

STATE HEALTH IMPROVEMENT PLAN



COMMONWEALTH OF VIRGINIA

June 2016

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EXECUTIVE SUMMARY

The Virginia State Health Innovation Plan represents a collective vision by a wide range of innovators and experts from across the Commonwealth to improve the patient experience, improve population health, and reduce health care costs for all Virginians. Our work, and partnership, was launched well before the opportunity to apply for support from the Centers for Medicare and Medicaid Innovation (CMMI) Round 2 Model Design grant became available in May 2014. Accordingly, this plan includes more than three years of planning, data seeking, partnership building, and compromise. It seeks not only to reform and innovate within the state Medicaid program, but to align reform efforts across all payers, providers, and populations. It is both ambitious and necessary.

Our reality is a state that is highly conflicted when it comes to health reform. Virginia is often described as a “purple state” -- where elections are competitive, political leadership changes often, and philosophical differences translate into contentious health policy debates. This has meant that state government is sometimes less of a driver of reform and more of a convener of stakeholders who together drive the change in the collaborative “Virginia Way.”

Governor Robert F. McDonnell recognized the need to think outside of traditional government roles when in May of 2010 he created the Virginia Health Reform Initiative (VHRI) and tasked it with “going beyond federal health reform and recommending other innovative healthcare solutions that meet the needs of Virginia’s citizens and government.” After a series of meetings, the six task forces of the VHRI Advisory Board made a series of recommendations to advance health reform in the Commonwealth in December 2010. One of these recommendations was for “the Commonwealth to convene multiple stakeholders in collaborative efforts to identify, pilot test, and spread effective models of delivery and payment reform.”

The Virginia Center for Health Innovation (VCHI) was subsequently launched to address this recommendation and secured startup funding from private sector stakeholders committed to its purpose. VCHI is an independent, nonprofit organization whose mission is to accelerate the adoption of value-driven models of wellness and healthcare throughout Virginia. Its leaders include representatives of state government, health care providers, pharmaceutical and laboratory organizations, payers, consumers, and businesses.

In December 2012, Governor Robert F. McDonnell issued the following charge to the Virginia Center for Health Innovation:

Together, we must change both the way we deliver health care and the way we pay for it. This union is essential if we are to provide better value to Virginia’s health care purchasers and patients. The present system is unsustainable and patients, health care staff, insurers, and corporations are all unsatisfied with

the existing system. Virginia can do better...The challenge ahead is to identify and prioritize demonstration projects that can be undertaken jointly by public and private sector partners to achieve better care, better health, and lower cost.

The Governor and the General Assembly then provided VCHI with \$1.6 M in funding to begin work on a three-year “Virginia Health Innovation Plan” that would meet the parameters established by CMMI for the State Innovation Model (SIM) grant program. The Governor fully supported the purpose of the SIM program, but would not serve as the fiscal agent for a federal grant funded by the Affordable Care Act. (At the time, only a Governor could serve as a state’s fiscal agent in order to receive SIM funding support from CMMI.) He also specified that Virginia’s Health Innovation Plan should be broader than the SIM requirements such that it incorporated all payers and positioned Virginia to move forward with other private and foundation funders, as well as CMMI.

Virginia therefore began its plan development with designated funding from the state and expertise from more than 70 health care and business thought leaders. Their first product was to define Virginia’s Call to Action.

VIRGINIA CALL TO ACTION FOR HEALTH INNOVATION

The Opportunity

Virginia is well positioned to advance and accelerate the pace of health improvement. Our assets include:

- A relatively strong economy and engaged employers
- Top-tier integrated health systems
- Leading-edge technology and telemedicine capability
- Excellent health professions training
- Medicaid managed care tradition
- Extensive and innovative safety net
- Strong culture of innovation
- Growing commitment to integrating acute and behavioral care
- Long-standing commitment to public-private partnerships
- New opportunities for funding.

What We Can Do

Virginia can engage and deploy its health assets to create a supportive environment for health innovation. Key aims include:

- Position health improvement as integral to Virginia’s future as a national leader in business, education, and health;

- Create a culture of innovation and collaboration, supported by rigorous analytics, to optimize health and health care;
- Create alignment across the public and private sectors to advance a shared action agenda;
- Adopt health improvement and cost growth reduction as a key strategy for every stakeholder;
- Focus our energy and resources on a core set of improvement initiatives.

A Vision for Virginia

Virginia will transform health care through three strategic pathways – **1) activated consumers and communities; 2) person-centered, integrated, accountable delivery systems; and 3) aligned infrastructure, workforce, and quality incentives.**

Working together, we can make Virginia a place where:

Activated Consumers & Communities	<ul style="list-style-type: none"> • Virginians enjoy better overall health, experience high satisfaction with the healthcare they receive, and are engaged in and responsible for their own care within a patient-centered health care system; • Communities are activated to advance access and population health; • The value of prevention, wellness and health care services is defined, measured, recognized, and rewarded by all stakeholders;
Person-Centered, Integrated, Accountable Delivery Systems	<ul style="list-style-type: none"> • Care throughout the lifecycle is delivered and organized through patient-centered, multi-payer medical homes; • Physical health care and behavioral health care are integrated; • Care transitions for patients between providers and institutions are optimized; • Health and educational services are strengthened and integrated for children from pre-conception to pre-kindergarten;
Aligned Infrastructure, Workforce, & Quality Incentives	<ul style="list-style-type: none"> • Telehealth is used to improve access to and the quality of healthcare; • Smart health information technology connects providers, payers, consumers, and community/public health; • Measures, data, and analytics are aligned across stakeholders and support practice transformation; • Payment models reward improved outcomes and reduced costs; • The health workforce is optimized and equipped to deliver excellent care in a team environment in every community in Virginia; and • The rise in the cost of care has been slowed or arrested while quality is sustained and improved.

With the Call to Action established, the leadership team set to review 371 delivery system and payment reform innovations submitted for consideration by Virginia's front line providers of care. This led to the establishment of eight action strategies.

Virginia's Action Strategies

- Connecting Communities to State Priorities
- Aligning Population Health and Clinical Quality Metrics
- Optimizing Health Data
- Analyzing Data to Identify Low Value Services
- Improving Models of Care and Care Transitions
- Strengthening the Care Coordination Workforce
- Preparing Primary Care for Virginia's Emerging Marketplace
- Moving Payment from Volume to Value

Rigorous evaluation and monitoring will be necessary to assist Virginia as it works to implement and refine the selected action strategies. To guide this assessment, Virginia's leadership selected three transformational goals by which to gauge collective impact.

Virginia's Transformational Goals

By 2020, we will achieve measurable improvement in the health of Virginians and the value of health care they receive. We will achieve this through:

1. Improvement in population health, with a focus on improving the social determinants of health and reducing disparities in indicators included in Virginia's Plan for Well-Being;
2. Improvement in health care system performance, with a focus on improving access to high quality, coordinated community-based care;
3. Improvement in the health care marketplace, by rewarding providers for high value care and reducing health care spending associated with unnecessary or preventable utilization.

Virginia's SIM Design Work

In 2014, Virginia applied for and received a \$2.6M SIM Round 2 Design award under Governor Terrence McAuliffe to further develop each of these action strategies. The Virginia Center for Health Innovation was selected to serve as the award lead and to oversee Virginia's public-private partnership approach to health innovation and reform. This report documents the results of Virginia's planning work and describes our next steps moving forward.

The report is organized as follows:

- Chapter 1: Background: Virginia's Health Care and Health Innovation Environments
- Chapter 2: Building Stakeholder Engagement
- Chapter 3: Connecting Communities to State Priorities
- Chapter 4: Improving Virginia's Well-Being
- Chapter 5: Aligning Population Health and Clinical Quality Measures
- Chapter 6: Optimizing Health Data
- Chapter 7: Analyzing Data to Identify Low Value Services
- Chapter 8: Improving Models of Care and Care Transitions
- Chapter 9: Strengthening the Care Coordination Workforce
- Chapter 10: Preparing Primary Care for Virginia's Emerging Marketplace
- Chapter 11: Moving Payment from Volume to Value: Medicaid Driving Innovation
- Chapter 12: The Financial Case for Transformation
- Chapter 13: An Evaluation Strategy for Virginia's Health Innovation Plan
- Chapter 14: Moving Forward: Ensuring Governance and Sustainability

More information about this report and how to get involved in VCHI's ongoing work to implement the plan can be found at:

www.vahealthinnovation.org

www.innovatevirginia.org

TABLE OF CONTENTS

Chapter 1: Background: Virginia’s Health Care and Health Innovation Environments ... 1

Virginia’s Health Care Environment.....	1
Virginia’s State Health Ranking	1
Virginia’s Local Health Needs.....	3
Virginia Health Opportunity Index.....	4
Health Coverage	5
Health Care Spending.....	7
Delivery System Capacity and Workforce	8
Virginia’s Opportunities for Improved System Performance	9
Virginia’s Health Innovation Environment.....	10
System Factors Supporting Innovation	10
Virginia Entities Leading Innovation	13
Looking Ahead.....	15

Chapter 2: Building Stakeholder Engagement..... 18

The Lead Entity: Virginia Center for Health Innovation.....	18
VCHI Board of Directors.....	18
VCHI Staff	19
VCHI Subcontractors	20
A Team Approach: Partnership with State Government	21
Virginia SIM Structural Hierarchy	21
Governor’s Office Leadership Team	22
Workgroups and Collaborative Teams.....	22
Population Health	22
Quality, Payment Reform, and Health Information Technology	22

Medicaid Innovation	23
Workforce	23
Value-Based Insurance Design and Choosing Wisely	23
Integrated Care	24
Care Transitions	24
Primary Care Transformation	24
Telehealth and Remote Patient Monitoring	25
The Virginia Health Innovation Network	25
Chapter 3: Connecting Communities to State Priorities	26
Chapter 4: Improving Virginia’s Well-Being	28
Setting the Stage.....	28
Defining the Vision: Well-Being for all Virginians.....	29
Aims and Goals	29
Healthy Connected Communities	29
1) Virginia’s Families Maintain Economic Stability.....	31
2) Virginia’s Communities Collaborate to Improve the Population’s Health.....	32
Strong Start for Children	34
1) Virginians Plan Their Pregnancies	34
2) Virginia’s Children are Prepared to Succeed in Kindergarten.....	35
3) The Racial Disparity in Virginia’s Infant Mortality Rate is Eliminated.....	36
Preventive Actions	38
1) Virginians Follow a Healthy Diet and Live Actively.....	39
2) Virginia Prevents Nicotine Dependency.....	41
3) Virginians are Protected Against Vaccine-Preventable Diseases.....	42
4) Cancers are Prevented or Diagnosed at the Earliest Stage Possible	43
5) Virginians Have Lifelong Wellness	44
System of Health Care	45
1) Virginia Has a Strong Primary Care System Linked to Behavioral Health Care, Oral Health Care, and Community Support Systems	46

2) Virginia’s Health IT System Connects People, Services, and Information to Support Optimal Health Outcomes	48
3) Health Care-Associated Infections are Prevented and Controlled	49
Chapter 5: Aligning Population Health and Clinical Quality Measures.....	53
Population Health Measures	53
Health System Performance Measures	54
Clinical Quality Measures.....	55
Alignment of Virginia Measures with National Measures.....	60
Chapter 6: Optimizing Health Data.....	62
Virginia’s Existing Health Information Technology.....	62
Health IT Domains of Development	63
Coordinate.....	64
Enhance.....	66
Integrate.....	67
Report.....	69
Inform	70
Evaluate	71
Secretary’s Task Force on Sharing of Electronic Health Records	72
Chapter 7: Analyzing Data to Identify Low Value Services	74
Background	74
Statewide Analysis	75
Pilot Design with the Commonwealth of Virginia State Employee Health Plan.....	78
Additional Next Steps.....	79
Chapter 8: Improving Models of Care and Care Transitions	80
Background	80
Care Integration Models	80
Care Transitions Model	88
Telehealth High Risk Obstetrics Model.....	92
Chapter 9: Strengthening the Care Coordination Workforce	94

Background	94
Expansion of Psychiatric Nurse Practitioner Programs	94
Establishment of a Community Health Worker Program.....	95
Establishment of a Health Behavior Coach Certificate	97
Establishment of a Care Coordination Certificate	97
Establishment of a Transformational Leadership Course	97
Chapter 10: Preparing Primary Care for Virginia’s Emerging Marketplace	99
Background	99
Virginia’s Approach to Primary Care Transformation.....	100
The Learning Organization	101
The Learning Context.....	101
Practice Facilitation	101
Expert Consultation	102
Collaborative Learning Events	102
Online Support Center.....	102
Data Feedback and Benchmarking	102
Differentiated Supports.....	102
Our Current Status.....	103
Next Steps: Preparing for MACRA and MIPS	104
Chapter 11: Moving Payment from Volume to Value: Medicaid Driving Innovation ..	105
Background	105
Managed Long Term Services and Supports (MLTSS).....	105
Delivery System Reform Incentive Payment (DSRIP)	107
Substance Use Disorder Program Changes.....	108
Chapter 12: The Financial Case for Transformation	110
Background	110
Specific Suggestive Data	110
Medicaid	111
Low Value Services and Choosing Wisely	112

Next Steps	113
Chapter 13: An Evaluation Strategy for Virginia’s Health Innovation Plan	114
General Approach to Evaluation Design	114
Virginia’s Transformational Goals and Cross-Cutting Measures	114
Chapter 14: Moving Forward: Ensuring Governance and Sustainability	118
Virginia’s SIM Governance Offers Steady Leadership in Uncertain Times	118
Opportunities on our Horizon	118
Preparing for SIM Round 3	120
Appendices	121
A) Comparison of Virginia’s Selected Measures to CMS Core Measures and VHHA Scorecard Measures	A1
B) Milliman Waste Calculator Results for Virginia	A17
C) Integrated Care Models	A161
D) Virginia’s Delivery System Reform Incentive Payment Waiver Application	A230
E) Virginia SIM 2015 – 2016 Operational Plan	A315

A. Virginia's Health Care Environment

Virginia is home to nearly 8.4 million people residing in 134 cities and counties spread across more than 40,000 square miles. We are a large and diverse state with significant regional differences in population health and systems of care. Like all states, we have continuing challenges related to population health, health coverage, and health care costs and quality. The Virginia SIM Design process has helped to bring Virginia stakeholders together in a more collaborative environment for addressing these challenges.

Pulling together data from a wide range of sources, and with assistance from Community Health Solutions and the State Health Access Data Assistance Center, we examine Virginia's profile in seven key areas. These are:

1. Virginia's State Health Ranking
2. Virginia's Local Health Needs
3. Virginia's Health Opportunity Index
4. Health Coverage
5. Health Care Spending
6. Delivery System Capacity and Workforce
7. Opportunities for Improved System Performance

A1. Virginia's State Health Ranking

From an economic viewpoint, Virginia ranks within the top ten states on measures of household income and per capita income.^{1,2} Virginia also ranks in the top tier of states on multiple measures of business climate and quality of life.³ When the focus turns to health, Virginia's national rankings are more varied. There is also substantial variation in health status and health resources across Virginia's local communities. Consequently, it is critically important for Virginia to "think locally" when developing statewide strategies for health improvement.

America's Health Rankings

Exhibit 1 shows Virginia in comparison to other states on United Health Foundation's America's Health Rankings. Among 34 measures shown (not including the section totals in bold), in 2015 Virginia ranked in the best quintile (best ten) on four measures; the second quintile on 13 measures; the third quintile on 13 measures; and the fourth quintile on four measures. This contrast between top-tier economic rankings and middle-tier health rankings has been one of the catalysts for Virginia's work on the State Innovation Model Design.

Exhibit 1. Virginia Performance on America's Health Rankings, 2013-2015

Metric	2015 Rank	2014 Rank	2013 Rank	Average Rank
Behaviors				
Smoking (% of adult population)	31	24	23	26
Excessive Drinking (% of adult population)	17	18	-	18
Drug Deaths (deaths per 100,000 population)	6	4	7	6
Obesity (% of adult population)	20	18	24	21
Physical Inactivity (% of adult population)	30	26	22	26
High School Graduation (% of students)	22	27	-	25
Behaviors Total*	19			19
Community & Environment				
Violent Crime (offenses per 100,000 population)	3	4	4	4
Occupational Fatalities (deaths per 100,000 workers)	27	25	20	24
Children in Poverty (% of children)	3	12	7	7
Infectious Disease (combined value Chlamydia, Pertussis, Salmonella)	10	16	-	13
Chlamydia (cases per 100,000 population)	20	26	32	26
Pertussis (cases per 100,000 population)	15	18	24	19
Salmonella (cases per 100,000 population)	21	25	31	26
Air Pollution (micrograms of fine particles per cubic meter)	20	19	25	21
Community & Environment Total*	6			6
Policy				
Lack of Health Insurance (% of population)	24	20	18	21
Public Health Funding (dollars per person)	28	28	28	28
Immunizations—Children (% of children aged 19 to 35 months)	16	29	23	23
Immunizations—Adolescents (combined value of HPV, MCV4, Tdap)	22	-	-	22
HPV Females (% of females aged 13 to 17 years)	33	43	-	38
HPV Males (% of males aged 13 to 17 years)	22	-	-	22
MCV4 (% of adolescents aged 13 to 17 years)	34	39	-	37
Tdap (% of adolescents aged 13 to 17 years)	13	34	-	24
Policy Total*	21			21
Clinical Care				
Low Birthweight (% of live births)	23	27	23	24
Primary Care Physicians (number per 100,000 population)	17	16	15	16
Dentists (number per 100,000 population)	16	16	19	17
Preventable Hospitalizations (discharges per 1,000 in Medicare)	18	22	19	20
Clinical Care Total*	21			21
All Determinants*	19		18	19
Outcomes				
Diabetes (% of adult population)	21	26	35	27

Exhibit 1. Virginia Performance on America's Health Rankings, 2013-2015

Metric	2015 Rank	2014 Rank	2013 Rank	Average Rank
Poor Mental Health Days (days in previous 30)	12	11	12	12
Poor Physical Health Days (days in previous 30)	19	15	20	18
Disparity in Health Status (% difference by education level)	33	27	37	32
Infant Mortality (deaths per 1,000 live births)	28	31	35	31
Cardiovascular Deaths (deaths per 100,000 population)	25	25	26	25
Cancer Deaths (deaths per 100,000 population)	23	23	29	25
Premature Death (years lost per 100,000 population)	18	19	21	19
All Outcomes*	23	23	28	25
Overall	21	21	26	23

Source: America's Health Rankings, United Health Foundation

<http://cdnfiles.americashealthrankings.org/SiteFiles/StateProfiles/Virginia-Health-Profile-2015.pdf>

A2. Virginia's Local Health Needs

Looking within Virginia's communities, there are significant regional differences in health and related social and economic factors. One resource for exploring this variation is the County Health Rankings report produced by the University of Wisconsin Population Health Institute.⁴ As shown in **Exhibit 2**, the County Health Rankings illustrate the variation across Virginia cities and counties on a variety of social & economic factors, health behaviors, health outcomes, and health care. In many cases the rates in Virginia's best performing cities and counties are two, three, or more times better than rates in communities at the lower end of the rankings.

Exhibit 2. Local Variation in Health Based on County Health Rankings

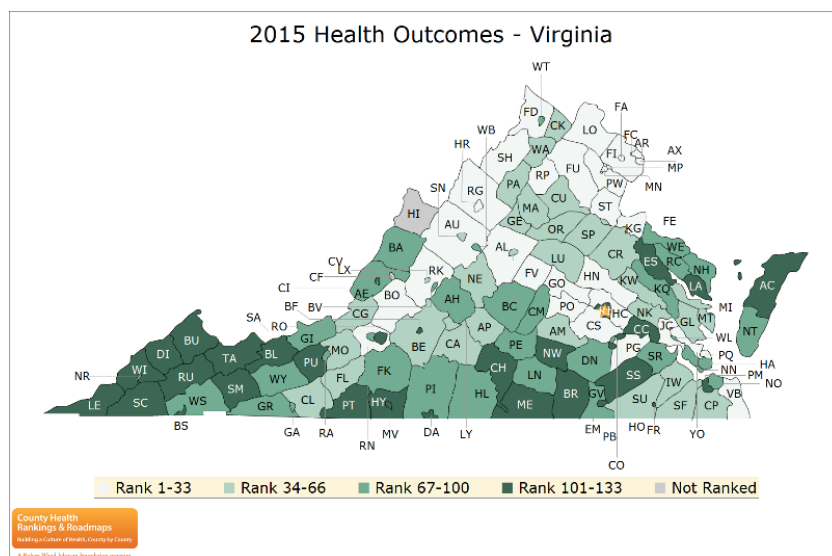


Exhibit 2. Local Variation in Health Based on County Health Rankings			
Measure	Overall in Virginia	City/County Range in Virginia	Year of Measure
Social & Economic Factors			
▪ Median Household Income	\$62,745	\$30,940 - \$117,680	2013
▪ Children in Poverty	16%	3% - 42%	2013
▪ High School Graduation	83%	65% - 98%	2011-2012
▪ Unemployment	5.5%	3.6%-12.1%	2013
▪ Older Adults (percent of population age 65 and older)	13.4%	6.8% - 34.2%	2013
▪ % Non-Hispanic White	63.6%	15.9% - 98.1%	2013
Health Outcomes			
▪ Low Birthweight (percentage of live births with weight < 2500 grams)	8.3%	5.3% - 16.4%	2006-2012
▪ Infant Mortality (Infant deaths (within 1 year), per 1,000 live births)	7.2	3.9-13.1	2004-2010
▪ Fair or Poor Health (Adults reporting, age adjusted)	14%	6% - 31%	2006-2012
▪ Premature Death (years of potential life lost before age 75 per 100,000 population (age-adjusted))	6,192	3,258 - 13,827	2010-2012
Health Behaviors			
▪ Adult Smokers (percent who are current smokers)	18%	8% - 35%	2006-2012
▪ Adult Obesity (percent of adults that report a BMI of 30 or more)	28%	18% - 42%	2011
▪ Excessive Drinking (percent of adults reporting binge or heavy drinking)	16%	9% - 29%	2006-2012
▪ Drug Poisoning Deaths (number of deaths per 100,000 population)	9	4 - 53	2006-2012
Health Care			
▪ Primary Care Physicians (ratio of population to primary care physicians)	1,344:1	20,936:1 - 29:1	2012
▪ Dentists (ratio of population to dentists)	1,611:1	22,307:1 - 355:1	2013
▪ Mental Health Providers (ratio of population to mental health providers)	724:1	52,617:1 - 87:1	2014
▪ Uninsured Adults (percentage of adults under age 65)	17%	9%-27%	2012
▪ Uninsured Children (percentage of children under age 19)	6%	4% - 12%	2012
▪ Preventable Hospital Stays (number of hospital stays for ambulatory care sensitive conditions per 1,000 Medicare enrollees)	55	33-182	2012
Source: County Health Rankings http://www.countyhealthrankings.org/app/virginia/2015/downloads			

A3. Virginia's Health Opportunity Index

If health opportunity varies by city and county, it also varies by neighborhood. This dynamic can be seen through the lens of an innovative health assessment tool called the Virginia Health

Opportunity Index (HOI). Developed by the Virginia Department of Health, the Virginia HOI is a group of indicators that provide broad insight into the overall opportunity Virginians have to live long and healthy lives based on the Social Determinants of Health. The Virginia HOI is made up of over 30 variables, combined into 13 indicators, grouped into four profiles, which are aggregated into a single Health Opportunity Index.

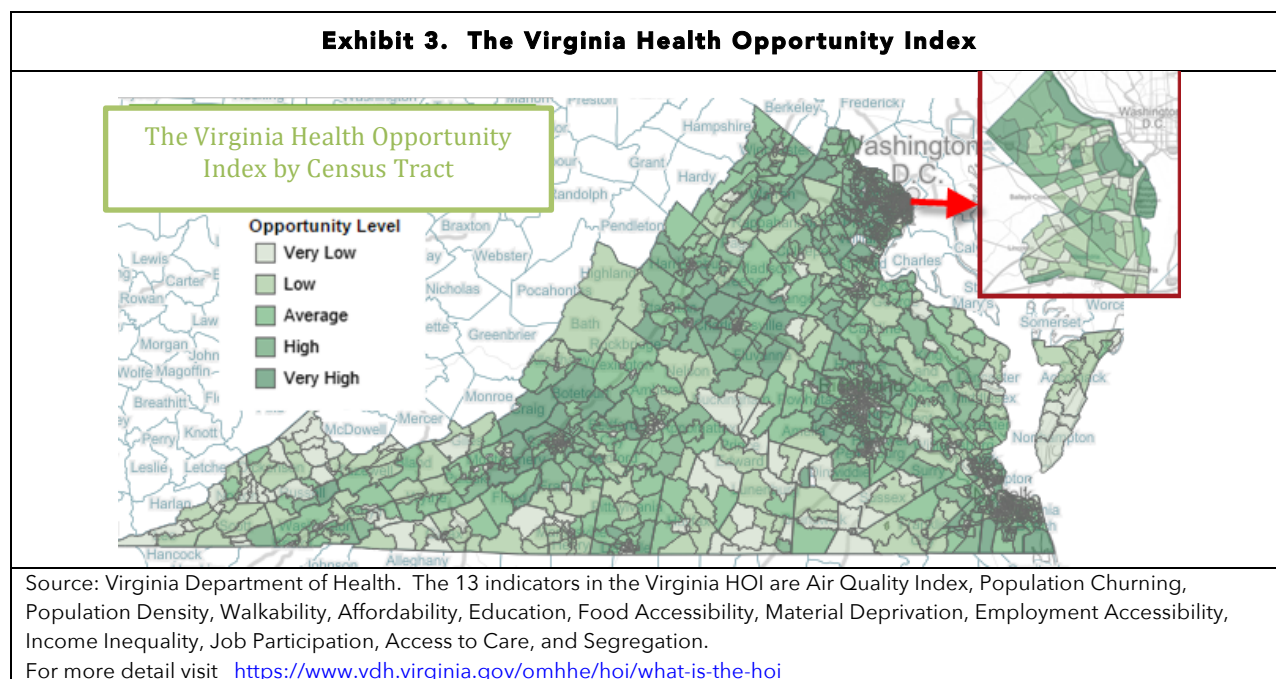


Exhibit 3 shows the Virginia HOI at the census tract level. Because census tracts are relatively small units of geography, census tract data can often be used to identify neighborhoods where residents may have relatively high or low health opportunity. By adopting this neighborhood view of Virginia, we can see that even in cities and counties that rank well on the County Health Rankings, there are neighborhoods at risk for low health opportunity and adverse health outcomes. For example, the cutout in Exhibit A4 shows Arlington County and the City of Alexandria, which are ranked first and sixth respectively in the County Health Rankings. Within these jurisdictions we can see that there are lighter-shaded census tracts indicating low health opportunity and elevated risk for adverse health outcomes. This same dynamic can be found in a number of Virginia jurisdictions in which positive indicators at the city/county level mask significant health needs within community neighborhoods. This insight is a driving factor in Virginia’s efforts to develop local partnerships for health innovation.

A4. Health Coverage

According to estimates from the US Census Bureau, in 2014 Virginia ranked 21st among the states with an uninsured rate of 10 percent.⁵ As shown in **Exhibit 4**, as of 2014 the majority of Virginians (55%) were enrolled in employer-based coverage, with seven percent in non-group

coverage, nine percent in Medicaid, 13 percent in Medicare, and six percent in other public coverage. Compared to the US, Virginia had a higher percentage of the population enrolled in employer-based coverage (55% compared to 49%), and a lower percentage enrolled in Medicaid (9% compared to 19%). In regard to health coverage expansion, Virginia is one of 17 states that have not chosen to adopt the Medicaid expansion option. As of January 2016, more than 384,000 Virginians had enrolled in a federally facilitated Marketplace Plan. Among these, about 80 percent enrolled with financial assistance, and about 62 percent had household income less than or equal to 200 percent of the federal poverty level.

Exhibit 4. Virginia Health Coverage Profile (2014)							
Location	Employer	Non-Group	Medicaid	Medicare	Other Public	Uninsured	Total
Virginia Count	4,514,000	596,000	748,300	1,070,300	514,300	815,900	8,258,800
Virginia Percent	55%	7%	9%	13%	6%	10%	100%
US Percent	49%	6%	19%	13%	2%	10%	100%
Source: Kaiser Family Foundation estimates based on the Census Bureau's March 2015 Current Population Survey (CPS: Annual Social and Economic Supplements).							

Focusing on the characteristics of health insurance markets (**Exhibit 5**), Virginia has at least eight carriers in its small group, large group, and individual markets. Virginia's managed care penetration is substantial, but still below national averages for both Medicaid and Medicare. Virginia's employers have chosen to self-insure at about the same rates as the nation.

Exhibit 5 Health Insurance Markets		
Measure	Virginia	United States
Number of credible insurance carriers, 2013 ⁶		
Small group	8	5
Large group	9	6
Individual market	9	6
Market share of largest carrier, 2013 ⁶		
Small group	45.5%	54.8%
Large group	43.9%	55.8%
Individual market	75.1%	56.0%
Largest carrier by market, 2013 ⁶		
Small group	Anthem BCBS (WellPoint)	
Large group	Anthem BCBS (WellPoint)	
Individual market	Anthem BCBS (WellPoint)	
Managed care penetration in public programs		
Medicaid, 2011 ⁷	59.8%	71.6%
Medicare, 2014 ⁸	15.0%	30.0%

Managed care and other plan types, among private sector employers offering coverage, 2013		
Two or more plans	51.2%	43.3%
Conventional indemnity	11.7%	11.3%
Any managed care	89.3%	91.0%
Exclusive provider	27.8%	27.9%
Mixed provider	76.0%	73.2%
Self-Insurance		
% of employers self-insuring, 2013⁹		
Total	40.2%	37.6%
Firms with less than 50 employees	13.2%	13.2%
Firms with 50 or more employees	66.0%	64.6%
% of workers in self-insured plans, 2013⁹		
Total	56.2%	58.2%
Firms with less than 50 employees	13.4%	11.5%
Firms with 50 or more employees	65.0%	67.7%

A5. Health Care Spending

Overall, Virginia compares favorably to the nation on general measures of health care spending (**Exhibit 6**). As of 2013 average premiums for private health insurance were below national averages. Medicare spending per enrollee was also below the national average, although spending varied across referral regions from a high of \$8,882 in the Norfolk region to a low of \$7,366 in the Arlington region. Medicaid spending per enrollee was higher in Virginia compared to the nation, with comparatively higher rates for Medicaid adults and children. One consideration in reviewing Medicaid spending for adults is that Virginia's limited Medicaid eligibility may exclude healthier adults as may be found in other states' Medicaid populations. Focusing on per capita spending by service, as of 2009 Virginia's spending levels were lower than the national average for hospital services, physician and clinical services, and other professional services.

Exhibit 6. Health Care Spending		
Measure	Virginia	United States
Private Health Insurance Market		
Average premium for employer sponsored health insurance, 2013¹⁰		
Single	\$5,408	\$5,57
Family	\$15,917	\$16,02
Average premium for nongroup health insurance, 2013¹¹		
	\$2,755	\$2,84
Average state employee health plan premiums, 2013¹²		
	\$504	\$570
Public Health Insurance Programs		
Medicare spending per enrollee, FY 2012¹³		
Statewide	\$8,193	\$8,97

Exhibit 6. Health Care Spending (cont'd)		
Measure	Virginia	United States
Medicare spending per enrollee, FY 2012¹⁴		
<u>Hospital Referral Regions</u>		
Arlington		\$7,366
Charlottesville		\$7,758
Lynchburg		\$7,799
Newport News		\$8,362
Norfolk		\$8,882
Richmond		\$8,768
Roanoke		\$8,026
Winchester		\$7,275
Public Health Insurance Programs, continued		
Medicaid spending per enrollee, FY 2012¹⁵		
Total	\$7,966	\$7,236
Aged	\$14,543	\$16,236
Disabled	\$18,372	\$19,031
Adults	\$6,419	\$4,368
Children	\$3,345	\$2,854
Per Capita Health Care Spending (State Total, All Coverage Types)		
Health care spending per person by type of service, 2009¹⁶		
All services	\$6,286	\$6,815
Hospital	\$2,298	\$2,475
Physician and Clinical Services	\$1,524	\$1,650
Other Professional Services	\$192	\$218
Other Services	\$2,429	\$2,211

A6. Delivery System Capacity and Workforce

As shown earlier in **Exhibit 2**, Virginia has substantial variation in local health care capacity as measured by the supply of primary care physicians, dentists, and mental health providers. As shown in **Exhibit 7**, as of 2011 Virginia was below the national rate for federal qualified health center (FQHC) delivery sites relative to low income population. Although the number of FQHC delivery sites in Virginia has increased since 2011, as of 2014 Virginia still had 73.5% of the population living in a primary care health professional shortage area, compared to 60.4 percent nationally.

Looking beyond the data on provider supply, one of the most important lessons learned from our SIM experience is that the Triple Aim requires fresh viewpoints on delivery system capacity and workforce development. Provider supply and access to care remain as fundamental requirements, but the key achieving the Triple Aim (better health, better care, lower cost) is to

engage patients in team care models that are multi-disciplinary, integrated, and coordinated. Under this paradigm, nurse practitioners, registered nurses, medical assistants, dental support professionals, case managers, health educators, social workers, and other support staff play critical roles in delivering team care models that work for patients and providers. As Virginia moves forward, we will be considering not only the supply of providers, but also team care models that make the best possible use of service providers from multiple disciplines.

Exhibit 7. Delivery System Capacity and Workforce		
Measure	Virginia	United States
Provider Supply Indicators		
Federally Qualified Health Center (FQHC) Delivery Sites, 2011¹⁷		
Total	149	8,504
Per 100,000 population under 200% FPG	7.1	8.0
Percent of state population living in primary care health professional shortage areas, 2014¹⁸		
	73.5%	60.4%
Physicians <i>not</i> accepting new Medicaid patients, 2011-2012¹⁹		
Primary Care	40.7%	33.2%
Specialty Care	19.7%	27.5%
Physicians per 100,000 population, 2014²⁰		
Primary Care	127.9	134.4
Specialty Care	135.9	148.3
Physician assistants per 100,000 population, 2013²¹		
	29.6	30.1
Nurse practitioners per 100,000 population, 2013²²		
	45.8	47.4
Scope of practice for nurse practitioners, 2014		
Physician involvement required in diagnosis/treatment ²³	Yes	31 States
Physician involvement required in prescribing ²⁴	Yes	31 States

A7. Virginia's Opportunities for Improved System Performance

Virginia's potential for improved system performance is apparent in the indicators reviewed in the preceding sections. Our opportunities for improvement have also been identified by dozens of stakeholders who have contributed to development of this State Health Improvement Plan. A summary statement of our opportunities for improvement would include:

- Improving access to primary care, behavioral health care, and oral health care, especially for populations who have low income, lack health coverage, or lack geographic access to primary care.

- Reducing preventable hospitalizations and readmissions for populations with conditions that can be effectively prevented or managed with effective outpatient care and patient self-management.
- Managing quality and costs by reducing overutilization of low-value health care services and increasing utilization of high-value services.
- Improving prevention of communicable disease through expanded immunization and effective disease control measures.
- Improving prevention and management of chronic disease by promoting healthy lifestyles and implementing evidence-based care models for chronic disease management.
- Reducing disparities and undesirable geographic variation in health outcomes such as low birthweight, infant mortality, and premature deaths.
- Innovating to create community systems of care based on evidence-based care models, integrated services, efficient health information exchange, clinical-community linkages, and supportive payment models.

B. Virginia's Health Innovation Environment

Virginia has a longstanding culture of health innovation, which is now being leveraged to produce the Virginia Health Innovation Plan initiatives outlined in subsequent sections of this report. Virginia stakeholders are innovating at the state and local level to design, demonstrate, and share models that work. The challenge lies in spreading, scaling, and financing these models so that all Virginian communities can benefit from the Triple Aim. This is a focus of the *Virginia Health Innovation Plan*, as explained in subsequent sections of this report.

B1. System Factors Supporting Innovation

Virginia is innovating to improve health and health care, and in the process we are creating a culture and eco-system for innovation that should allow us to accelerate our pace in the coming years. As shown in **Exhibit 8**, as of 2013 Virginia was with or ahead of the nation in both physician and hospital adoption of electronic health records, as well as the percent of eligible providers receiving EHR incentive payments. Virginia providers and health plans also have been engaged in CMS innovation initiatives including the Medicare Shared Savings Program, the FQHC Advanced Practice Demonstration, Health Care Innovation Awards, and the Community-based Care Transitions Initiative. In addition, Virginia has pursued health improvement initiatives related to a state demonstration grant to integrate care for dual eligible individuals, and a CDC grant to prevent obesity, heart disease, and diabetes.

Exhibit 8. System Factors Supporting Innovation		
Measure	Virginia	United States
Information Technology		
% of physicians who have adopted electronic health records, 2013 ²⁵	57.7%	48.1%
% of eligible physicians, physician assistants, and nurse practitioners that have received a Medicare or Medicaid EHR incentive payment, 2014 ²⁶	54.0%	56.0%
% of hospitals that have adopted electronic health records, 2013 ²⁷	65.2%	59.4%
% of hospitals that have received a Medicare or Medicaid EHR incentive payment, 2014 ²⁶	93.0%	93.0%
% of new and renewal prescriptions processed electronically, 2013 ²⁸	60.0%	57.0%
State all-payer claims database (APCD) in place, 2013 ²⁹	Yes	18 States
CMS Initiatives Involving Providers and Health Plans³⁰		
Pioneer ACOs	No	11 States
Advance Payment ACOs	No	17 States
Medicare Shared Savings Program	Yes	48 States
Comprehensive Primary Care Initiative	No	8 States
FQHC Advanced Primary Care Practice Demonstration	Yes	47 States
Health Care Innovation Awards	Yes	28 States
Community-Based Care Transitions Program	Yes	36 States
CMS Initiatives Involving State Government²⁹		
Multi-Payer Advanced Primary Care Practice Demonstration	No	8 States
State Demonstration Grants to Integrate Care for Dual Eligible Individuals	Yes	12 States
Medicaid Incentives Program for the Prevention of Chronic Diseases	No	10 States
Initiatives to Support Population Health		
CDC Population Health Initiatives³¹		
State and Local Public Health Actions to Prevent Obesity, Diabetes, and Heart Disease	Yes	18 States
Partnerships to Improve Community Health	No	21 States
State Initiatives³²		
Medicaid/CHIP ACOs	No	19 States
Medical home/care coordination initiatives in Medicaid/CHIP	Yes	45 States
Episode-based payment	No	17 States

Looking beyond the initiatives in **Exhibit 8** and the SIM-specific initiatives outlined in this report, Virginia has also been pursuing a number of additional strategies as part of its innovation agenda. Examples include:

- A new Medicaid managed care program for members receiving long-term services and supports (see more detail in Chapter 11);

- Enhanced treatment options for Medicaid members in need of substance abuse disorder (SUD) services (see more detail in Chapter 11);
- Enhancements to the Medicaid Enterprise System (MES) program to support a more user-friendly experience for citizens and more effective program management;
- A proposed Medicaid Delivery System Reform Incentive Payment Program (see more detail in Chapter 11);
- An initiative to develop Certified Community Behavioral Health Clinics across the state, beginning with a pilot group of eight Community Services Boards; and
- Legislation requesting the Secretary of Health and Human Resources to work with health care stakeholders to evaluate interoperability of electronic health record systems and develop recommendations for improving the share of electronic health records for better care and lower cost.

B2. Virginia Entities Leading Innovation

Virginia Center for Health Innovation (VCHI)

VCHI is a 501(c)3 nonprofit organization that convenes public and private stakeholders to develop, accelerate and spread health reform solutions that improve the value of healthcare delivered in the Commonwealth of Virginia. The mission of VCHI is to work in partnership with multiple stakeholders to accelerate the adoption of value-driven models of wellness and health care throughout Virginia. VCHI works closely with state government as well as a variety of private stakeholders through its Board and Leadership Council, as well as a variety of task groups related to the Virginia SIM Design process. In this capacity, VCHI has become a vital convener and catalyst for a number of Virginia initiatives.

The Virginia Health Innovation Network (an Initiative of VCHI)

One practical illustration of Virginia's innovation environment is the *Virginia Health Innovation Network* (VHIN). VHIN is a dynamic online forum for individuals interested in learning about health innovation; connecting with colleagues across the state; collaborating on projects; and sharing information, ideas, and innovations with the ultimate goal of spreading value-driven models of healthcare and wellness in Virginia. The VHIN's 1700+ members represent healthcare, business, government, higher education, consumer, and philanthropic interests. Over the past three years, Virginia organizations have provided descriptions of more than 400 innovative projects that have been implemented by Virginia employers, health care providers, and community based organizations. This knowledge base illustrates a growing culture of innovation in Virginia, and the opportunity for the Virginia SIM Design to tap into this asset in pursuing implementation of the initiatives outlined in the rest of this report.

State Government

Virginia state agencies are implementing an array of innovations aimed at improving access to health and human services for all Virginians. These innovations are apparent in the work of multiple agencies within the Health and Human Resources Secretariat, including Medicaid (Department of Medical Assistance Services), the Department of Behavioral Health and Developmental Services, the Department of Aging and Rehabilitative Services, and the Department of Health; as well as in the Department of Human Resource Management, which manages the state employee health benefit program. Critical to these efforts is a willingness to partner with the private sector in efforts to develop policies, practices, and systems that optimize services and resource utilization.

Employers

Virginia employers are playing important advisory roles with the Virginia Chamber of Commerce and the Virginia Center for Health Innovation. In the process they are sharing critical insights about what works in employee health improvement, and how to structure policy and program initiatives that advance both health and business development in Virginia. Virginia employers are also innovating to improve their employee health and wellness programs, and many are sharing their results and lessons learned through the *Virginia Business Coalition on Health*, other health-related groups across Virginia, and the *Virginia Health Innovation Inventory*.

Health Plans and Health Care Providers

Virginia is fortunate to have health plans and health care providers that are national leaders in health care management. Through various Virginia SIM Design committees and other group meetings, as well as the *Virginia Health Innovation Inventory*, our health plans and providers are sharing their expertise on care models that work, as well as how to spread these models through smart policies and programs. Much of this knowledge exchange is achieved in partnership with health association groups whose board leaders and staff are committed to sharing knowledge and facilitating collaboration to support health innovation in Virginia. As a result, Virginia is able to learn ‘what works’ from a broad network of state and local stakeholders.

Community Partnerships

Across Virginia there are numerous local partnerships at work that may involve partners from multiple sectors. These partnerships may include local health departments, community services boards, community health centers, free clinics, hospitals and health systems, social service agencies, local areas on aging, local schools systems, faith communities, and more. To be sure, these types of partnerships were happening before the Virginia SIM Design process, but the SIM initiative has allowed us to identify and engage these local initiatives as learning partners for statewide improvement. Many examples of these partnerships have been posted in the *Virginia Health Innovation Inventory*.

Health Philanthropy

Virginia is fortunate to have a health philanthropy sector that strongly supports innovation for health improvement. The Virginia Health Care Foundation and dozens of regional and local health foundations act as conveners, catalysts, and funders for hundreds of local projects that improve health and generate lessons learned about what works. These organizations also provide vital intelligence on evolving opportunities and challenges in Virginia’s diverse communities. A scan of projects supported by Virginia health foundations shows innovative initiatives in health promotion, prevention, early intervention, medical care, dental care, behavioral health care, and more. Many of these projects are built upon clinical-community partnerships for population health

improvement, and numerous examples can be found in the *Virginia Health Innovation Inventory*.

CMMI Initiatives beyond SIM

In describing the health innovation environment within Virginia, it should also be noted that Virginia organizations are involved in multiple CMMI-supported initiatives beyond the Virginia SIM Design Grant. . Dozens of Virginia organizations are involved in these CMMI initiatives including:

- BPCI Model 2: Retrospective Acute & Post Acute Care Episode
- BPCI Model 3: Retrospective Post Acute Care Only
- FQHC Advanced Primary Care Practice Demonstration
- Health Care Innovation Awards
- Independence at Home Demonstration
- Innovation Advisors Program
- Medicare Choices Model
- Strong Start for Mothers and Newborns Initiative
- Transforming Clinical Practices Initiative

B3. Looking Ahead

A profile of Virginia's health care environment should also anticipate the changing needs of Virginia in the future. The number of older adults in Virginia is expected to reach 1.8 million by 2030 - more than double that population in 2000. If this expectation holds, almost one in every five Virginians will be age 65 or older, with the over 85 age group being the fastest growing segment of the population. As the aging trend continues to unfold, Virginia's population is also becoming more diverse in terms of race, ethnicity, and income. These dynamics could have profound implications for the future health needs of community populations. Another important trend is the increasing number of military personnel who will rely on Virginia health and community services to support their health and well-being. The impact of these trends is likely to vary across Virginia's communities, and local systems of care will have to evolve in order to meet the particular needs of local populations. From this perspective, health innovation is an ongoing process that must constantly evolve in response to changing circumstances. The SIM initiatives described in the following sections can be viewed as a substantial starting point for ongoing innovation in Virginia.

¹ Virginia Performs <http://vaperforms.virginia.gov/indicators/economy/personalIncome.php>

² US Census Bureau <http://www.census.gov/hhes/www/income/data/statemedian/index.html>

³ <http://www.yesvirginia.org/AssetRich/FastFacts>

⁴ <http://www.countyhealthrankings.org/app/virginia/2015/overview>

⁵ <http://kff.org/other/state-indicator/total-population/>

⁶ SHADAC analysis of 2013 Supplemental Health Care Exhibit data from the National Association of Insurance Commissioners. Credible insurance carriers include active insurers that have at least 1,000 member years and positive premium earnings. Plans with the same parent company are collapsed into one insurer. United States figures represent the national median. See appendix (Table A1) for information on the number of member years for each credible insurance carrier in your state.

⁷ CMS Managed Care Enrollment Reports.

⁸ CMS MA State/County Market Penetration file.

⁹ Medical Expenditure Panel Survey - Insurance Component, see appendix for plan type definitions. These data only include firms that offer health insurance.

¹⁰ Medical Expenditure Panel Survey-Insurance Component, numbers reflect total premiums (employer and employee shares). These data reflect information collected from a sample of all employers, and are not comparable to premiums reported from state and federal insurance Marketplaces.

¹¹ SHADAC analysis of 2013 Supplemental Health Care Exhibit data from the National Association of Insurance Commissioners.

¹² The Pew Charitable Trusts and the John D. and Catherine T. MacArthur Foundation, "State Employee Health Plan Spending," August 2014, based on data from the Milliman Atlas of Public Employer Health Plans. Numbers reflect total premiums (employer and employee shares).

¹³ Centers for Medicare & Medicaid Services (CMS) Geographic Variation Public Use File. Estimates were standardized to remove geographic differences in Medicare payment rates. In general, total standardized per capita costs are less than actual per capita costs because extra payments Medicare made to hospitals, such as payments for medical education (both direct and indirect) and payments to hospitals that serve a disproportionate share of low-income patients are removed.

¹⁴ Centers for Medicare & Medicaid Services (CMS) Geographic Variation Public Use File. Estimates were standardized to remove geographic differences in Medicare payment rates. In general, total standardized per capita costs are less than actual per capita costs because extra payments Medicare made to hospitals, such as payments for medical education (both direct and indirect) and payments to hospitals that serve a disproportionate share of low-income patients are removed.

¹⁵ Medicaid and CHIP Payment and Access Commission (MACPAC), "MACStats: Medicaid and CHIP Program Statistics," June 2014, based on Medicaid Statistical Information System (MSIS) data.

¹⁶ CMS Office of the Actuary, Health Expenditures by State of Residence. Other Services includes the following: Dental Services; Home Health Care; Prescription Drugs; Durable Medical Products; Nursing Home Care; Other Health, Residential, and Personal Care. Other health professionals include non-physician providers such as nurse practitioners and physician assistants.

¹⁷ National Association of Community Health Centers, Key Health Center Data by State, 2011. Population data from the American Community Survey (ACS).

¹⁸ Health professional shortage area information from Health Resources and Services Administration (HRSA). Population data from ACS. See appendix for more details on health professional shortage areas.

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- ¹⁹ NCHS analysis of NAMCS Electronic Medical Records Supplement from Decker, S. "Two-thirds of primary care physicians accepted new Medicaid patients in 2011-2012." *Health Affairs*, 32, no. 7, 2013.
- ²⁰ Kaiser State Health Facts measure based on state licensing information from Redi-Data, Inc.
- ²¹ 2013 Statistical Profile of Certified Physician Assistants,
- ²² National Commission on Certification of Physician Assistants. Area Health Resources Files (AHRF).
- ²³ American Association of Nurse Practitioners.
- ²⁴ Law Atlas, "Nurse Practitioner Prescribing Laws," July 2014
- ²⁵ National Center for Health Statistics (NCHS) analysis of National Ambulatory Medical Care Survey (NAMCS) Electronic Medical Records Supplement.
- ²⁶ Office of the National Coordinator for Health Information Technology (ONC) Dashboard Meaningful Use Scorecard.
- ²⁷ Analysis of the 2013 American Hospital Association (AHA) Information Technology (IT) Supplement to the AHA Annual Survey published in Office of the National Coordinator for Health Information Technology (ONC) Data Brief No. 16, May 2014.
- ²⁸ Analysis of Surescript transactions published in Office of the National Coordinator for Health Information Technology (ONC) Data Brief No. 18, July 2014.
- ²⁹ All-Payer Claims Database (APCD) Council.
- ³⁰ Center for Medicare and Medicaid Innovation and Centers for Medicare and Medicaid Services.
- ³¹ Centers for Disease Control and Prevention (CDC).
- ³² National Association of State Health Policy (NASHP), see appendix for more detail on these initiatives.

A. The Lead Entity: Virginia Center for Health Innovation

As an entity created to advance statewide collaboration on health reform and innovation and given its success in building a 70 member advisory board for pre-design work, the Virginia Center for Health Innovation (VCHI) was selected to lead Virginia's SIM design process. As a 501c3 public-private partnership, the VCHI is an atypical SIM program lead. It is the only non-state agency or state university to lead a SIM Design in the country. We believe it is this unique structure that positioned Virginia to move quickly and collaboratively to undertake a tremendous amount of planning in a very short time. Leadership was provided by the VCHI Board of Directors, staff, and a network of highly respected contractors. For all, SIM Design work was a top priority, not an additional task. We believe this dedication of purpose was essential to our success in achieving our aims in a timely and thoughtful way.

A1. VCHI Board of Directors

Members of the VCHI Board of Directors provide diverse expertise and include representatives from health systems and health providers, insurance and pharmaceutical industries, health research and education, nonprofit health services, state government, and non-health industry employers. The VCHI Board of Directors represents all geographic regions of the Commonwealth.

VCHI Board of Directors 2015-2016

Nancy Agee	Chair	Carilion Clinic	President and CEO
William A. Hazel, Jr., MD	Immediate Past Chair	Commonwealth of Virginia	Secretary of Health & Human Resources
Kendall D. Hunter	Vice Chair	Kaiser Permanente	SVP, Health Insurance Exchange Operations
William Murray, PhD	Vice Chair	Dominion Resources	Managing Director, Public Policy
Chas Roades	Secretary	The Advisory Board	Chief Research Officer
Richard M. Hamrick, III, MD, MBA	Treasurer	HCA Virginia	Chief Medical Officer
Andrew Corsig	Director	Pharmaceutical Research and Manufacturers of America	Deputy Vice President

Elizabeth Whalley Buono, BSN, RN,MBA, JD	Director	WestRock	VP Global Quality, Regulatory and External Affairs
Ursula Butts, RN, BSN, MSHA	Director	VCU Community Memorial Healthcenter	VP of Patient Care Services
Ben J. Davenport, Jr.	Director	First Piedmont Corporation	Chairman
Siobhan Dunnivant, MD	Director	OBGYN Associates, Ltd.	COO & Partner
Anna McKean	Director	Aviant Health	President & Co-Founder
Deborah D. Oswalt	Director	Virginia Health Care Foundation	Executive Director
Pamela Sutton-Wallace	Director	University of Virginia Medical Center	CEO

A2. VCHI Staff

The VCHI staff is responsible for facilitating the continued engagement of all SIM Design stakeholders. New staff, hired for the SIM work, were in place by the end of February 2015, the first month of the grant, and included individuals well known to our partner organizations. To manage the logistics of SIM Design, five positions were added and two existing VCHI positions were redirected to concentrate on SIM specific work.

VCHI staff for SIM Design was as follows:

Beth A. Bortz

State Innovation Model Project Director

The SIM Project Director worked in partnership with the Governor's Office Leadership Team and the VCHI Board of Directors to oversee all aspects of SIM design.

Elizabeth Brady

Logistics Coordinator

The Logistics Coordinator provided scheduling and meeting support to all SIM 2015 workgroups.

Ashley M. Edwards

Accountable Care Community and Innovation Network Manager

The ACC & VHIN Manager oversaw all Accountable Care Community Design, engaging stakeholders in each region, sharing data on core population health and quality indicators, and working with them to begin the development of the *Regional Transformation Plans*.

Anne Faszewski

Finance Director

The Finance Director provided oversight for all financial and accounting issues associated with SIM design.

Molly Huffstetler Dean

Innovation Waiver Program Manager

The Innovation Waiver Program Manager worked with the Virginia Department of Medical Assistance Services and the Virginia Department of Behavioral Health and Developmental Services to oversee the Delivery System Reform Incentive Payment (DSRIP) Waiver work.

Brenden Rivenbark

Integrated Care Program Manager

The Integrated Care Program Manager oversaw the Integrated Care Workgroups and ensured completion of all deliverables and milestones for the project by building relationships with and facilitating meetings of the Behavioral Health, Oral Health, and Complex Care Workgroups.

Suzannah Stora

Sustainability Director

The Sustainability Director was responsible for 1) identifying sources of funding to advance initiatives developed under the SIM Design beyond 2015 and 2) completing all applicable funding and reporting requests.

A3. VCHI Subcontractors

VCHI subcontracted with many consultants to secure the additional expertise and knowledge needed for SIM Design. VCHI and its subcontractors carefully mapped out specific tasks and duties, which were detailed in memorandums of understanding. Each subcontractor also submitted a detailed monthly progress report, and actively updated VCHI's Smart Sheet project management software. VCHI SIM subcontractors included (*listed alphabetically by lead contact*):

Deborah Bachrach <i>Manatt</i> Innovation Waiver	David Coe <i>Colonial Behavioral Health</i> Integrated Care	Alan Dow, MD <i>VCU Center for Interprofessional Education and Collaborative Care</i> Workforce Initiative
A. Mark Fendrick, MD <i>University of Michigan Center for Value-Based Insurance Design</i> VBID & Choosing Wisely	Patrick Finnerty <i>PWF Consulting</i> Integrated Care; Innovation Waiver	Andrew Hackbarth <i>RAND Corporation</i> Quality, Payment, and HIT Roundtable; Innovation Waiver; Integrated Care
Stephen Horan <i>Community Health Solutions</i> Quality, Payment, and HIT Roundtable; ACC's	Sandra Hunt <i>PriceWaterhouseCoopers</i> Monitoring and Evaluation	John Lindstrom <i>Richmond Behavioral Health Authority</i> Integrated Care
Michael Lundberg <i>Virginia Health Information</i> Choosing Wisely; Quality, Payment, and HIT Roundtable	Michael Matthews <i>Connect Virginia HIE</i> Quality, Payment, and HIT Roundtable	Katherine Neuhausen, MD <i>VCU Office of Health Innovation</i> Integrated Care; Innovation Waiver

Len Nichols, PhD <i>GMU, Center for Health Policy Research and Ethics</i> Monitoring and Evaluation; Quality, Payment, and HIT Roundtable	Karen S. Rhueban, MD <i>UVA Center for Telehealth</i> Telemedicine & Remote Patient Monitoring	Joann Richardson, PhD <i>VCU Department of Health and Human Performance</i> Workforce Initiative
Michael Royster <i>Institute for Public Health Innovation</i> Workforce Initiative	Kathy Vessley-Massey <i>Bay Aging</i> Care Transitions	Kathy Wibberly, PhD <i>Virginia Telehealth Network</i> Telemedicine & Remote Patient Monitoring

B. A Team Approach: Partnership with State Government

Virginia's SIM Design is a comprehensive strategy that includes the involvement of state government agencies, regional and local governments, providers, payers, businesses, and community and patient advocacy organizations. These entities worked together to achieve the Triple Am of better health, better care, and lower cost for all Virginians.

B1. Virginia SIM Structural Hierarchy



B2. Governor's Office Leadership Team

At the helm of the SIM Design effort is the Governor's Office Leadership Team. In partnership with the VCHI Board of Directors, it provides guidance to all entities working on SIM Design. Members include: the Governor, the Lt. Governor, the Secretary and Deputy Secretaries of Health and Human Resources, the Commissioner of the Virginia Department of Health, the Commissioner of the Department of Behavioral Health and Developmental Services, the Commissioner of the Department of Aging and Rehabilitative Services; the Director of the Department of Medical Assistance Services; and the Director of the Department of Human Resource Management. During the planning year, the Governor's Office Leadership Team met monthly to ensure that the all facets of the SIM Design remained on schedule. To help provide continuity, Beth Bortz, VCHI President and CEO and SIM Project Director, also served as a member of the Leadership Team. Likewise, Sec. William Hazel, MD, Secretary of Health and Human Resources, served on both the Governor's Office team and the VCHI Board of Directors. In addition, VCHI staff provided weekly updates for the Governor so that he would remain knowledgeable about the progress of SIM Design.

C. Workgroups and Collaborative Teams

To facilitate SIM Design, VCHI set up many workgroups and collaborative teams that represent the different programmatic areas of the plan. These workgroups and teams were guided by the Governor's Office Leadership Team and operationalized by the VCHI Board of Directors. They included:

C1. Population Health

Key Partners: Virginia Department of Health, Virginia Health Information

Priorities:

- Identify data sources for the *Virginia Plan for Well-Being*
- Analyze preliminary data
- Develop the *Virginia Plan for Well-Being*
- Ensure alignment of the *Virginia Plan for Well-Being* with the selected core clinical quality measures developed by the Quality, Payment Reform, and Health Information Technology workgroup

C2. Quality, Payment Reform, and Health Information Technology

Key Partners: Office of the Lt. Governor, Virginia's Secretary of Health and Human Resources, Virginia Department of Health, Virginia Department of Medical Assistance Services, Virginia Department of Behavioral Health and Developmental Services, Virginia Department of Aging and Rehabilitative Services, Virginia Health Information, *Connect Virginia* HIE, Virginia Association of Health Plans members, Medical Society of Virginia, Virginia Academy of Family Physicians, American College of Physicians (Virginia Chapter), Virginia Hospital and Healthcare Association members, and Virginia Chamber of Commerce members

Priorities:

- Build consensus around a core set of health system performance and clinical quality measures to be voluntarily utilized by payers in Virginia
- Develop an HIT Plan for the Commonwealth of Virginia that includes a health information exchange strategy

C3. Medicaid Innovation

Key Partners: Virginia Department of Medical Assistance Services, Virginia hospitals, community service boards, federally qualified health centers, free clinics, dental providers, and primary care and psychiatry practices affiliated with academic medical centers.

Priorities:

- Review Delivery System Reform Incentive Payment Waiver opportunity and assess potential benefit for Virginia
- Assure long-term budget neutrality of approach and identify sources of funding for non-federal share
- Develop concept paper and submit to CMS for feedback
- Prepare waiver submission and engage in waiver negotiations with CMS

C4. Workforce

Key Partners: Virginia Commonwealth University, Institute for Public Health Innovation

Priorities:

- Expand use of community health workers, define their scope of practice, and recommend a credentialing process.
- Develop and pilot an online *Learning Transformation* course for healthcare professionals
- Develop care coordination and community health educator certificate programs
- Explore sustainable funding mechanism for community health workers with private insurers and the Virginia Department of Medical Assistance Services

C5. Value-Based Insurance Design and Choosing Wisely

Key Partners: Virginia Department of Human Resource Management, Center for Value Based Insurance Design, Milliman, Medical Society of Virginia, Virginia Health Information

Priorities:

- Pilot use of Milliman's *Waste Calculator* application on data from the Virginia state employee health plan and the All Payer Claims Database (APCD) to determine which medical tests and procedures are unnecessary, potentially harmful, and costly
- Recommend changes to Virginia's state employee health plan benefit design to better incentivize consumers to choose high value care and avoid low value tests and procedures

C6. Integrated Care

Key Partners: Virginia Department of Behavioral Health and Developmental Services, Richmond Behavioral Health Authority, Colonial Behavioral Health, Middle Peninsula Northern Neck Community Services Board, Virginia Commonwealth University, The University of Virginia, Bon Secours Health System, HCA Virginia, Virginia Oral Health Coalition, Inova Health System, Carilion Clinic, Virginia's Federally Qualified Health centers, local health departments, housing agencies, school systems, and social service agencies.

Priorities:

- Establish regional partnerships to assess local opportunities to improve care integration
- Develop a portfolio of integrated care models to address:
 - Bi-directional integration of behavioral health and primary care for adults, transition-aged youth, and children;
 - Bi-directional integration of oral health and primary care for adults and children;
 - Enhanced care coordination and treatment for the most complex and expensive utilizers of the health care system; and
 - Enhanced substance abuse treatment with integrated mental health and primary care treatment

C7. Care Transitions

Key Partners: Eastern Virginia Care Transitions Partnership (EVCTP), Virginia Department of Aging and Rehabilitative Services, Virginia Health Quality Center, Virginia Hospital and Healthcare Association, Virginia Association of Area Agencies on Aging

Priorities:

- Conduct an assessment of EVCTP's pilot enhancements to the Coleman Care Transitions Initiative
- Develop a plan for a statewide expansion of EVCTP's Coleman Care Transitions Initiative
- Develop an alternative payment model for EVCTP's services

C8. Primary Care Transformation

Key Partners: Virginia Commonwealth University, Virginia Association of Family Physicians, American College of Physicians, VA Chapter, Virginia Community Healthcare Association, Virginia Health Quality Center, George Mason University, Community Health Solutions, Agency for Health Care Research and Quality

Priorities:

- Identify 250 primary care practices interested in practice transformation support services
- Assess practice readiness and capacity for change

- Develop a package of capacity building supports to help primary care providers transform their practices for population health management based on principles of the Chronic Care Model, the Patient Centered Medical Home, health information exchange, and clinical-community partnership

C9. Telehealth and Remote Patient Monitoring

Key Partners: University of Virginia Center for Telehealth, Virginia Telehealth Network, Virginia Community Healthcare Association, Virginia Department of Health, George Mason University

Priorities:

- Identify sites for high risk OB and chronic disease remote patient monitoring pilot expansions
- Prepare a financial analysis of potential cost savings from an expansion of telehealth and remote patient monitoring services
- Develop a proposed bundled payment for high risk OB telehealth services

D. The Virginia Health Innovation Network

A key priority for Virginia's SIM Design work was to ensure that any organization or individual that wanted to participate in the planning was provided with an opportunity to engage. This engagement opportunity was provided through the Virginia Health Innovation Network (www.innovatevirginia.org), a custom-built, online platform where more than 1700 individuals from across the Commonwealth joined to learn more about Virginia's SIM work and consider participation opportunities. Through this collaboration site, individuals joined online communities of interest, reviewed plan development, suggested innovations for consideration, and commented on areas of interest. The site will serve as an ongoing mechanism for collaboration and engagement as Virginia prepares to move from model design to testing.

During SIM Design, VCHI's main priorities for the ACCs were to build engagement, to review regional population health data, and to begin to identify priorities that align with Virginia's Plan for Well-Being and Delivery System Reform Incentive Payment Waiver. To facilitate this work, at least three meetings were held in each region during the course of the planning year. Each regional partnership was provided with a package of capacity building supports, data assessments, value-based payment models, and regulatory supports to help its members consider and select sustainable community care models that are person-centered, population-focused, evidence-based, and accountable.

Should future funding be secured, the ACCs will begin work to develop Regional Transformation Plans, which will include how each locality will implement selected statewide metrics in their region. VCHI will offer guidance and technical support to assist in designing the necessary data collection infrastructure to implement rapid cycle improvement capacity.

A. Setting the Stage

Virginia's Department of Health took the lead in developing a plan to improve population health in the Commonwealth of Virginia. Known as ***Virginia's Plan for Well-Being***, it is a call to action to create and sustain conditions that support health and well-being in all of Virginia. Communities, stakeholders, and partners can use this plan to build on work being done to assure clarity of effort and align scarce resources. It lays out 13 priority goals that address issues significantly impacting the health and well-being of the people of Virginia. It provides a framework to guide the development of projects, programs, and policies to advance Virginians' health. From these goals, communities can choose one or two that represent a priority to them and around which they can focus efforts in the short term. The strategies in the Plan for Well-Being have been shown to be promising or best practices. The Plan for Well-Being also identifies some of the key community partners needed to achieve results.



The Virginia Department of Health is committed to tracking the progress of Virginia's population health improvement and to annually report on specific measures identified. Using population health data to evaluate our progress can help Virginians assess whether our systems and strategies are effective and can guide us to change course where needed.

Achieving population health improvement requires alignment, clarity and intentionality. Alignment includes coordination and collaboration of all sectors of the community: government, health care, education, businesses, community organizations including the faith community, and the public. Clarity refers to focused effort on issues that matter to people with corresponding measurable outcomes. Intentionality refers to designing our communities, policies and processes to specifically lead to improved outcomes in well-being, while avoiding unintended unhealthy outcomes. Virginians working together in alignment, with clarity and with a shared intention to improve the health of all Virginians provides the basis for success. We believe there is a role for everyone as we move Virginia toward becoming the healthiest state in the nation.

B. Defining the Vision: Well-Being for all Virginians

Virginians live longer, healthier lives today than ever before. Medical care is only part of the reason. Health begins where Virginians live, work, and play. Virginia's economy paves the way for its communities to create conditions for people to be healthy. Disinfecting drinking water, vaccinating people, controlling mosquitos and rodents, and tracking contagious illnesses keep once common diseases like measles and polio at bay. Passing laws to make transportation safer and to protect workers reduces injuries.

The definition of well-being is "a state characterized by health, happiness, and prosperity". It is valuable as a population outcome measure because it reflects how Virginians perceive their life is going. Well-being is dependent on having good physical and emotional health. Social circumstances, financial resources, and community factors also play important roles.

The opportunity for health begins with our families, neighborhoods, schools and jobs. There are striking differences in health within and between communities in Virginia. Uncovering the root causes of health inequities in Virginia's neighborhoods and working together to improve the conditions needed for people to be healthy will improve well-being for all Virginians.

This begins with community coming together to review local and state level data that reflect the health of the community. Examining trends and variation among subsets of the population can assist the state and communities in analyzing health outcomes and identifying priority issues to address.

Virginia's Plan for Well-Being lays out the foundation for giving everyone a chance to live a healthy life: (1) Factoring health into policy decisions related to education, employment, housing, transportation, land use, economic development, and public safety; (2) Investing in the health, education, and development of Virginia's children; (3) Promoting a culture of health through preventive actions; and Creating a connected system of health care. The plan highlights specific goals and strategies on which communities can focus so the state can make measureable health improvement by 2020. *Virginia's Plan for Well-Being* is a call to action for all Virginians to work together to make Virginia the healthiest state in the nation. Improving well-being can lower health care costs and increase productivity, ultimately enhancing Virginia's competitiveness and resiliency.

C. Aims and Goals

C1: AIM: Healthy Connected Communities

Where Virginians live affects their health. Feeling safe, supported, and connected to family, neighborhood, and community is critical for well-being. Place matters: the conditions in which people live, work, and play shape their health. For example, having safe, clean parks provides

Virginians with recreational opportunities. This supports active living, which results in improved physical and emotional health. Conditions that foster well-being include:

- Safe, walkable neighborhoods
- Accessible public transportation
- Access to health care
- Employment opportunities with safe working conditions
- Quality educational systems
- Spaces for social gatherings and physical activity
- Clean air and water

Improving environmental and social conditions at the neighborhood level provides greater opportunity for all Virginians to be healthy. Communities can improve health by considering implications to health when developing policies and systems related to education, employment, housing, transportation, land use, economic development, and public safety.

The Virginia Department of Health has developed a Health Opportunity Index (HOI) to help communities understand the factors that lead to health so they can work to improve health outcomes for everyone. The HOI is a composite measure of the “social determinants of health”, factors that relate to a community’s well-being and the health status of its population. It is comprised of 13 indices in four categories:

Environment:

(1) Air quality; (2) Population density; (3) Population churning; (4) Walkability

Consumer Opportunity:

(1) Affordability; (2) Education; (3) Food accessibility; (4) Material deprivation

Economic Opportunity:

(1) Employment; (2) Income inequality; (3) Job participation

Wellness:

(1) Segregation; (2) Access to care

The HOI is calibrated with life expectancy, disability-adjusted life expectancy, and low birth weight measures, and is strongly predictive of key health outcomes. The HOI provides communities with a tool to identify areas and populations that are most vulnerable, giving Virginia an opportunity to develop strategic, targeted approaches to improve health and well-being.

Foundational Goals for Creating Healthy Connected Communities

- Virginia's families maintain economic stability
- Virginia's communities collaborate to improve the population's health
- Virginians receive a quality education
- Virginians complete job training or college after high school
- Virginians live in housing they can afford
- Virginians are socially engaged
- Virginians have access to clean air and water
- Virginians have access to safe food
- Virginians are prepared to respond to manmade and natural disasters
- Virginians have access to quality emergency medical services
- Virginians are protected from fires
- Virginians are protected from crime
- Virginia's public transportation systems provide access to and from geographically isolated areas
- Virginia's businesses partner with the community to address environmental and social drivers of workforce health

During 2016-2020, Virginia is focusing attention on two of these foundational goals:

1.1 Virginia's families maintain economic stability

1.2 Virginia's communities collaborate to improve the population's health

Goal 1.1 Virginia's Families Maintain Economic Stability

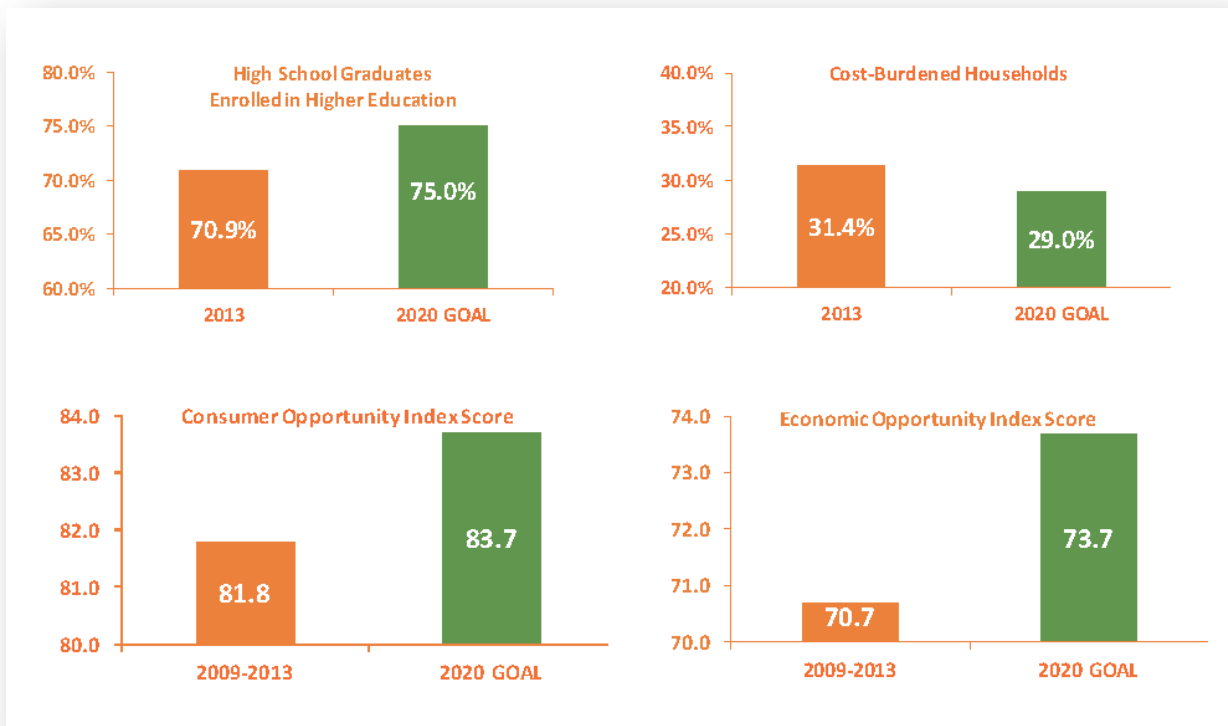
Health and poverty are inextricably linked; ill health not only affects the poor disproportionately, it is also associated with lower income.¹ Virginia is perennially one of the wealthiest states in the nation. Unfortunately, a wealth gap prevents some Virginians from experiencing equitable opportunities for optimal health and longevity. Reducing poverty and maintaining economic stability are vital to keeping all Virginians well. An education that prepares Virginians for today's job market provides increased opportunity for employment, which in turn improves access to stable housing, healthy food, transportation, and health care. Strategic investments in the physical and social infrastructure as well as investments in educational resources are important for sustained economic stability.

Strategies:

- Provide alternative pathways to graduation and post-secondary training for disconnected youth and those with special needs
- Develop and use early warning systems to prevent failure and help at-risk students

- Develop school policies to assess and address physical, social, and environmental health barriers that impede learning
- Expand training and work-linked learning opportunities for youth
- Support opportunities for mid-career retraining
- Build affordable housing, and rehabilitate existing affordable housing to accommodate low-income families

Measures of Success:



Key Community Partners:

- Community Organizations
- Community Planners
- Economic Development Agencies
- Educators
- Elected Officials
- Employers
- Families
- Justice System

Goal 1.2 Virginia's Communities Collaborate to Improve the Population's Health

Adopting a collaborative community approach to health assessment and planning supports population-level health improvement. Both state and community-level assessments are valuable to identify opportunities to achieve and maintain well-being in the Commonwealth. This process involves bringing together people from many sectors of the community to review data; identify priorities; develop goals and measurable objectives; and recommend evidence-based policies,

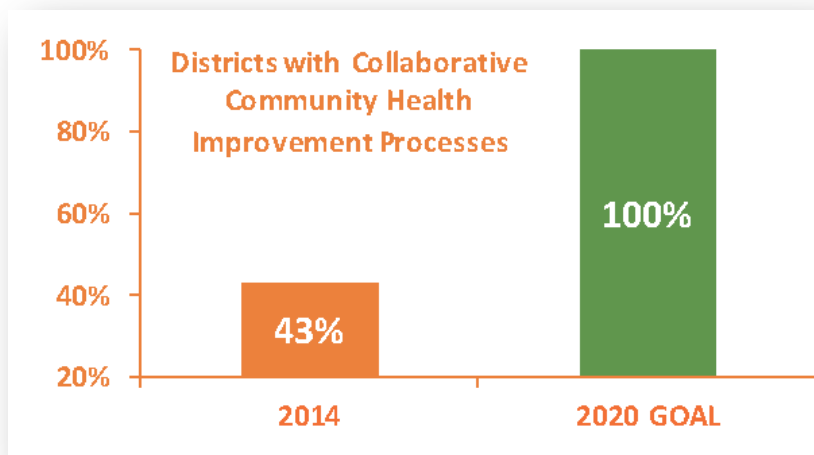
programs, and actions for the community to pursue. The assessments include social, economic, and environmental data, such as the number of mothers who did not graduate from high school, in addition to health outcome data, like the number of people who have lung cancer.

State and community health improvement plans can be a catalyst for empowering community action. They can be shared with elected officials, the health care community, governmental and community-based agencies, and the public. The information can foster the allocation of resources to areas that will maximize benefits to the collective health of the community.

Strategies:

- Establish collaborative health assessment and strategic health improvement planning processes throughout the Commonwealth that include public health, health care systems, and community partners
- Align health system community benefit programs with community health improvement plans
- Enhance data systems and public health information technology to collect, manage, track, analyze, and report state and county-level data for use in health assessments

Measures of Success:



Key Community Partners:

- Community Organizations
- Educators
- Elected Officials
- Employers
- Families
- Health Care Providers
- Hospital Systems
- Local Governments
- Public
- Public Health

C2: AIM: Strong Start for Children

A child's health is affected by biological influences, including nutrition, illness, and each parent's health, as well as environmental influences, including education and quality health and social services.² Compared to children without chronic health problems, children with chronic health problems have a greater risk of having poorer health outcomes and lower job status as adults.^{3 4} Health-related factors affect school performance, and in turn academic success is associated with health outcomes during childhood and later in adulthood.⁵ Investing in programs that lead to improved health for Virginia's children benefits everyone and reduces long-term costs to the Commonwealth.⁶

Foundational Goals for Giving Children a Strong Start

- Virginians plan their pregnancies
- Virginia's children are prepared to succeed in kindergarten
- The racial disparity in Virginia's infant mortality rate is eliminated
- Virginians are as healthy as possible before becoming pregnant
- Pregnant women in Virginia receive recommended prenatal care services
- Virginia mothers breastfeed
- Virginia parents practice positive parenting
- Virginia fathers are engaged in family planning, health, parenting, and child development-focused activities
- Virginia infants and children are not exposed to secondhand smoke
- Virginia's adolescents choose not to engage in behaviors that put their well-being at risk

During 2016-2020, Virginia is focusing attention on three of these foundational goals:

2.1 Virginians plan their pregnancies

2.2 Virginia's children are prepared to succeed in kindergarten

2.3 The racial disparity in Virginia's infant mortality rate is eliminated

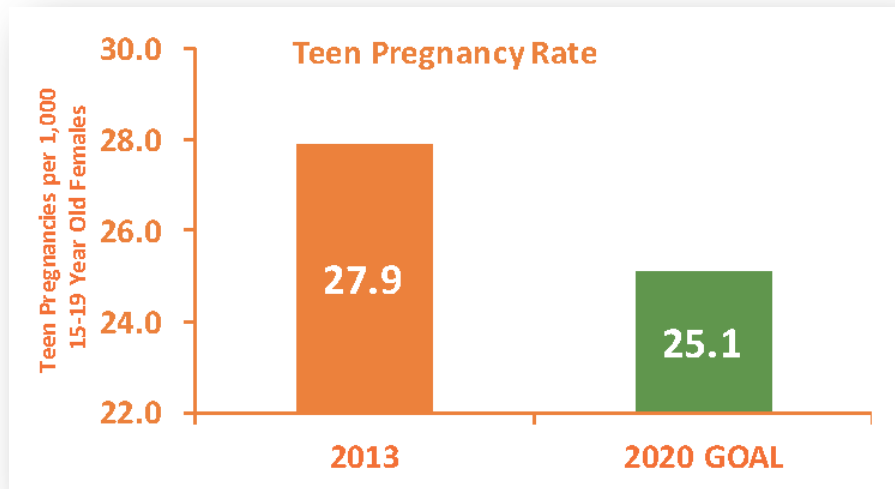
Goal 2.1 Virginians Plan Their Pregnancies

Comprehensive family planning and preconception health lead to improved birth outcomes, which are associated with better health and cognition as children mature. Family planning services include providing education and contraception. These services help families have children when they are financially, emotionally, and physically ready. Publicly-supported family planning services prevent an estimated 1.3 million unintended pregnancies a year in the United States. The trend toward having smaller families and waiting at least 24 months between pregnancies has contributed to better health of infants and children.⁷ Preconception health services for females and males include health screenings, counseling, and clinical services that enable them to become as healthy as possible before pregnancy.⁸

Strategies:

- Increase access to quality family planning services for all women of child-bearing age
- Expand evidence-based programs that promote healthy relationships
- Educate women and men about the effectiveness of contraceptive methods and increase access to the most effective methods
- Expand access to and use of preconception health services

Measures of Success:



Key Community Partners:

- Community Organizations
- Faith-Based Communities
- Families
- Federally Qualified Health Centers
- Health Care Providers
- Health Insurers
- Public Health
- Schools
- Social Services

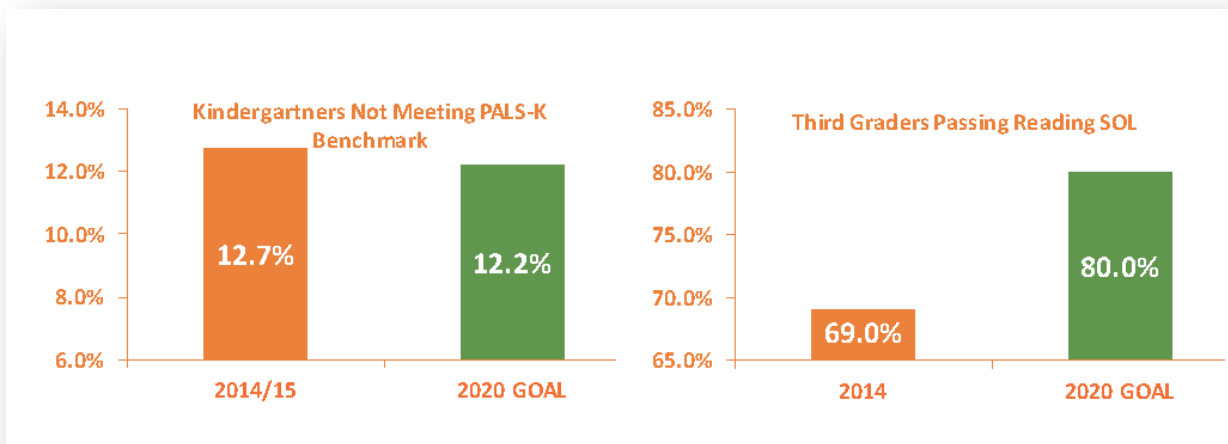
Goal 2.2 Virginia's Children Are Prepared To Succeed in Kindergarten

Succeeding or failing in school affects a child's well-being, self-esteem, and motivation. Being developmentally ready to learn and participate in classroom activities not only sets the stage for the kindergarten year but can have lifelong influence on well-being. According to a report by the University of Virginia's Curry School of Education, one out of three children in Virginia is not prepared to succeed in literacy, math, self-regulation, and/or social skills at the beginning of kindergarten. The report finds that "children who enter kindergarten behind their peers rarely catch up; instead, the achievement gap widens over time."⁹ Investing in programs to prepare children to succeed in school prevents them from falling behind and dropping out of high school.

Strategies:

- Increase developmental screening for childhood milestones and delays
- Increase enrollment of three to five year-old children in early childhood education programs that include quality educational components that address literacy, numeracy, cognitive development, socio-emotional development, and motor skills
- Increase the number of providers and educators who screen for adverse childhood events (ACEs) and are trained in using a trauma-informed approach to care
- Expand programs that help families affected by ACEs, toxic stress, domestic violence, mental illness, and substance abuse create safe, stable, and nurturing environments
- Expand programs that teach positive parenting and help parents fully engage with their children in productive ways
- Increase opportunities for fathers to be engaged in programs and services for their children

Measures of Success:



Key Community Partners:

- Businesses
- Childcare Providers
- Community Organizations
- Educators
- Families
- Health-Care Providers
- Public Health
- Social Services

Goal 2.3 The Racial Disparity in Virginia's Infant Mortality Rate is Eliminated

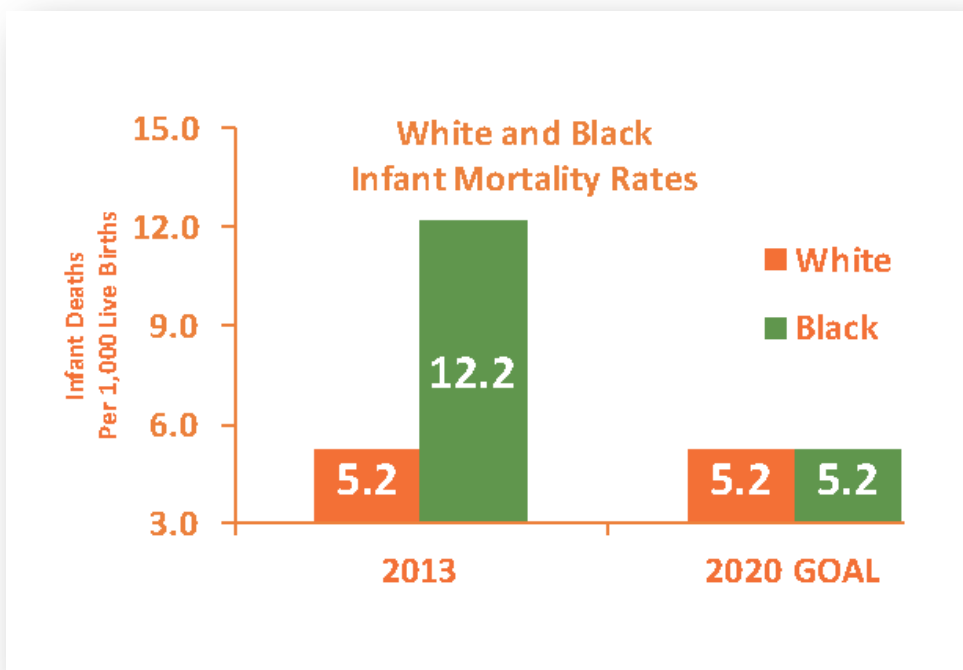
The Commonwealth has made significant progress in helping its infants thrive; however, some communities have worse outcomes than others. If the rate at which black infants and white

infants died were equal, Virginia would have the lowest infant mortality rate in the country. Giving everyone a chance to live a healthy life benefits not only those currently disadvantaged but the whole community. Closing this gap requires addressing the root causes of disparities throughout life. To achieve equity, all sectors of the community—from policy makers to grassroots community organizations to community members—must work together.

Strategies:

- Form neighborhood collaboratives co-led by community members in under-resourced communities to identify obstacles and develop plans to address the root causes of health inequities
- Increase the number of providers who screen postpartum women for depression and provide or refer for treatment
- Eliminate early elective deliveries
- Expand outreach to pregnant women and increase the number of group prenatal care classes
- Implement policies that support women and their families in breastfeeding for at least six months
- Expand home visiting and family support programs

Measures of Success:



Key Community Partners:

- Community Organizations
- Educators
- Elected Officials
- Families
- Federally Qualified Health Centers
- Health-Care Providers
- Health Insurers
- Hospital Association
- Medical Societies
- Mental Health Providers
- Public Health
- Social Services

C3: AIM: Preventive Actions

A culture of health and wellness is built on preventive actions. Virginia can substantially decrease the burden of disease and reduce health care spending by creating conditions that lead to health. Communities, health care systems, and individuals all have a role to play. For example, reversing Virginia's high prevalence of obesity will require (1) community design and policies that promote healthy eating and active living; (2) clinical interventions and education; and (3) individual behavior modification.

Policy makers can create the conditions that support the healthy choice becoming the easy choice. Fluoridating drinking water, developing walkable communities, and prohibiting smoking in public buildings are actions that prevent disease.

Clinical interventions that promote health include vaccination, cancer screenings, treatment for high blood pressure, dental cleanings, and early identification and treatment of persons addicted to substances. According to the Centers for Disease Control and Prevention (CDC), Americans receive preventive health services "at about half the recommended rate".¹⁰ This results in complex, advanced disease that is more costly to treat.

Personal behaviors that prevent disease include not using tobacco; eating appropriately-sized portions; daily dental flossing; practicing safe sex; exercising regularly; and taking medicines as prescribed.

Foundational Goals for Preventive Actions

- Virginians follow a healthy diet and live actively
- Virginia prevents nicotine dependency
- Virginia conducts comprehensive surveillance and investigation of diseases
- Virginians are protected against vaccine-preventable diseases
- Virginians are free from sexually transmitted infections
- Virginia prevents and controls animal diseases from spreading to people (for example, rabies and bird flu)
- In Virginia, injuries are prevented

- Virginians have good oral health
- Virginians have access to, can afford, and receive preventive clinical services
- In Virginia, cancers are prevented or diagnosed at the earliest stage possible
- Virginians have lifelong wellness

During 2016-2020, Virginia is focusing attention on these foundational goals:

- 3.1 Virginians follow a healthy diet and live actively**
- 3.2 Virginia prevents nicotine dependency**
- 3.3 Virginians are protected against vaccine-preventable diseases**
- 3.4 In Virginia, cancers are prevented or diagnosed at the earliest stage possible**
- 3.5 Virginians have lifelong wellness**

Goal 3.1 Virginians Follow a Healthy Diet and Live Actively

Following a healthy diet and living actively have long-term health benefits. Maintaining a healthy weight is associated with improved quality of life and reduced risk of cardiovascular disease, diabetes, dementia, cancer, liver disease, and arthritis. Obesity results from a combination of factors: genetics; behavior; education; access to nutritious food; an environment that supports active living; and food marketing and promotion.¹¹

A nutritious diet includes balancing the number of calories consumed with the number of calories the body uses. It is necessary for optimal growth and development of children.¹² Healthy eating is associated with improved thinking, memory, and mood among school children.¹³ The inability to afford enough food for an active, healthy life is associated with poor health outcomes among children, adults, and the elderly.¹⁴

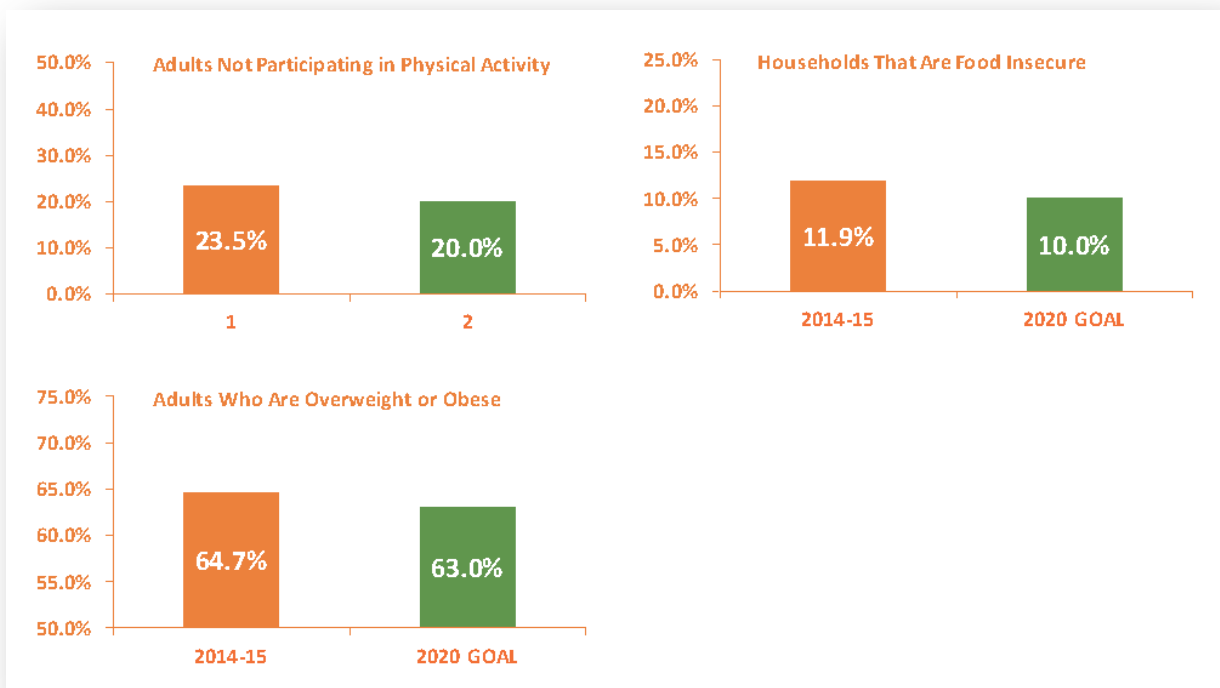
Living an active lifestyle supports wellness, improves mood, and reduces chronic disease. Among children, it alleviates depression, decreases body fat, creates stronger bones, and is even associated with better grades in school.¹⁵ Among older adults, physical activity lowers the risk of falls, a leading cause of injury. Factors that positively contribute to physical activity levels include higher income, enjoyment of exercise, and social support from peers and family. Factors that discourage adequate physical activity include a low income, lack of time, rural residency, and obesity.

Policies can be created and neighborhoods can be designed to support healthy eating and active living. People make decisions based on their environment; for example, a person may choose not to take a walk because there are no sidewalks. Creating opportunities in the community, child care, school, and workplace settings can make it easier to engage in physical activity and eat a healthy diet.

Strategies:

- Integrate health planning into local and regional comprehensive planning
- Adopt community designs that support active living, including concentrated mixed use development and bicycle- and pedestrian-friendly communities
- Expand opportunities during and after school for children to get healthy meals and the recommended amount of daily physical activity
- Create parks, recreation facilities or open space in all neighborhoods
- Increase access to healthy and affordable foods in all neighborhoods
- Implement organizational and programmatic nutrition standards and policies
- Expand programs and services to eliminate childhood hunger
- Help people recognize and make healthy food and beverage choices
- Increase the number of evidence-based employee wellness programs

Measures of Success:



Key Community Partners:

- Businesses
- Childcare Providers
- Community Organizations
- Community Planners
- Economic Development Agencies
- Educators
- Farmers
- Families
- Health-Care Providers
- Public Health

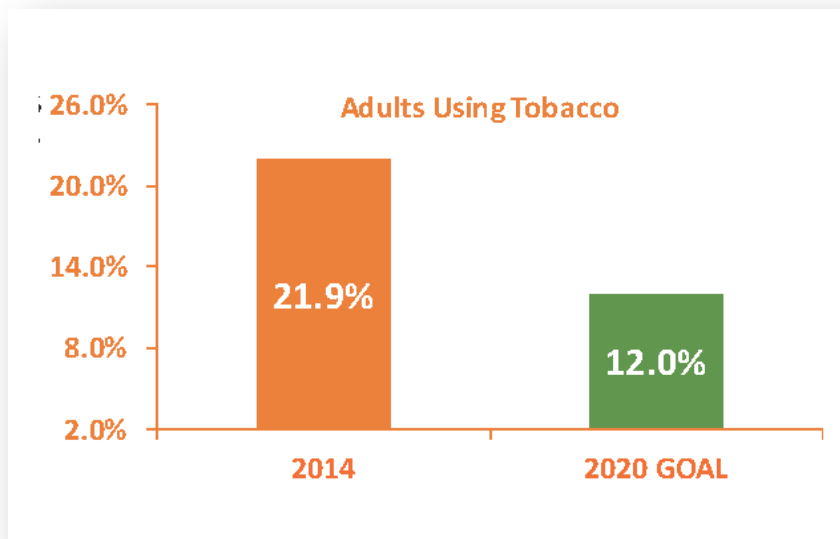
Goal 3.2 Virginia Prevents Nicotine Dependency

According to the CDC, “tobacco use is the single most preventable cause of death and disease in the United States.”¹⁶ The Campaign for Tobacco Free Kids reports that health care costs in Virginia directly caused by smoking are \$3.11 billion a year.¹⁷ Smoking is associated with heart disease, stroke, chronic lung disease, diabetes, bone disease, and many types of cancer. Tobacco accounts for 30% of all cancer deaths. Secondhand smoke causes heart disease, stroke, and lung cancer. It affects the health of infants and children by increasing the risk for asthma attacks, respiratory and ear infections, and Sudden Infant Death Syndrome.^{18,19}

Strategies:

- Establish smoke-free policies and social norms
- Promote tobacco cessation and support tobacco users in quitting
- Prevent initiation of tobacco use

Measures of Success:



Key Community Partners:

- Academic Partners
- Businesses
- Elected Officials
- Faith-based Communities
- Health-Care Providers
- Health Insurers
- Public Health
- School Districts

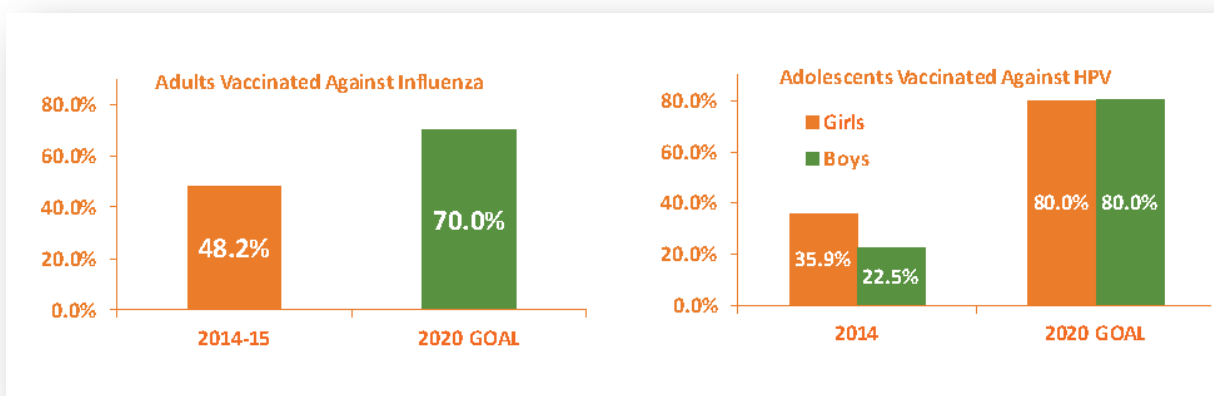
Goal 3.3 Virginians Are Protected Against Vaccine Preventable Diseases

Virginians who receive their recommended vaccines protect themselves from illness and protect others by decreasing the spread of disease. Virginia benefits from high childhood immunization rates. However, in two other areas, it lags behind. While the percent of adults receiving an annual flu vaccine has increased, it is still below the national goal. The area of most concern, however, is a low rate of adolescent vaccinations that prevent meningococcal meningitis and cancers caused by the Human Papillomavirus (HPV).

Strategies:

- Use patient registries to identify patients due for vaccination and send them reminders
- Evaluate data from the Vaccines for Children program and target outreach to providers who have the opportunity to improve vaccination rates
- Evaluate data from the Virginia Immunization Information System to assess immunization coverage and develop targeted interventions to address gaps
- Educate Virginians about the effectiveness of HPV vaccination in preventing HPV-associated cancers
- Increase the number of adolescents who receive well visits in patient-centered medical homes
- Establish policies to ensure health-care providers receive annual influenza vaccine

Measures of Success:



Key Community Partners:

- Families
- Federally Qualified Health Centers
- Health-Care Providers
- Hospital Systems
- Health Insurers
- Medical Societies
- Public Health

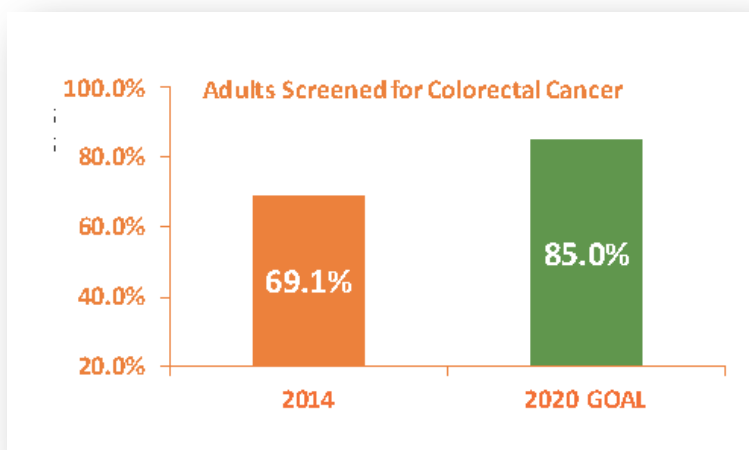
Goal 3.4 Cancers Are Prevented Or Diagnosed At The Earliest Stage Possible

Cancer is the leading cause of death for Virginians. It is caused by changes to the genes that lead to the uncontrolled growth of specific cells in the body. There are many types of cancer, and the risks associated with each type vary. Preventive actions can keep some cancers from developing. These include not using tobacco, minimizing alcohol consumption, and vaccination against HPV and Hepatitis B. In some cases, when cancer does form, it can be identified early through evidence-based screenings, resulting in better treatment options and outcomes.

Strategies:

- Increase tobacco prevention and cessation programs
- Increase percent of medical practices that implement evidence-based client reminder systems to increase recommended cancer screenings for patients
- Increase the number of providers, lay health advisors, and volunteers trained in health literacy to provide one-on-one education in medical, community, worksite, and household settings to support people in seeking recommended cancer screenings
- Implement evidence-based strategies to reduce structural barriers to cancer screenings
- Implement provider assessment and feedback interventions to increase cancer screenings

Measures of Success:



Key Community Partners:

- Community Organizations
- Employers
- Families
- Federally Qualified Health Centers
- Health Care Providers
- Health Insurers
- Hospital Systems
- Lay Health Workers
- Medical Societies
- Public Health

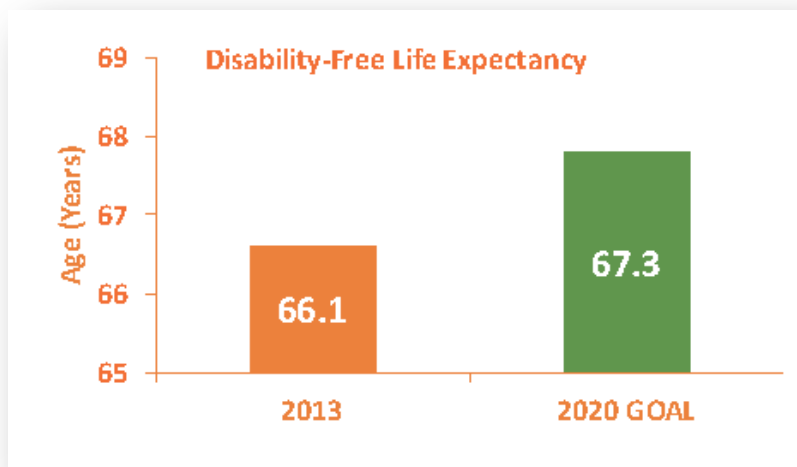
Goal 3.5 Virginians Have Lifelong Wellness

Nearly one out of every eight Virginians today is 65 or older. In two decades, almost one in every five will be. Preventive actions and support systems can result in people living in their own home and community safely, independently, and comfortably, regardless of age, income, or ability level.

Strategies:

- Encourage construction of safe, congregate and retirement housing for the aging population
- Increase access to internet usage for aging Virginians
- Increase the number of fitness and physical therapy facilities that promote senior fitness
- Develop a statewide senior falls prevention program
- Implement community-wide value-neutral programs to support Virginians in planning in advance for future healthcare choices

Measures of Success:



Key Community Partners:

- Academic Partners
- Adult Daycare Providers
- Area Agencies on Aging
- Faith-based Communities
- Businesses
- Families
- Health-Care Providers
- Hospital Systems
- Nursing Homes
- Public Health
- Senior Centers

C4: AIM: System of Health Care

Virginia is home to excellent providers and hospitals that deliver state-of-the-art health care services. However, like the rest of the United States, many health measures, including patient outcomes and quality, lag behind other developed countries. Health care spending in the United States is the highest in the world and continues to increase. Increased longevity and chronic health problems place new demands on the utilization of medical services and medical technology and contribute to higher spending.

The leading category of health care spending in Virginia is hospitalization. Many hospital stays can be avoided through prevention and primary care. In Virginia in 2013, there were 1,294 avoidable hospital stays for every 100,000 people. The rate ranges significantly across Virginia, from 233 to 6,934 per 100,000. A Kaiser Family Foundation poll found that 40% of Americans were “very worried” about “having to pay more for their health care or health insurance”.²⁰ The challenge for Virginia is to improve health care quality by providing care that is safe, effective, patient-centered, timely, efficient, and equitable while controlling health care spending. Meeting this challenge is difficult because health care is delivered across many disparate and independent settings and by many providers. The average Medicare beneficiary with chronic illness in the U.S. sees an average of 13 physicians a year.²¹ The Commonwealth Fund Commission challenged health care systems to improve performance by 2020. Strategies include making patient’s clinical information available at the point of care through shared electronic health records and actively coordinating care across providers and settings.²²

Foundational Goals for a System of Health Care

- Health care in Virginia is affordable to families and businesses
- Virginia assures adequate regulation of health care facilities
- Virginia has a strong primary care system linked to behavioral health care, oral health care, and community support systems
- Virginians obtain, process, and understand basic health information and services needed to make appropriate health decisions
- Virginia’s health IT system connects people, services, and information to support optimal health outcomes
- All health care professionals in Virginia are licensed and/or certified
- Health care-associated infections are prevented and controlled in Virginia

2020 Focus Goals

- 4.1 Virginia has a strong primary care system linked to behavioral health care, oral health care, and community support systems**
- 4.2 Virginia’s health IT system connects people, services, and information to support optimal health outcomes.**

4.3 Health care-associated infections are prevented and controlled in Virginia.

Goal 4.1 Virginia Has A Strong Primary Care System Linked To Behavioral Health Care, Oral Health Care, And Community Support Systems

A primary care provider is an important point of entry into the complex health care delivery system. This is especially important for people living with chronic conditions like diabetes. As the number of Virginians with chronic disease increases, the need for patient-centered care coordination and programs to help them manage their medications and monitor their illness increases.

Untreated mental health disorders and substance misuse and abuse have serious impact on physical health and are associated with the prevalence, progression, and outcome of some of today's most pressing chronic diseases, including diabetes, heart disease, and cancer. Integrating behavioral health care, substance abuse prevention and treatment services, and primary care services produces the best outcomes and proves the most effective approach to caring for people with complex health care needs.²³

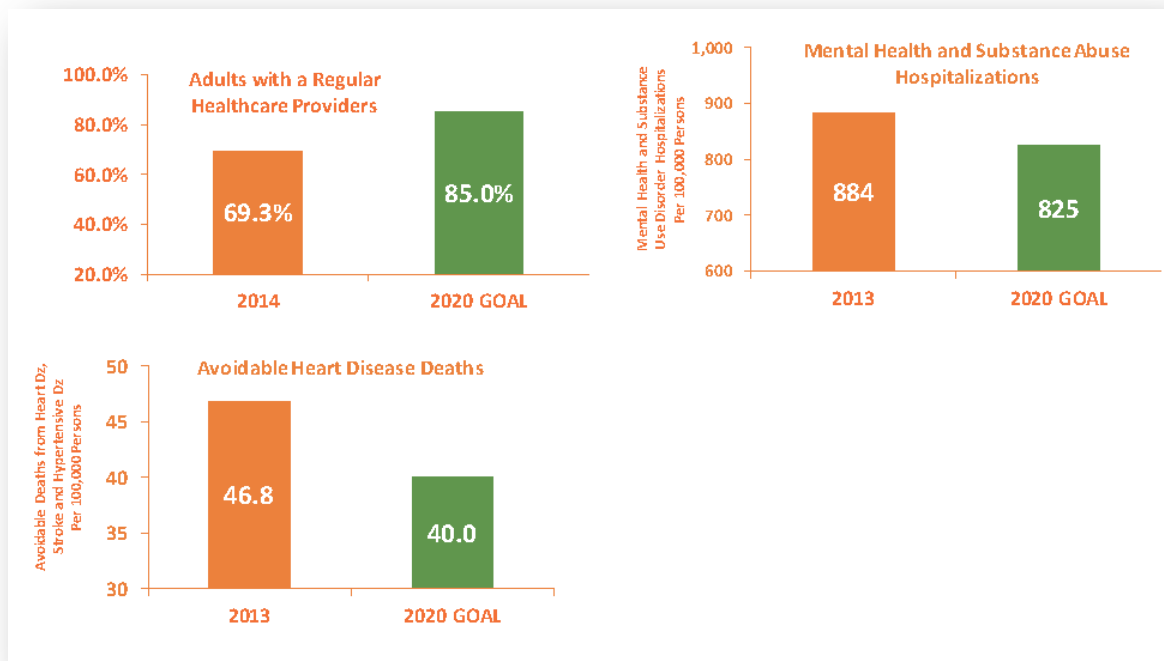
Bringing together hospital systems, health care providers, insurers and community partners to develop shared strategies to improve population health can lead to improved delivery systems and better coordination of care across settings.

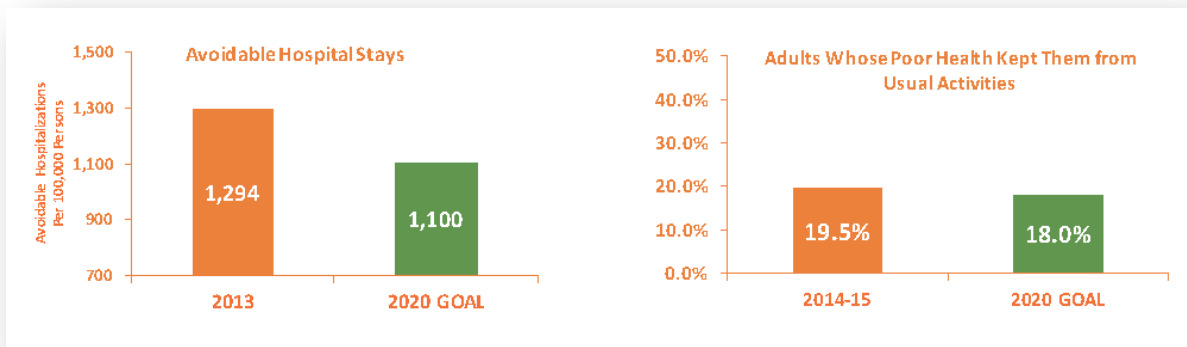
Strategies:

- Create Accountable Care Communities throughout Virginia, groups of health-care providers and community partners that voluntarily coordinate high quality care to ensure patients get the right care at the right time; avoid duplication of services; and prevent medical errors
- Incentivize payment for healthcare that leads to prevention and management of health and wellness rather than episodic treatment of disease
- Improve access to comprehensive primary care in patient-centered medical homes
- For patients with complex conditions, integrate primary care with behavioral health care, substance abuse services, and oral health care
- Increase the number of Virginia-certified community behavioral health clinics
- Expand telemedicine services in rural areas of Virginia
- Increase care coordination across providers and settings
- Expand adoption of the community health worker model by health care organizations
- Develop patient-centered health communications that have a positive impact on health, health care, and health equity

- Increase the number of providers who screen for nicotine use, including smokeless tobacco and e-cigarettes, and provide or refer for cessation services
- Expand access to and use of community-based programs for treatment of mental health disorders
- Promote drug-prescribing protocols in health care settings
- In primary care and other settings, increase use of the Screening, Brief Intervention, Referral and Treatment tool (an evidence-based practice used to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs)
- Increase the number of providers who screen for domestic violence and refer victims to organizations that can assist them
- Educate Virginians about how to avoid wasteful or unnecessary medical tests, treatments and procedures

Measures of Success:





Key Community Partners:

- Businesses
- Community Organizations
- Faith-based Communities
- Federally Qualified Health Centers
- Health-Care Providers
- Hospital Systems
- Public Health

Goal 4.2 Virginia's Health IT System Connects People, Services, And Information To Support Optimal Health Outcomes

Virginians and their health-care providers benefit from access to comprehensive, secure, easily accessible health information that can inform better decision making. Connect Virginia HIE, Inc. is the Commonwealth's health-information exchange designed to promote collaboration and information sharing between consumers, health-care providers, and purchasers of health care services. Developing the capacity to collect, analyze, and share population health information provides the opportunity for Virginia to create policies and systems to bring about meaningful health improvement for all Virginians.

Strategies:

- Adopt electronic health records in all clinical and care coordination settings
- Expand the use of specific disease registries and reports (for example, patients with hypertension) by medical practices and hospital systems to evaluate and track patient outcomes and develop targeted interventions to improve patient outcomes
- Connect providers, hospitals, and community partners through Connect Virginia HIE, Inc. to allow for statewide health information exchange
- Develop the capacity to create aggregated data reports through Connect Virginia HIE, Inc. that can be used to analyze and track population health measures
- Enhance public and private data systems and public health information technology to collect, manage, track, analyze, and report population health data
- Support Health Information Technology training opportunities and jobs

Measures of Success:



Key Community Partners:

- Businesses
- Elected Officials
- Federally Qualified Health Centers
- Free Clinics
- Health-Care Providers
- Health Insurers
- Hospital Systems
- Public Health

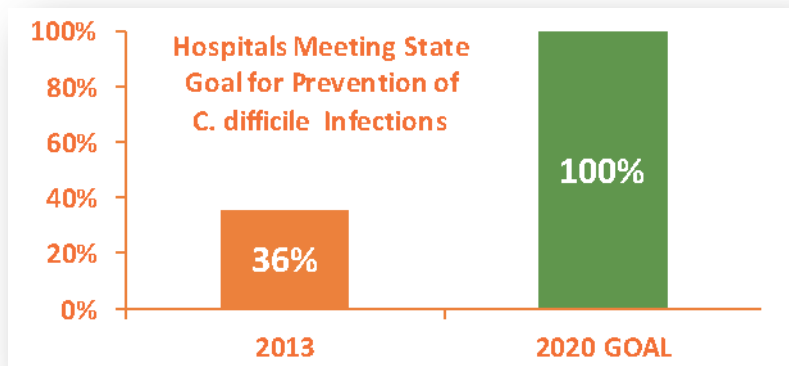
Goal 4.3 Health Care-Associated Infections Are Prevented And Controlled In Virginia

Developing systems to assure patient safety has improved but remains an important goal in providing quality care. Health care-associated infections (HAIs), those resulting from the receipt of medical care in health care settings, are estimated to account for \$28 to \$45 billion in direct health care costs in the United States annually.²⁴ When health care facilities employ evidence-based prevention strategies, HAIs can be prevented and controlled. For example, *Clostridium difficile*, a type of bacteria that causes gastrointestinal illness, accounts for 12% of HAIs in hospitals.²⁵ Strategies to prevent spread include complying with hand hygiene guidelines, ensuring adequate cleaning and disinfection of the environment, and prescribing antibiotics appropriately.

Strategies:

- Create a culture of safety in health care facilities that encourages effective communication between health-care providers, patients, and family members
- Perform hand hygiene frequently
- Use antibiotics wisely to prevent bacteria from developing resistance to the drugs that are used to treat them
- Implement standard precautions in the care of all patients in all health care settings all of the time
- Use evidence-based methods to clean medical equipment and the health care environment
- Collect, analyze, and use data to engage healthcare providers in quality improvement activities
- Increase knowledge and practice of key prevention strategies for the various HAIs across and within healthcare settings
- Use health information systems to reinforce clinical practices that improve patient safety

Measures of Success:



Key Community Partners:

- Academic Partners
- Businesses
- Health-Care Providers
- Hospital Systems
- Insurers
- Public Health

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CHAPTER 5:

ALIGNING POPULATION HEALTH AND CLINICAL QUALITY MEASURES

Virginia has used the SIM Design process to engage a broad group of stakeholders in collaborative efforts to align selected population health metrics (included in the *Virginia Plan for Well-Being*) with a core set of clinical quality measures. Guidance for developing Virginia goals and measures was provided by the *Quality, Payment Reform, and Health Information Technology (HIT) Roundtable*. The group was chaired by Lt. Governor Ralph S. Northam, MD, and included individuals representing public and private payers, providers, government representatives, and community organizations. The group was tasked with developing a plan to better align statewide clinical quality measures, population health measures, and cost-related performance measures across all payers in Virginia, and then to ensure that the IT infrastructure is in place to collect the necessary data for timely analysis and utilization.

A. Population Health Measures

The population health measures, which are described more fully in Chapter 4 as part of the *Virginia Plan for Well-Being*, are summarized in **Exhibit 1**.

Exhibit 1. Summary of Virginia's Plan for Well-Being Aims, Goals, and Measures		
Aims	Goals	Measures
Aim 1. Healthy Connected Communities	Goal 1.1 Virginia's Families Maintain Economic Stability	<ul style="list-style-type: none"> High School Graduates Enrolled in Higher Education Cost-Burdened Households Consumer Opportunity Index Score Economic Opportunity Index Score
	Goal 1.2 Virginia's Communities Collaborate to Improve the Population's Health	<ul style="list-style-type: none"> Virginia Health Districts with Collaborative Community Health Improvement Processes
Aim 2: Strong Start for Children	Goal 2.1 Virginians Plan Their Pregnancies	<ul style="list-style-type: none"> Teen Pregnancy Rate
	Goal 2.2 Virginia's Children Are Prepared to Succeed in Kindergarten	<ul style="list-style-type: none"> Kindergartners Not Meeting PALS-K Benchmark Third Graders Passing Reading SOL
	Goal 2.3 The Racial Disparity in Virginia's Infant Mortality Rate Is Eliminated	<ul style="list-style-type: none"> White and Black Infant Mortality Rates
Aim 3: Preventive Actions	Goal 3.1 Virginians Follow a Healthy Diet and Live Actively	<ul style="list-style-type: none"> Adults Not Participating in Physical Activity Households that Are Food Insecure Adults Who Are Overweight or Obese
	Goal 3.2 Virginia Prevents Nicotine Dependency	<ul style="list-style-type: none"> Adults Using Tobacco
	Goal 3.3 Virginians Are Protected Against Vaccine-Preventable Diseases	<ul style="list-style-type: none"> Adults Vaccinated Against Influenza Adolescents Vaccinated Against HPV

Exhibit 1. Summary of Virginia's Plan for Well-Being Aims, Goals, and Measures (cont'd)		
Aims	Goals	Measures
Aim 3: Preventive Actions	Goal 3.4 In Virginia, Cancers are Prevented or Diagnosed at the Earliest Stage Possible	<ul style="list-style-type: none"> Adults Screened for Colorectal Cancer
	Goal 3.5 Virginians Have Lifelong Wellness	<ul style="list-style-type: none"> Disability-Free Life Expectancy
Aim 4: System of Health Care	Goal 4.1 Virginia Has a Strong Primary Care System Linked to Behavioral Health Care, Oral Health Care, and Community Support Systems	<ul style="list-style-type: none"> Adults with Regular Healthcare Providers Mental Health and Substance Abuse Hospitalizations Avoidable Heart Disease Deaths Avoidable Hospital Stays Adults Whose Poor Health Kept them from Usual Activities
	Goal 4.2 Virginia's Health IT System Connects People, Services and Information to Support Optimal Health Outcomes	<ul style="list-style-type: none"> Providers with Electronic Health Records Health Districts with Electronic Health Records Entities Connected to Health Information
	Goal 4.3 Health Care-Associated Infections in Virginia Are Prevented and Controlled	<ul style="list-style-type: none"> Hospitals Meeting State Goals for Prevention of C. difficile Infections

B. Health System Performance Measures

While the measures in *Virginia's Plan for Well-Being* are primarily focused on population-based indicators of health and well-being, the *Virginia Health System Performance Measures* are directly focused on health care access, cost, and quality. The five measures shown in **Exhibit 2** were chosen as key performance indicators that can be used to track the overall performance of Virginia's health care system from a clinical perspective. The audiences for the *Health System Performance Measures* should include all Virginia stakeholders interested in monitoring trends in health system performance. The measures can be generated at the state and regional level from the *Virginia All Payer Claims Database* (APCD) and the *Virginia Hospital Inpatient Discharge Database* available from Virginia Health Information. It should be noted that for some measures, data may only be available for Virginians in private insurance, Medicaid, and Medicare.

Exhibit 2. Virginia Health System Performance Measures
<ol style="list-style-type: none"> 1. Access to Primary / Preventive / Ambulatory Health Services 2. All-Cause PQI Admission Rate 3. All-Cause 30-Day Readmission Rate 4. All-Cause ED Visit Rate 5. Per Capita Healthcare Expenditures

C. Clinical Quality Measures

The *Focused Menu of Clinical Quality Measures (CQMs) for Quality Improvement and Quality-based Payment* was developed in response to growing concern that Virginia providers are being asked to produce far more CQMs than can be effectively monitored and managed in the practice setting. The purpose of the menu is to give Virginia stakeholders (providers, plans, purchasers, public health agencies, grant makers) a set of CQMs from which to choose as their first option when defining their measures for quality improvement or quality-based payment models. The goal of the menu is to create alignment around a core set of CQMs in an effort to advance value-driven payment models while reducing the overall reporting burden on providers. Use of the menu is voluntary but strongly encouraged.

As shown in **Exhibit 3**, the menu contains 73 measures. This list was trimmed from an initial list of more than 500 measures found to be in use during 2015, many of which were overlapping in focus. The list is organized into three broad categories by population focus (*Strong Start for Children*, *Aging Well*, and *Rising Risk Adults*). Within each population group there are a mix of measures relating to clinical prevention and treatment. As currently structured, the menu is oriented toward practitioner-based measures with an emphasis on primary care, but the menu could be expanded to include more facility-based measures such as those that are being published by the Virginia Hospital and Healthcare Association. The operating assumption is that this voluntary menu should be adjusted over time in response to new developments in measurement as well as the interests of Virginia stakeholders.

Exhibit 3. Focused Menu of CQMs			
Category / Measure	Measure Source	NQF #	Age Group Focus
Strong Start for Children			
1. Prenatal and Postpartum Care: Postpartum care	DMAS NCQA HEDIS		Women, Children
2. Prenatal and Postpartum Care: Timeliness of Prenatal Care	DMAS NCQA HEDIS		Women, Children
3. Frequency of Ongoing Prenatal Care	DMAS NCQA HEDIS	1391	Women, Children
4. NQI Neonatal Blood Stream Infection Rate	AHRQ	478	Children
5. PQI Low Birth Weight Rate	AHRQ	278	Children
6. Children's and Adolescents Access to Primary Care Practitioners	DMAS, NCQA HEDIS		Children
7. Childhood and Adolescent Immunization Status (age 2; age 13)	DMAS NCQA HEDIS PQRS, MU, UDS	38	Children
8. Lead Screening in Children	DMAS NCQA HEDIS		Children
9. Well Child and Adolescent Well- Care Visits: age 3-6	DMAS NCQA HEDIS		Children

Exhibit 3. Focused Menu of CQMs (cont'd)			
Category / Measure	Measure Source	NQF #	Age Group Focus
10. Well Child and Adolescent Well- Care Visits: ages 12-21	DMAS NCQA HEDIS		Children
11. Well Child and Adolescent Well- Care Visits: first 15 months of life	DMAS NCQA HEDIS		Children
12. Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	DMAS NCQA HEDIS	24	Children
13. Appropriate Testing for Children With Pharyngitis	DMAS NCQA HEDIS MU PQRS	2	Children
14. Appropriate Treatment for Children with Upper Respiratory Infection	DMAS NCQA HEDIS MU PQRS	69	Children
15. Annual Dental Visit (age 2-21)	NCQA HEDIS PQRS		Children
16. Children who have dental decay or	MU	1335	Children
17. Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk	UDS		Children
18. Follow-up Care for Children Prescribed ADHD Medication	DMAS, NCQA HEDIS, MU, PQRS	108	Children
19. Metabolic Monitoring for Children and Adolescents on Antipsychotics	DMAS, NCQA HEDIS		Children
20. Use of First-Line Psychosocial Care for Children and Adolescents on Anti-Psychotics	DMAS, NCQA HEDIS		Children
21. Use of Multiple Concurrent Antipsychotics in Children and Adolescents (new in 2015)	DMAS NCQA HEDIS		Children
Aging Well			
22. Care for Older Adults (medication review)	NCQA HEDIS	553	Seniors
23. Fall Risk Management: Intervention / Managing Fall Risk	NCQA HEDIS, PQRS		Seniors
24. Fall Risk Management: Screening for Future Fall Risk	ACO, NCQA HEDIS, PQRS		Seniors
25. Flu Vaccinations for Adults Ages 65 and Older	NCQA HEDIS		Seniors
26. Physical Activity in Older Adults	NCQA HEDIS	29	Seniors
27. Pneumococcal Vaccination Status for Older Adults	ACO, NCQA HEDIS, PQRS	43	Seniors
28. Potentially Harmful Drug-Disease Interactions in the Elderly	NCQA HEDIS		Seniors
29. Use of High-Risk Medications in the Elderly	NCQA HEDIS, MU, PQRS	22	Seniors

Exhibit 3. Focused Menu of CQMs (cont'd)			
Category / Measure	Measure Source	NQF #	Age Group Focus
Aging Well			
22. Care for Older Adults (medication review)	NCQA HEDIS	553	Seniors
23. Fall Risk Management: Intervention / Managing Fall Risk	NCQA HEDIS, PQRS		Seniors
24. Fall Risk Management: Screening for Future Fall Risk	ACO, NCQA HEDIS, PQRS		Seniors
25. Flu Vaccinations for Adults Ages 65 and Older	NCQA HEDIS		Seniors
26. Physical Activity in Older Adults	NCQA HEDIS	29	Seniors
27. Pneumococcal Vaccination Status for Older Adults	ACO, NCQA HEDIS, PQRS	43	Seniors
28. Potentially Harmful Drug-Disease Interactions in the Elderly	NCQA HEDIS		Seniors
29. Use of High-Risk Medications in the Elderly	NCQA HEDIS, MU, PQRS	22	Seniors
Rising Risk Adults			
Tobacco			
30. Advising Smokers and Tobacco Users to Quit	ACO DMAS NCQA HEDIS	27	Adults | Seniors
31. Discussing Cessation Medications	DMAS NCQA		Adults | Seniors
32. Discussing Cessation Strategies	DMAS NCQA	27	Adults | Seniors
Weight			
33. Adult BMI Assessment	DMAS NCQA		Adults | Seniors
Behavioral Health			
34. Adherence to Antipsychotic Medications for Individuals With Schizophrenia	DMAS NCQA HEDIS PQRS	1879	Adults | Seniors
35. Screening for Clinical Depression and Follow-Up Plan	ACO, MU, PQRS, UDS	418	Adults | Seniors
36. Anti-Depressant Medication Management	DMAS, NCQA	105	Adults | Seniors
37. Follow-up after Hospitalizations for Mental Illness (30 day, 7 day)	DMAS, NCQA	576	Adults | Seniors
38. Initiation and Engagement of Alcohol and Other Drug Dependence Treatment	DMAS, NCQA HEDIS	4	Adults | Seniors
39. Identification of Alcohol and Other Drug Services	DMAS NCQA HEDIS		Adults | Seniors
Cancer			
40. Breast Cancer Screening	ACO, DMAS, NCQA HEDIS,	2372	Adults | Seniors
41. Cervical Cancer Screening	ACO, DMAS, NCQA HEDIS, PQRS	32	Adults | Seniors
42. Colorectal Cancer Screening	ACO, DMAS, NCQA HEDIS,	34	Adults | Seniors

Exhibit 3. Focused Menu of CQMs (cont'd)			
Category / Measure	Measure Source	NQF #	Age Group Focus
Cardiovascular and Cerebrovascular Disease			
43. Annual Monitoring for Patients on Persistent Medications	DMAS, NCQA HEDIS	2371	Adults | Seniors
44. Aspirin Use and Discussion	DMAS NCQA		Adults | Seniors
45. Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia	DMAS NCQA HEDIS	1933	Adults | Seniors
46. Cholesterol Management, LDL Control	DMAS, PQRS, UDS		Adults | Seniors
47. Controlling High Blood Pressure	ACO, DMAS, NCQA HEDIS, MU, PQRS, UDS	18	Adults | Seniors
48. Persistence of Beta Blocker Treatment After a Heart Attack	DMAS NCQA HEDIS	71	Adults | Seniors
49. PQI Admissions for Cardiovascular Conditions	NCQA HEDIS, PQRS, UDS		Adults | Seniors
50. Asthma Medication Ratio	DMAS, NCQA HEDIS	1800	Adults | Seniors
51. Medication Management for People with Asthma	NCQA HEDIS, PQRS, UDS	1799	Adults | Seniors
52. Use of Appropriate Medications for People with Asthma	DMAS, NCQA HEDIS, MU, PQRS, UDS	36	Adults | Seniors
53. PQI Admissions for Asthma in Older Adults	ACO, AHRQ		Adults | Seniors
54. Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	DMAS, NCQA HEDIS, PQRS	58	Adults | Seniors
55. Pharmacotherapy Management of COPD Exacerbation - Use of Bronchodilators	DMAS, NCQA HEDIS, PQRS		Adults | Seniors
56. Pharmacotherapy Management of COPD Exacerbation - Use of Systemic Corticosteroids	DMAS, NCQA HEDIS		Adults | Seniors
57. Use of Spirometry Testing in the Assessment and Diagnosis of COPD	DMAS, NCQA HEDIS, PQRIS	577	Adults | Seniors
58. PQI Admissions for Chronic Obstructive Pulmonary Disease (COPD)	ACO, AHRQ		Adults | Seniors

Exhibit 3. Focused Menu of CQMs (cont'd)			
Category / Measure	Measure Source	NQF #	Age Group Focus
Diabetes			
59. Comprehensive Diabetes Care (NCQA HEDIS® 2015)	DMAS NCQA HEDIS		Adults | Seniors
60. Comprehensive Diabetes Care (NCQA HEDIS® 2015)- BP Control (<140/90 mm Hg)	DMAS NCQA HEDIS	61	Adults | Seniors
61. Comprehensive Diabetes Care (NCQA HEDIS® 2015)-Eye exam (retinal) performed	DMAS NCQA HEDIS	55	Adults | Seniors
62. Comprehensive Diabetes Care (NCQA HEDIS® 2015)- Hemoglobin A1c (HbA1c) testing	DMAS NCQA HEDIS	57	Adults | Seniors
63. Comprehensive Diabetes Care (NCQA HEDIS® 2015)-HbA1c control (<7.0%) for a selected population	DMAS NCQA HEDIS		Adults | Seniors
64. Comprehensive Diabetes Care (NCQA HEDIS® 2015)-HbA1c control (<8.0%)	DMAS NCQA HEDIS	575	Adults | Seniors
65. Comprehensive Diabetes Care (NCQA HEDIS® 2015)-HbA1c poor control (>9.0%)	DMAS NCQA HEDIS	59	Adults | Seniors
66. Comprehensive Diabetes Care (NCQA HEDIS® 2015)-Medical attention for nephropathy	DMAS NCQA HEDIS	62	Adults | Seniors
67. Diabetes Monitoring for People With Diabetes and Schizophrenia	DMAS NCQA HEDIS	62	Adults | Seniors
68. Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications	DMAS NCQA HEDIS	1934	Adults | Seniors
69. PQI Admissions for Diabetes Short- Term Complications	AHRQ		Adults | Seniors
Musculoskeletal Conditions			
70. Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis	DMAS NCQA HEDIS PQRS	54	Adults | Seniors
71. Osteoporosis Management in Women Who Had a Fracture	NCQA HEDIS PQRS	53	Adults | Seniors
72. Osteoporosis Testing in Older Women	NCQA HEDIS PQRS	37	Adults | Seniors
73. Use of Imaging Studies for Low Back Pain	DMAS NCQA HEDIS MU PQRS	52	Adults | Seniors

D. Alignment of Virginia Measures with National Measures

Measurement alignment is certain to be an ongoing, time-consuming process at the state level. Multiple forces are at work which make this a difficult task, even when consensus and collaboration exists among the payer and provider communities.

First, there is the expected complication that arises from the need to review and revise measures as new scientific evidence indicates that adjustments are necessary or as new sources of data make measurement easier or more timely. More challenging, however, is trying to assure continuous alignment between state selected measures and nationally recommended ones. Virginia's recommended core set of clinical quality measures was less than one month old in January of 2016, when the Centers for Medicare and Medicaid Services (CMS) and America's Health Insurance Plans (AHIP) released a new proposed set of core measures. A comparative review of these 97 measures with the 78 selected by Virginia (included as Appendix 4) found less than optimal overlap. The national measures, for example, did not include:

- Any measures targeted specifically to the population health of older (non-newborn) children and adolescents –(VA has 12);
- Any measures related to COPD (VA has 4);
- Any measures related to oral health (VA has 3);
- Any measures related to alcohol or substance abuse (VA has 2);
- Any “system performance” measures for readmissions, PQI admissions, and ED visits (Virginia has 3);
- Any direct measures of cost of care (VA has 1)

Perhaps most importantly, the CMS/AHIP set includes only one measure related to behavioral health. This is a top priority for Virginia, with seven behavioral health measures in its recommended set.

Before this information could be considered to make adjustments to the Virginia core, CMS released a second set of recommended core measures for its *Comprehensive Primary Care Plus Initiative*. Review of these measures suggests that there is less than optimal overlap with both the CMS/AHIP recommended measures and the Virginia measures.

This uncertainty makes it challenging to garner the necessary momentum and scale to appropriately leverage the alignment work of the Virginia *Quality, Payment Reform, and Health Information Technology (HIT) Roundtable* across payers without an enforceable mandate to do so.

Looking forward, Virginia will want to thoughtfully consider measurement alignment in two additional ways. These are:

1. The selection of measures for the Medicaid Delivery System Reform Incentive Payment Waiver. At the state level, reasonably good alignment with the previously agreed upon population health, health system, and clinical quality measures should be attainable and highly desirable.
2. The alignment of its core clinical quality measures with those selected by CMS for its Merit-based Incentive Payment System (MIPS).

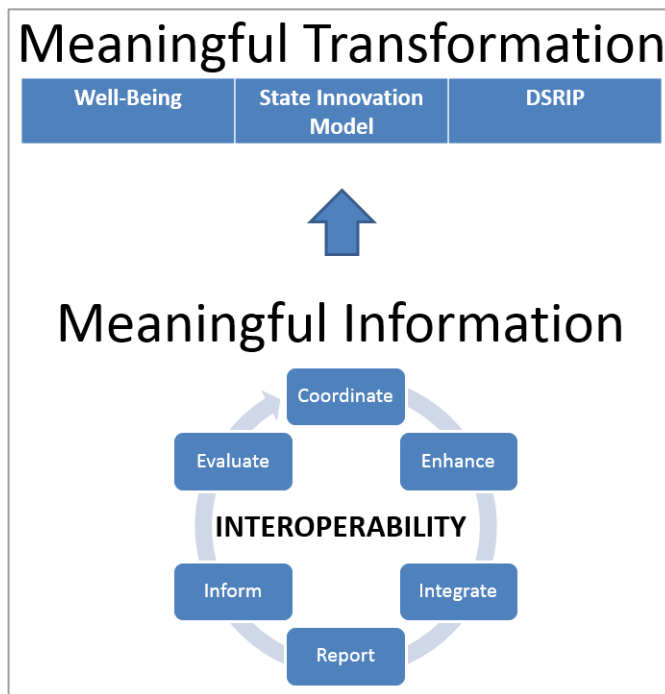
Given well documented morale problems among primary care and other physicians, some of which are related to the proliferation of quality measures and the recent implementation of new electronic health record systems and constantly changing reporting requirements, it is exceedingly important that the state not add to the reporting burden imposed by CMS. Thus, reconciliation of measures used by public and private payers and by the state's SIM-related initiatives is paramount.

A. Virginia's Existing Health Information Technology Environment

Stakeholders across the Commonwealth of Virginia are working diligently to leverage health information technology to improve the health and well-being of our citizens. Included on the list of noteworthy initiatives are the All-Payer Claims Database (APCD); the *ConnectVirginia* statewide health information exchange (HIE); advances in the public health IT capabilities within the Virginia Department of Health; the Virginia Health IT Standards Advisory Commission; Virginia Health Information (VHI); the Virginia HIT Regional Extension Center; and the Virginia Atlas of Community Health. We are as proud of our accomplishments as we are motivated by the work that remains.

Our emerging health data optimization approach is based on the following considerations:

- Impressive initiatives are underway to help transform healthcare in the Commonwealth of Virginia, as described in this report.
- Meaningful healthcare transformation must be supported by robust and integrated information systems that strengthen population-level and patient-level interventions.
- There is presently no consolidated effort to coordinate the vast but disparate health IT resources in the Commonwealth to maximize impact and efficiency.
- While many components of health IT are in place, these components are not fully utilized across the Commonwealth and integration of information support into frontline clinical processes is imperative.
- Key stakeholders in the healthcare ecosystem, including long-term care and social services, have not fully shared in the benefits of health IT adoption and automation.
- There is an increased recognition that behavioral health must be fully integrated into population health and patient care services, and health IT must be just as integrated across these domains even given the special concerns for privacy of sensitive patient information.
- The role of the consumer relative to health IT is still being defined, but information access, decision support, transactional capabilities and tele-monitoring services must be addressed if benefits are to be optimized.
- Payers play a significant role in the health data optimization in the Commonwealth, therefore we must engage this stakeholder group in a more meaningful way.



Given these considerations, the major domains of the Virginia Health IT Plan are:

1. **Coordinate:** Establish a governance model built by a public-private partnership to coordinate health IT initiatives that reduce duplication of effort, achieve interoperability and increase efficiency.
2. **Enhance:** Build upon existing and planned individual health IT initiatives to expand participation and impact, while redressing gaps in current health IT and EHR adoption.
3. **Integrate:** Establish interoperability among disparate health IT systems as needed to ensure completeness of information and soundness of decision-making.
4. **Report:** Provide clinical data to Transformation Initiatives to enable assessment of impact and opportunities for improvement.
5. **Inform:** Utilize more complete and integrated information as decision support for key stakeholders in the health ecosystem, specifically: providers; patients; public; policy makers; and payers.
6. **Evaluate:** Assess the effectiveness of health IT initiatives for continuous quality improvement of systems and processes.

B. Health IT Domains of Development

In the sections that follow, each of the six domains of our proposed health IT plan is discussed in more detail. Specific recommendations for activities related to each dimension

are included, with examples interspersed that illustrate the impact of these activities on public health and patient care.

Following this discussion is a “crosswalk” of how this overall approach and the work along the six dimensions supports the major goals of SIM, DSRIP, and the Plan for Well-being. This work concludes with a high-level action plan that provides a logical roadmap and sequence for how these various activities can be implemented in an efficient and effective manner.

B1. Coordinate

Aim: Establish a governance model built by a public-private partnership to coordinate health IT initiatives that reduce duplication of effort, achieve interoperability and increase efficiency.

In order to determine Virginia’s future health IT needs, it is necessary to assess the current infrastructure and environment. Prior to receiving the SIM award, Virginia established a Health Care Information Needs Workgroup that has been working on this assessment. An inventory of data assets, technologies and processes has been collected. The assessment of healthcare transformation initiatives across the state conducted during the first phase of the health IT planning process yielded important insights into technology-related requirements for payment and delivery system reform. The assessment documented the extensive number of initiatives currently underway and the health IT infrastructure, systems, datasets and analytics supporting those initiatives. Lastly, the need for a scalable governance model to coordinate the array of health IT investments – existing and future – required for system-wide healthcare transformation was highlighted during this assessment.

Since the key to connecting communities from a technology perspective rests with our health information exchange, we propose that the organizational purpose of Virginia’s health information exchange – *ConnectVirginia* HIE, Inc. – be expanded to include the governance role described herein. The governance model envisioned to achieve the objectives set out in this Health IT Plan will be overseen by this public-private partnership and will establish a mechanism to engage partners across Virginia. We envision these partners including hospitals, providers, nursing home and long term care facilities, Virginia Integration Partners (VIPs), community health workers, behavioral health and community service boards, etc. These stakeholders, core participants identified in the SIM and DSRIP strategies, will be leaders driving the state’s healthcare transformation initiatives. Their engagement in the governance model will ensure a business-centric approach to all of the health IT development domains identified in the Health IT Plan.

The purpose of the Health IT Plan governance model is to establish a discipline in data governance and standards to promote interoperability across all of the health IT systems.

Virginia's DSRIP strategy (discussed more thoroughly in Chapter 11) identifies the following objectives for Virginia Integrated Partners (VIP) data infrastructure, systems, exchanges and analytics:

- Build integrated clinical, behavioral, social and support data platform to accelerate provider integration;
- Establish data-readiness for providers to conduct team-based care;
- Establish data-readiness for providers to be reimbursed for outcomes;
- Develop near real-time data exchange between providers;
- Develop capacity for business intelligence; and
- Develop capacity for data analytics.

Achieving these objectives will be possible only if the Health IT Plan governance model has established the level of interoperability required for health IT systems to exchange data using standards-based, clearly defined definitions, nomenclature and specifications. Virginia currently has a Health Information Technology Standards Advisory Committee (HITSAC) that recommends and adopts health IT standards for the Commonwealth's state agencies. Expanding the scope of this Committee is necessary in order to establish these standards across *all* health IT platforms in Virginia. Bringing these stakeholder groups together to engage in interoperability and standards discussions and consensus is necessary in order to deploy connectivity across Virginia.

Coordination under the Health IT Plan also will require development of a trust framework to articulate the governance model's policy, business and technical requirements in a single, integrated approach. Trust frameworks have a history of success in the health IT domain, offering a scalable alternative to point-to-point agreements. Examples include the Data Use and Reciprocal Support Agreement (DURSA), the trust framework underlying eHealth Exchange, and the *ConnectVirginia* Trust Agreement, itself modeled on the DURSA.

This type of trust framework foundation is necessary given the scale and complexity in coordinating existing health IT investments and integrating new investments as they come online. Trust frameworks establish a common set of requirements for all members in the health IT community to meet in order to participate. This promotes a consistent, standards-based approach to collecting, maintaining and exchanging electronic health information, and it allows for the trust framework to evolve over time and accommodate new participants, participant types, use cases and technologies.

Key elements of trust frameworks include:

- **Policy Requirements:** Provisions within the trust framework agreement establishing policy-level obligations for participants. These may include provisions for compliance with applicable law for security, privacy and consent; assignment of liability and risk; grant of authority to the governing body; dispute resolution; audit and performance

expectations; and related requirements.

- **Business Requirements:** Provisions for how participants and the operational entity will manage day-to-day operations of the trust framework. These may include operational policies and procedures; data sharing components documenting data elements and permitted purpose of the exchange; expectations of participant performance; change management procedures for the trust framework and its components; and related requirements.
- **Technical Requirements:** Provisions documenting the trust framework's technical performance and service specifications. These may cover the technical components and standards for security, privacy and consent; system access, authentication and authorization; onboarding, testing and certification; compliance with external standards adopted by the governing body; and related requirements.

The Health IT Plan governance model and trust framework will provide a systematic, comprehensive level of coordination among the existing health IT initiatives and those added with the expansion of Virginia's Healthcare Transformation strategies. Building out the governance model and trust framework will enable all stakeholders to leverage current areas of opportunity and identify where enhancements to existing health IT initiatives may be necessary.

B2. Enhance

Aim: Build upon existing and planned individual health IT initiatives to expand participation and impact, while redressing gaps in current health IT and EHR adoption.

The Commonwealth of Virginia has invested significant resources in building out health information technology functionality. We have a highly functional health information exchange and many hospital systems and providers are now using electronic health records systems. According to statistics published by the U.S. Department of Health and Human Services Office of the National Coordinator for Health IT (ONC), 58% of primary care providers in Virginia have adopted Basic EHRs as of 2013. Likewise, 65% of Non-Federal Acute Care Hospitals have adopted at least Basic EHRs. Much of this recent surge in adoption comes as a result of Meaningful Use requirements and the recognition that more robust and integrated health IT is necessary for improved patient outcomes and value-based care.

While progress has been made in the adoption of electronic health records by physicians and health systems, adoption is not universal. In addition, many key stakeholders have not realized the success of physicians and health systems. Long-term care providers, behavioral health providers, oral health providers and social services agencies lag far behind their physician and

health system counterparts in EHR adoption. Before integration and interoperability of clinical information systems can occur, all stakeholders must “go digital.” Innovative funding and payment options may be necessary for progress in these domains.

Going forward, we must transform the way we deliver health services to our Medicaid patients within Virginia and further extend this to Medicare, private pay and others. We are fully prepared to provide transformational health information technologies that support enhanced patient outcomes and improved efficiency. Virginia’s Governor and State Health Commissioner have set a goal for Virginia to become the healthiest state in the nation. A more interoperable and shared infrastructure is necessary to reach that goal.

Building out infrastructure to address Virginia’s Medicaid population is the first step in enhancing Virginia’s health information technology infrastructure. The infrastructure will be scalable so as to address other populations within Virginia such as Medicare, private pay and self-pay. We will invest in community connectivity and integrated care for Virginia’s most vulnerable and high-cost Medicaid populations. Working with the Department of Medical Assistance Services (DMAS), we foresee connecting the new Medicaid Management Information System (MMIS) to Virginia’s health information exchange, *ConnectVirginia*. Having access to clinical information on Medicaid recipients is very helpful with managing patient care.

In summary, Virginia will work closely and collaboratively with those stakeholders who have not yet adopted EHR technologies (including behavioral health, mobile care teams and community health workers) to ensure completeness of clinical data and robust analytics capabilities.

B3. Integrate

Aim: Establish interoperability among disparate health IT systems as needed to ensure completeness of information and soundness of decision-making.

Despite impressive gains in technical approaches to interoperability, health information exchange remains the “exception” rather than the “rule.” Virginia is committed to establishing a health information exchange as a true standard of care, bringing real-time, complete clinical information to providers at the right time and in the right process to improve the effectiveness and efficiency of decision-making.

As mentioned above, participation in Virginia’s health information exchange is growing; however we need a more focused plan for connectivity in order to reach stakeholders who are not yet participating in the exchange. According to ONC, at least one-third of Virginia health systems and office-based physicians do not have the capability of basic health information exchange. Enabling all health systems and physicians to have the

capacity to participate in HIE is imperative. Just as important, however, is the actual use of HIE to enhance clinical decision-making. The Virginia Health IT Plan builds upon and expands existing interoperability capabilities of providers, health systems, public health services and health information exchanges. Eleven (11) specific areas of improvement have been identified:

1. **Health System Connectivity** – Approximately 60% of Virginia hospitals and health systems now have the capacity for a query-based health information exchange through eHealth Exchange, *ConnectVirginia* or MedVirginia. Our objective is to get this participation to 95% or above within 24 months.
2. **Ambulatory Connectivity** – Physician practices are far more capable of receiving data than sending data. Yet much of clinical information needed for sound decision-making resides in ambulatory-based EHRs. Our objective is to achieve greater than 50% of practices able to participate in query-based exchange.
3. **Wounded Warriors** – Provision of services and support to our retired military remains a top priority for Virginia. We are proud to be the site of the first connectivity between a VA Medical Center and a health information exchange. While more hospitals in Virginia are capable of connectivity with the VA through eHealth Exchange, scale continues to be limited because of the relatively few veterans who have “opted in” to allow their data to be exchanged. Virginia will continue to work closely with the Veterans Health Administration to significantly increase the number of veterans able to have their records exchanged.
4. **Behavioral Health and Long-term Care** – These sectors of healthcare have lagged far behind others both in the adoption of EHRs and in the participation in the health information exchange. In the case of behavioral health, additional challenges to interoperability result from additional privacy requirements of sensitive data. These two sectors will be a priority for Virginia, and public and private funding to support health IT advancement will be sought.
5. **Continuity-of-Care** – A query-based health information exchange has been the most common approach to interoperability, but there is an increasing need for transactional, real-time support to ensure patients are supported during transitions of care. This is especially critical for discharges from acute care facilities to the community. *ConnectVirginia* has implemented a successful clinical encounter alerts utility to inform physicians and care managers that a clinical event of interest has occurred with one of their patients. Our objective is to scale this utility for implementation statewide.
6. **Innovation** – Health information exchange technologies continue to evolve rapidly. A mechanism has been established in *ConnectVirginia* to identify and vet new products and

services that bring value to providers and patients. This mechanism will be utilized by the *ConnectVirginia* HIE to assess future needs and development opportunities.

7. **Cross-functional Integration** – Exploratory discussions have been undertaken to assess synergies of cross-functional collaboration and integration. One such example is the potential for the APCD and *ConnectVirginia* to integrate clinical information into the APCD for even richer data analytics and population health opportunities. Such cross-functional integration opportunities will be overseen by the *ConnectVirginia* HIE.
8. **Medicaid** – *ConnectVirginia* and DMAS have developed a product roadmap for the integration of clinical information into plans for the new MMIS. This will result in both improved analytics as well as enhanced case management support driven by improved understanding of needs.
9. **Consumer/Patient Access and Engagement** – Providing healthcare information in a succinct, coordinated manner for consumers/patients is integral as we build out our health information technology solutions for Virginia. Building a patient-centered system enables healthcare providers and patients to have access to the right information at the right time.
10. **Payers** – Health Plans play a significant role in the delivery of healthcare in Virginia and across the United States. Engaging health plans in actively participating in our health information exchange and other technologies is crucial in order to reach better patient outcomes and value-based care.
11. **Genomics and Precision Medicine** – Virginia has recognized a need for data standards in the rapidly emerging field of genomics and precision medicine. This will enable the sharing of genomics information to power improved diagnostic and treatment decisions. Virginia intends to be a pioneer and national leader in this important domain.

B4. Report

Aim: Provide clinical data to transformation initiatives to enable assessment of impact and opportunities for improvement.

A primary objective under the Health IT Plan is to leverage existing population health analytics, informatics and outcome measurement platforms supporting Virginia's SIM Design initiatives. This involves analyzing and integrating into actionable information core measures described in Chapter 5 (Virginia Plan for Well Being, Health System Performance Measures, Clinical Quality Measures), as well as Medicaid DSRIP performance measures as referenced in Chapter 11.

The Health IT Plan recognizes that building a data-driven decision support system for these and other initiatives depends upon the ability to integrate clinical and population health data from across the outcome measurement systems. Success in the Report Health IT Plan Domain will result in a timely, readily accessible flow of data needed to inform VIP decision-makers and their stakeholders.

B5. Inform

Aim: Utilize more complete and integrated information as decision support for key stakeholders in the health ecosystem, specifically: providers; patients; public; policymakers; and payers.

Virginia's Health IT Plan brings together relevant information from many public and private organizations. The Health IT Plan supports the overall goal of transforming Virginia's delivery system by integrating service delivery information and data from disparate sources to support Virginia community efforts to improve care and well-being for Medicaid recipients and other citizens of the Commonwealth. With these tools in place, reaching these goals is achieved by engaging and informing Virginia's stakeholders on how each may actively seek better health, better care and lower costs.

The core metrics from the Virginia Department of Health's *Plan for Well-Being* are designed not only to provide baseline and ongoing information to support value-based purchasing, but to engage and inform healthcare providers, payers, policy makers and patients with new insights into healthy lifestyles and how to achieve them with support from the Commonwealth, their communities and taking personal responsibility for their health. Together, these and other metrics reflect Virginia's plan to reduce the incidence of disease and increase care coordination to provide the right care at the right time to the right people.

Each of these groups will benefit from information on which efforts work well and others that have little impact based on evidence-based measures and analysis of utilization trends of services. It is how the information is presented that differs according to each group's needs. Seminars, webinars, and CME credits sponsored by physician and health systems are approaches often used for providers. Health plans may leverage their existing email and printed communications to their members regarding their role in patient safety, promotions on the benefits of prevention activities to curb chronic disease, or ways to manage these conditions.

Measures on behavioral health can be coupled with improved access to coordinated care and related spending to inform policymakers through routine communications and other information for behavioral health committees within the General Assembly.

Approaches will vary on the most effective mediums to inform and engage these groups based on their needs. What is important is the coupling of these data to tell an insightful story of how we can improve our well-being from breaking down barriers to healthy lifestyles, prevention and treatment of mental illness and other health issues, coordinating community resources and empowerment for individual action.

B6. Evaluate

Aim: Assess the effectiveness of health IT initiatives for continuous quality improvement of systems and processes.

As Virginia assesses, enhances and integrates new technologies so that interoperability and connectivity are achieved across the healthcare continuum, it is necessary to periodically evaluate these technologies to determine effectiveness. Specific metrics and factors for success will be built into these technology implementations. Health information technology has been shown to improve quality by increasing adherence to standards and guidelines, enhancing population health disease surveillance and tracking and decreasing medication errors. Additionally, the appropriate use of health information technology improves the quality of care through clinical monitoring and connecting clinical data across disparate healthcare providers, community health workers, etc. Implementing new and enhancing current technologies across Virginia can support new ways of delivering care that are not feasible with paper-based information management.

We envision a healthcare system that is consumer-centric and information-rich, in which medical information follows the consumer and information tools guide medical decisions. Clinicians have appropriate access to a patient's complete treatment history, including medical records, medication history, laboratory results and other key pieces of information. Transitions of care occur more seamlessly since systems are connected, interoperable and timely. In summary, as we implement health information technology changes and enhancements, our goal is to ensure stakeholder expectations are met and exceeded.

As the basis for evaluation, we intend to utilize both qualitative and quantitative measures. Measures will be incorporated on three dimensions: users; usage; and usefulness. This approach has been in use in other regional, state and national health IT initiatives and has been helpful in engaging stakeholders in the evaluation process.

For overall performance evaluation, we propose the use of a Logic Model as displayed in Exhibit 1. The Performance Metrics and Impacts will tie directly to the transformational initiatives discussed previously. Activities are categorized into the six domains of this Health IT Plan. Participants represent the key stakeholders whose engagement is critical for the success of the Plan. The *ConnectVirginia* HIE Board will be responsible for overall performance evaluation.

Exhibit 1: Logic Model

Inputs	Outputs			Performance Metrics & Impacts	
	Participants	Activities	Direct Products/Service	Performance Metrics	Long-term Impacts
<ul style="list-style-type: none"> Virginia Department of Health & State Health Comm. (VDH) Virginia Secretary of Health & Human Resources Connect/Virginia HIE (CVHIE) Department of Medical Assistance Services (DMAS) Veterans Administration/ VAMCs State Health Information Technology Standards Advisory Committee (HITSAC) Delivery System Reform Incentive Program State Innovation Model (SIM) Grant Program 	<ul style="list-style-type: none"> Health Systems Ambulatory Providers Behavioral Health Providers Long Term Care Providers Oral and Visual Providers Consumers/Patients Medicaid and other payers 	<p>Coordinate:</p> <ul style="list-style-type: none"> Assessment Public-Private Partnership Stakeholders Leverage/Expand HITSAC <p>Enhance:</p> <ul style="list-style-type: none"> Leverage Statewide HIE Leverage MU adoption Leverage DMAS/MMIS Identify options for "digital-gap" providers Identify barriers to full interoperability <p>Integrate:</p> <ul style="list-style-type: none"> Increase Health System Connectivity Increase Ambulatory Connectivity Wounded Warrior/Veteran Opt-In assistance Behavior Health and Long Term Care Connectivity Continuity of Care Support Cross-functional Integration Consumer/Patient Access Payer Participation <p>Report:</p> <ul style="list-style-type: none"> Lieutenant Governor's Roundtable Clinical Quality Measures (CQMs) Virginia's Plan for Well-Being and State Health Assessment Metrics DSRIP Waiver Measures Clinical Data Aggregation <p>Inform:</p> <ul style="list-style-type: none"> Provide capabilities to utilize more complete and integrated information as decision support for key stakeholders <p>Evaluate:</p> <ul style="list-style-type: none"> Assess the use of new technologies for interoperability and connectivity to evaluate effectiveness 	<p>Governance/Trust Model</p> <ul style="list-style-type: none"> Technical, Policy and Business requirements Data Standards governance Legal and Policy framework HITSAC standards adoption <p>Expand digital EMR footprint</p> <ul style="list-style-type: none"> Behavioral health providers Long Term Care providers Oral Health providers Vision Health providers Identify funding mechanisms <p>Connect HIE with DMAS and their new MMIS</p> <p>Expand HIE Connectivity</p> <p>Assist and promote HIE Connectivity with those not participating</p> <p>Assist in developing relevant CQMs, metrics, data analytics activities.</p> <p>Develop and implement a strategy for the integration of claims data and clinical data</p> <p>Provide tools that integrate service delivery information and data from disparate sources</p> <p>Specific metrics and factors for success will be built into these technology implementations.</p>	<ul style="list-style-type: none"> Complete Inventory of Metrics Currently Available Measures focused specifically on the requirements of the DSRIP Waiver, which will target value-added reforms Health System Participation level at 95% or above Achieve greater than 50% of ambulatory practices able to participate in query-based exchange Measure use of technology by behavioral health, long term care, oral, vision providers Lt. Governor's Roundtable CQMs supported Plan for Well-Being and State Health metrics supported DSRIP Waiver Measures supported Clinical Data Aggregation Supported 	<ul style="list-style-type: none"> Timely, readily accessible flow of data needed to inform clinical decision-makers and their stakeholders Clinical decision-makers utilize more complete and integrated information that is available Better care through clinical monitoring and connecting of clinical data across disparate health care providers, community health workers Clinicians have appropriate access to a patient's complete treatment history, including medical records, medication history, laboratory results and other key pieces of information supporting better transitions of care and better outcomes

C. Secretary's Task Force on Sharing of Electronic Health Records

To advance Virginia's efforts to optimize health data, in 2016 the Virginia General Assembly passed legislation directing the Secretary of Health and Human Resources to work with health care stakeholders to increase sharing of electronic health records. Specifics of this direction include:

- That the Secretary of Health and Human Resources shall work with stakeholders, which shall include representatives of hospitals and other health care providers in the Commonwealth, to:
 - Evaluate interoperability of electronic health records systems among health systems and health care providers and the ability of health systems and health care providers to share patient records in electronic format; and
 - Develop recommendations for improving the ability of health systems and health care providers to share electronic health records with the goal of ensuring that all health care providers in the Commonwealth are able to share electronic health

information to reduce the cost of health care and improve the efficiency of health care services.

- The Secretary shall report his findings and recommendations to the Chairmen of the House Committee on Health, Welfare and Institutions and the Senate Committee on Education and Health by December 1, 2016.

A. Background

During Virginia's pre-SIM planning work, there was considerable consensus by our employer, health care provider, and consumer partners to prioritize the identification of low-value medical services, especially those that could cause patient harm, and target them for reduction. Our partners recognized that not all medical treatments and tests are necessary, and at times can be harmful. The Congressional Budget Office has estimated that 30 percent of medical care in the U.S. is unnecessary care, and the Institute of Medicine identified \$750 billion of wasted spending, with unnecessary services accounting for \$210 billion.¹ If Virginia can reduce the number of unnecessary tests and procedures it performs, then it will be able to redirect its resources to those preventive procedures that are demonstrably of higher value, and patient care and outcomes will be enhanced.

We started our efforts by engaging with Choosing Wisely®, an initiative designed by the American Board of Internal Medicine and the National Physicians Alliance to help physicians, patients, and other healthcare stakeholders think and talk about the overuse of health care resources. At the national level, each medical specialty was asked to identify five medical tests and/or procedures that it knows to be unnecessary and/or harmful. More than seventy specialty society partners are now participating in Choosing Wisely®, and a list of more than 300 tests and procedures was identified.

Next we partnered with Milliman and VBID Health. Their healthcare experts had developed the *MedInsight Waste Calculator*, an analytical tool that allows healthcare managers to target and reduce spending on unnecessary medical tests and procedures. With health policy and clinical expertise provided by Michael Chernow, PhD (Harvard) and Mark Fendrick, MD (Michigan), the team at Milliman has identified more than 450 potentially unnecessary services for analysis. The sources leveraged for measures include:

- Choosing Wisely (from the ABIM Foundation);
- US Preventive Services Task Force Grade D recommendations, for which there is moderate to high certainty that the service has no net benefit or that the harms outweigh the benefits;
- The American Medical Association's Physician Consortium for Performance Improvement; and
- The United Kingdom's National Institute for Health and Care Excellence Recommendations on High Quality Care.

In general, the prioritization of measures is based on the criteria listed below:

- High prevalence rate or incidence of the unnecessary events as reported in different publications;
- High cost impact due to the unnecessary events;
- Representation of different specialties or clinical conditions;
- Representation of different types of services (e.g., preventive screening tests and diagnostic tests and prescription of drugs); and
- Representation of relevant measures for different age groups (children, adults, elderly, or all population), as well as gender-specific measures.

Milliman is now in the process of developing the coding methodologies for each of the 450+ potentially unnecessary services identified.

With access to the MedInsight *Waste Calculator*, VCHI next partnered with Virginia Health Information to secure access to Virginia's All Payer Claims Database (APCD). Virginia's APCD was established in 2012 to facilitate data-driven evidence-based improvements in the access, quality and cost of health care and to promote and improve public health through the understanding of health care expenditure patterns and the operation and performance of the health care system. Virginia's APCD is a voluntary program with specific requirements of participating data submitters and certain restrictions on how the de-identified data may be used. The Virginia APCD currently includes paid claims data for approximately 4.1 million Virginia residents, including about 65% of the commercially insured market and all of the Medicaid market (with the exception of oral health and carved out behavioral health claims). VCHI, through its SIM award partnership with CMS, was able to secure Medicare fee-for-service claims data, bringing the database capacity to include claims for 5.5 million Virginians. It should be noted that the database does not include claims data from workers' compensation, Tricare and the Veterans Health Administration, and the Federal Employees Health Benefit Plan.

VCHI then worked with VHI and Milliman to run Virginia's claims data through the *MedInsight Waste Calculator*. Three reports were completed during the SIM design period, two analyzing the statewide data and one analyzing the data from Virginia's state employee health plan. The results of these analyses are described below.

B. Statewide Analysis

In October of 2015, Milliman completed the coding required to assess the first 29 measures that had been determined to be medically unnecessary and/or harmful. This analysis did not yet include Medicare claims data, as Medicare data is not available to states with the same frequency as commercial or Medicaid data. It is available just once a year to SIM states, with a

considerable time lag before its release. Both the commercial data and the Medicaid data are available quarterly. The analysis that was conducted looked at claims reported in 2013.

In January of 2016, Milliman completed the coding necessary to assess an additional 16 measures (bringing the total to 45), and now had access to both an additional year of data for all entities (2014) and the Medicare data.

The findings of this analysis can be reviewed in their entirety in Appendix B. Most notably we learn:

- 20% of members were exposed to 1+ unnecessary service
- 36% of services were unnecessary
- 2.4% (or \$11.94 PMPM (per member per month)) in claims was unnecessarily spent
- Just 45 of our targeted 450 measures identified \$1.3 billion dollars in unnecessary services over a two year period

Exhibit 1. Summary of Findings	Initial Report	January 2016 Update
Reporting Period	2013	2013, 2014
Number of Measures	29	45
CMS Data Included?	No	Yes
Unnecessary Services Identified	650,000	3.3 Million
Dollars Spent on Unnecessary Services	\$ 200 million	\$ 1.3 billion

When we examine the 45 measures by total cost, we learn that just five measures yielded more than \$801 million in unnecessary spending during a two-year period of time. These five are illustrated in **Exhibit 2** below.

Exhibit 2. Top 5 Potentially Unnecessary Services in Virginia Based on Costs

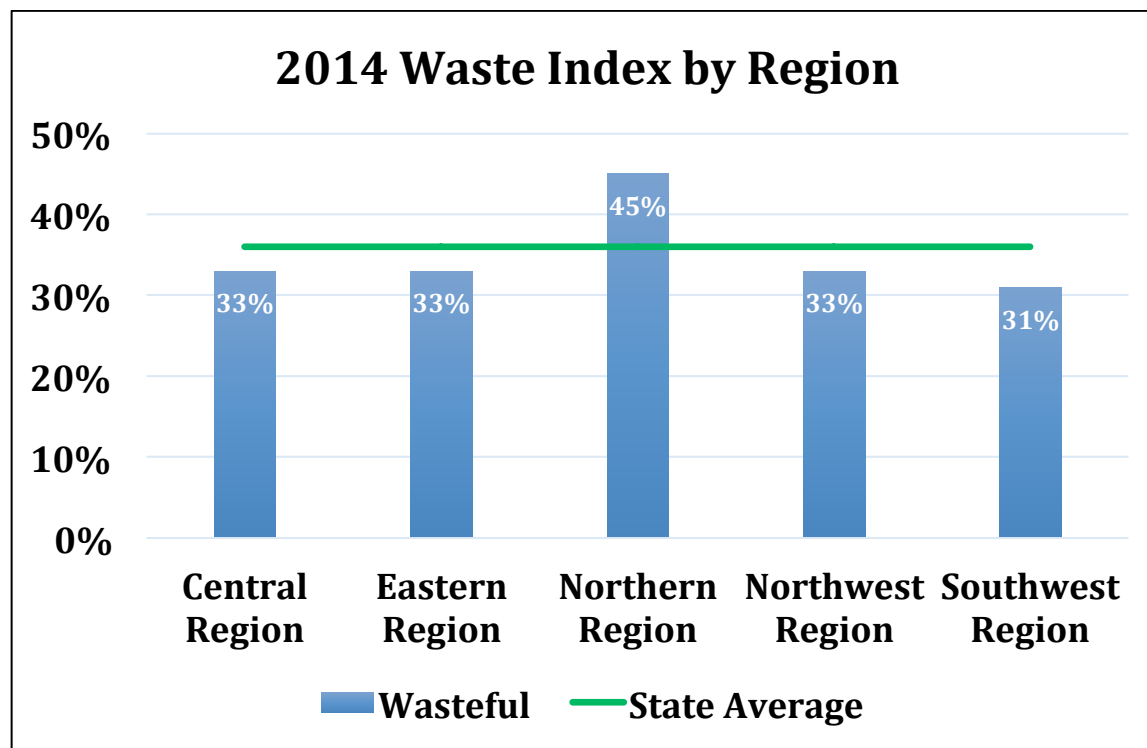
Measure	Unnecessary Services (#)	Waste Index (%)	Unnecessary Spending (\$)
Baseline laboratory studies in patients without systemic disease undergoing low-risk surgery	938,814	79%	\$365,847,701
Stress cardiac or advanced non-invasive imaging in the initial evaluation of patients w/o symptoms	54,702	12%	\$185,997,938
Annual electrocardiograms (EKGs) or other cardiac screening for low-risk patients without symptoms.	276,698	6%	\$113,615,026
Routine annual cervical cytology screening (Pap tests) in women 21–65 years of age	334,184	80%	\$73,369,640
PSA-based screening for prostate cancer in all men regardless of age.	272,015	41%	\$63,137,698

We were also able to look at the data to explore variation, both by coverage type and by region. This analysis, depicted in **Exhibits 3 and 4** below, shows significant differences in the drivers of unnecessary services by coverage type and in the waste index (the number of services classified as wasteful divided by the total number of services measured) by region of the state.

Exhibit 3. Variation in Potentially Unnecessary Services Provided in Virginia by Payer Type

Coverage Type	Greatest Driver of Unnecessary Services	Greatest Driver of Unnecessary Spending
Commercial	Screening Tests (59%)	Screening Tests (42%)
Medicaid	Common Treatments (42%)	Diagnostic Testing (50%)
Medicare	Pre-Op Evaluations (61%)	Pre-Op Evaluations (49%)

Exhibit 4. 2014 Waste Index Variation in Virginia by Region



Our next steps at the state level include:

- Digging deeper into the data analysis to determine which tests and procedures: a) present the most potential harm to patients; b) impact the greatest number of individuals; c) are trending upward; and d) have significant geographical variation.
- Working with the Virginia Hospital and Healthcare Association to facilitate a workgroup of hospitals interested in collaborating to reduce a set of targeted inpatient services.
- Convening a workgroup of Virginia health plan leadership to determine if and how performance on these measures could be tied to incentive-based performance contracts.
- Re-running the analysis in the Fall of 2016 with an additional 15 measures (bringing the total to 60 and including 2015 data for Medicare, Medicaid, and commercial payers).

C. Targeting Employers: Pilot Design with The Commonwealth of Virginia State Employee Health Plan

One way the Governor's Office Leadership team can accelerate action in the utilization of data on low value services by employers is through its role as a large employer. The Virginia SIM team has worked with the Virginia Department of Human Resources Management (DHRM) to

conduct an employer-specific data analysis, which can then be used to assess potential changes in benefit design to better facilitate the choice of high value services over low value ones.

The analysis of the state employee health plan data was completed in March of 2016. It utilized 2013-2014 data and assessed the same 45 measures that were analyzed at the state level. A summary of the results is displayed in the **Exhibit 5** below.

Exhibit 5: Unnecessary Services Statewide

Year	Number of Unnecessary Services	Total Cost	Associated PMPM
2013	86,364	26,068,292	10.12
2014	91,938	25,945,878	9.95

Our next steps for the state employee health plan include:

- Digging deeper into the data analysis to set reduction priorities. The state employee health plan would like to review the data with the top priority being identifying the measures that can cause harm to patients, then those that are deemed unnecessary 100 percent of the time, then those that yield the highest unnecessary spending, and finally those that are the most frequently occurring unnecessary services.
- Next, the state employee health plan benefits will be reviewed to determine if adjustments can be made to discourage utilization of low value services and better encourage utilization of high value services.
- These adjustments would then need to be included in the next state employee health benefit contracts with selected health plans.

D. Additional Next Steps

As Virginia prepares for a possible Round 3 SIM Testing submission, it is looking to develop provider and employer specific performance reports for targeted low value tests and procedures selected from the 45 that have been analyzed to date. We believe that this type of data analysis and dashboard sharing, when paired with educational campaigns for providers, employers, and consumers, will yield the greatest improvement in outcomes.

We are fortunate that our partners, including the Virginia Chamber of Commerce, the Medical Society of Virginia, the Virginia Hospital and Healthcare Association, Virginia Health Information, Milliman, VBID Health, and the Commonwealth of Virginia Department of Human Resource Management are all strongly committed to making this a priority moving forward.

¹ lom.edu/bestcare

A. Background

As part of SIM Design, VCHI convened cross-sector regional and statewide planning groups to develop integrated care, care transitions, and telehealth delivery models that: 1) reflect known best practices and 2) place emphasis on ensuring that patients medical and social needs are met to yield optimal outcomes. These models address:

- Bi-directional integration of behavioral health and primary care for adults, transition-aged youth, and children;
- Bi-directional integration of oral health and primary care for adults and children;
- Enhanced care coordination and treatment for the most complex and expensive utilizers of the health care system;
- Enhanced substance abuse treatment with integrated mental health and primary care treatment;
- Enhanced care transitions using a modified version of the Coleman Model for older adults at high-risk for a hospital readmission; and
- Use of telehealth services for high-risk obstetrical care.

The groups that developed these models were comprised of health system leaders and providers; emergency department providers; private primary care, mental health, and dental providers; community service boards; area agencies on aging; Federally Qualified Health Centers; free clinics; provider associations; state agency leadership; state and local health department leadership; housing agencies; local health foundations; school system leadership; social services leadership; among others.

B. Care Integration Models

The care integration workgroups developed a total of 27 recommended models. Each is described briefly below. A more detailed description is provided in Appendix C. These models will be further refined for specific communities as funding becomes available.

Integrated Behavioral Health and Primary Care Models

Integrated Primary and Behavioral Health Care Services for Children and Adolescents	
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) in primary care or behavioral health settings
Objective	Provide patient-centered, trauma-informed, and recovery oriented treatment and prevention services for uninsured, Medicaid-covered, and FAMIS-covered children from birth through adolescence. The goals of these interventions are to effectively screen and identify children who have mental illness and/or are at risk for developing mental illness. By co-treating these children's primary and behavioral health care needs, a cost-effective delivery system will be established that will increase immediate and downstream clinical outcomes and improve quality of life, while decreasing immediate and downstream costs to the Medicaid program.

Prenatal Care for At-Risk Pregnant Women, Mothers, and Families to Reduce Risk Factors Predisposing Fetuses to Developmental Delays, Intellectual Challenges, and Mental Illness During the Prenatal Period

Target Population	<p>Women of childbearing age (low-income, Medicaid-covered and/or uninsured) and their existing family members who are considered to be “at-risk” based on experiencing one or more of the following factors:</p> <ol style="list-style-type: none"> 1. Poor housing and living conditions 2. Homeless or living in shelters, jails, or are transient 3. Exposed to toxins due to housing conditions (i.e. lead poisoning) 4. Infections during pregnancy with a potential delay or lack of treatment 5. Lack of a patient-centered medical home 6. Immigrants or refugees 7. Living in a food desert resulting in lack of micronutrients, malnutrition, iodine deficiency 8. Other vitamin deficiencies, potential risk for eating pica, and having a low birth weight infant 9. Teenage mom or unplanned or undesired pregnancy 10. Poor adaptation to pregnancy 11. History of mental illness including a history of postpartum depression. 12. History of domestic abuse 13. Insecure attachment challenges 14. Greater maternal stress 15. Use of tobacco, alcohol, and/or illegal drugs 16. Chronic physical diseases (e.g., Hypertension, Diabetes, HIV/AIDs) <p>Family members with mental illness</p>
Objective	To reduce the volume and acuity of children requiring ongoing, acute behavioral health needs by identifying and addressing strategies that can improve the prenatal care for at-risk pregnant women, mothers, and families

High Quality Early Childhood and Preschool Education and Intervention Program

Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-5)
Objective	Support all children in developing to their full potential, and to ensure that preventable issues are avoided, thus preserving resources to provide early interventions for children with identified issues. Improved child health outcomes and significant cost savings can be realized through a timely screening process to identify and address any medical or developmental issues a child may have. Screening can occur in the home, primary care sites, or in preschool settings. Lastly, access to high-quality preschool programs for all children allows them to gain the skills necessary for school success and (if necessary) ensure that any screening they receive will be thorough, comprehensive and well informed. This would allow the early identification of any issues and the provision of intervention when it is most effective.

Addressing the Ongoing and Acute Behavioral Health Needs of Children and Adolescents

Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) with identified ongoing and/or acute behavioral health needs
Objective	Identify and address the ongoing/acute behavioral health needs of children and adolescents in order to facilitate opportunities for recovery, resiliency and wellness with the overall goal of preventing the need for emergency and/or intensive behavioral health treatment at any point in a child’s life. This goal is achieved through the establishment of a comprehensive coordinated care approach with existing community primary care and behavioral health providers, public health departments, local schools, juvenile justice and social services systems; and the establishment of a “single point of access to care” for acute behavioral health needs.

Identification and Support of Parents with Serious Mental Illness and their Children	
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) of parents with Behavioral Health Impairments with a focus on Serious Mental Illness (SIM)
Objective	Identify, assess and intervene early and appropriately in families characterized by having parents with mental health impairments, most notably Serious Mental Illness (SMI). By supporting children and families in health management (including self-management supports), this model aims to produce healthier children and adolescents.
Rural Coordinated Care for Transition Age Youth and Young Adults	
Target Population	<p>Medicaid-covered, FAMIS-covered, and uninsured “transition age youth” (ages 16-25) who currently experience or are at risk of experiencing mental illness and/or substance use disorders.</p> <p><u>Transition age youth must meet one or more of the following criteria to receive this intervention:</u></p> <ol style="list-style-type: none"> 1. Not completing typical developmental milestones: driving, attending school as required / passing academically on grade-level, graduating high school, employed or in secondary education 2. In contact with juvenile justice system 3. In Foster Care or with an active Foster Care prevention case 4. Known to have used/abused substances (possibly including smoking under age) 5. Diagnosed with Serious Mental Illness (SMI), Serious Emotional Disturbance (SED), or Substance Use Disorder (SUD) in primary care or behavioral health settings 6. Uninsured 7. Utilizing the emergency department as their primary resource for primary care 8. Not connected to any organized but unpaid social connection (church, clubs, organized sport, etc.) <p>Meets at least one of the ACEs (child abuse, child neglect, parental mental illness, parental substance abuse and/or alcoholism, lack of food or clothing at home, loss of a parent due to abandonment, death, or divorce)</p>
Objective	To reduce the costs to organizations treating the target populations in addition to saving costs at state and county levels by improving short term and long term health and social outcomes for youth-in-transition and decreasing the number of young adults who “graduate” from juvenile services into the adult mental health, substance abuse, criminal justice, social services, and emergency services.
Integration of Behavioral Health into Primary Care Practices	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with behavioral health needs in primary care settings
Objective	Integration of behavioral health screening and treatment (mental health, substance abuse treatment, and health psychology) with primary care to ensure coordination of care for both services and to improve outcomes for both behavioral health conditions and chronic physical diseases. Integration will decrease costs by decreasing preventable utilization, including Emergency Room visits and inpatient hospitalization and costs.
Behavioral Health Home: Integrated Primary Care in Behavioral Health Settings	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) with a chronic physical disease in behavioral health settings
Objective	Full integration of primary and behavioral health care services for individuals with Serious Mental Illness and co-occurring/co-morbid Substance Use Disorders and other Chronic Medical Conditions will result in an increase in quality of life and life expectancy, reduce emergency room and inpatient hospital use and costs due to decreased exacerbations of chronic physical disease, and support positive health outcomes, including recovery and continuity of care.

Permanent Supportive Housing and Intensive Wrap-Around Services for the Homeless	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) who are Homeless
Objective	Provide permanent supportive housing with comprehensive wrap-around services to the homeless population to prevent unnecessary utilization of emergency department services and reduce the use of other high-cost, emergency services, including the criminal justice system.
Jail Diversion and Jail Transitions	
Target Population	Medicaid-covered or uninsured Adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorder (SUD) who are incarcerated or involved in a jail diversion program
Objective	Design new care models that integrate behavioral health with primary care to improve care and decrease costs for Medicaid and uninsured populations with mental illness and substance use disorders. Specifically, individuals with behavioral health conditions in contact with the criminal justice system have multiple, complex needs including high rates of trauma and chronic medical conditions. Addressing both physical and behavioral health needs “early” with an array of community-based diversion services designed to be patient centered, trauma informed and recovery oriented will enhance the quality of life, promote public safety, and save taxpayer dollars.
Behavioral Health Super-Utilizers: Improving Stability and Decreasing Costs	
Target Population	<p>Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) who are Emergency Department and inpatient hospital “super-utilizers.”</p> <p>In an urban area, behavioral health “super-utilizers” could be defined as:</p> <ul style="list-style-type: none"> • 6 emergency department visits in 3 months OR • 2 or more inpatient admissions in 3 months OR • 3 or more inpatient admissions in 6 months OR <p>4 or more crisis stabilization admissions in a year</p>
Objective	Improve behavioral health and physical health outcomes and the emotional stability of adults with SMI and/or SUD. Provide early intervention, improved access to treatment, care coordination and comprehensive discharge planning with the goal of reducing utilization of high-cost inpatient and Emergency Department (ED).
Medication Assisted Treatment (MAT) of Opiate Addiction in Urban Communities	
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with heroin and/or prescription opiate addiction
Objective	The goals of this model are to: (a) improve access to (and remove barriers to access) community-based, evidence-based Opioid Addiction Treatment services; and (b) increase access to non-stigmatizing peer recovery support and recovery coaching services; (c) maximize Medicaid enrollment for those who are eligible for, but not currently enrolled in Medicaid, among this target population; (d) reduce avoidable emergency department visits and inpatient hospital admissions and associated costs that result from substance use disorders, specifically opioid dependence, and/or chronic pain; and (e) reduce Medicaid transportation costs by embedding multiple, integrated health care services in a “one-stop-shop” setting with which the recipient of services is already comfortable and familiar.
Primary Care Treatment of Opioid Addiction in Rural Communities	
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with heroin and/or prescription opiate addiction

Objective	To empower the existing provider workforce to treat the epidemic of opioid addiction. The magnitude of the epidemic requires us to use the resources we currently have available. Just as our epidemic of diabetes cannot be addressed by hiring endocrinologists, so addiction cannot be addressed by recruiting “addictionologists.” They do not exist to be hired and most patients do not need this level of expertise. Instead, we will train and, most importantly, support primary care physicians to treat opioid addiction.
Chronic Pain Initiative: Primary Care Treatment of Chronic Pain in Rural Communities	
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with chronic pain
Objective	<p>The Virginia Chronic Pain Initiative (CPI) is designed to improve the medical care received by patients with chronic pain and in the process, to reduce the misuse, abuse, and overdose of medications used to treat patients with chronic pain. This model will provide guidelines for the assessment and treatment of chronic pain by primary care providers that increases access to first line non-pharmacological treatments for pain; decreases mortality due to unintentional overdose deaths from opioid prescriptions; decreases inappropriate use of emergency departments (ED) for pain management; decreases inappropriate ED use of imaging with diagnosis of chronic pain; and increases engagement of primary care providers in providing appropriate treatment for chronic pain through treatment protocols.</p> <p>Overall goals of the CPI model are to avert deaths from unintentional poisoning; address the rapidly rising problem of uncoordinated and excessive use of opioids; change systems of care and prescribing patterns to promote quality and safe care for patients with chronic pain; improve the coordination of care for patients with chronic pain; ensure appropriate use of prescription pain medications; enhance collaboration with the local systems of care to ensure safe and quality care for patients; and lower health care costs associated with higher service utilization to treat chronic pain.</p>
Enhanced Opiate Addiction Treatment and Care Transitions in Rural Communities: Medication Assisted Recovery (MAT), Intensive Outpatient Therapy, and Emergency Department Transitions	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with opiate addiction and/or alcohol abuse
Objective	<p>Create effective, assessable substance abuse treatment for residents of rural communities. A variety of services will need to be available because of the complex nature of substance abuse including intensive outpatient and case management services and Medication Assisted Treatment (MAT) resources to treat opiate addiction. Due to transportation barriers in rural communities, these services will need to work closely with one another to provide multiple services through a variety of access points and coordinate closely with emergency departments (EDs) to provide seamless care transitions. Community Service Boards are equipped to deal with substance abuse issues and the mental health issues that often accompany them with a variety of services. Typically, primary care physicians often deal with ongoing medical issues associated with continued substance use independently from the packaged services offered by the CSB.</p> <p>This model will integrate medical care with behavioral health care for residents dealing with substance abuse needs while expanding access to the spectrum of essential opiate addiction treatments from Intensive Outpatient Therapy (IOP) to MAT. These programs will differ from the current substance abuse treatment reimbursed by Medicaid because they will: offer comprehensive treatment protocols; be accessible and adequate in capacity to meet the needs of all communities; be recovery and person-centered focused, utilize peer support specialists to engage, support, coach and encourage; and be trauma-informed. By focusing on the whole person and integrating care with primary and behavioral health providers, this model will increase overall health outcomes and decrease avoidable emergency department (ED) visits and psychiatric and medical hospitalizations.</p>

Comprehensive Residential Services: Medically Supervised Detox, Crisis Stabilization, and Medication Assisted Recovery (MAT) for Opiate Addiction in Rural Communities	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with opiate addiction and/or alcohol abuse
Objective	Provide residential detox and residential crisis stabilization services and centralized MAT services that are community-based, culturally sensitive and responsive, trauma-informed, person-centered, non-judgmental, recovery-oriented, evidence based, and specifically designed to meet the complex needs of adults who typically have addictions to more than one substance and who often have co-occurring mental health and physical health conditions. This model will also meet the immediate crisis needs of adults with psychiatric or co-occurring disorders who require short term community-based residential treatment, avoiding the high-cost and intensive level of care associated with inpatient hospitalizations.
Comprehensive Substance Abuse Treatment for Pregnant Women and Mothers	
Target Population	Medicaid-covered or uninsured pregnant women or parenting women with dependent children with opiate addiction and/or alcohol abuse
Objective	Develop a continuum of care that is community based, culturally sensitive and responsive, trauma informed, person-centered, non-judgmental, recovery oriented, evidence based, and specifically designed to meet the myriad of needs of women with Substance-Use Disorders or co-occurring mental illness who are pregnant, postpartum, and/or parenting or who are of child bearing age. The continuum of care will also target women with substance use disorders or co-occurring mental illness who do not meet one of these four targeted populations. Objectives are to: (a) provide a continuum of care that includes, but is not limited to, screening, assessment, gender specific outpatient and intensive outpatient services, intensive case management, peer support, Medication Assisted Treatment (MAT) for opiate addiction, residential treatment, and Drug Courts; (b) increase capacity to ensure immediate access to services included in the continuum of care; (c) identify and reduce barriers to immediate access to services, i.e., transportation and child care; (d) ensure integrated primary and behavioral health care with community providers for gynecological and/or obstetric care, pediatric care, communicable diseases, family planning, pain management, nutrition, dental care, etc.; (e) increase positive birth and early childhood outcomes; (f) decrease infant and maternal mortality rates; (g) increase retention in treatment and increase potential for sustainable and successful recovery outcomes; (h) provide MAT services that include medication therapies and behavioral health interventions for opiate, alcohol, and nicotine dependence; (i) increase access to high-quality residential treatment services; and (j) maximize Medicaid enrollment for these targeted populations.
SBIRT (Screening, Brief Intervention, and Referral to Treatment) for Substance Use Disorders in Primary Care	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) seen in primary care with or at risk of opiate addiction and/or alcohol abuse
Objective	<p>The goals of this model are to:</p> <ul style="list-style-type: none"> • Increase the integration and utilization of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach in primary care clinics to identify, reduce, and prevent problematic substance use and dependence; • Increase the number of primary care patients who are: <ul style="list-style-type: none"> ○ Screened for use of tobacco and illegal substances and misuse of alcohol and prescribed medications, and ○ Provided brief interventions for risky substance abuse behaviors, and ○ Referred for specialty treatment, when appropriate; • Increase the capacity of communities to provide treatment options for patients who screen positive for substance abuse issues, either through in-person or technology-based appointments;

Objective (Continued)	<ul style="list-style-type: none"> • Reduce avoidable emergency department visits and inpatient hospital admissions and associated costs that result from substance use disorders or misuse of substances; and • Increase education and training about substance abuse issues and appropriate assessment and treatment options, including SBIRT, for behavioral health students and providers.
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Complex Care Models

Integrated Care for Pediatric Super-Utilizers: Team-Based-Care for Children with Medical Complexity	
Target Population	Medicaid, FAMIS, or uninsured children (ages 0-18 y/o) who are emergency department and inpatient super-utilizers
Objective	Improve clinical outcomes and decrease hospital (inpatient and ED) utilization and costs for uninsured and Medicaid pediatric super-utilizers by addressing social and medical complexity with expanded coordination of care, family support, novel partnerships and innovation.
Individuals with Intellectual and Developmental Disabilities (IDD): Improving Access, Decreasing Costs.	
Target Population	Approximately 140,000 individuals with intellectual and developmental disabilities currently on the wait lists for the Medicaid ID and DD waivers, Medicaid waiver recipients, or residing in Nursing Facilities in Virginia
Objective	To reduce avoidable hospitalizations and unnecessary Medicaid service utilization by building a new community oriented vision for care coordination; providing access to the holistic care needs of individuals with IDD through mobile and community integrated region-based service options that include preventative care, medical and dental intervention, mobile crisis services, and behavioral supports while addressing the social determinants of health for the patient and family/caregivers.
Integrated Care for Adult Super-Utilizers with Complex Chronic Physical and Behavioral Health Conditions in Rural Communities	
Target Population	<p>Medicaid-covered and uninsured adults (ages 18-64 y/o) who are classified as “super-utilizers” based on the following scoring system:</p> <p>Emergency Department Visit = 1 Point Ambulance Call = 1 Point Inpatient Admission (Non-Obstetric) = 2 Points</p> <p>If a patient scores 6 or greater in the past year and has at least one chronic illness, they will be considered a super-utilizer</p> <p>If a patient is categorized as being high-risk due to social risk factors (e.g., difficulty accessing services, inadequate social support, mental illness, substance abuse, homeless, recent trauma history or ACE) or difficulty accessing health care due to location in an underserved area (HPSA or MUA) in addition to scoring above a 6, they will be prioritized for this intervention.</p> <p><u>The following types of patients will be excluded from this intervention:</u></p> <ol style="list-style-type: none"> 1. Patients whose only chronic illness is Serious Mental Illness and who are already connected to psychiatric care 2. Patients who have had two or more Substance Abuse Rehab stays or admissions and are still actively using a substance <p><i>*These could be candidates for the behavioral health super-utilizers intervention</i></p>
Objective	Provide trauma-informed, patient-centered treatment to improve clinical outcomes and decrease preventable hospital (inpatient and ED) utilization, ambulance utilization, and

	costs for uninsured and Medicaid adult inpatient and ED super-utilizers so they can receive the right level of care, at the right place, at the right time.
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Integrated Care for Adult Super-Utilizers with Complex Chronic Physical and Behavioral Health Conditions Living in Urban Communities	
Target Population	<p>Uninsured or Medicaid-covered Adults (ages 18 and older) with at least one chronic illness who are classified as “super-utilizers” based on review of healthcare utilization over 3 months using the following scoring system:</p> <p>Emergency Department Visit = 1 Point Inpatient Admission (Non-Obstetric) = 2 Points If a patient scores above a 6 in the past year and has at least one chronic illness, they will be considered a super-utilizer</p> <p>If a patient is categorized as being high-risk due to social risk factors (e.g., difficulty accessing services, inadequate social support, mental illness, substance abuse, homeless, recent trauma history or ACE) or difficulty accessing health care due to location in an underserved area (HPSA or MUA) in addition to scoring above a 6, they will be prioritized for this intervention.</p> <p>The following types of patients will be excluded from this intervention:</p> <ol style="list-style-type: none"> 1. Patients whose only chronic illness is Serious Mental Illness and are already connected to psychiatric care 2. Patients who have had two or more Substance Abuse Rehab stays or admissions and are still actively using a substance <p><i>*These patients could be candidates for a separate behavioral health super-utilizers intervention</i></p>
Objective	Improve clinical outcomes for physical and behavioral health conditions for very vulnerable and medically fragile patients while decreasing preventable inpatient hospital and emergency department (ED) utilization and total health care costs for uninsured and Medicaid adult inpatient and ED super-utilizers.

Integrated Oral Health and Primary Care Models

Healthy Moms and Babies: Providing Oral Health Services During Pregnancy	
Target Population	Medicaid-covered and uninsured pregnant women in prenatal care and oral health settings
Objective	To improve perinatal health outcomes, facilitate establishment of early dental homes and reduce health care costs by establishing an integrated care delivery model that incorporates oral health education, screening, and appropriate treatment and/or care coordination/referrals for underserved populations who are pregnant.
Improving Children’s Overall Health By Integrating Basic Oral Health Screenings, Education, Fluoride Varnish, Assessments and Referrals in Primary Care Settings	
Target Population	Medicaid, FAMIS, and uninsured children (ages 0-20) in primary care and oral health settings
Objective	Increase the number of Medicaid and FAMIS enrollees age 0 up to age 20 that receive oral health education, screening, appropriate prevention services and age appropriate dental referrals in pediatric medical primary care settings.
Treating and Preventing Periodontal Disease to Improve Overall Health of Patients With Type 2 Diabetes	
Target Population	Medicaid-covered and uninsured adults (ages 18 to 64) in oral health or primary care settings who have Type 1 or 2 diabetes or are at risk for developing Type 1 or 2 diabetes

Objective	Improve oral/overall health and reduce treatment costs by incorporating oral health education, screening, appropriate treatment and care coordination within the patient centered medical home model for underserved populations with Type 1 or 2 diabetes or are at risk for developing Type 1 or 2 diabetes.
Dental Diversion Plan for Emergency Department Patients	
Target Population	Medicaid-covered and uninsured adults (ages 18-64) presenting to emergency department with oral health diagnosis/oral pain
Objective	Improve patient outcomes, introduce a dental home with continuity of care, and reduce health care costs by improving the management of patients that report to hospital Emergency Departments (EDs) for dental-related complaints. Program will also reduce drug seeking behavior of patients seeking medications from hospital Emergency Departments.
Adults with Serious Mental Illness (SMI): Reducing the Burden of Disease by Improving Patients' Oral Health	
Target Population	Medicaid-covered, GAP-covered, and uninsured adults (ages 18-64) with SMI in oral health or primary care settings
Objective	Improve health, promote coordinated care and reduce health care costs by establishing an integrated delivery model that incorporates oral health education, screening, appropriate treatment and care coordination for underserved populations with a diagnosis of severe mental illness. The model includes training dental providers to care for individuals with SMI.

C. Care Transitions Model

Recognizing that unnecessary hospitalizations are a challenge for patients, families and providers across Virginia, a coalition known as *Virginia Partners for Care Transitions* (led by the Virginia Hospital and Healthcare Association, the Virginia Health Quality Center, and the Virginia Department for Aging and Rehabilitation Services) was active before the launch of the SIM Design process in 2015 to identify effective strategies and build strong partnerships to improve care transitions for patients across the Commonwealth. In particular they were interested in exploring a possible statewide replication of the Eastern Virginia Care Transitions Partnership (EVCTP).

EVCTP is a formal collaborative of 5 Area Agencies on Aging (AAAs), 4 health systems (11 hospitals), 69 skilled nursing facilities (some independent and some owned by hospitals), and 3 Managed Care Organizations (MCOs). Bay Aging is the lead community based organization and fiduciary agent for EVCTP which covers 20% of Virginia. In operation since 2013, EVCTP utilizes Dr. Eric Coleman's evidence-based Care Transitions Program® (CTP) model of engaging patients and their caregivers in skill transfer making them better prepared and more confident to take charge of their own health management activities.

EVCTP's Care Transitions Program was initially funded by a Centers for Medicare and Medicaid Innovation Care Transitions Initiative (CTI) grant, and has shown notable success. It provides transitional care to patients who are enrolled in Medicare Parts A and B who have multiple chronic illnesses. Service is provided as patients leave treatment from a hospital or skilled nursing facility and return home. The package of services includes:

- Identification of eligible patients in participating hospitals from the prior day census.

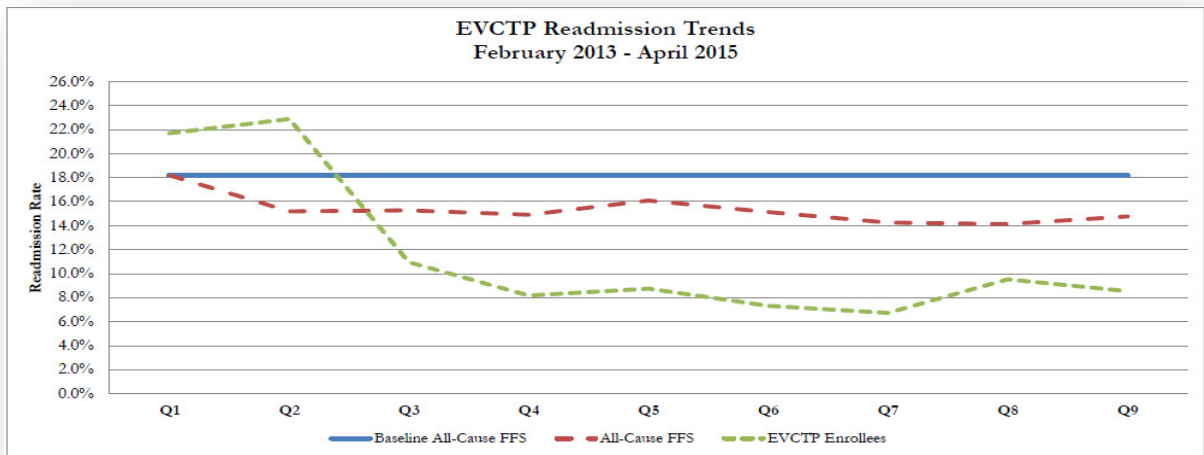
- A hospital visit to meet the patient, schedule the home visit and discuss goals of the program.
- A visit to a skilled nursing facility if this is next transition step.
- A minimum of one home visit within 24 to 72 hours of discharge to include the following:
 - Medication Self-Management and Review to promote patient knowledge about medications and develop a medication management system, to provide at program expense medication management tools when needed (ex. pill boxes, pill cutters, reminders, etc.), to identify any non-reported medications utilized by the patient and to provide emergency medication purchase when necessary.
 - Patient Centered Health Record (PHR), to promote patient understanding and to develop and use a Personal Health Record to improve communication with the primary care physician, specialist or other caregivers.
 - Follow-Up to ensure that patient schedules and completes follow-up visits with the primary care provider or specialist.
 - Red Flag Identifications, to promote patient understanding of indications that their condition is worsening and how to respond.
 - Environmental Home Assessment.
 - Options Counseling evaluation when needed to determine eligibility for additional supportive services.
- A second home visit at no additional charge if indicated by risk.
- A minimum of 3 follow-up phone calls within the first 30 days and additional calls as needed within the 90-day follow up period to promote compliance with the established health goals.
- Re-coaching at no additional charge of patients readmitted for any reason within the first 30 days, or within 90 days for the same diagnosis with which the patient was discharged.

In order to better address the social determinants of health, EVCTP's model has grown to incorporate additional evidence-based care components to enhance the transition through the post-acute care continuum. In addition to standard CTI coaching and community supports, EVCTP employs:

- The Stanford Chronic Disease Self-Management Program;
- Diabetes Self-Management education;
- Fall Prevention;
- Advance Care Planning;
- Telehealth partnerships; and
- Healthy Ideas behavioral health interventions for depression and anxiety.

In the period February 2013 through October 2015, EVCTP coaches served over 21,000 patients in their homes. As depicted in the two figures below, the beginning 2010 baseline all-cause readmission rate of 18.2% has been reduced to 14%. The baseline readmission rate of

23.4% for the high-risk target group now averages 9% for program enrollees. This has yielded an estimated avoided readmissions savings of \$17.2 million.



EVCTP Key Milestone Data:

A	Target Group Discharges		26,633
B	Target Group 2010 Baseline Readmission Rate		23.4%
C	Readmission Rate Among Target Group		17.1%
D	Change in Target Group Readmission Rate	$(C - B) \div B$	-27.0%
E	Absolute Percentage Point Reduction	$B - C$	6.3%
F	Number of Clients Enrolled		20,485
G	Readmission Rate Among Enrollees		9.7%
H	Number of Readmissions Avoided	$(A \times B) - (A \times C)$	1,685
I	Estimated Savings Per Avoided Readmission		\$10,226
J	Estimated Avoided Readmission Savings	$H \times I$	\$17,230,810

Given this success, VCHI contracted with Bay Aging as part of the SIM Design opportunity to prepare a plan to replicate the EVCTP model statewide. The contract required Bay Aging to assess capacity of other Area Agencies on Aging (AAAs) in the state, design a training program and outline a method to implement a Care Transitions Program (CTP) model for Virginia. It has accomplished all of this. The AAAs are color-coded below to indicate their readiness for expansion. A statewide rollout could be accomplished in three years.

The next steps for the statewide replication of the EVCTP model are to 1) establish an alternative payment model with Virginia health plans and 2) establish a Virginia Technical Assistance Center.

Using the EVCTP experience and data as a template, specific negotiated episode-based

or bundled payment rates will need to be refined using the current Medicare amount of \$356 per enrollee per month in the eastern part of the state as a starting point. In the long run, all AAAs can sustain the CTP capacity and performance with properly set per episode payments, which can be financed out of shared savings for payers if the EVCTP performance is any guide, and it should be, since EVCTP will be training the rest of the state's AAAs in this project.

Figure 1 may help illustrate the transition to the alternative payment model envisioned in this project. This is illustrative only of the concept; it is not to scale and does not reflect the impact the Medicare Population dispersion has on the regions.

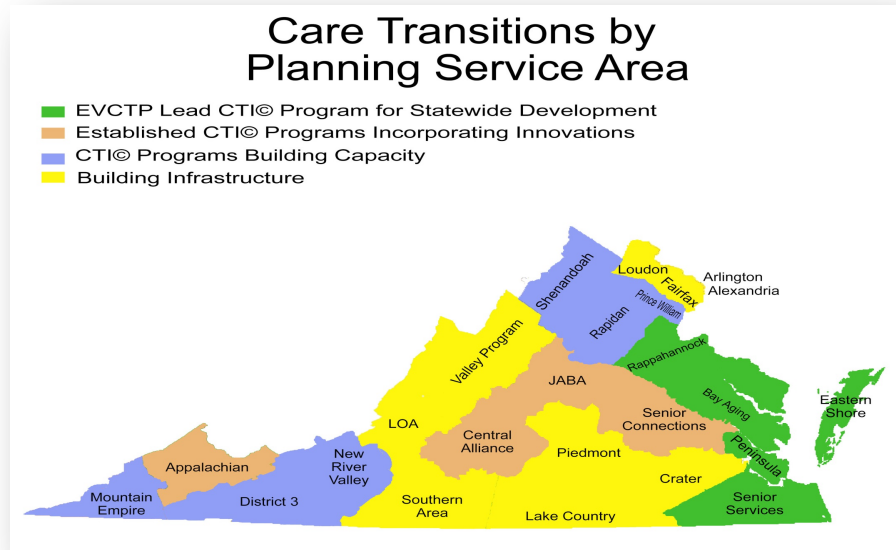
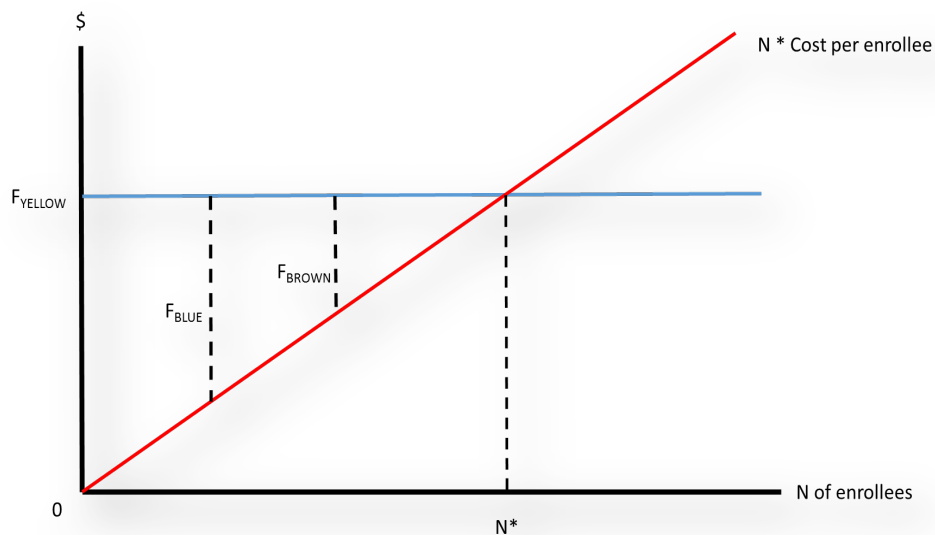


Figure 1



The vertical axis is measured in dollars (\$) and the horizontal axis is measured in number (N) of target group enrollees. As an area's N grows, the amount of fixed payment required drops, as shown from yellow to brown, until it hits zero at N*, the scale of EVCTP (in the green area on the previous map). The cost per enrollee is a key parameter, and reflects the personnel, travel and minimal services costs.

VCHI has agreed to facilitate the creation of a Technical Assistance Center, should funding become available for the proposed replication. This Center would be tasked with maintaining the database for reporting, tracking performance measures, tracking episodes of care and reporting on quality outcomes and quality assurance measures while working to integrate with Virginia's Health Information Exchange. The Technical Assistance Center will serve as a statewide one-stop-shop for referrals, billing, reporting and data analytics, simplifying and standardizing the administrative processes for providing statewide complex care. This will be key to maintain the fidelity of the operations, critical to ensuring the projected reduction in readmissions.

The SIM leadership team is confident EVCTP and other Virginia AAA partners will continue to effectively reduce readmissions and significantly improve health outcomes while being a low-cost provider of non-clinical services. There are additional significant potential savings impacts from future readmission reductions, prevention programs and emergency department diversion strategies currently in development with EVCTP. To see further discussion of the projected financial implications of this model, please see *Chapter 12: The Financial Case for Transformation*.

Our next step will be to further refine the alternative payment model and identify a source of funding for the desired statewide replication. VCHI was successful in 2016 in assisting EVCTP in securing operating support from the Virginia General Assembly after federal funds from CMS were prematurely ended due to a change in congressional budget approval. There was widespread recognition of the potential and value of this model by Virginia's legislative leaders.

D. Telehealth High Risk Obstetrics Model

The University of Virginia Center for Telehealth has proven the value of telehealth programs to fill gaps in care coordination for chronic or complex conditions, as well as access to high-risk obstetrical care. During the SIM design period, an analysis of a recent UVA demonstration project that spanned three years and provided care to 467 patients showed that when compared to a traditional referral clinic for high-risk pregnant women living in rural communities, telemedicine was associated with:

- A decrease in the percentage of patients who missed one or more prenatal visits from 57.1% to 21.3%;
- An increase in average prenatal visits from 5.26 to 6.46 visits;

- 162,126 miles in travel saved;
- Reduced mean neonatal intensive care unit days: 13.42 vs. 22.11;
- Higher mean birth weight: 3226 grams vs. 3137 grams.

Now that a sound delivery system model is available, the challenge is creating an alternative payment model that will make telehealth a viable, sustainable solution. Moving forward, VCHI is working with PriceWaterhouseCoopers, the Virginia Department of Medical Assistance Services, George Mason University, and the University of Virginia to review Virginia's claims data to establish an alternative payment model for high-risk OB telehealth services. This work will be ongoing in 2016 with funding support from the Virginia General Assembly.

A. Background

Meeting the needs of an aging and increasingly complex population while also closing gaps in health disparities and improving access to timely and appropriate services will require a healthcare workforce trained in new ways to identify and address the barriers to well-being facing our communities. Through five workforce development programs, Virginia has been working to facilitate education and training across levels of health professions expertise that develops individuals into collaborative, boundary-spanning healthcare workers needed to bridge the gaps in the current healthcare system. These five programs are:

- Expansion of Psychiatric Nurse Practitioner Programs
- Establishment of a Community Health Worker Program
- Establishment of a Health Behavior Coach Certificate
- Establishment of a Care Coordination Certificate
- Establishment of a Transformative Leadership Course

B. Expansion of Psychiatric Nurse Practitioner Programs

Virginia, like many states, has an overall shortage of mental health professionals and a growing need for behavioral health services. Nearly two-thirds of Virginia's counties are defined as mental health professional shortage areas with high shortages concentrated in certain regions of the state. The "golden crescent" of Northern Virginia (33%), Central Virginia (27%) and Hampton Roads (18%) is home to 78 percent of Virginia's mental health professionals, leaving more rural regions with significantly fewer professionals -- West Central (11%), Valley (6%), Southwest (3%), Southside (2%), and Eastern (<1%).

Many of our proposed delivery system reform models, described in Chapter 8, rely on improved integration between primary care and behavioral health. But at the present time, Virginia does not appear to have enough mental health professionals to make this feasible in many parts of the Commonwealth. Furthermore, research shows that much of today's mental health treatment requires the prescribing and monitoring of medications, which can only be done by a psychiatrist, a primary care physician, or a psychiatric nurse practitioner.

Our recommended strategy, developed in partnership with the Virginia Health Care Foundation, is to train and prepare more psychiatric nurse practitioners. As of 2015, there are only 203 practicing psychiatric nurse practitioners in the state. This represents just 3% of all nurse practitioners. Psychiatric nurse practitioners must complete a two-year curriculum (or a

little less if an existing nurse practitioner elects to go back for 3-4 semesters of post graduate work) making the pipeline for completion relatively short. Additionally, psychiatric nurse practitioners are more affordable for many types of behavioral health care, typically costing less than \$100,000 per year.

Virginia has four schools of nursing that have a psychiatric nurse practitioner program. They are Virginia Commonwealth University, University of Virginia, Shenandoah University, and George Mason University. While expansion of these programs is possible, it will require additional financial resources to do so. Each program will need money to hire additional faculty and to identify the required preceptor sites.

Virginia's next step will be to identify the resources to begin pursuing an expansion of these four programs.

C. Establishment of a Community Health Worker Program

The severity and persistence of health inequities in the U.S.¹ and Virginia² are well documented. The utilization of community health workers (CHWs) is one strategy that has been recommended as a best practice for promoting health equity.³ CHWs are frontline public health workers who are trusted members of, and/or have a unique understanding of, the community served. They possess knowledge about the challenges faced by community residents because many have experienced those challenges themselves. CHWs have been shown to be effective in improving screening rates for cancer, reducing hospital readmissions, and producing a positive return on investment.^{4,5,6}

Despite the effectiveness of CHWs, several barriers keep them from full participation in the health workforce. According to an Institute of Medicine report, inconsistent scope of practice, training, and qualifications; lack of sustainable funding; and insufficient recognition by other health professionals are some of the barriers to full participation.⁷ To address these barriers, the Institute for Public Health Innovation (IPHI) and the Virginia Department of Health (VDH) were funded through the SIM design process to co-convene a statewide CHW Advisory Group that has worked to increase professionalization and raise awareness regarding CHWs. To date the group has created a Virginia-specific definition of a CHW as well as a scope of practice and core competencies. The group is currently researching best practices in order to create Virginia-specific training guidelines, credentialing processes, and financing strategies.

Moving forward, IPHI will continue to partner with VDH to lead a collaborative process to define the CHW workforce. VDH has identified funding to hire a part-time coordinator to staff the CHW Advisory Group and facilitate planning meetings between VDH and IPHI. IPHI will play the lead role in convening a policy taskforce to develop legislative and healthcare system policies relevant to the institutionalization of CHWs. IPHI will also lead the development and

implementation of a public awareness campaign to build support for the utilization of CHWs. These three aspects of the CHW development effort are described below.

Building on the accomplishments over the past year, the Advisory Group, facilitated by VDH, will develop and recommend a program of training and certification for CHWs and establish qualifications that will involve:

- Recommending a model of training certification that will accommodate diverse certification approaches by formal educational institutions and non-profit agencies. For example, the Advisory Group examined similar work in Florida and identified it as a potential model for VA.
- Identifying and engaging an entity to help create and operate the recommended credentialing system. For example, the Virginia Certification Board and the Virginia Community College System are entities that have been identified by the Advisory Group as potential homes for the credentialing system.
- Recommending standards for hours of classroom instruction and continuing education, as well as the adoption of a certification examination or other means to assess CHW competency in connection with certification. The Group is currently researching state requirements for CHW certification in FL, SC, MO, TX and NY.

The VA CHW Advisory Group, with leadership provided by IPHI, will convene a policy taskforce and meet with policy makers (i.e. legislative and health care system) and others to formally integrate CHWs into standard models of care and sustainable financing models. Strategies that will be employed to promote sustainable funding include:

- Facilitating movement toward Medicaid financing by working closely with the Department of Medical Assistance Services (DMAS) to recommend specifics for a Medicaid State Plan Amendment and a Delivery System Reform Incentive Payment (DSRIP) program. An example of this facilitation is the continuation of discussions with DMAS around training and certification as it relates to Medicaid reimbursement.
- Engaging elected officials to discuss the potential need to pass legislation to establish a certification or licensure program for CHWs.
- Partnering with hospitals systems, health plans and health insurers to develop pilot projects that demonstrate the value and return on investment (ROI) of CHWs in improving outcomes, quality, and costs for complex, high utilizer patient populations. Data from successful pilot projects can be used to support the direct hiring of CHWs within the healthcare system.

The VA CHW Advisory Group, with IPHI leadership, will build awareness about the value of CHWs among key target audiences including hospitals, local health care systems, insurers, CHW program managers, state and local health departments, and the general public across the state by:

- Planning and convening a second, statewide CHW Summit among stakeholders to continue to raise awareness, learn from promising practices across Virginia, and identify opportunities for institutionalizing and sustaining CHW programs,
- Developing and implementing a public relations strategy to educate and engage key audiences.

D. Establishment of a Health Behavior Coach Certificate

The Health Behavior Coach Certificate is a post-baccalaureate program designed for college graduates with an interest in a health career. Through a one-year, predominately on-line program, graduates will learn the essential knowledge, skills, and attitudes to function as health coaches. The training will also prepare them for successful passage of the Certified Health Education Specialist examination. With this training, individuals will be prepared to work with individuals toward healthier lives, improving long-term well-being while also defraying downstream healthcare costs. The Certificate is currently pending approval from Virginia Commonwealth University leadership and expects to enroll students in the fall of 2016.

E. Establishment of a Care Coordination Certificate

Similar to the Health Behavior Coach Certificate, the Care Coordination Certificate is a post-baccalaureate program; however, this program is designed for individual with prior health expertise in areas such as nursing or social work. Through the one-year, predominately on-line program, students will learn the foundational knowledge and leadership skills to function successfully as a care coordinator. Graduates will have the capacity to work across organizations such as health systems, insurers, governmental agencies, and community organizations to help complex individuals achieve their health goals. The program, developed with SIM design funds, is the first of its kind in the country and is completing the approval process at Virginia Commonwealth University and expects to enroll students in the fall of 2016.

F. Establishment of a Transformational Leadership Course

Finally, the Virginia SIM team invested in the development of a Transformational Leadership Course. This on-line program designed for physicians, future physicians, and other current or aspiring healthcare leaders examines the role of the healthcare leader from several perspectives: the individual, the team, and the system. Through the course, learners learn about themselves, how to collaborate within teams, and how the changing system is shaping the leadership needed in healthcare. The course will be available beginning in the summer of 2016 to anyone in the world with internet access and will be credited for continuing education.

Collectively, these programs represent a sequence of curricula designed to train community-engaged health professionals that can bridge the gaps in healthcare. Individuals who complete

any of the programs will have new skillsets that can enhance or create the change needed to improve healthcare and the overall health of Virginians.

¹ Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report – United States, 2013. MMWR 2013;62(Suppl 3):

² Virginia Department of Health. 2012 Virginia Health Equity Report.
<http://www.vdh.virginia.gov/healthpolicy/2012report.htm>

³ National Office of Minority Health, National Stakeholder Strategy for Achieving Health Equity,
<http://minorityhealth.hhs.gov/npa/templates/content.aspx?lvl=1&lvlid=33&ID=286>

⁴ Agency for Health Research and Quality. National Healthcare Disparities Report, 2010. Accessed via
<http://www.ahrq.gov/research/findings/nhqrdr/nhdr10/pdf/nhdr10key.pdf>

⁵ Kangovi, S. et al. Patient-Centered Community Health Worker Intervention to Improve Post-hospital Outcomes: A Randomized Clinical Trial. JAMA Internal Medicine. Published online February 10, 2014.

⁶ Rush, Carl H. Return on Investment from Employment of Community Health Workers. J Ambulatory Care Management. April-June 2012, Vol 35, No 2, pp. 133-137.

⁷ Institute of Medicine, Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care (2002)

A. Background

Virginia primary care clinicians are working through a period of profound change. Virtually all are being challenged to demonstrate their value in terms of productivity, quality, outcomes, and cost efficiency. Many are also being challenged to adopt population health management strategies to improve health and health services relative to cost for defined populations. These changes are occurring within a context of health system change including mergers, acquisitions, formation of accountable care organizations, rollout of the Virginia health insurance exchange and the tight network products available therein, uncertainty about the future of Medicaid expansion, important changes in Medicare payment policy emphasizing performance standards and efficiency, and an employer sector that is re-examining its role in health care.

Small to medium sized primary care practices in particular are facing multiple challenges that make it increasingly difficult to deliver patient-centered care in an economically viable practice environment. The results can be seen in physician burnout and the continuing challenge of providing sufficient medical home capacity for our most vulnerable populations. There are many factors contributing to PCP burnout, including poor documentation and coding that results in a disparity between actual work done and payment for services rendered; low overhead models of staffing that result in physicians doing non-physician, non-revenue generating work as much as 50% of the time; and confusion as to the best way to measure the quality of services delivered and earn value-based incentives. According to the Patient-Centered Primary Care Collaborative, Virginia is in the lowest quintile in the nation for PCMH engagement, despite having a high income, highly insured, highly educated population. Practices must be helped to achieve a return to a psychologically comfortable state as a first step – this creates the *adaptive reserve* that is needed for higher order practice transformation.¹

Recognizing that we needed to do more to prepare Virginia primary care physicians for the emerging marketplace, VCHI convened a planning group comprised of the faculty from Virginia's academic medical centers (VCU, UVA, EVMS, and Carilion/Virginia Tech), practice facilitation experts from the Virginia HITREC, VHQC, and Community Health Solutions, provider associations (the Virginia Community Healthcare Association, the Virginia Academy of Family Physicians, the Virginia Chapter of the American College of Physicians), evaluation experts from George Mason University, as well as state partners from the Virginia Department of Medical Assistance Services and the Virginia Department of Health to become partners in *Restoring Primary Care in Virginia*. This group was started pre-SIM Design, and quickly identified an opportunity to secure funding from the Agency for Healthcare Research and Quality to support our emerging vision.

In April of 2015, Virginia was awarded a \$10.6 M grant to be one of the seven national collaboratives selected as part of the “Accelerating the Dissemination and Implementation of PCOR Findings into Primary Care Practices” R18 initiative. This meant our primary care transformation efforts would get jump-started such that they would be initiated before the SIM Design period was concluded. While challenging from a staffing perspective, we welcomed the opportunity.

B. Virginia’s Approach to Primary Care Transformation

Our initiative, known as *Restoring Primary Care in Virginia*, delivers quality improvement support to 250 small-to-medium sized primary care practices. The value proposition is fairly simple: the opportunity to sustain and revitalize a practice in the new health care environment. We believe this new environment will reward practices that are ready and able to identify and implement patient-centered outcomes research findings. The new environment will also reward practices that can demonstrate value by improving health and managing costs for defined populations. Research and experience show that these challenges can be met by small to medium-sized practices if they know how to optimize their practice model and their practice culture. We offer participating practices:

- Improved financial performance;
- Improved clinician, staff, and patient satisfaction;
- Improved quality of care;
- Improved ability to negotiate for and receive pay for performance bonuses;
- Completion of Part IV certification by the ABFM and ABIM for QI work completed in this initiative;
- Engagement in a self-sustaining learning collaborative of similar practices after the end of the project; and
- Restored joy in practicing primary care medicine to reduce burnout.

A core principle of Virginia’s approach is that the practice model and the practice culture are inextricably linked. This principle is critically important at this point in history when many small primary care practices are facing multiple challenges that make it increasingly difficult to deliver patient-centered care in an economically viable practice environment. The results can be seen in physician burnout and the ongoing challenge of generating sufficient primary care capacity for our most vulnerable populations. One practical implication of this pressure is that it can be difficult to sustain the clinical leadership necessary to introduce new approaches – including freshly produced patient centered outcomes research – into an environment that is overworked and overstressed.

Consequently, for many primary care practices, restoring the joy in practice is not just a nicety, but a critical strategy for restoring and sustaining the clinical leadership necessary to elevate quality and demonstrate value. Fortunately, there are practice innovations that allow primary clinicians to fulfill their calling as leaders and healers while demonstrating value to those who purchase and those who

receive health services. We teach these practice innovations through *Restoring Primary Care in Virginia*, and we believe that restoring the joy of practice is a significant part of our value proposition for participating practices.

We do this by employing a blended educational strategy. This strategy is based on the principle of the learning organization and includes practice facilitation, expert consultation, collaborative learning events, an online support center, and data feedback and benchmarking. We employ this strategy to help participating practices incorporate patient-centered outcomes research (PCOR) clinical and organizational findings while building their overall practice capabilities. It is critically important that this strategy accommodate practices at different stages of learning and development. A description of each component of this strategy follows.

B1. The Learning Organization. The Institute of Medicine (IOM) has widely promoted the importance of health care organizations becoming learning organizations. This goal of organizational learning is closely aligned with QI capacity building.² As noted by AHRQ, "...a primary care practice has "QI capacity" when it knows and understands QI approaches and how to use data and feedback to improve. QI capacity also depends on the commitment of practice leadership and staff to QI activities. In order to develop QI capacity, a practice needs to become a learning organization, which actively seeks to respond and adapt to external feedback and changing context, to ensure that important QI work does not end when a specific QI project ends."³

B2. The Learning Context. A learning organization requires a learning context, and we continuously communicate a context for learning that is closely tied to the value proposition of the project. First, we use data to educate practices that Virginia has significant work to do in optimizing primary care for populations that have or are at risk for cardiovascular disease, including work to eliminate disparities in access and quality for medically underserved populations. Second, we use research and example practice models to show practices that primary care must be and can be a cornerstone of community-based efforts to improve access, quality, and population health. Third, we identify and disseminate PCOR findings that can and should be implemented within primary care practice setting. Most importantly, we continually communicate and support the vision that PCOR findings are best delivered in practice settings that are designed to be patient-centered, clinically excellent, economically viable, and a joyful place to practice. By equipping practice leaders with this vision and the supports to achieve it, we believe we are equipping them in turn for the job of engaging their practice teams as willing and enthusiastic learners. This creates the context for learning that is necessary to engage the practices in learning and sustain their commitment as partners in the project.

B3. Practice Facilitation. The project provides practice facilitation support for participants that need hands-on help to implement PCOR findings and practice improvements. In its publication titled *Developing and Running a Primary Care Practice Facilitation Program: A How to Guide*, AHRQ defines practice facilitation as "...a supportive service provided to a primary care practice by a trained

individual or team of individuals. These individuals use a range of organizational development, project management, **QI**, and practice improvement approaches and methods to build the internal capacity of a practice to help it engage in improvement activities over time and support it in reaching incremental and transformational improvement goals.”⁴ AHRQ also reviews the evidence base for practice facilitation in Chapter 1 of the same document.

B4. Expert Consultation. Expert consultation is used to help practices solve specific challenges in quality improvement and practice transformation. We have found that expert consultation from physician faculty is of particular value to practice leaders faced with significant clinical challenges or leadership situations. Research and experience suggest that physician-to-physician communication is a powerful catalyst for practice transformation.

B5. Collaborative Learning Events. The project produces shared learning events to help practices learn and implement PCOR findings and related practice improvements. Collaborative learning events are distinctive for their emphasis on peer-to-peer learning in addition to traditional learning from expert faculty.

B6. Online Support Center. The project manages an online support center where participants can find and share announcements, ideas, insights, and promising practices for practice improvement. Online resources include articles, tools, tutorials, and webinars on relevant topics, plus data on community indicators of cardiovascular health including indicators of health disparity. Participants are invited to share their best practices, lessons learned, and implementation tools. The online support center also captures and manages knowledge so that intellectual content (knowledge, insight, practice guides, tools) can be shared and utilized repeatedly.

B7. Data Feedback and Benchmarking. Participating practices are expected to report on multiple dimensions of their experience including, but not limited to, the defined set of ABCS (aspirin, blood pressure control, cholesterol management and smoking cessation) measures, the Change Process Capacity Questionnaire, the Measurement of Adaptive Reserve (also known as the Practice Culture Assessment), and the National Ambulatory Medical Care Survey Medical Records Questionnaire. It is critically important to optimize the value of this reporting by providing practices with feedback on their organization compared to other project participants. This allows each practice to gain insight on their own organization referenced against the experience of others. The resulting insights can be used to further inform practice improvement efforts.

B8. Differentiated Supports. An important benefit of a blended support model is that support activities are tailored to match the stage of development of the practice. To illustrate, practices in the initial learning and implementation stage receive intensive support through the learning collaborative, direct practice facilitation, and the online learning center. As practices complete this intensive phase, they are transitioned to maintenance support primarily through the online learning center.

C. Our Current Status

We have completed the first year of this three-year initiative. 249 practices from all regions of the Commonwealth are participating. Their geographic and practice types are depicted in Exhibits 1 and 2 below.

Exhibit 1. Breakdown of practices by affiliation

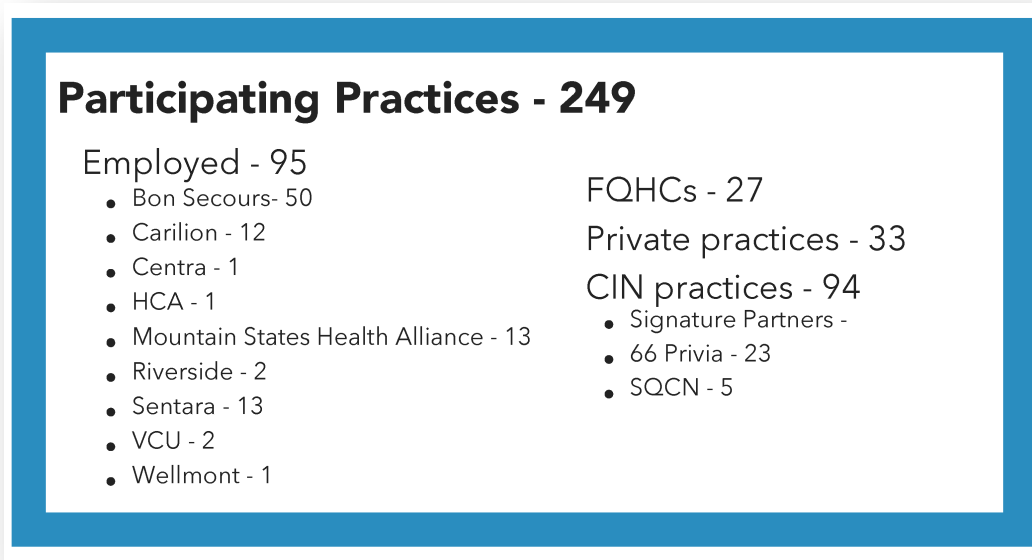
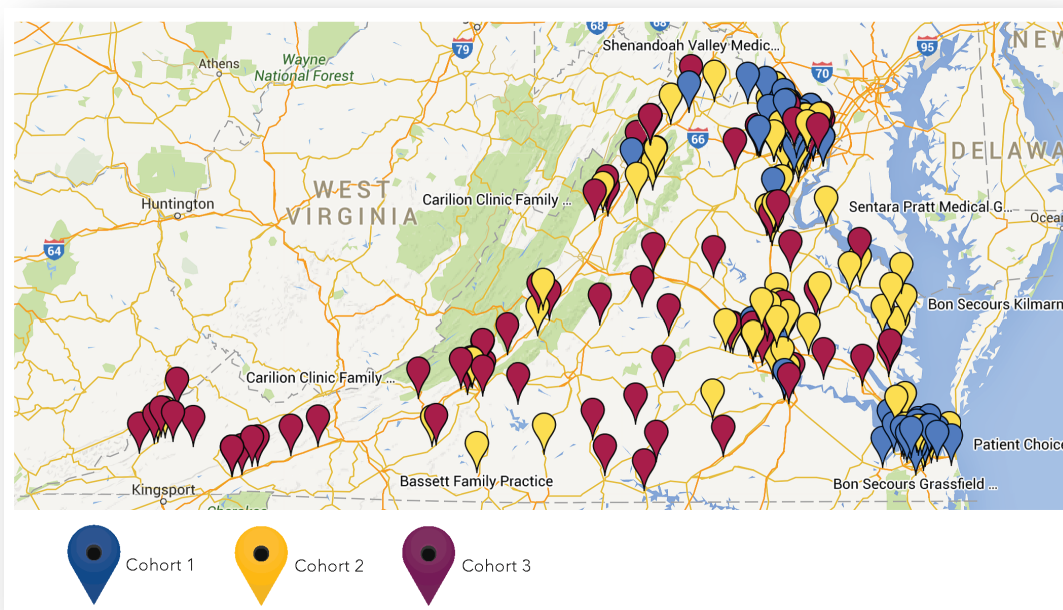


Exhibit 2. Geographic distribution of practices



D. Next Steps: Preparing for MACRA and MIPS

One likely extension of the *Restoring Primary Care in Virginia* project will be to help prepare our small practice collaborators for the rapidly approaching and new Medicare payment world of MACRA and the Merit-based Incentive Payment System (MIPS). AHRQ currently requires the reporting of four clinical quality measures in our project, corresponding to the ABCS of the Million Hearts Campaign (A = aspirin or other anti-thrombotic for ischemic vascular disease, B = blood pressure control, C = statins for high risk levels of cholesterol, and S = smoking assessment and cessation counseling). Two of these four, B and S, are cross-cutting measures under PQRS and likely to be included in the proposed MIPS system. Under MIPS, through which the vast majority of small group physicians are expected to be paid during the early years of MACRA implementation, physicians must choose at least one cross-cutting and 5 other measures from the 200 or so to be selected by CMS to choose from. Exactly which measures will be options will be clarified in the final rule by November 1, 2016.

Since the first performance period (calendar 2017) begins only 2 months after the final MACRA implementation rule is required to be published (by statute), clinicians will have to spend the rest of calendar 2016 making choices about which quality metrics to focus on and report. These will be highly impactful choices since up to 4% of Medicare revenue will be at risk in year one rising to 9% in year 4, based partly on practices' quality scores, resource use or total cost of care of attributed members, clinical practice improvement activities, and use of care information through HIT. Everything but cost is central to *Restoring Primary Care in Virginia*. Also, since the MIPS "at risk" payments are zero sum in the aggregate, i.e., the winners win exactly what the losers lose, providers will want as much guidance as possible about which metrics are best for them to report and compete on. The practice coaching and the learning organization we have created in *Restoring Primary Care in Virginia* are well positioned to provide our collaborating practices with unique guidance in these choices, and this kind of guidance can be spread statewide if future SIM testing grants are made available.

¹ Nutting PM, Crabtree BF, Miller WF, et al. Journey to the Patient-Centered Medical Home: A Qualitative Analysis of the Experience of Practices in the National Demonstration Project. *Ann Fam Med* 2010; 8(Suppl 1):545-556. http://www.annfammed.org/content/8/Suppl_1/S45.full.pdf+html

² Institute of Medicine (2013). A Continuously Learning Health Care System in the United States. Available online at <http://www.iom.edu/Global/Perspectives/2013/ContinuouslyLearning.aspx>.

³ AHRQ (2013). Building Quality Improvement Capacity in Primary Care: Supports and Resources. Decision Maker Brief: Primary Care Quality Improvement #2. Retrieved from <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/capacity-building/pcmhqi2.pdf>

⁴ AHRQ (2011). Developing and Running a Primary Care Practice Facilitation Program: A How to Guide. P.1.

A. Background

In Virginia, we believe that Medicaid has the ability and responsibility to lead payment reform at the state level and to ensure that its efforts are purposely aligned, where appropriate, with the payment reform initiatives of other payers – both Medicare and in the commercial market. Since Virginia Medicaid relies almost exclusively now on MCOs, the same insurers by and large that are in the commercial market, this should be more feasible than if Medicaid was still using FFS.

We have used the SIM Design process as an opportunity to plan an accelerated transformation of our Medicaid delivery system to ensure that high-value care is the norm and even the most medically complex enrollees with significant behavioral, physical, sensory, and developmental disabilities are supported to live safely and thrive in the community. Our work has focused on three aligned initiatives:

- Managed Long Term Supports and Services (MLTSS)
- Delivery System Reform Incentive Payment (DSRIP); and
- Substance Use Disorder Services (SUD).

While SIM Design funds were only used to support the development of the Delivery System Reform Incentive Payment waiver, all three pieces are essential to our delivery system and payment reform vision.

After many months of planning and collaboration, in January of 2016 the Virginia Department of Medical Assistance Services (DMAS) requested approval of a demonstration project under §1115 of the Social Security Act to implement two of these strategic initiatives: MLTSS and DSRIP. It plans to request a waiver for the Substance Use Disorder Services later this year. Alignment of all three creates a powerful opportunity to strengthen and integrate Virginia Medicaid's community delivery structure and accelerate a shift toward value-based payment.

B. Managed Long Term Services and Supports (MLTSS)

MLTSS is a new Medicaid managed care program that will serve approximately 212,000 individuals with complex care needs and will focus on care coordination. It employs an integrated delivery model across the full continuum of care and includes medical, behavioral health, and long-term services and supports, with very few carved out services. It will build on the foundation of Virginia's Medicare-Medicaid enrollee financial alignment demonstration - Commonwealth Coordinated Care (CCC). CCC was Virginia's first opportunity to coordinate care for the high-risk dually eligible population and CCC activities in the areas of systems integration, contract and quality monitoring, outreach, and program evaluation have been nationally recognized as best practices.

Virginia seeks to strengthen this model by including additional populations and operating the program statewide. In its waiver request, Virginia sought the authority to mandate the enrollment of eligible individuals into selected managed care plans. These plans will be competitively selected to ensure access to services and high-quality care. The populations enrolled and services included in two home and community-based service (HCBS) waivers will be included in the MLTSS program. MLTSS health plans will be expected to ensure that members are aware of and can access community based treatment options designed to serve members in the settings of their choice. Eligible enrollees will include: full benefit dual eligible; those receiving long term services and supports through a community-based services waiver or through an institutional setting; and other aged, blind, and disabled Medicaid enrollees.

MLTSS next steps include:

- Competitive selection of health plans, at least two per region, by DMAS. Health plan proposals are due by June 30, 2016 and the notices of intent to award contracts are expected in December 2016. Contracts will include targets for value-based payments and alternative payment models.
- A regional phase-in, as depicted in Table 1 below, will begin in July of 2017.
- All awarded managed care plans will be required to operate a Dual Eligible Special Needs Plan (D-SNP) within two years of contract award.

Table 1: MLTSS Proposed Program Launch

Date	Region	Totals	
		At Time of Regional Launch	With CCC& ABD
7/1/2017	Tidewater	17,395	42,910
9/1/2017	Central	23,573	54,275
10/1/2017	Charlottesville/Western	16,481	29,614
11/1/2017	Roanoke/Alleghany/Southwest	23,665	47,291
12/1/2017	Northern/Winchester	25,099	37,964
1/1/2018	CCC Enrolled	29,510	<i>included above</i>
1/1/2018	Aged, Blind, and Disabled (from Medallion 3.0)	76,331	<i>included above</i>
Total	All Regions	212,054	212,054

C. Delivery System Reform Incentive Payment (DSRIP)

An important element of Virginia’s SIM Design work was the planning, analysis, and development of a Delivery System Reform Incentive Payment (DSRIP) waiver. A DSRIP waiver can be used by Medicaid to achieve delivery system transformation through infrastructure development, system redesign, and clinical outcome improvements. If successful, it supports provider readiness for value-based payment and accelerates the transition of how care is delivered and paid for. DSRIP is a one-time investment, over a five-year period of time, where all terms and conditions with CMS are clearly outlined at the outset. It must be strictly focused on infrastructure development for the current Medicaid population.

VCHI assisted DMAS in bringing together key stakeholders and consultants to analyze the opportunity and prepare a timely waiver submission. Key partners included:

- The Department of Behavioral Health and Development Services (DBHDS);
- The Department of Aging and Rehabilitative Services (DARS);
- The Virginia Department of Health (VDH);
- The Virginia Hospital and Healthcare Association (VHHA);
- The Virginia Association of Health Plans (VAHP);
- The Virginia Association of Community Service Boards (VACSB);
- The Virginia Community Healthcare Association (VaCHA);
- The Virginia Health Care Association (VHCA);
- Virginia’s academic medical centers;
- Manatt Consulting; and
- PriceWaterhouseCoopers.

Through this collaborative partnership, the Virginia DSRIP has been designed to “think big, start focused, and scale fast.” It will provide funding to support provider readiness for value-based payment and optimal service to Medicaid’s most complex enrollees through strengthening and better connecting the provider community. It includes support for the establishment of groups of high performing providers known as Virginia Integration Partners (VIPs). VIPs will share and integrate: care, data, processes, and communication. VIPs will partner with DMAS’ managed care plans in order to improve the coordination of care and overall health of the Commonwealth’s high-cost enrollees. This will enable the Medicaid program to better offer high-touch, person-centered care for its highest utilizers and highest risk enrollees. These partnerships will include medical, behavioral health, and long-term services and support (LTSS) providers, and also include care navigation and supports. Health systems focused on addressing enrollees’ complex needs will coordinate the VIPs.

Funds to support the establishment of VIPs and initial processes will be obtained through achievement of outcome measures. VIPs will achieve ongoing sustainability through transition to alternative payment models. In demonstration year 3, the DSRIP Program will launch and support the transition of additional providers, known as Affiliate Providers, to alternative payment models for individuals who are not already receiving care through a VIP. Alternative payment models will be developed in collaboration with contracted Medicaid health plans.

It is anticipated that the DSRIP will benefit Virginia by:

- Strengthening community capacity for Medicaid members with disabilities and behavioral health needs;
- Integrating clinical and social data infrastructure to optimally serve Medicaid members;
- Paying providers based on achievement of quality outcomes, not just utilization;
- Improving health outcomes by expanding infrastructure for existing services and addressing social determinants of health;
- Improving enrollee health and the enrollee experience; and
- Bending the cost curve.

The DSRIP waiver request was submitted by DMAS to CMS in January of 2016 and is included in this report in Appendix D.

DSRIP next steps include:

- DMAS will continue negotiation on the scope of innovation and demonstration with CMS through 2016;
- DMAS will work with stakeholders to negotiate program details (administration, expectations, milestones, financing, and reporting/evaluation) through 2016;
- DMAS will develop a budget for the program and seek approval from the Virginia General Assembly during the 2017 Legislative Session.
- Anticipated program launch in Spring of 2017.

D. Substance Use Disorder Program Changes

In combination with the MLTSS and DSRIP waiver requests, Virginia's Medicaid program is working to enhance substance use disorder treatment options. The impact of substance abuse on the health of Virginians and the Medicaid program is staggering. In 2014:

- Substance abuse disorders were the #2 cause for children entering foster care;
- There were 986 deaths from drug overdoses and 80% involved prescription opioids or heroin;
- More Virginians died from drug overdoses than from motor vehicle accidents;
- Opioid prescriptions cost Medicaid \$26 million; and

- An additional \$28 million was spent on ER and inpatient hospital treatment for Medicaid members with substance abuse disorders.

To better address these concerns, Virginia Medicaid, with support from the General Assembly, is working to create a fully integrated physical and behavioral health continuum of care through managed care plans. This will support Medicaid members by:

- Expanding short-term SUD inpatient detox to all Medicaid members;
- Expanding short-term SUD residential treatment to all Medicaid members;
- Increasing rates for existing Medicaid/FAMIS SUD treatment services;
- Adding Peer Support Services for individuals receiving SUD benefit;
- Requiring SUD Care Coordination at Medicaid health plans; and
- Providing Provider Education, Training and Recruitment Activities.

SUD program next steps include:

- Utilizing a core workgroup, consisting of managed care organizations and Magellan (Virginia Medicaid's behavioral health services administrator), as well as public and private stakeholders, to finalize:
 - 1) The SUD benefit management structure within an integrated care environment;
 - 2) Standardized clinical operations and medical necessity criteria;
 - 3) A standardized reimbursement model; and
 - 4) Standard operating procedures.
- Pursuing a CMS Demonstration and expanding bed capacity in residential treatment and services and enhance network development efforts.
- Conducting extensive training to align service delivery and network capacity with the American Society of Addictions Medicine (ASAM) Program Model.

It is anticipated that this work will be complete by July of 2017.

Collectively, it is anticipated that these three initiatives will move Virginia further along in its evolution toward a Medicaid program where:

- Provider partnerships focus on super-utilizers/high-risk beneficiaries;
- Care management is provider-led, high-touch, and person-centered;
- The delivery model shifts from population-based to needs-based; and
- Risk is shared with providers.

A. Background

On first glance, Virginia would seem to need no sense of urgency about its health care costs. As shown in Exhibit 6 in Chapter 1, premiums, Medicaid spending per beneficiary and overall health care spending per person are all lower than U.S. national averages. According to the Dartmouth Atlas, Medicare spending per beneficiary in 2012, adjusted for age, sex, and race, was 9% lower than the national average, and below the median state per beneficiary amount. AHRQ employer survey data show that in 2014, commercial insurance market premiums in Virginia were 7% lower than the national average. So in relative terms, Virginia's health cost structure is better than most.

On the other hand, beating U.S. spending averages by less than 10% is nothing to be particularly proud of, since as a country we spend at least 50% more than the rest of the world. As a body, the Virginia General Assembly is concerned about Medicaid spending and the taxes required to support it. Employers and their workers are not happy about premium costs either, however much higher they may be elsewhere. And more specific indicators, along with two recent analyses to suggest potential savings, buttress these intuitive feelings that costs could be a *lot* lower in Virginia if better care management – including self-care management -- and wiser decision making about utilization options were more widespread.

B. Specific Suggestive Data

A convenient, yet analytic, summary measure of overall health system performance is PQI admissions, that is, admissions for reasons associated with preventable quality indicators (e.g., for uncontrolled diabetes or asthma). In many cases, these admissions could be prevented with more effective and widespread preventive and primary care, along with more effective self-care management, which can often only be learned from health professional communications. Virginia Health Information (VHI) obtains discharge abstracts from all Virginia hospitals and utilizes AHRQ's MONAHRQ software to analyze PQI admissions and posts the data on its website for public use. The most recent data (2013) suggest that while overall admission rates in Virginia are 15% below national norms, almost 13% of admissions in Virginia are associated with PQI conditions. Using a conservative estimate of average cost per admission of \$11,055 (for all admissions, not for PQI-only admissions), these estimates suggest that Virginians may be spending over \$1.2B on avoidable admissions, with the bills paid by Medicare, Medicaid, employers, and consumers.

Not all of this money could be saved, of course, since some of it would have to be spent on better primary care and other support services to avoid the admissions. But the point is that better care, better patient outcomes (and quality of life) *and* considerably lower health care costs are

eminently obtainable in Virginia, since many proven techniques for reducing PQI admissions are well known and in use. This fact is also manifested in the geographic disparity in PQI admission rates, which vary by a factor of 12 (Arlington vs. Greensville) across counties in the Commonwealth. Geographic disparities – not to mention racial and ethnic ones – are reason enough to pursue care transformations and the incentive realignment to sustain them.

C. Medicaid

Using well-established measurement methods developed by 3M, Price Waterhouse Coopers (PWC), a contractor to Virginia's Medicaid program, undertook an analysis for the VCHI and Medicaid of potentially preventable events (PPE) in the Medicaid program across a spectrum of care using 2014-2015 data. The software uses principal diagnoses and procedures and a proprietary analysis of clinical pathways to identify hospital inpatient admissions, readmissions, hospital acquired conditions, emergency department visits and ancillary services that may be preventable. Four types of PPEs were analyzed: admissions, emergency department visits, ancillary services, and complications. PWC used FFS claims and MCO encounter data and their own proprietary methods for imputing prices to MCO encounters and utilization. **Exhibit 1** reports the basic findings from this analysis.

Exhibit 1: Analysis of Potentially Preventable Events for Medicaid Beneficiaries in Virginia, 2014-15

Type of Potentially Preventable Event	% of events of same type judged potentially preventable	% of total cost in events judged potentially preventable	Aggregate of total cost of these event types that were potentially preventable
Admissions	23%	19%	\$98m
Emergency Department Visits	63%	34%	\$53m
Ancillary Services	30%	40%	\$386m
Stays for Complications as percent of people with potentially preventable Complications	22%	NA	\$100m

One possibly surprising finding is that most of the potential savings are to be found not in inpatient stays or emergency room visits but in ancillary services. This suggests that careful care

coordination and management, and avoiding duplicative diagnostics, are fertile grounds for care transformation activities to focus on. This aligns with Virginia’s planned Low Value Services Initiative, based on the Choosing Wisely campaign.

D. Low Value Services and Choosing Wisely

Virginia Health Information maintains the Virginia All Payer Claims Data Base, which includes 65% of the commercial plus Medicaid claimants in the state (4.1m) and another 1.4m Medicare enrollees. These data, when run through the *MedInsight Waste Calculator* – a collaboration between Milliman and the Center for Value Based Insurance at the University of Michigan – can support estimates of potential savings statewide if the more parsimonious Choosing Wisely guidelines were implemented, as developed by the specialty societies cooperating with the American Boards of Internal Medicine. These guidelines and the services evaluated span the gamut of Choosing Wisely service categories: screening tests, diagnostic testing, pre-operative evaluation, common treatments, follow up/monitoring, disease approach. Table 2 reports summary results.

Table 2: Waste Calculator Results Summaries

Overall Results Summary			
	2013	2014	% Change
Total Services Measured	5,130,182	4,742,659	-7.55%
Total Wasteful Services	1,729,275	1,686,225	-2.49%
Total Dollars Measured	\$26,863,228,292	\$27,297,155,499	1.62%
Total Wasteful Dollars	\$640,738,381	\$654,693,295	2.18%
Total Members Examined	5,514,720	5,603,979	1.62%
Total Per Member Per Month	\$492.65	\$497.75	1.03%
Waste Per Member Per Month	\$11.75	\$11.94	1.59%
Percent of Total Members having at least one Wasteful Service	20.40%	19.70%	-3.43%

Commercial Results Summary			
	2013	2014	% Change
Total Services Measured	2,067,137	2,117,873	2%
Total Wasteful Services	991,146	1,022,512	3%
Total Dollars Measured	\$9,410,067,055	\$10,315,271,020	10%
Total Wasteful Dollars	\$322,927,129	\$339,021,955	5%
Total Members Examined	2,874,258	2,952,048	3%
Total Per Member Per Month	\$356.37	\$389.12	9%
Waste Per Member Per Month	\$12.23	\$12.79	5%
Percent of Total Members having at least one Wasteful Service	23.06%	23.10%	0%

These estimates suggest a bit over \$650m in wasteful spending across the Commonwealth in one year, with slightly more than half in commercial plans. Note none of these potential savings has anything to do with admissions or ER visits, which are related to the ballpark PQI estimates with which we began this chapter. Also it is worth noting that the aggregate amount of Choosing Wisely-type waste was lowest in Medicaid (\$65m).

E. Next Steps

Despite being a relatively low cost state, stakeholders in Virginia, aware of these analyses and their own interactions with the cost of care and insurance, do not need to be convinced that the overall health system has enough inefficiency embedded in “business as usual” that substantial incentive realignments and care delivery transformations is absolutely essential for the Virginia economy and its citizens to thrive in the 21st century. What they are looking for is leadership to help organize sustainable realignments and transformations. That is the role and goal of the VCHI and the SIM program.

A. General Approach to Evaluation Design

For the design purposes of this report, we lay out the goals, measures, and likely interventions in the event of a testing application process or during possible Medicaid waiver negotiations. Specific evaluation methods – of control group(s) selection, data collection strategies and statistical methods and models -- will be explained in more detail in a SIM testing proposal. In this chapter we make clear what we intend to accomplish and how we aim to measure the impacts of our interventions.

B. Virginia's Transformational Goals and Cross-Cutting Measures

As described more fully in Chapter 5, the Lt. Governor's Roundtable on Quality, Payment Reform, and Health Information Technology articulated the goal that by 2020, we will achieve measurable improvement in the health of Virginians and the value of health care they receive. We will achieve this through:

1. Improvement in population health, with a focus on improving the social determinants of health and reducing disparities in indicators included in Virginia's Plan for Well-Being;
2. Improvement in health care system performance, with a focus on improving access to high quality, coordinated community-based care;
3. Improvement in the health care marketplace, by rewarding providers for high value care and reducing health care spending associated with unnecessary or preventable utilization.

We then selected five cross cutting measures of system performance, which all of our initiatives are designed to address. These are:

1. Access to preventive/primary/ambulatory health services
2. All cause PQI admission rate
3. All cause 30 day readmission rate
4. All cause ED visit rate
5. Per capita health care expenditures

Each of these metrics can be produced by the VHI using hospital discharge, APCD, or CDC survey data. Each is reflective of system-wide performance and the interaction (or lack thereof) among social determinants of health, delivery system elements, and personal behavior, and should be calculated where possible for communities in which specific interventions could be implemented and tested.

We and various partners across Virginia have developed a number of interventions or initiatives that can help achieve our transformational goals as illustrated thru statistically significant marginal impacts on these specific cross-cutting measures. A matrix linking specific initiatives with specific goals and measures follows in **Exhibit 1**.

Exhibit 1. Transformational Goals and Measures Matrix		
Virginia SIM Initiative	Transformational Goals Addressed	Cross-Cutting Measures to be Used
Low Value Services Initiative/Choosing Wisely	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures
Integrated Care	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures
Care Transitions	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures
Workforce	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures
Primary Care Transformation	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures
Medicaid DSRIP	#1 Population Health	Access to preventive/primary/ambulatory services
	#2 Health Care System Performance	All cause PQI admission rate
		All cause 30 day readmission rate
		All cause ED visit rate
	#3 Health Care Marketplace	Per capita health expenditures

Additionally, improvements in population health will be tracked through the measures included in the *Plan for Well-Being*, reproduced below in **Exhibit 2**, that are to be maintained going forward by the VDH.

Exhibit 2. Summary of Virginia's Plan for Well-Being Aims, Goals, and Measures		
Aims	Goals	Measures
Aim 1. Healthy Connected Communities	Goal 1.1 Virginia's Families Maintain Economic Stability	<ul style="list-style-type: none"> High School Graduates Enrolled in Higher Education Cost-Burdened Households Consumer Opportunity Index Score Economic Opportunity Index Score
	Goal 1.2 Virginia's Communities Collaborate to Improve the Population's Health	<ul style="list-style-type: none"> Virginia Health Districts with Collaborative Community Health Improvement Processes
Aim 2: Strong Start for Children	Goal 2.1 Virginians Plan Their Pregnancies	<ul style="list-style-type: none"> Teen Pregnancy Rate
	Goal 2.2 Virginia's Children Are Prepared to Succeed in Kindergarten	<ul style="list-style-type: none"> Kindergartners Not Meeting PALS-K Benchmark Third Graders Passing Reading SOL
	Goal 2.3 The Racial Disparity in Virginia's Infant Mortality Rate Is Eliminated	<ul style="list-style-type: none"> White and Black Infant Mortality Rates
Aim 3: Preventive Actions	Goal 3.1 Virginians Follow a Healthy Diet and Live Actively	<ul style="list-style-type: none"> Adults Not Participating in Physical Activity Households that Are Food Insecure Adults Who Are Overweight or Obese
	Goal 3.2 Virginia Prevents Nicotine Dependency	<ul style="list-style-type: none"> Adults Using Tobacco
	Goal 3.3 Virginians Are Protected Against Vaccine-Preventable Diseases	<ul style="list-style-type: none"> Adults Vaccinated Against Influenza Adolescents Vaccinated Against HPV
	Goal 3.4 In Virginia, Cancers are Prevented or Diagnosed at the Earliest Stage Possible	<ul style="list-style-type: none"> Adults Screened for Colorectal Cancer
	Goal 3.5 Virginians Have Lifelong Wellness	<ul style="list-style-type: none"> Disability-Free Life Expectancy
Aim 4: System of Health Care	Goal 4.1 Virginia Has a Strong Primary Care System Linked to Behavioral Health Care, Oral Health Care, and Community Support Systems	<ul style="list-style-type: none"> Adults with Regular Healthcare Providers Mental Health and Substance Abuse Hospitalizations Avoidable Heart Disease Deaths Avoidable Hospital Stays Adults Whose Poor Health Kept them from Usual Activities
	Goal 4.2 Virginia's Health IT System Connects People, Services and Information to Support Optimal Health Outcomes	<ul style="list-style-type: none"> Providers with Electronic Health Records Health Districts with Electronic Health Records Entities Connected to Health Information
	Goal 4.3 Health Care-Associated Infections in Virginia Are Prevented and Controlled	<ul style="list-style-type: none"> Hospitals Meeting State Goals for Prevention of C. difficile Infections

The VDH plans to begin collecting the data, producing annual reports, creating a dashboard on its website, and creating cross-sector State Action Teams in 2016. The State Action Teams will meet quarterly to discuss implementation strategies to address each of the Aims of the *Plan for Well-Being*, and to identify performance and data gaps. The State Action Teams will then develop plans for leveraging partnerships for improvement.

We will apply appropriately specific evaluation methods to the individual SIM initiatives as they are finalized in negotiations with funders and stakeholder partners. For example, for integrated care and care transitions, we would likely employ a step-wedge design which exploits the fact that implementation will start at different times in different parts of Virginia. This design enables all participants to also serve as the control group until they begin actively participating in the project. Data collection strategies would also vary across initiatives, with some relying on specific clinical metrics, some relying on paid claims data, and some utilizing publicly available data from Medicaid, Medicare or CDC/VDH.

In sum, our SIM activities have significantly helped lay the foundation for the state's stakeholders to choose to focus on specific goals, measures, interventions and evaluation strategies, once funding opportunities associated with SIM Testing Round 3 are more clear.

A. Virginia's SIM Governance Structure Offers Steady Leadership in Uncertain Times

Virginia is well situated to continue to advance its State Health Innovation Plan at the conclusion of its Design process and has already taken steps to do so. As the only non-profit, non-state agency to lead a SIM Design, the Virginia Center for Health Innovation is less vulnerable to election cycle politics and changing political agendas than many other SIM recipients. Our board of directors, in partnership with our advisory Leadership Council, is committed to advancing the SIM agenda for the long-term and has been working from the Design inception to identify and secure the funding needed for sustainability. Our SIM project director will remain committed to working with the Governor's Office Leadership team, and other strategic partners, to advance Virginia's plans after the grant's conclusion.

But even with our public-private partnership model, we recognize the need to be flexible and adaptable if we want to see our work move from design to implementation. Accordingly, we have structured our Virginia Health Innovation Plan as a venture capitalist might -- investing seed funding in designing multiple innovations and then surveying the landscape to see where opportunities to accelerate one or two at a time might exist.

B. Opportunities On Our Horizon

As we wait, like all SIM Round 2 Design states, to see if there will be an opportunity to pursue SIM Round 3 Testing funds, we are continuing our work where we are able to secure the necessary resources to move forward. At this time, we are focused on:

- Advancing Virginia's primary care transformation initiative, *Restoring Primary Care in Virginia*, which is fully funded with grant support from the Agency for Healthcare Research and Quality. With two years remaining in grant support, our Virginia team is working to both actively implement the initiative and explore how we can utilize the emerging learning collaborative of 250 primary care practices, ten practice coaches, and a respected team of faculty and evaluators to provide MACRA quality improvement direct technical assistance in response to CMS' Solicitation Number HHSM-500-2016-FRP-0021. We believe this to be a natural evolution of the quality improvement support we are currently offering and a strong fit with our Virginia Health Innovation Plan.
- Advancing Virginia's Reducing Low Value Services Initiative, which has been embraced for ongoing engagement by both the Virginia Hospital and Healthcare Association and

the Virginia State Employee Health Plan. We have been successful in our efforts to secure the resources needed to license the *MedInsight Waste Calculator* for another year, so that we can continue to prepare the necessary data analysis to inform our educational campaign and payment reform strategies. Once this data analysis is complete and we have developed a plan to target those tests and procedures that are potentially causing the most patient harm and/or yielding the most unnecessary spending, we will seek additional funding support from the Virginia General Assembly in FY'18.

- Advancing the Virginia Department of Medical Assistance Services (DMAS) innovation agenda, which includes MLTSS, DSRIP, and SUD waivers. VCHI has a contract in place for FY'17 to assist DMAS by:
 - Launching a resource inventory and speaker series to better educate potential Virginia Integrated Partners (VIPs) as to best practices in risk stratification, data integration, and clinical interventions;
 - Developing DSRIP evaluation metrics that align with the rest of the Virginia Health Innovation Plan and also dovetail with the findings from the Medicaid preventive risk analysis conducted by PriceWaterhouseCoopers.
- Advancing Virginia's Care Transition's Initiative. With a \$250,000 appropriation from the Virginia General Assembly, the Eastern Virginia Care Transitions Partnership secured the resources needed to transition from its CMS demonstration grant to refining its alternative payment model so that it is well positioned for success in partnering with health systems and health plans when Virginia's DSRIP and/or MLTSS waivers are approved.
- Advancing the *Virginia Plan for Well-Being*. The Virginia Department of Health (VDH) has efforts underway to share population health performance dashboards with each of the Accountable Care Communities beginning in early 2017. VCHI will be working with VDH to review the early scorecard results and to select one or two initiatives for focused improvement efforts. At this time, there seems to be considerable interest, and potential funding, to advance a statewide immunization improvement program as one of the selected options.
- Further developing and refining Virginia's Health Information Technology Plan. Virginia's Secretary of Health and Human Resources, at the direction of the Virginia General Assembly, is instructed to "*work with stakeholders, which shall include representatives of hospitals and other health care providers in the Commonwealth, to (i) evaluate interoperability of electronic health records systems among health systems and health care providers and the ability of health systems and health care providers to share patient records in electronic format and (ii) develop recommendations for improving the ability of health systems and health care providers to share electronic health records with the goal of ensuring that all health care providers in the Commonwealth are able to share*

electronic health information to reduce the cost of health care and improve the efficiency of health care services. The Secretary shall report his findings and recommendations to the Chairmen of the House Committee on Health, Welfare and Institutions and the Senate Committee on Education and Health by December 1, 2016.” Secretary Hazel will be assisted in this work by the SIM leadership team.

C. Preparing for SIM Round 3

VCHI is committed to serving as the lead in coordinating a Round 3 Testing submission on behalf of the Commonwealth of Virginia, should the opportunity present itself in 2016. We are eager to see our partnership’s work implemented in its entirety. We will strive to keep our team motivated, focused, and aligned until such time as this opportunity presents itself. We do, however, recognize the very real concern that the longer we wait from the completion of Round 2 to the start of Round 3, the more challenging it will be to maintain the drive and enthusiasm that has been the hallmark of our current collaboration. For this reason, we implore CMS to move forward with all deliberate speed.

APPENDICES

Appendix A:

Comparison of Virginia Selected Measures to CMS Core Measures and VHHA Scorecard Measures

The Virginia Quality, Payment Reform, and HIT Roundtable (“VA Roundtable”) measures include 5 domain-agnostic (“system performance”) measures and 73 domain-specific (“focused menu”) measures covering the following 10 population- and condition-specific domains¹:

1. Strong Start for Children
2. Aging Well
3. Rising Risk Adults: Tobacco
4. Rising Risk Adults: Weight
5. Rising Risk Adults: Behavioral Health
6. Cancer
7. Cardiovascular / Cerebrovascular
8. Chronic Lower Respiratory Disease
9. Diabetes
10. Musculoskeletal

This memo compares the VA Roundtable measures to the latest set of CMS Core Measures at the domain level (Section I) and the individual measure level (Section II); and to the Virginia Hospital and Healthcare Association Scorecard (“VHHA Scorecard”) measures at the domain level (Section III) and the individual measure level (Section IV).

I. Domain-Level Comparison of VA Roundtable Measures to CMS Core Measures

The recently published CMS Core Measure portfolio includes 97 measures covering the following 7 domains²:

1. Accountable Care Organizations (ACOs), Patient Centered Medical Homes (PCMH), and Primary Care (henceforth, “Primary Care”)
2. Cardiology
3. Gastroenterology
4. HIV and Hepatitis C

¹ <http://www.vahealthinnovation.org/wp-content/uploads/2016/01/Proposed-Clinical-Quality-Measures-01.05.16.pdf>

² <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityMeasures/Core-Measures.html>

5. Medical Oncology
6. Obstetrics and Gynecology
7. Orthopedics

Comparing the VA Roundtable and CMS domains, 8 of the 10 VA Roundtable domains substantially overlap with the CMS domains:

1. Aging Well (overlaps with several CMS domains)
2. Rising Risk Adults: Tobacco (overlaps with the CMS "Primary Care" domain)
3. Rising Risk Adults: Weight (overlaps with the CMS "Primary Care" domain)
4. Rising Risk Adults: Behavioral Health (overlaps with the CMS "Primary Care" domain)
5. Cancer (overlaps with the CMS "Primary Care" domain; note that the VA Roundtable Cancer measures deal exclusively with screening, which is covered within the CMS Primary Care domain, not the CMS Medical Oncology domain, which deals with cancer treatment)
6. Cardiovascular / Cerebrovascular (overlaps with the CMS "Cardiovascular" domain)
7. Chronic Lower Respiratory Disease (overlaps with the CMS "Primary Care" domain)
8. Diabetes (overlaps with the CMS "Primary Care" domain)

The remaining 2 VA Roundtable domains (Strong Start for Children and Musculoskeletal) are not as clearly represented as domains in the CMS portfolio, though there are some areas of overlap within "subdomain" blocs of related measures within these domains - e.g., the prenatal and newborn subdomain within Strong Start for Children overlaps substantially with the CMS Obstetrics and Gynecology domain.

Additional conceptual differences emerge at the subdomain level:

- The CMS portfolio contains no measures targeted specifically to the population health of older (non-newborn) children and adolescents - a subdomain with 12 measures in the VA Roundtable list;
- The CMS portfolio contains, essentially, only 1 measure related to mental health conditions (VA Roundtable has 7);
- The CMS portfolio contains no measure related to COPD (VA Roundtable has 4);
- The CMS portfolio contains no measures related to oral care (VA Roundtable has 3);
- The CMS portfolio contains no measures related to alcohol or substance abuse (VA Roundtable has 2);
- The CMS portfolio contains nothing analogous to the breadth of the VA Roundtable "system performance" measures for readmissions, PQI admissions, and ED visits;
- The CMS portfolio contains no direct measures of cost of care (VA Roundtable has 1);

From the opposite perspective, 4 out of the 7 CMS domains (Gastroenterology, HIV / Hep C, Medical Oncology, and Orthopedics) do not substantially overlap with VA Roundtable domains. Additionally, at the subdomain level:

- The CMS portfolio contains 10 measures targeted specifically to surgical care and outcomes (VA Roundtable has none);
- The CMS portfolio contains 5 measures related to care at the end of life (VA Roundtable has none)

The following table summarizes these high-level differences:

Table 1: High-level (domain and subdomain) differences between VA Roundtable and CMS measures

Domains and <i>subdomains</i> in the VA Roundtable list without a significant presence on the CMS list	Domains and <i>subdomains</i> in the CMS list without a significant presence on the VA Roundtable list
<ul style="list-style-type: none"> • Musculoskeletal • Strong Start for Children (<i>Population health of non-newborn children and adolescents</i>) • <i>COPD</i> • <i>Mental health conditions</i> • <i>Oral care</i> • <i>Alcohol or substance abuse</i> • <i>All-patient ED and inpatient utilization</i> • <i>Cost of care</i> 	<ul style="list-style-type: none"> • Gastroenterology • HIV / Hep C • Medical Oncology (<i>Cancer treatment</i>) • Orthopedics • <i>Surgical care and outcomes</i> • <i>End-of-life care</i>

II. Measure-Level Comparison of VA Roundtable Measures to CMS Core Measures

In the following analysis, each measure in the VA Roundtable portfolio was reviewed in an effort to find one or more matching measures in the CMS portfolio. The result of this analysis was a classification for each VA Roundtable measure of “Exact match”, “Related match”, or “No match”.

While the previous domain- and subdomain-level analysis was meant to identify larger thematic divergences between the VA Roundtable and CMS portfolios, this comparison is intended to identify smaller-bore differences in specifications and opportunities for closer alignment. For example, the VA Roundtable measures classified as “Related match” may be considered candidates for substitution with the related CMS measure.

To summarize the results: of the 78 VA Roundtable measures (inclusive of both the "system performance" and "focused menu" measures), 13 (17%) were exact matches to CMS measures; 20 (25%) were classified as "Related match" to one or more CMS measure; and 45 (58%) were classified as "No match".

Full lists of the VA Roundtable measures, grouped by these classifications and with commentary, are provided below.

Table 2: VA Roundtable measures with exact matches to CMS measures

VA Roundtable Domain	VA Roundtable Measure Name	NQF #
Strong Start for Children	Frequency of Ongoing Prenatal Care	1391
Cancer	Breast Cancer Screening	2372
Cancer	Cervical Cancer Screening	0032
Cancer	Colorectal Cancer Screening	0034
Cardiovascular / Cerebrovascular	Controlling High Blood Pressure	0018
Cardiovascular / Cerebrovascular	Persistence of Beta Blocker Treatment After a Heart Attack	0071
Chronic Lower Respiratory Disease	Medication Management for People with Asthma	1799
Chronic Lower Respiratory Disease	Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	0058
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·Eye exam (retinal) performed	0055
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·Hemoglobin A1c (HbA1c) testing	0057
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·HbA1c poor control (>9.0%)	0059
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·Medical attention for nephropathy	0062
Musculoskeletal	Use of Imaging Studies for Low Back Pain	0052

Table 3: VA Roundtable measures with related (non-exact) matches to CMS measures

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Related CMS Measures
System-wide	All-Cause 30-Day Readmission Rate		Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following heart failure hospitalization; Hospital 30-day, all-cause, unplanned, risk-standardized readmission rate (RSRR) following coronary artery bypass graft (CABG) surgery; Risk-Adjusted Coronary Artery Bypass Graft (CABG) Readmission Rate (30-days); Hospital 30-day all-cause risk-standardized readmission rate (RSRR) following acute myocardial infarction (AMI) hospitalization; Hospital-level 30-day, all-cause risk-standardized readmission rate (RSRR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
Strong Start for Children	PQI Low Birth Weight Rate	0278	Elective Delivery (Patients with elective vaginal deliveries or elective cesarean sections at ≥ 37 and < 39 weeks of gestation completed) *
Strong Start for Children	Children's and Adolescents Access to Primary Care Practitioners		CG CAHPS (Getting Timely Appointments, Care, and Information; How Well Providers (or Doctors) Communicate with Patients; and Access to Specialists) **
Strong Start for Children	Well Child and Adolescent Well-Care Visits: age 3-6		CG CAHPS (Getting Timely Appointments, Care, and Information; How Well Providers (or Doctors) Communicate with Patients; and Access to Specialists) **
Strong Start for Children	Well Child and Adolescent Well-Care Visits: ages 12-21		CG CAHPS (Getting Timely Appointments, Care, and Information; How Well Providers (or Doctors) Communicate with Patients; and Access to Specialists) **
Strong Start for Children	Well Child and Adolescent Well-Care Visits: first 15 months of life		CG CAHPS (Getting Timely Appointments, Care, and Information; How Well Providers (or Doctors) Communicate with Patients; and Access to Specialists) **

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Related CMS Measures
Aging Well	Care for Older Adults (medication review)	0553	Medication Reconciliation (Clinician measure)
Rising Risk Adults: Tobacco	Advising Smokers and Tobacco Users to Quit	0027	Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention
Rising Risk Adults: Tobacco	Discussing Cessation Medications		Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention
Rising Risk Adults: Tobacco	Discussing Cessation Strategies	0027	Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention
Rising Risk Adults: Weight	Adult BMI Assessment		Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up
Rising Risk Adults: Behavioral Health	Anti-Depressant Medication Management	0105	Depression Remission at 12 Months; Depression Response at Twelve Months - Progress Towards Remission
Cardiovascular / Cerebrovascular	Aspirin Use and Discussion		Ischemic Vascular Disease: Use of Aspirin or Another Antithrombotic; Therapy with aspirin, P2Y12 inhibitor, and statin at discharge following PCI in eligible patients *
Chronic Lower Respiratory Disease	Asthma Medication Ratio	1800	Medication Management for People with Asthma
Chronic Lower Respiratory Disease	Use of Appropriate Medications for People with Asthma	0036	Medication Management for People with Asthma

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Related CMS Measures
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)		[All Comprehensive Diabetes Care Components except BP control and 7%/8% HbA1c control measures]
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)· BP Control (<140/90 mm Hg)	0061	[All Comprehensive Diabetes Care Components except BP control and 7%/8% HbA1c control measures]
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·HbA1c control (<7.0%) for a selected population		Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)·HbA1c control (<8.0%)	0575	Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%)

* Only loosely related

** These CG CAHPS measures are not targeted to children and adolescents, but appear to be valid for those populations

Table 4: VA Roundtable measures with no exact or related matches to CMS measures

VA Roundtable Domain	VA Roundtable Measure Name	NQF #
System-wide	All-Cause PQI Admission Rate	
System-wide	All-Cause ED Visit Rate	
System-wide	Per Capita Healthcare Expenditures	
Strong Start for Children	Prenatal and Postpartum Care: Postpartum care	
Strong Start for Children	Prenatal and Postpartum Care: Timeliness of Prenatal Care	
Strong Start for Children	NQI Neonatal Blood Stream Infection Rate	0478
Strong Start for Children	Childhood and Adolescent Immunization Status (age 2; age 13)	0038
Strong Start for Children	Lead Screening in Children	
Strong Start for Children	Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents	0024
Strong Start for Children	Appropriate Testing for Children With Pharyngitis	0002
Strong Start for Children	Appropriate Treatment for Children with Upper Respiratory Infection	0069
Strong Start for Children	Annual Dental Visit (age 2-21)	
Strong Start for Children	Children who have dental decay or cavities	1335
Strong Start for Children	Dental Sealants for 6-9 Year-Old Children at Elevated Caries Risk	
Strong Start for Children	Follow-up Care for Children Prescribed ADHD Medication	0108
Strong Start for Children	Metabolic Monitoring for Children and Adolescents on Antipsychotics	
Strong Start for Children	Use of First-Line Psychosocial Care for Children and Adolescents on Anti-Psychotics	
Strong Start for Children	Use of Multiple Concurrent Antipsychotics in Children and Adolescents (new in 2015)	
Aging Well	Fall Risk Management: Intervention / Managing Fall Risk	
Aging Well	Fall Risk Management: Screening for Future Fall Risk	
Aging Well	Flu Vaccinations for Adults Ages 65 and Older	
Aging Well	Physical Activity in Older Adults	0029

VA Roundtable Domain	VA Roundtable Measure Name	NQF #
Aging Well	Pneumococcal Vaccination Status for Older Adults	0043
Aging Well	Potentially Harmful Drug-Disease Interactions in the Elderly	
Aging Well	Use of High-Risk Medications in the Elderly	0022
Rising Risk Adults: Behavioral Health	Adherence to Antipsychotic Medications for Individuals With Schizophrenia	1878
Rising Risk Adults: Behavioral Health	Screening for Clinical Depression and Follow-Up Plan	0418
Rising Risk Adults: Behavioral Health	Follow-up after Hospitalizations for Mental Illness (30 day, 7 day)	0576
Rising Risk Adults: Behavioral Health	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment	0004
Rising Risk Adults: Behavioral Health	Identification of Alcohol and Other Drug Services	
Cardiovascular / Cerebrovascular	Annual Monitoring for Patients on Persistent Medications	2371
Cardiovascular / Cerebrovascular	Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia	1933
Cardiovascular / Cerebrovascular	Cholesterol Management, LDL Control	
Cardiovascular / Cerebrovascular	PQI Admissions for Cardiovascular Conditions	
Chronic Lower Respiratory Disease	PQI Admissions for Asthma in Older Adults	
Chronic Lower Respiratory Disease	Pharmacotherapy Management of COPD Exacerbation - Use of Bronchodilators	

VA Roundtable Domain	VA Roundtable Measure Name	NQF #
Chronic Lower Respiratory Disease	Pharmacotherapy Management of COPD Exacerbation - Use of Systemic Corticosteroids	
Chronic Lower Respiratory Disease	Use of Spirometry Testing in the Assessment and Diagnosis of COPD	0577
Chronic Lower Respiratory Disease	PQI Admissions for Chronic Obstructive Pulmonary Disease (COPD)	
Diabetes	Diabetes Monitoring for People With Diabetes and Schizophrenia	1934
Diabetes	Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications	1932
Diabetes	PQI Admissions for Diabetes Short-Term Complications	
Muskuloskeletal	Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis	
Muskuloskeletal	Osteoporosis Management in Women Who Had a Fracture	0053
Muskuloskeletal	Osteoporosis Testing in Older Women	0037

III. Domain-Level Comparison of VA Roundtable Measures to VHHA Scorecard Measures

The VHHA Scorecard Measure portfolio includes 20 measures covering the following 6 domains³:

1. Healthcare-Associated Infections
2. Patient Safety
3. Readmissions
4. Mortality
5. Patient Satisfaction
6. Efficiency

There is little overlap between the VA Roundtable and VHHA Scorecard domains. First, the VA Roundtable domains are structured around conditions and populations, while the VHHA Scorecard domains are structured around dimensions of performance that cut across conditions. Second, the VA Roundtable domains deal primarily with population health conditions and focus on care delivered in ambulatory settings⁴, while the VHHA Scorecard focuses almost exclusively on the hospital inpatient setting (or with short episodes of care indexed on a hospital admission). Third, the VA Roundtable portfolio focuses heavily on process, while the VHHA Scorecard includes only outcome measures. Fourth, no direct measures of patient satisfaction are included in the VA Roundtable portfolio.

The area of strongest conceptual overlap between the two measure sets is in the area of efficiency, which, while not explicitly a domain in the VA Roundtable measure set, is a strong thread running through the portfolio as a whole. In addition to the system-level measure of total per-beneficiary spending, many of the VA Roundtable measures capture the frequency of potentially inappropriate overutilization, e.g., Use of Imaging Studies for Low Back Pain, DMARD Therapy for Rheumatoid Arthritis, Use of First-Line Psychosocial Care for Children and Adolescents on Anti-Psychotics, etc.

For the most part, however, the two portfolios remain conceptually very different. While the first of the four divergences listed above is essentially superficial, the final three might warrant some reflection. The quality of care provided in inpatient settings is highly consequential in terms of both patient outcomes and cost; outcome measures are more attractive than process measures in many ways – with respect to intended application of the VA Roundtable

³ <http://www.vhha.com/quality-patient-safety/scorecard/learn-more/>

⁴ The 5 domain-specific PQI admission measures in the VA Roundtable set were not considered “inpatient focused” for the purposes of this comparison, as they are primarily intended to measure the success or failure of ambulatory care in avoiding preventable inpatient admissions.

portfolio, most notable perhaps is that they provide breathing room for providers to develop tailored interventions that might deviate from established process measure but are nonetheless successful; and patient satisfaction measures are now so common in wide-ranging portfolios like the VHHA Scorecard (or the CMS Core Measures) that their absence among the VA Roundtable measures is conspicuous.

IV. Measure-Level Comparison of VA Roundtable Measures to VHHA Scorecard Measures

In the following analysis, each measure in the VA Roundtable portfolio was first classified based on (1) the extent to which it dealt with hospital care; and (2) the extent to which it dealt with specialty care. Measures that were classified positively in either category were included in a set that was then compared to the VHHA Scorecard Measures; each VA Roundtable measure in the resulting “comparison set” was then further classified as “Exact match”, “Related match”, or “No match”.

As with the earlier comparison to CMS Core Measures, this exercise is intended to identify potential opportunities for closer alignment by harmonizing specifications for measures covering related concepts. In particular, the VA Roundtable measures classified as “Related match” may be considered candidates for substitution with the related VHHA Scorecard measure.

To summarize the results: 24 (31%) of the 78 VA Roundtable measures were included in the initial comparison set. (Most of these 24 were only marginally related to either hospital or specialty care, but were included in order to maximize the chance of capturing matches between the measure sets.) Of these 24, 0 were classified as an “Exact match”, 3 (12.5%) were classified as a “Related match”, and 21 (87.5%) were classified as “No match”.

A full list of the 24 VA Roundtable measures in the comparison set, with matched VHHA Scorecard measures when applicable, is provided below.

Table 5: VA Roundtable measures in the VHHA Scorecard comparison set, with matching VHHA Scorecard measures identified

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Match Classification	Matched VHHA Scorecard Measures
Cancer	Breast Cancer Screening	2372	No match	
Cancer	Colorectal Cancer Screening	0034	No match	
Cardiovascular / Cerebrovascular	PQI Admissions for Cardiovascular Conditions		No match	
Chronic Lower Respiratory Disease	Pharmacotherapy Management of COPD Exacerbation - Use of Bronchodilators		No match	
Chronic Lower Respiratory Disease	Pharmacotherapy Management of COPD Exacerbation - Use of Systemic Corticosteroids		No match	
Chronic Lower Respiratory Disease	Use of Spirometry Testing in the Assessment and Diagnosis of COPD	0577	No match	
Chronic Lower Respiratory Disease	PQI Admissions for Chronic Obstructive Pulmonary Disease (COPD)		No match	
Diabetes	Comprehensive Diabetes Care (NCQA HEDIS® 2015)-Medical attention for nephropathy	0062	No match	
Diabetes	Diabetes Monitoring for People With Diabetes and Schizophrenia	1934	No match	
Diabetes	Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications	1932	No match	
Diabetes	PQI Admissions for Diabetes Short-Term Complications		No match	

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Match Classification	Matched VHHA Scorecard Measures
Muskuloskeletal	Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis		No match	
Muskuloskeletal	Use of Imaging Studies for Low Back Pain	0052	No match	
Rising Risk Adults: Behavioral Health	Adherence to Antipsychotic Medications for Individuals With Schizophrenia	1878	No match	
Rising Risk Adults: Behavioral Health	Anti-Depressant Medication Management	0105	No match	
Rising Risk Adults: Behavioral Health	Follow-up after Hospitalizations for Mental Illness (30 day, 7 day)	0576	No match	
Strong Start for Children	NQI Neonatal Blood Stream Infection Rate	0478	Related match	[AHRQ PSI] PSI 07 - Central Venous Catheter-Related Bloodstream Infections; [CDC NHSN] CLABSI rate
Strong Start for Children	Metabolic Monitoring for Children and Adolescents on Antipsychotics		No match	
Strong Start for Children	Use of First-Line Psychosocial Care for Children and Adolescents on Anti-Psychotics		No match	
Strong Start for Children	Use of Multiple Concurrent Antipsychotics in Children and Adolescents (new in 2015)		No match	
System-wide	All-Cause 30-Day Readmission Rate		Related match	[CMS Hospital Compare] Hospital-Wide 30-Day Unplanned Readmissions

VA Roundtable Domain	VA Roundtable Measure Name	NQF #	Match Classification	Matched VHHA Scorecard Measures
System-wide	Per Capita Healthcare Expenditures		Related match	[CMS Hospital Compare] Medicare Spending per Beneficiary
System-wide	All-Cause PQI Admission Rate		No match	
System-wide	All-Cause ED Visit Rate		No match	



Virginia APCD MedInsight Health Waste Calculator Results version 2.0

Prepared for the Virginia Center for Health Innovation by Virginia Health Information

January 2016

Table of Contents

Background and Report Summary

About the Virginia APCD	5
Background on MedInsight Waste Calculator	6
Waste Categories and Descriptions	8
Report Caveats	14
Report Definitions	15
Result Summaries	16

Waste Calculator Reports

Top 5 Wasteful Services by Cost and Frequency	21
2014 Statewide Overall	25
2014 Statewide Commercial	27
2014 Statewide Medicaid	29
2014 Central Region Overall	31
2014 Central Region Commercial	33
2014 Central Region Medicaid	35
2014 Eastern Region Overall	37
2014 Eastern Region Commercial	39
2014 Eastern Region Medicaid	41
2014 Northern Region Overall	43
2014 Northern Region Commercial	45
2014 Northern Region Medicaid	47
2014 Northwest Region Overall	49
2014 Northwest Region Commercial	51
2014 Northwest Region Medicaid	53
2014 Southwest Region Overall	55
2014 Southwest Region Commercial	57
2014 Southwest Region Medicaid	59
2014 Blacksburg, Christiansburg & Radford (Area 1) Overall	61

2014 Charlottesville (Area 2) Overall	63
2014 Danville (Area 3) Overall	65
2014 Harrisonburg (Area 4) Overall	67
2014 Kingsport & Bristol (Area 5) Overall	69
2014 Lynchburg (Area 6) Overall	71
2014 Richmond (Area 7) Overall	73
2014 Roanoke (Area 8) Overall	75
2014 Virginia Beach, Norfolk & Newport News (Area 9) Overall	77
2014 Washington, Arlington & Alexandria (Area 10) Overall	79
2014 Winchester (Area 11) Overall	81
2014 ACO Rating Area 12 Overall	83
2013 Statewide Overall	85
2013 Statewide Commercial	87
2013 Statewide Medicaid	89
2013 Central Region Overall	91
2013 Central Region Commercial	93
2013 Central Region Medicaid	95
2013 Eastern Region Overall	97
2013 Eastern Region Commercial	99
2013 Eastern Region Medicaid	101
2013 Northern Region Overall	103
2013 Northern Region Commercial	105
2013 Northern Region Medicaid	107
2013 Northwest Region Overall	109
2013 Northwest Region Commercial	111
2013 Northwest Region Medicaid	113
2013 Southwest Region Overall	115
2013 Southwest Region Commercial	117
2013 Southwest Region Medicaid	119
2013 Blacksburg, Christiansburg & Radford (Area 1) Overall	121
2013 Charlottesville (Area 2) Overall	123
2013 Danville (Area 3) Overall	125
2013 Harrisonburg (Area 4) Overall	127
2013 Kingsport & Bristol (Area 5) Overall	129
2013 Lynchburg (Area 6) Overall	131

2013 Richmond (Area 7) Overall	.....	133
2013 Roanoke (Area 8) Overall	.....	135
2013 Virginia Beach, Norfolk & Newport News (Area 9) Overall	.....	137
2013 Washington, Arlington & Alexandria (Area 10) Overall	.....	139
2013 Winchester (Area 11) Overall	.....	141
2013 ACO Rating Area 12 Overall	.....	143

Background and Report Summary

About the Virginia APCD:

The Virginia All Payer Claims Database (APCD) was established to facilitate data-driven, evidence-based improvements in the access, quality and cost of health care and to promote and improve public health through the understanding of health care expenditure patterns and the operation and performance of the health care system. Virginia's APCD is a voluntary program with specific requirements of participating data submitters and certain restrictions on how the de-identified data may be used. Virginia's APCD was created under the authority of the Virginia Department of Health. The program is operated by VHI as a collaborative effort with health care stakeholders who provide input through the Virginia APCD Advisory Committee.

The Virginia APCD currently includes paid claims data for approximately 4.1 million Virginia Residents. VHI estimates that approximately 65% of the Commonwealth's commercially-insured residents are represented in the Virginia APCD. Medicare Fee-for-Service Claims Data was included in this set of APCD Health Waste Calculator reports for a total of approximately 5.5 million Virginians.

The Virginia APCD consists of medical and pharmacy claims submitted by commercial and public insurance carriers. Health insurance carriers submit paid claims data for services provided to privately-insured individuals and individuals covered under self-funded group health plans in the Commonwealth.

These records include paid claims from institutional encounters (hospital, surgery centers, etc.), medical professional services (such as doctor visits and imaging), pharmacy and other services. Data submitted to the Virginia APCD by medical insurance carriers includes claims from administrators of "carved-out" services such as pharmacy and mental health/chemical dependency. The database also contains records about individual plan members (e.g., demographics and enrollment), providers and insurance products (e.g., product type and coverage type).

The Virginia APCD includes data on coverage and services for the majority of commercially-insured Virginia residents as well as those with public or private Medicaid insurance. It also includes data from both health insurance carriers and third-party administrators. The following kinds of coverage are excluded at this time:

- Workers' Compensation
- TRICARE and the Veterans Health Administration and
- Federal Employees Health Benefit Plan

MedInsight Health Waste Calculator:

Overview:

The MedInsight Health Waste Calculator is an analytical tool that provides actionable data to support healthcare quality, efficiency and effectiveness reporting. The calculator brings together clinical expertise and powerful data analytics, allowing health care managers to target and reduce wasteful spending.

Comprehensive measures are developed and constantly refined to provide the most innovative and up-to-date healthcare analytics by Milliman healthcare experts and partners at VBID Health, Mike Chernew and Mark Fendrick, MD.

The sources leveraged for measures include:

- Choosing Wisely (from the ABIM Foundation)
- US Preventive Services Task Force Grade D Recommendations (recommendations against the service), for which there is moderate to high certainty that the service has no net benefit or that the harms outweigh the benefits
- The American Medical Association's Physician Consortium for Performance Improvement
- The United Kingdom's National Institute for Health and Care Excellence (NICE) Recommendations on High Quality Care
- Numerous research endeavors, such as these recent publications:
 - *Mayo Clinic Proceedings* publication on "A Decade of Reversal: An Analysis of 146 Contradicted Medical Practices"
 - Johns Hopkins Medicine research report on imaging for severe dizziness in the ER
 - *Pediatrics*, "CT Scan Utilization Patterns in Pediatric Patients with Recurrent Headache"

Health Waste Calculator Value:

Eliminating inefficient and unnecessary medical services improves overall healthcare efficiency while reducing costs. The Health Waste Calculator is effective at identifying potentially unnecessary care and potential cost savings. The Congressional Budget Office has estimated that 30% of medical care in the U.S. is unnecessary care. In 2009, the Institute of Medicine (IOM) identified \$750 billion of wasted spending, with unnecessary services accounting for \$210 billion (iom.edu/bestcare).

The MedInsight Health Waste Calculator:

- Adds value to existing publicly available cost and quality reporting efforts;
- Denotes whether services were appropriate or potentially wasteful;
- Indicates which services should be reviewed and flags potentially wasteful spending;
- Improves reporting for efficiency and effectiveness measurement.

In addition, Milliman and VBID health have established a research pipeline to continually investigate new wasteful services and look to rapidly expand the range of wasteful services included in this product offering.

Rationale for Developing the Measures:

Milliman and VBID Health continue to research and add to the growing list of over 450 measures in their research pipeline. Each are striving to identify at least 2 measures per medical society. In general the prioritization of measures are based on the criteria listed below:

- High prevalence rate or incidence of the wasteful events as reported in different publications;
- High cost impact due to the wasteful events;
- Representation of different specialties or clinical conditions;
- Representation of different types of services (e.g., preventive screening tests and diagnostic tests and prescription of drugs); and
- Representation of relevant measures for different age groups (children, adults, elderly, or all population), as well as gender-specific measures.

Health Waste Calculator Research Team Background:

The Waste Calculator Research team has incorporated health care data into related measure development for over five years. The scope of their work in measure development includes:

- Validation of the industry based literature on measure criteria;
- Identification of topics for new measures;
- Production of measures for not only the WC product but also for HEDIS like measures of compliance and noncompliance to healthcare industry best practices; And
- Production of normative measures and benchmarks.

The research team created the Waste Calculator methodology to include the algorithms for handling multiple ICD-9 Diagnosis and Procedure codes, HCPCS and Revenue codes.

Waste Categories and Rule Descriptions:

Definitions:

Waste Measure Rule- Brief description of the waste measure.

Population Age- Indicates the age criteria of the eligible population. For example Adults <65, Pediatric, Medicare, all ages etc.

Root Cause - Indicates if the measure can be categorized as an Overtreatment/ Medically unnecessary disease screening/Failure of care delivery/Failure of care coordination/Triggers to Profile Providers/Miscellaneous (for measures that cannot be categorized into any Root Cause type).

- Failure of Care Coordination includes -i. Case Management and Disease Management related/managed services that wasteful ii. Duplicate services/testing
- “Overtreatment” includes - Medically unnecessary treatment/testing for patients with specific conditions
- “Failure of Care Delivery” – Typically implies lack of or inadequate treatment/testing
- “Triggers to Profile Providers” - Potentially fraud and abuse triggers
- “Miscellaneous” – Doesn’t fall into one of these buckets

CW Topic Themes- "Includes the Choosing Wisely Themes under 6 main categories -

1. Screening Tests
2. Diagnostic Testing
3. Preoperative evaluation
4. Common Treatments
5. Routine FU/Monitoring
6. Disease Approach

Waste Measure Rule	Population Age	Root Cause	CW Topic Themes
Don't perform population based screening for 25-OH-Vitamin D deficiency	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	Adults <65 & Pediatric	Overtreatment	Common Treatments
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	All ages	Overtreatment	Common Treatments
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	Adults <65	Overtreatment	Disease Approach
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	Adults <65	Overtreatment	Disease Approach
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	Medicare	Medically unnecessary disease screening	Screening Tests
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	Medicare	Medically unnecessary disease screening	Screening Tests
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	Adults <65	Overtreatment	Diagnostic Testing
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	Pediatric	Overtreatment	Common Treatments
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	All ages	Overtreatment	Diagnostic Testing

Waste Short Description	Population Age	Root Cause	CW Topic Themes
Don't perform computed tomography scans on children being treated for headache.	Pediatric	Overtreatment	Diagnostic Testing
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't routinely do diagnostic testing in patients with chronic urticaria.	All ages	Overtreatment	Diagnostic Testing
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	Adults <65	Overtreatment	Routine FU/Monitoring
Don't perform routine head CT scans for emergency room visits for severe dizziness.	Adults <65	Overtreatment	Diagnostic Testing
Don't perform electroencephalography (EEG) for headaches.	All ages	Overtreatment	Diagnostic Testing
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't do imaging for uncomplicated headache.	Adults <65	Overtreatment	Diagnostic Testing
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	Adults <65	Overtreatment	Diagnostic Testing
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	All ages	Overtreatment	Diagnostic Testing

Waste Short Description	Population Age	Root Cause	CW Topic Themes
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	Adults <65	Failure of care coordination	Disease Approach
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	Adults <65	Overtreatment	Diagnostic Testing
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	Adults <65	Medically unnecessary disease screening	Routine FU/Monitoring
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	Pediatric	Overtreatment	Diagnostic Testing
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	Adults <65	Overtreatment	Disease Approach
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	All ages	Overtreatment	Common Treatments
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	Adults <65	Overtreatment	Common Treatments
Don't perform Pap smears on women with previous hysterectomy	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't perform Pap smears on women younger than 21	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't perform a postcoital test (PCT) for the evaluation of infertility.	Adults <67	Medically unnecessary disease screening	Diagnostic Testing

Waste Short Description	Population Age	Root Cause	CW Topic Themes
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	Adults <65	Medically unnecessary disease screening	Preoperative evaluation
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	Adults <65	Medically unnecessary disease screening	Preoperative evaluation
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	Adults <65	Medically unnecessary disease screening	Preoperative evaluation
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	All ages	Medically unnecessary disease screening	Screening Tests
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	Adults <65 & Pediatric	Overtreatment	Diagnostic Testing
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	Adults <65	Overtreatment	Routine FU/Monitoring
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	Adults <65	Overtreatment	Diagnostic Testing
Don't perform routine annual stress testing after coronary artery revascularization.	Adults <65	Medically unnecessary disease screening	Routine FU/Monitoring
Don't perform routine general health checks for asymptomatic adults	Adults <65	Medically unnecessary disease screening	Screening Tests

Waste Short Description	Population Age	Root Cause	CW Topic Themes
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	Adults <65	Medically unnecessary disease screening	Screening Tests
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	Adults <66	Medically unnecessary disease screening	Diagnostic Testing
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	Adults <65	Medically unnecessary disease screening	Diagnostic Testing
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	Adults <65	Overtreatment	Diagnostic Testing

Report Caveats:

- Standardized Proxy Reimbursement Amount: Virginia Code prohibits disclosing or reporting provider-specific, facility-specific or carrier-specific reimbursement information. Information capable of being reverse-engineered, combined or otherwise used to calculate or derive such reimbursement information from the APCD is also prohibited. To comply with the legal prohibition of disclosing reimbursement information, a standardized proxy reimbursement amount was utilized for these reports generated from the Virginia APCD. All dollar amounts referenced in these reports are proxy dollars based on Milliman's Global RVU methodology.
- The output of the Health Waste Calculator is subject to the quality of the necessary inputs within Virginia APCD claims data. Lack of accurate Procedure and Diagnosis codes on the individual claims analyzed may cause some services that were potentially or definitively wasteful to be classified as necessary and vice versa.
- All ACO Rating Areas are grouped according to CMS guidelines. Each Rating Area corresponds to the equivalent Metropolitan Statistical Areas (MSAs) name, number and composition for Virginia with the exception of ACO Rating Area 12. Rating Area 12 consists of the following remaining lower population cities and counties: Accomack, Alleghany, Augusta, Bath, Bland, Brunswick, Buchanan, Buckingham, Carroll, Charlotte, Culpeper, Dickenson, Essex, Floyd, Grayson, Greensville, Halifax, Henry, Highland, King George, Lancaster, Lee, Lunenburg, Madison, Mecklenburg, Middlesex, Northampton, Northumberland, Nottoway, Orange, Page, Patrick, Prince Edward, Rappahannock, Richmond County, Rockbridge, Russell, Shenandoah, Smyth, Southampton, Tazewell, Westmoreland, Wise, Wythe, Buena Vista City, Covington City, Emporia City, Franklin City, Galax City, Lexington City, Martinsville City, Norton City, Staunton City and Waynesboro City.
- For privacy reasons, no calculations that resulted in less than 11 observations are displayed within each report. In each of these cases the number of observations for Likely Wasteful and Wasteful results were suppressed as well as the average proxy cost for each category. In the event that an individual Waste Likelihood category contained only 1 suppressed value, the total was adjusted to reflect a range of ± 1 to prevent the potential reverse engineering of the suppressed value.
- Medicare data could not be broken out individually by geographic region or individual waste measure at the time of this report.

Report Definitions:

Waste Measure Rule- The type of service evaluated by the Health Waste Calculator with results defined as either Necessary or Wasteful. Waste Measure Rules also briefly outline the criteria for a potentially unnecessary service.

Total Services Measured- The total number of services that were evaluated for a specific Waste Measure.

Percent of all Services- The total number of services measured for each Waste Measures divided by the overall total number of services measured within each report

Services Measured per 1,000 - The total number of services measured for each Waste Measure divided by the number of members encompassed within each report divided by 1,000

Wasteful Services- The total number of services that meet the necessary criteria outlined in the Waste Calculator methodology to be classified as Wasteful.

Wasteful Services per 1000- The number of wasteful services measured for each Waste Measure divided by the number of members encompassed within each report divided by 1,000

Wasteful Total Proxy Allowed Costs- The total number of proxy allowed dollars associated with claims classified as Wasteful.

Wasteful Average Proxy Allowed Costs- The total number of proxy allowed dollars associated with claims classified as Wasteful divided by the total number of services classified as Wasteful.

Percent of Waste Proxy Allowed Costs – The total number of wasteful proxy allowed dollars for each Waste Measure divided by the overall total wasteful proxy dollars measured within each report

Quality Index- The number of services classified as Necessary divided by the total number of services measured.

Waste Index- The number of services classified as either Wasteful divided by the total number of services measured.

Waste Calculator Results Summaries:

Overall Results Summary			
	2013	2014	% Change
Total Services Measured	5,130,182	4,742,659	-7.55%
Total Wasteful Services	1,729,275	1,686,225	-2.49%
Total Dollars Measured	\$26,863,228,292	\$27,297,155,499	1.62%
Total Wasteful Dollars	\$640,738,381	\$654,693,295	2.18%
Total Members Examined	5,514,720	5,603,979	1.62%
Total Per Member Per Month	\$492.65	\$497.75	1.03%
Waste Per Member Per Month	\$11.75	\$11.94	1.59%
Percent of Total Members having at least one Wasteful Service	20.40%	19.70%	-3.43%

Commercial Results Summary			
	2013	2014	% Change
Total Services Measured	2,067,137	2,117,873	2%
Total Wasteful Services	991,146	1,022,512	3%
Total Dollars Measured	\$9,410,067,055	\$10,315,271,020	10%
Total Wasteful Dollars	\$322,927,129	\$339,021,955	5%
Total Members Examined	2,874,258	2,952,048	3%
Total Per Member Per Month	\$356.37	\$389.12	9%
Waste Per Member Per Month	\$12.23	\$12.79	5%
Percent of Total Members having at least one Wasteful Service	23.06%	23.10%	0%

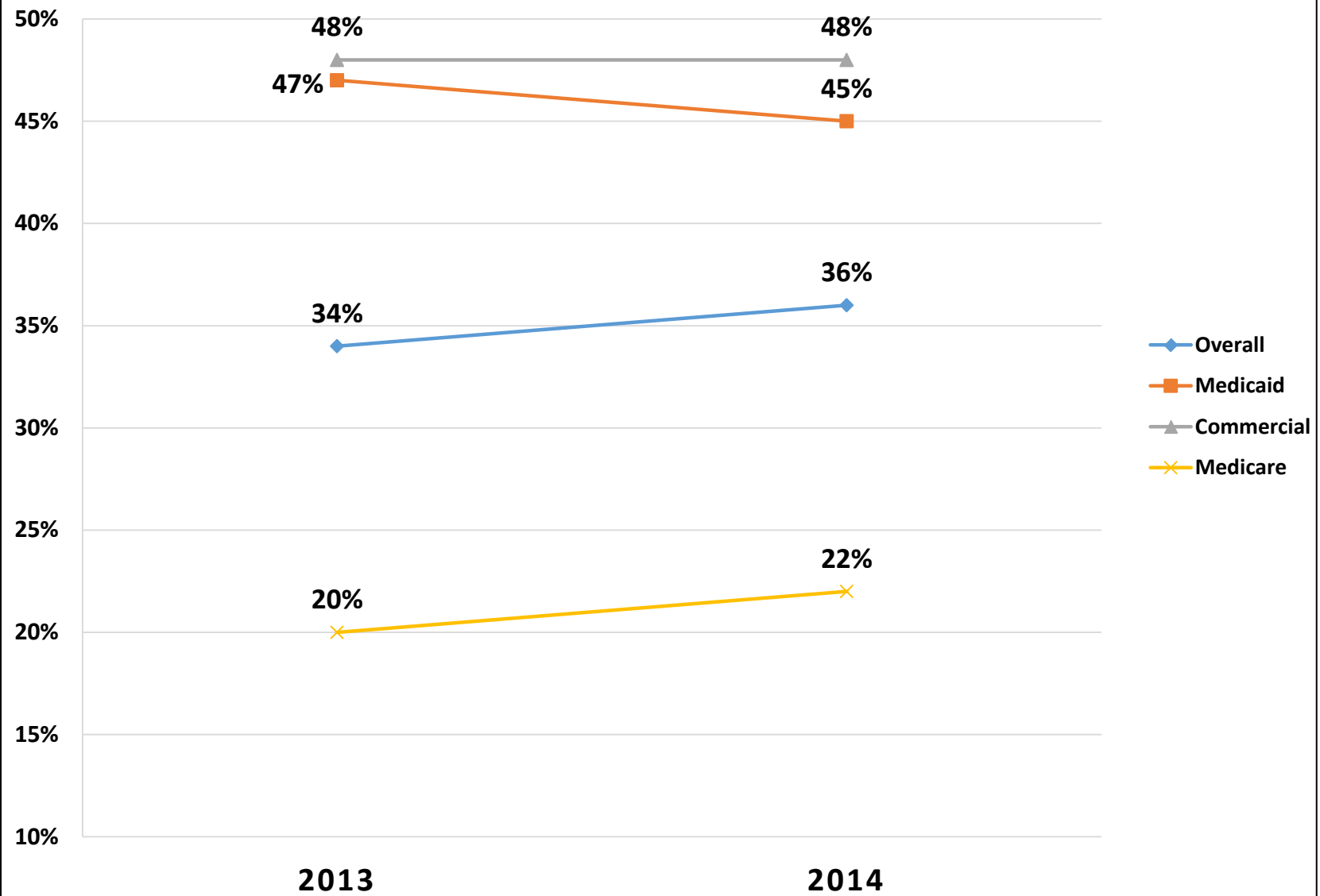
Medicaid Results Summary

	2013	2014	% Change
Total Services Measured	468,889	412,295	-12%
Total Wasteful Services	220,127	184,996	-16%
Total Dollars Measured	\$5,345,190,979	\$4,830,854,442	-10%
Total Wasteful Dollars	\$59,321,738	\$65,481,555	10%
Total Members Examined	1,302,416	1,273,061	-2%
Total Per Member Per Month	\$415.00	\$383.72	-8%
Waste Per Member Per Month	\$4.61	\$5.20	13%
Percent of Total Members having at least one Wasteful Service	11.45%	9.86%	-14%

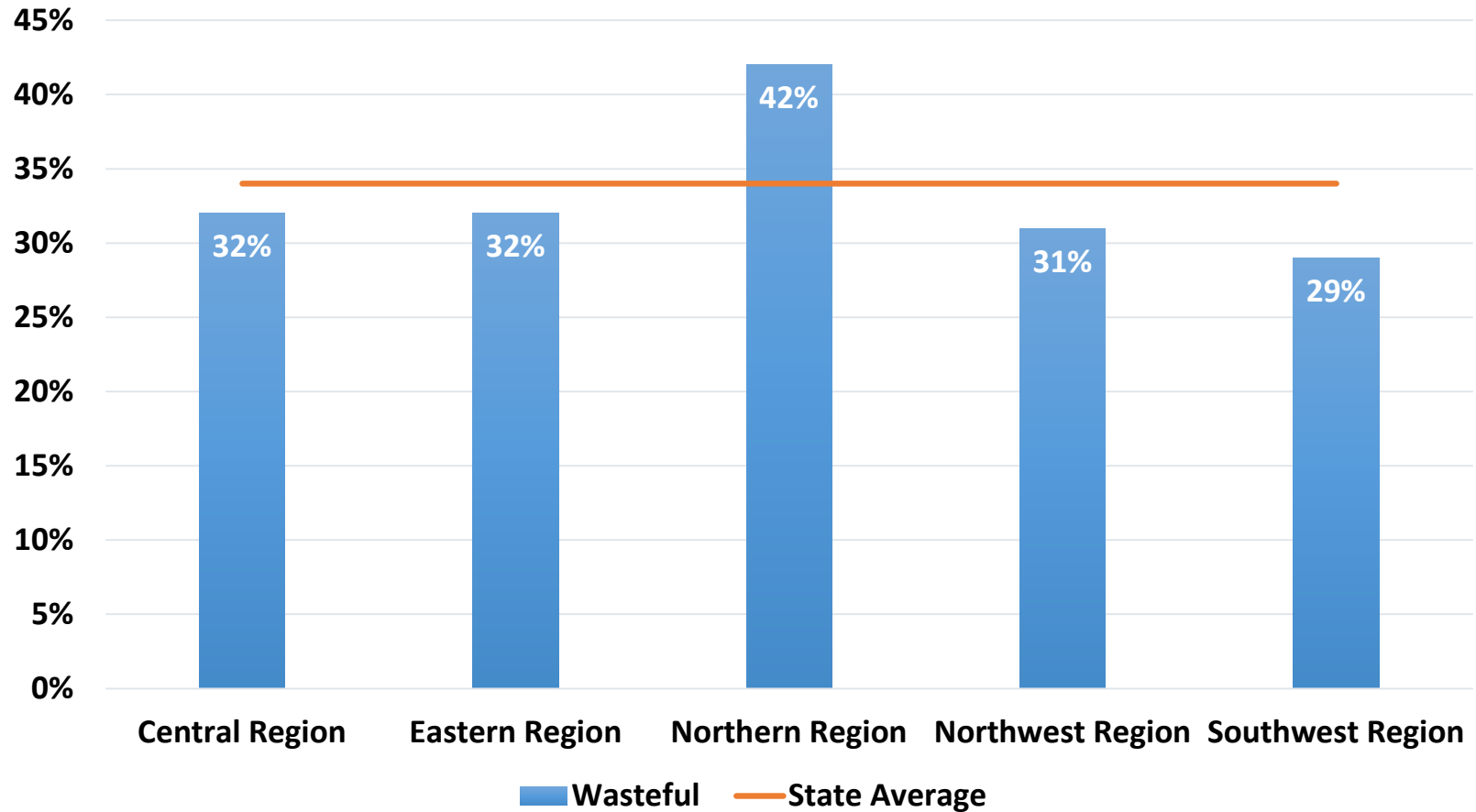
Medicare Results Summary

	2013	2014	% Change
Total Services Measured	2,594,156	2,212,491	-15%
Total Wasteful Services	518,002	478,717	-8%
Total Dollars Measured	\$12,107,970,25	\$12,151,030,037	0%
Total Wasteful Dollars	\$258,489,514	\$250,189,785	-3%
Total Members Examined	1,338,046	1,378,870	3%
Total Per Member Per Month	\$794.36	\$771.87	-3%
Waste Per Member Per Month	\$16.96	\$15.89	-6%
Percent of Total Members having at least one Wasteful Service	22.00%	20.00%	-9%

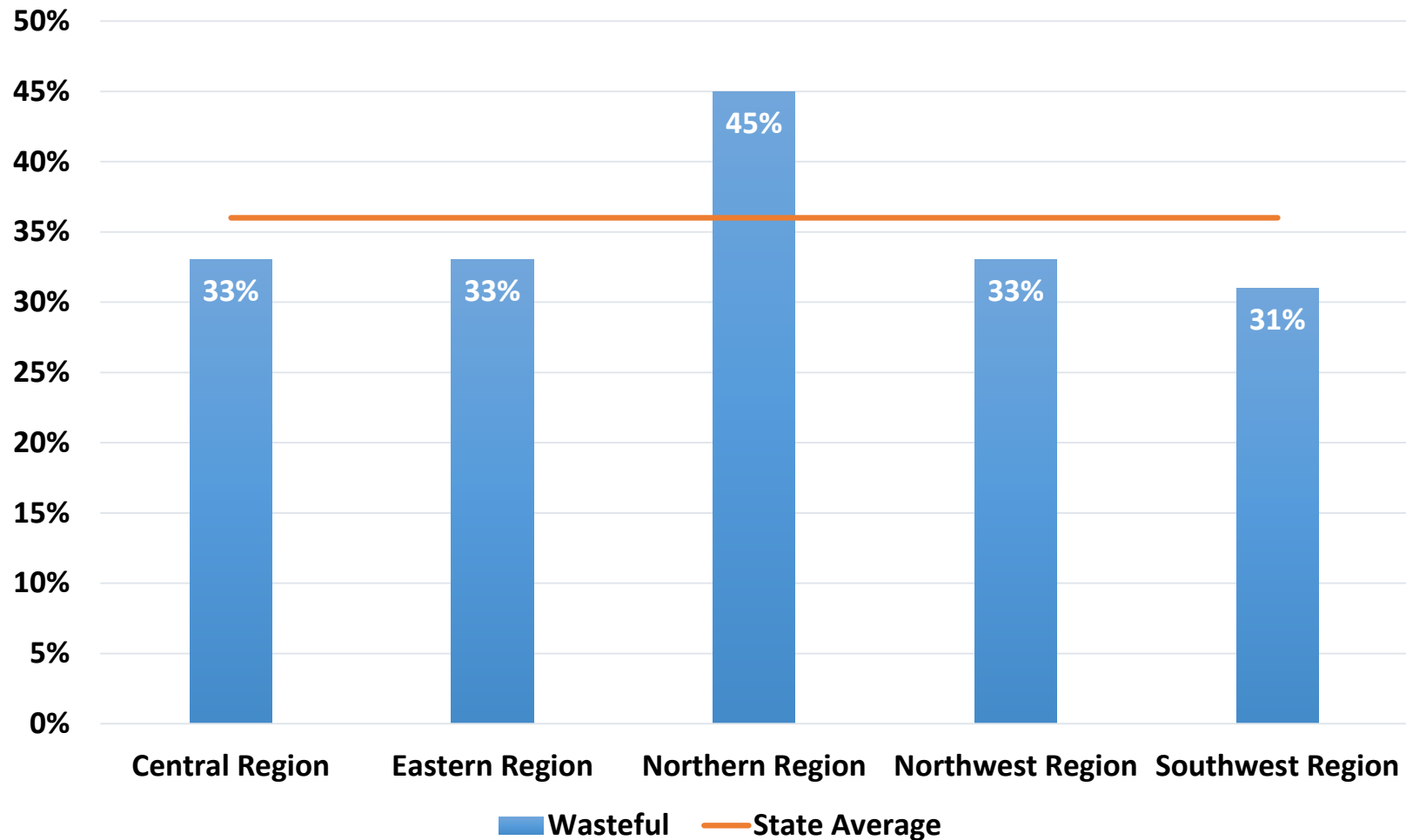
WASTE INDEX BY INSURANCE TYPE



2013 WASTE INDEX BY REGION



2014 Waste Index by Region





Top 5 Wasteful Services by Proxy Cost for 2014

2014 Statewide Total Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$184,781,018	28%	453,447	27%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$94,669,595	14%	27,817	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$60,499,386	9%	147,423	9%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	\$37,558,707	6%	161,539	10%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	\$31,501,675	5%	132,793	8%

2014 Statewide Commerical Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$64,469,416	19%	154,854	15%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$44,272,863	13%	129,729	13%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	\$34,125,067	10%	141,984	14%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$27,373,460	8%	9,169	1%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	\$21,552,272	6%	31,299	3%



Top 5 Wasteful Services by Proxy Cost for 2014 Continued

2014 Statewide Medicaid Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$22,314,690	34%	36,856	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$9,878,635	15%	18,712	6%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$7,463,091	11%	13,658	13%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	\$4,541,539	7%	5,704	8%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	\$3,395,512	5%	3,376	10%

Top 5 Wasteful Services by Proxy Cost for 2013

2013 Statewide Total Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$181,066,684	28%	485,367	28%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$91,328,343	14%	26,885	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$53,115,641	8%	129,275	7%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	\$35,810,934	6%	172,645	10%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	\$31,636,024	5%	139,222	8%

2013 Statewide Commerical Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$61,664,129	19%	160,314	16%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$36,804,163	11%	110,027	11%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	\$33,597,766	10%	148,250	15%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	\$28,250,289	9%	150,987	15%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$25,052,963	8%	8,487	1%



Top 5 Wasteful Services by Proxy Cost for 2013 Continued

2013 Statewide Medicaid Wasteful Services				
Waste Rule	Total Proxy Cost	% of Wasteful Dollars	Frequency	% of Wasteful Services
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	\$20,101,112	34%	3,073	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	\$9,184,816	15%	12,275	6%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	\$6,139,033	10%	29,292	13%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	\$4,374,147	7%	15,904	7%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	\$2,529,765	4%	2,593	1%



2014 Statewide Wasteful Services- Total

Waste Measure Rule				Total Wasteful Results						
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs	Quality Index	Waste Index
Common Treatments	238,049	5.0%	44.36	229,809	42.83	\$23,475,373.00	\$102.15	3.6%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	189,171	4.0%	35.25	181,559	33.84	\$22,438,374.75	\$123.59	3.4%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	277	0.0%	0.05	252	0.05	\$30,016.95	\$119.11	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	5,409	0.1%	1.01	4,806	0.90	\$616,301.29	\$128.24	0.1%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	87	0.0%	0.02	87	0.02	\$15,075.03	\$173.28	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	43,105	0.9%	8.03	43,105	8.03	\$375,605.47	\$8.71	0.1%	0%	100%
Diagnostic Testing	395,299	8.3%	73.67	131,103	24.43	\$197,882,153.00	\$1,509.36	30.2%	67%	33%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	49,341	1.0%	9.20	43,063	8.03	\$17,169,583.24	\$398.71	2.6%	13%	87%
Don't do imaging for uncomplicated headache.	33,801	0.7%	6.30	11,388	2.12	\$12,399,682.97	\$1,088.84	1.9%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	2,790	0.1%	0.52	2,723	0.51	\$3,860,287.00	\$1,417.66	0.6%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	5,027	0.1%	0.94	1,970	0.37	\$8,503,587.69	\$4,316.54	1.3%	61%	39%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	51	0.0%	0.01	51	0.01	\$4,858.62	\$95.27	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	119	0.0%	0.02	119	0.02	\$22,979.75	\$193.11	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	3,831	0.1%	0.71	2,073	0.39	\$2,072,796.95	\$999.90	0.3%	46%	54%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	8,795	0.2%	1.64	3,371	0.63	\$5,000,483.10	\$1,483.38	0.8%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	219,878	4.6%	40.98	27,817	5.18	\$94,669,595.48	\$3,403.30	14.5%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	22,237	0.5%	4.14	11,289	2.10	\$7,401,632.05	\$655.65	1.1%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	703	0.0%	0.13	703	0.13	\$712,692.60	\$1,013.79	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	13,728	0.3%	2.56	7,342	1.37	\$16,956,661.83	\$2,309.54	2.6%	47%	53%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	38	0.0%	0.01	38	0.01	\$42,380.14	\$1,115.27	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	1,834	0.0%	0.34	1,834	0.34	\$2,882,526.15	\$1,571.72	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	3,789	0.1%	0.71	1571	0.29	\$1,454,242.89	\$925.68	0.2%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	41	0.0%	0.01	41	0.01	\$41,290.35	\$1,007.08	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	29,296	0.6%	5.46	15,710	2.93	\$24,686,872.20	\$1,571.41	3.8%	46%	54%
Disease Approach	69,962	1.5%	13.04	53,840	10.03	\$29,646,476.00	\$550.64	4.5%	23%	77%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	495	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	557	0.0%	0.10	557	0.10	\$1,516,294.79	\$2,722.25	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	3,958	0.1%	0.74	3,958	0.74	\$1,007,855.28	\$254.64	0.2%	0%	100%

Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	64,952	1.4%	12.10	49,325	9.19	\$27,122,325.45	\$549.87	4.1%	24%	76%
Preoperative evaluation	605,212	12.8%	112.79	486,746	90.71	\$199,246,357.00	\$409.34	30.4%	20%	80%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	526	0.0%	0.10	523	0.10	\$293,800.45	\$561.76	0.0%	1%	99%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	571,600	12.1%	106.52	453,447	84.50	\$184,781,018.18	\$407.50	28.2%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	33,086	0.7%	6.17	32,776	6.11	\$14,171,538.37	\$432.38	2.2%	1%	99%
Routine FU/Monitoring	67,272	1.4%	12.54	9,300	1.73	\$14,639,283.00	\$1,574.12	2.2%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	31,603	0.7%	5.89	1,001	0.19	\$1,345,021.49	\$1,343.68	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	893	0.0%	0.17	893	0.17	\$694,663.23	\$777.90	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	6,731	0.1%	1.25	1,187	0.22	\$1,600,967.49	\$1,348.75	0.2%	82%	18%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	28,045	0.6%	5.23	6,219	1.16	\$10,998,631.12	\$1,768.55	1.7%	78%	22%
Screening Tests	3,366,865	71.0%	627.45	775,427	144.51	\$189,803,653.00	\$244.77	29.0%	77%	23%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	77,253	1.6%	14.40	622	0.12	\$449,845.87	\$723.22	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	2,268,194	47.8%	422.70	147,423	27.47	\$60,499,385.50	\$410.38	9.2%	94%	6%
Don't perform Pap smears on women with previous hysterectomy	3,610	0.1%	0.67	1,432	0.27	\$364,850.63	\$254.78	0.1%	60%	40%
Don't perform Pap smears on women younger than 21	3,702	0.1%	0.69	3,226	0.60	\$719,024.21	\$222.88	0.1%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	173,381	3.7%	32.31	173,381	32.31	\$23,821,569.35	\$137.39	3.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	199,865	4.2%	37.25	161,539	30.10	\$37,558,706.76	\$232.51	5.7%	19%	81%
Don't perform routine general health checks for asymptomatic adults	83,624	1.8%	15.58	83,624	15.58	\$16,609,693.81	\$198.62	2.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	25,416	0.5%	4.74	25,416	4.74	\$2,657,302.40	\$104.55	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	77,073	1.6%	14.36	13,438	2.50	\$3,095,111.53	\$230.33	0.5%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	141,736	3.0%	26.41	32,533	6.06	\$12,526,488.36	\$385.04	1.9%	77%	23%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	313,011	6.6%	58.33	132,793	24.75	\$31,501,675.06	\$237.22	4.8%	58%	42%
Grand Total	4,742,659	100.0%	883.84	1,686,225	314.24	\$654,693,295.83	\$388.26	100.0%	64%	36%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Statewide Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results						
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs	Quality Index	Waste Index
Common Treatments	154,967	7.3%	57.13	150,199	55.37	\$19,351,787.00	\$128.84	5.7%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	146,993	6.9%	54.19	142,626	52.58	\$18,755,230.81	\$131.50	5.5%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	153	0.0%	0.06	139	0.05	\$21,701.55	\$156.13	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	3,873	0.2%	1.43	3,486	1.29	\$480,024.21	\$137.70	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	37	0.0%	0.01	37	0.01	\$4,223.13	\$114.14	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	3,911	0.2%	1.44	3,911	1.44	\$90,606.94	\$23.17	0.0%	0%	100%
Diagnostic Testing	141,463	6.7%	52.15	60,404	22.27	\$78,929,724.00	\$1,306.70	23.3%	57%	43%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	26,715	1.3%	9.85	24,754	9.13	\$10,172,875.14	\$410.96	3.0%	7%	93%
Don't do imaging for uncomplicated headache.	15,393	0.7%	5.67	6,840	2.52	\$9,282,411.15	\$1,357.08	2.7%	56%	44%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	1,021	0.0%	0.38	1,004	0.37	\$2,162,898.38	\$2,154.28	0.6%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	891	0.0%	0.33	484	0.18	\$2,048,674.89	\$4,232.80	0.6%	46%	54%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	51	0.0%	0.02	51	0.02	\$4,858.62	\$95.27	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	119	0.0%	0.04	119	0.04	\$22,979.75	\$193.11	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,655	0.1%	0.61	1,007	0.37	\$1,139,444.24	\$1,131.52	0.3%	39%	61%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,083	0.1%	0.77	812	0.30	\$1,547,619.17	\$1,905.93	0.5%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	64,171	3.0%	23.66	9,169	3.38	\$27,373,460.36	\$2,985.44	8.1%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	12,840	0.6%	4.73	6,412	2.36	\$3,976,716.11	\$620.20	1.2%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	463	0.0%	0.17	463	0.17	\$438,897.25	\$947.94	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	6,037	0.3%	2.23	3,046	1.12	\$6,435,645.39	\$2,112.82	1.9%	50%	50%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	11	0.0%	0.00	11	0.00	\$9,437.66	\$857.97	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	727	0.0%	0.27	727	0.27	\$1,679,898.29	\$2,310.73	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	1,406	0.1%	0.52	541	0.20	\$731,098.16	\$1,351.38	0.2%	62%	38%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	11	0.0%	0.00	11	0.00	\$20,308.51	\$1,846.23	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	7,869	0.4%	2.90	4,953	1.83	\$11,882,501.14	\$2,399.05	3.5%	37%	63%
Disease Approach	39,272	1.9%	14.48	33,588	12.38	\$23,286,980.00	\$693.31	6.9%	14%	86%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	292	0.0%	0.11	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	373	0.0%	0.14	373	0.14	\$1,196,146.28	\$3,206.83	0.4%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,916	0.1%	0.71	1,916	0.71	\$538,562.17	\$281.09	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	36,691	1.7%	13.53	31,299	11.54	\$21,552,271.84	\$688.59	6.4%	15%	85%
Preoperative evaluation	209,398	9.9%	77.20	172,613	63.64	\$71,352,402.00	\$413.37	21.0%	18%	82%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	296	0.0%	0.11	296	0.11	\$195,778.94	\$661.42	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	191,639	9.0%	70.65	154,854	57.09	\$64,469,416.08	\$416.32	19.0%	19%	81%

Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	17,463	0.8%	6.44	17,463	6.44	\$6,687,207.20	\$382.94	2.0%	0%	100%
Routine FU/Monitoring	15,875	0.7%	5.85	2,887	1.06	\$3,851,413.00	\$1,334.05	1.1%	82%	18%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,409	0.3%	2.36	311	0.11	\$397,150.77	\$1,277.01	0.1%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	319	0.0%	0.12	319	0.12	\$292,511.78	\$916.96	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,882	0.1%	0.69	420	0.15	\$301,959.45	\$718.95	0.1%	78%	22%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	7,265	0.3%	2.68	1,837	0.68	\$2,859,790.55	\$1,556.77	0.8%	75%	25%
Screening Tests	1,556,898	73.5%	573.97	602,821	222.24	\$142,249,650.00	\$235.97	42.0%	61%	39%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	29,123	1.4%	10.74	450	0.17	\$251,856.12	\$559.68	0.1%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	888,420	41.9%	327.53	129,729	47.83	\$44,272,863.37	\$341.27	13.1%	85%	15%
Don't perform Pap smears on women with previous hysterectomy	2,045	0.1%	0.75	1,127	0.42	\$308,462.82	\$273.70	0.1%	45%	55%
Don't perform Pap smears on women younger than 21	2,500	0.1%	0.92	2,186	0.81	\$545,097.19	\$249.36	0.2%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	142,288	6.7%	52.46	142,288	52.46	\$20,262,229.05	\$142.40	6.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	174,118	8.2%	64.19	141,984	52.34	\$34,125,066.85	\$240.34	10.1%	18%	82%
Don't perform routine general health checks for asymptomatic adults	80,390	3.8%	29.64	80,390	29.64	\$16,228,221.79	\$201.87	4.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	3,146	0.1%	1.16	3,146	1.16	\$421,642.92	\$134.03	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	27,859	1.3%	10.27	7,545	2.78	\$1,923,143.73	\$254.89	0.6%	73%	27%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	75,579	3.6%	27.86	8,983	3.31	\$2,703,758.76	\$300.99	0.8%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	131,430	6.2%	48.45	84,993	31.33	\$21,207,306.90	\$249.52	6.3%	35%	65%
Grand Total	2,117,873	100.0%	780.78	1,022,512	376.96	\$339,021,955.41	\$331.56	100.0%	52%	48%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Statewide Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	79,698	19.3%	62.53	76,345	59.90	\$3,736,586.00	\$48.94	5.7%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	38,882	9.4%	30.51	35,730	28.03	\$3,304,452.84	\$92.48	5.0%	8%	92%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	124	0.0%	0.10	113	0.09	\$8,315.40	\$73.59	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,448	0.4%	1.14	1,258	0.99	\$127,966.99	\$101.72	0.2%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	50	0.0%	0.04	50	0.04	\$10,851.90	\$217.04	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	39,194	9.5%	30.75	39,194	30.75	\$284,998.53	\$7.27	0.4%	0%	100%
Diagnostic Testing	47,294	11.5%	37.11	16,974	13.32	\$32,828,518.00	\$1,934.05	50.1%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,665	0.9%	2.88	3,328	2.61	\$1,527,963.50	\$459.12	2.3%	9%	91%
Don't do imaging for uncomplicated headache.	7,314	1.8%	5.74	3,182	2.50	\$1,770,659.77	\$556.46	2.7%	56%	44%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	409	0.1%	0.32	405	0.32	\$289,547.73	\$714.93	0.4%	1%	99%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	388	0.1%	0.30	204	0.16	\$697,303.70	\$3,418.16	1.1%	47%	53%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	1,024	0.2%	0.80	420	0.33	\$164,760.67	\$392.29	0.3%	59%	41%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	544	0.1%	0.43	193	0.15	\$200,343.92	\$1,038.05	0.3%	65%	35%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	21,680	5.3%	17.01	3,330	2.61	\$22,314,690.43	\$6,701.11	34.1%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,442	0.8%	2.70	577	0.45	\$268,709.93	\$465.70	0.4%	83%	17%
Don't routinely do diagnostic testing in patients with chronic urticaria.	82	0.0%	0.06	82	0.06	\$60,599.47	\$739.02	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,898	0.5%	1.49	1,081	0.85	\$1,814,396.80	\$1,678.44	2.8%	43%	57%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	695	0.2%	0.55	695	0.55	\$614,308.11	\$883.90	0.9%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	2,382	0.6%	1.87	1030	0.81	\$723,144.73	\$702.08	1.1%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	30	0.0%	0.02	30	0.02	\$20,981.84	\$699.39	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	3,741	0.9%	2.94	2,417	1.90	\$2,361,107.00	\$976.88	3.6%	35%	65%
Disease Approach	26,831	6.5%	21.05	16,687	13.09	\$5,012,772.00	\$300.40	7.7%	38%	62%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	201	0.0%	0.16	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	44	0.0%	0.03	44	0.03	\$42,500.11	\$965.91	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,918	0.5%	1.50	1,918	1.50	\$428,732.15	\$223.53	0.7%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	24,668	6.0%	19.35	14,725	11.55	\$4,541,539.32	\$308.42	6.9%	40%	60%
Preoperative evaluation	33,235	8.1%	26.07	28,170	22.10	\$8,146,905.00	\$289.21	12.4%	15%	85%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	149	0.0%	0.12	149	0.12	\$53,812.25	\$361.16	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	29,618	7.2%	23.24	24,553	19.26	\$7,463,090.56	\$303.96	11.4%	17%	83%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	3,468	0.8%	2.72	3,468	2.72	\$630,002.20	\$181.66	1.0%	0%	100%
Routine FU/Monitoring	3,177	0.8%	2.49	311	0.24	\$323,584.00	\$1,040.46	0.5%	90%	10%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,425	0.3%	1.12	37	0.03	\$19,264.43	\$520.66	0.0%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	43	0.0%	0.03	43	0.03	\$22,709.09	\$528.12	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	452	0.1%	0.35	44	0.03	\$82,574.03	\$1,876.68	0.1%	90%	10%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,257	0.3%	0.99	187	0.15	\$199,036.36	\$1,064.37	0.3%	85%	15%
Screening Tests	222,060	53.9%	174.22	46,509	36.49	\$15,433,191.00	\$331.83	23.6%	79%	21%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	6,247	1.5%	4.90	96	0.08	\$131,705.09	\$1,371.93	0.2%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	168,114	40.8%	131.90	10,757	8.44	\$9,878,635.47	\$918.34	15.1%	94%	6%
Don't perform Pap smears on women with previous hysterectomy	217	0.1%	0.17	117	0.09	\$21,423.26	\$183.10	0.0%	46%	54%
Don't perform Pap smears on women younger than 21	1,187	0.3%	0.93	1,026	0.80	\$172,431.40	\$168.06	0.3%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	9,514	2.3%	7.46	9,514	7.46	\$928,589.17	\$97.60	1.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	25,532	6.2%	20.03	19,369	15.20	\$3,395,512.22	\$175.31	5.2%	24%	76%
Don't perform routine general health checks for asymptomatic adults	2,771	0.7%	2.17	2,771	2.17	\$340,671.94	\$122.94	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	79	0.0%	0.06	79	0.06	\$3,406.06	\$43.11	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	1,556	0.4%	1.22	252	0.20	\$46,329.91	\$183.85	0.1%	84%	16%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	3,578	0.9%	2.81	493	0.39	\$139,256.56	\$282.47	0.2%	86%	14%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,265	0.8%	2.56	2,035	1.60	\$375,229.67	\$184.39	0.6%	38%	62%
Grand Total	412,295	100.0%	323.47	184,996	145.14	\$65,481,554.51	\$353.96	100.0%	55%	45%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Central Region Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	47,880	5.3%	48.81	46,663	47.57	\$5,218,229.00	\$111.83	4.4%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	37,363	4.2%	38.09	36,267	36.97	\$5,024,904.70	\$138.55	4.3%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	34	0.0%	0.03	33	0.03	\$3,983.73	\$120.72	0.0%	3%	97%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	949	0.1%	0.97	829	0.85	\$102,984.61	\$124.23	0.1%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	18	0.0%	0.02	18	0.02	\$1,645.77	\$91.43	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,516	1.1%	9.70	9,516	9.70	\$84,710.39	\$8.90	0.1%	0%	100%
Diagnostic Testing	72,781	8.1%	74.19	25,609	26.11	\$35,083,700.00	\$1,369.98	29.8%	65%	35%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	10,746	1.2%	10.95	9,720	9.91	\$3,378,279.18	\$347.56	2.9%	10%	90%
Don't do imaging for uncomplicated headache.	6,545	0.7%	6.67	2,247	2.29	\$2,564,495.73	\$1,141.30	2.2%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	525	0.1%	0.54	517	0.53	\$829,289.28	\$1,604.04	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	755	0.1%	0.77	279	0.28	\$1,383,676.14	\$4,959.41	1.2%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	22	0.0%	0.02	22	0.02	\$2,692.26	\$122.38	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	108	0.0%	0.11	108	0.11	\$22,573.43	\$209.01	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	607	0.1%	0.62	276	0.28	\$305,654.67	\$1,107.44	0.3%	55%	45%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,300	0.1%	1.33	485	0.49	\$608,555.64	\$1,254.75	0.5%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	38,298	4.3%	39.04	4,109	4.19	\$13,887,760.60	\$3,379.84	11.8%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,300	0.4%	3.36	1,669	1.70	\$1,210,036.65	\$725.01	1.0%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	122	0.0%	0.12	122	0.12	\$115,349.52	\$945.49	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,797	0.3%	2.85	1,626	1.66	\$3,594,818.48	\$2,210.84	3.1%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,052.47	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	356	0.0%	0.36	356	0.36	\$556,022.19	\$1,561.86	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	880	0.1%	0.90	355	0.36	\$459,288.89	\$1,293.77	0.4%	60%	40%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,073.61	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,420	0.7%	6.54	3,718	3.79	\$6,157,081.74	\$1,656.02	5.2%	42%	58%
Disease Approach	13,643	1.5%	13.91	10,555	10.76	\$5,622,368.00	\$532.67	4.8%	23%	77%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	116	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	119	0.0%	0.12	119	0.12	\$299,696.97	\$2,518.46	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	725	0.1%	0.74	725	0.74	\$163,547.34	\$225.58	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	12,683	1.4%	12.93	9,711	9.90	\$5,159,123.27	\$531.27	4.4%	23%	77%
Preoperative evaluation	113,798	12.7%	116.00	87,467	89.16	\$38,390,216.00	\$438.91	32.6%	23%	77%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	77	0.0%	0.08	76	0.08	\$30,667.45	\$403.52	0.0%	1%	99%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	107,972	12.1%	110.06	81,692	83.27	\$35,734,193.05	\$437.43	30.4%	24%	76%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	5,749	0.6%	5.86	5,699	5.81	\$2,625,355.61	\$460.67	2.2%	1%	99%
Routine FU/Monitoring	13,490	1.5%	13.75	1,649	1.68	\$3,475,347.00	\$2,107.55	3.0%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,949	0.7%	6.06	194	0.20	\$265,850.85	\$1,370.37	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	132	0.0%	0.13	132	0.13	\$121,980.12	\$924.09	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,441	0.2%	1.47	213	0.22	\$582,228.68	\$2,733.47	0.5%	85%	15%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,968	0.7%	6.08	1,110	1.13	\$2,505,287.19	\$2,257.02	2.1%	81%	19%
Screening Tests	633,956	70.8%	646.24	121,695	124.05	\$29,796,978.00	\$244.85	25.3%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	14,090	1.6%	14.36	77	0.08	\$91,393.68	\$1,186.93	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	433,740	48.4%	442.14	20,400	20.80	\$9,543,548.65	\$467.82	8.1%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	732	0.1%	0.75	333	0.34	\$68,939.82	\$207.03	0.1%	55%	45%
Don't perform Pap smears on women younger than 21	764	0.1%	0.78	662	0.67	\$146,757.94	\$221.69	0.1%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	20,096	2.2%	20.49	20,096	20.49	\$2,546,547.64	\$126.72	2.2%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	35,324	3.9%	36.01	28,159	28.70	\$6,108,171.24	\$216.92	5.2%	20%	80%
Don't perform routine general health checks for asymptomatic adults	11,656	1.3%	11.88	11,656	11.88	\$2,161,121.16	\$185.41	1.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,267	0.6%	5.37	5,267	5.37	\$534,701.97	\$101.52	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	17,219	1.9%	17.55	2,376	2.42	\$456,230.10	\$192.02	0.4%	86%	14%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	29,529	3.3%	30.10	5,618	5.73	\$2,291,056.13	\$407.81	1.9%	81%	19%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	65,539	7.3%	66.81	27,051	27.58	\$5,848,509.40	\$216.20	5.0%	59%	41%
Grand Total	895,557	100.0%	912.91	293,647	299.34	\$117,586,837.94	\$400.44	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Central Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	32,186	8.0%	67.10	31,569	65.81	\$4,528,721.00	\$143.45	7.4%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	30,666	7.6%	63.93	30,125	62.80	\$4,418,741.95	\$146.68	7.3%	2%	98%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	25	0.0%	0.05	24	0.05	\$3,036.17	\$126.51	0.0%	4%	96%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	717	0.2%	1.49	642	1.34	\$82,933.32	\$129.18	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$971.81	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	778	0.2%	1.62	778	1.62	\$23,037.32	\$29.61	0.0%	0%	100%
Diagnostic Testing	28,083	7.0%	58.54	12,565	26.19	\$16,092,190.00	\$1,280.72	26.5%	55%	45%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	6,361	1.6%	13.26	5,997	12.50	\$2,086,158.94	\$347.87	3.4%	6%	94%
Don't do imaging for uncomplicated headache.	2,877	0.7%	6.00	1,210	2.52	\$1,860,185.91	\$1,537.34	3.1%	58%	42%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	211	0.1%	0.44	208	0.43	\$520,216.98	\$2,501.04	0.9%	1%	99%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	151	0.0%	0.31	68	0.14	\$496,266.74	\$7,298.04	0.8%	55%	45%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	22	0.0%	0.05	22	0.05	\$2,692.26	\$122.38	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	108	0.0%	0.23	108	0.23	\$22,573.43	\$209.01	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	259	0.1%	0.54	133	0.28	\$201,698.11	\$1,516.53	0.3%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	348	0.1%	0.73	118	0.25	\$233,463.79	\$1,978.51	0.4%	66%	34%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	12,047	3.0%	25.11	1,411	2.94	\$4,490,711.31	\$3,182.64	7.4%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,860	0.5%	3.88	948	1.98	\$579,348.60	\$611.13	1.0%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	82	0.0%	0.17	82	0.17	\$57,023.87	\$695.41	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,311	0.3%	2.73	733	1.53	\$1,616,919.71	\$2,205.89	2.7%	44%	56%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$4,799.09	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	148	0.0%	0.31	148	0.31	\$346,069.16	\$2,338.31	0.6%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	310	0.1%	0.65	100	0.21	\$151,684.52	\$1,516.85	0.2%	68%	32%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,988	0.5%	4.14	1,279	2.67	\$3,422,377.41	\$2,675.82	5.6%	36%	64%
Disease Approach	7,651	1.9%	15.95	6,596	13.75	\$4,471,548.00	\$677.92	7.4%	14%	86%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	55	0.0%	0.11	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	77	0.0%	0.16	77	0.16	\$229,657.57	\$2,982.57	0.4%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	291	0.1%	0.61	291	0.61	\$80,933.89	\$278.12	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	7,228	1.8%	15.07	6,228	12.98	\$4,160,956.87	\$668.10	6.8%	14%	86%
Preoperative evaluation	42,083	10.5%	87.73	32,435	67.61	\$14,735,997.00	\$454.32	24.2%	23%	77%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	28	0.0%	0.06	28	0.06	\$13,339.65	\$476.42	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	38,882	9.7%	81.05	29,234	60.94	\$13,401,508.68	\$458.42	22.0%	25%	75%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	3,173	0.8%	6.61	3,173	6.61	\$1,321,148.38	\$416.37	2.2%	0%	100%
Routine FU/Monitoring	3,733	0.9%	7.78	571	1.19	\$1,015,620.00	\$1,778.67	1.7%	85%	15%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,439	0.4%	3.00	69	0.14	\$59,871.26	\$867.70	0.1%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	62	0.0%	0.13	62	0.13	\$57,330.62	\$924.69	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	416	0.1%	0.87	70	0.15	\$37,863.75	\$540.91	0.1%	83%	17%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,816	0.5%	3.79	370	0.77	\$860,554.33	\$2,325.82	1.4%	80%	20%
Screening Tests	288,407	71.7%	601.22	88,047	183.54	\$19,964,456.00	\$226.75	32.8%	69%	31%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	5,374	1.3%	11.20	27	0.06	\$28,255.05	\$1,046.48	0.0%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	172,108	42.8%	358.78	15,818	32.97	\$5,617,374.48	\$355.13	9.2%	91%	9%
Don't perform Pap smears on women with previous hysterectomy	466	0.1%	0.97	278	0.58	\$60,387.58	\$217.22	0.1%	40%	60%
Don't perform Pap smears on women younger than 21	535	0.1%	1.12	460	0.96	\$112,786.08	\$245.19	0.2%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,531	3.9%	32.38	15,531	32.38	\$1,906,419.74	\$122.75	3.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	30,057	7.5%	62.66	23,927	49.88	\$5,435,090.77	\$227.15	8.9%	20%	80%
Don't perform routine general health checks for asymptomatic adults	11,113	2.8%	23.17	11,113	23.17	\$2,093,485.11	\$188.38	3.4%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	685	0.2%	1.43	685	1.43	\$88,897.44	\$129.78	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	5,556	1.4%	11.58	1,162	2.42	\$256,228.55	\$220.51	0.4%	79%	21%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	16,711	4.2%	34.84	1,425	2.97	\$449,795.77	\$315.65	0.7%	91%	9%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	30,271	7.5%	63.10	17,621	36.73	\$3,915,735.40	\$222.22	6.4%	42%	58%
Grand Total	402,153	100.0%	838.33	171,793	358.12	\$60,808,531.37	\$353.96	100.0%	57%	43%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Central Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	15,182	18.2%	61.01	14,594	58.64	\$619,490.00	\$42.45	4.6%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	6,219	7.5%	24.99	5,675	22.80	\$536,854.89	\$94.60	4.0%	9%	91%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$947.56	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	225	0.3%	0.90	181	0.73	\$19,340.36	\$106.85	0.1%	20%	80%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$673.96	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	8,738	10.5%	35.11	8,738	35.11	\$61,673.07	\$7.06	0.5%	0%	100%
Diagnostic Testing	9,244	11.1%	37.15	3,496	14.05	\$5,931,468.00	\$1,696.64	44.1%	62%	38%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	674	0.8%	2.71	624	2.51	\$270,761.55	\$433.91	2.0%	7%	93%
Don't do imaging for uncomplicated headache.	1,583	1.9%	6.36	754	3.03	\$387,491.62	\$513.91	2.9%	52%	48%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	86	0.1%	0.35	86	0.35	\$56,533.49	\$657.37	0.4%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	69	0.1%	0.28	41	0.16	\$131,535.68	\$3,208.19	1.0%	41%	59%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	187	0.2%	0.75	66	0.27	\$24,357.11	\$369.05	0.2%	65%	35%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	78	0.1%	0.31	24	0.10	\$26,521.18	\$1,105.05	0.2%	69%	31%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,063	4.9%	16.33	611	2.46	\$3,774,643.83	\$6,177.81	28.1%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	547	0.7%	2.20	90	0.36	\$46,199.89	\$513.33	0.3%	84%	16%
Don't routinely do diagnostic testing in patients with chronic urticaria.	14	0.0%	0.06	14	0.06	\$10,008.32	\$714.88	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	365	0.4%	1.47	225	0.90	\$276,457.89	\$1,228.70	2.1%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	122	0.1%	0.49	122	0.49	\$108,297.05	\$887.68	0.8%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	570	0.7%	2.29	255	1.02	\$307,604.37	\$1,206.29	2.3%	55%	45%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,073.61	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	886	1.1%	3.56	584	2.35	\$507,982.44	\$869.83	3.8%	34%	66%
Disease Approach	5,461	6.5%	21.94	3,489	14.02	\$932,254.00	\$267.20	6.9%	36%	64%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	61	0.1%	0.25	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	14	0.0%	0.06	14	0.06	\$11,253.70	\$803.84	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	418	0.5%	1.68	418	1.68	\$75,097.62	\$179.66	0.6%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	4,968	6.0%	19.96	3,057	12.28	\$845,902.89	\$276.71	6.3%	38%	62%
Preoperative evaluation	6,597	7.9%	26.51	5,553	22.31	\$1,921,705.00	\$346.07	14.3%	16%	84%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	37	0.0%	0.15	37	0.15	\$10,206.63	\$275.85	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	5,689	6.8%	22.86	4,645	18.67	\$1,764,982.33	\$379.97	13.1%	18%	82%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	871	1.0%	3.50	871	3.50	\$146,515.65	\$168.22	1.1%	0%	100%
Routine FU/Monitoring	675	0.8%	2.71	51	0.20	\$69,179.00	\$1,356.46	0.5%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	305	0.4%	1.23	*	*	\$2,103.34	*	0.0%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$3,764.92	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	102	0.1%	0.41	11	0.04	\$18,269.46	\$1,660.86	0.1%	89%	11%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	268	0.3%	1.08	40	0.16	\$45,041.54	\$1,126.04	0.3%	85%	15%
Screening Tests	46,271	55.4%	185.93	11,071	44.49	\$3,979,867.00	\$359.49	29.6%	76%	24%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,212	1.5%	4.87	37	0.15	\$53,675.86	\$1,450.70	0.4%	97%	3%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	35,291	42.3%	141.81	3,493	14.04	\$2,794,566.04	\$800.05	20.8%	90%	10%
Don't perform Pap smears on women with previous hysterectomy	34	0.0%	0.14	17	0.07	\$2,506.65	\$147.45	0.0%	50%	50%
Don't perform Pap smears on women younger than 21	229	0.3%	0.92	202	0.81	\$33,971.86	\$168.18	0.3%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,015	2.4%	8.10	2,015	8.10	\$248,174.25	\$123.16	1.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	5,247	6.3%	21.08	4,214	16.93	\$669,967.81	\$158.99	5.0%	20%	80%
Don't perform routine general health checks for asymptomatic adults	469	0.6%	1.88	469	1.88	\$60,617.66	\$129.25	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	14	0.0%	0.06	14	0.06	\$842.34	\$60.17	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	258	0.3%	1.04	46	0.18	\$7,710.57	\$167.62	0.1%	82%	18%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	810	1.0%	3.25	105	0.42	\$29,140.09	\$277.52	0.2%	87%	13%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	692	0.8%	2.78	459	1.84	\$78,693.58	\$171.45	0.6%	34%	66%
Grand Total	83,461	100.0%	335.38	38,292	153.87	\$13,453,962.66	\$351.35	100.0%	54%	46%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Eastern Region Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	43,570	4.6%	40.22	41,980	38.75	\$4,238,247.00	\$100.96	3.4%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	32,678	3.4%	30.16	31,226	28.82	\$4,009,353.04	\$128.40	3.2%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	66	0.0%	0.06	62	0.06	\$10,686.83	\$172.37	0.0%	6%	94%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	961	0.1%	0.89	827	0.76	\$110,488.98	\$133.60	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	19	0.0%	0.02	19	0.02	\$2,907.17	\$153.01	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,846	1.0%	9.09	9,846	9.09	\$104,811.43	\$10.65	0.1%	0%	100%
Diagnostic Testing	84,163	8.8%	77.69	27,698	25.57	\$37,384,922.00	\$1,349.73	30.2%	67%	33%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	10,303	1.1%	9.51	8,988	8.30	\$3,486,925.77	\$387.95	2.8%	13%	87%
Don't do imaging for uncomplicated headache.	7,439	0.8%	6.87	2,128	1.96	\$2,394,737.93	\$1,125.35	1.9%	71%	29%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	595	0.1%	0.55	583	0.54	\$830,259.92	\$1,424.12	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,248	0.1%	1.15	502	0.46	\$2,000,943.16	\$3,985.94	1.6%	60%	40%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$948.49	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$265.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	786	0.1%	0.73	391	0.36	\$410,959.53	\$1,051.05	0.3%	50%	50%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,153	0.2%	1.99	912	0.84	\$1,396,715.34	\$1,531.49	1.1%	58%	42%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	46,241	4.9%	42.68	5,691	5.25	\$15,479,076.84	\$2,719.92	12.5%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	4,089	0.4%	3.77	2,135	1.97	\$1,555,271.09	\$728.46	1.3%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	84	0.0%	0.08	84	0.08	\$110,085.27	\$1,310.54	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,228	0.3%	2.98	1,952	1.80	\$3,621,168.13	\$1,855.11	2.9%	40%	60%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$218.51	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	392	0.0%	0.36	392	0.36	\$626,817.08	\$1,599.02	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	814	0.1%	0.75	321	0.30	\$244,631.87	\$762.09	0.2%	61%	39%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	11	0.0%	0.01	11	0.01	\$13,600.49	\$1,236.41	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,780	0.7%	6.26	3,608	3.33	\$5,212,296.85	\$1,444.65	4.2%	47%	53%
Disease Approach	19,122	2.0%	17.65	14,420	13.31	\$7,896,554.00	\$547.61	6.4%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	121	0.0%	0.11	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	106	0.0%	0.10	106	0.10	\$309,006.53	\$2,915.16	0.2%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	648	0.1%	0.60	648	0.60	\$238,117.32	\$367.47	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	18,247	1.9%	16.84	13,666	12.61	\$7,349,430.24	\$537.79	5.9%	25%	75%
Preoperative evaluation	139,283	14.6%	128.57	112,425	103.78	\$42,052,816.00	\$374.05	34.0%	19%	81%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	83	0.0%	0.08	83	0.08	\$51,002.33	\$614.49	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	133,002	14.0%	122.77	106,221	98.05	\$39,443,488.82	\$371.33	31.9%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,198	0.7%	5.72	6,121	5.65	\$2,558,325.30	\$417.96	2.1%	1%	99%
Routine FU/Monitoring	14,827	1.6%	13.69	2,006	1.85	\$3,481,881.00	\$1,735.73	2.8%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,529	0.7%	6.03	230	0.21	\$258,514.25	\$1,123.98	0.2%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	286	0.0%	0.26	286	0.26	\$230,836.45	\$807.12	0.2%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,489	0.2%	1.37	215	0.20	\$338,390.51	\$1,573.91	0.3%	86%	14%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	6,523	0.7%	6.02	1,275	1.18	\$2,654,139.51	\$2,081.68	2.1%	80%	20%
Screening Tests	651,605	68.4%	601.49	114,306	105.51	\$28,592,546.00	\$250.14	23.1%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	18,101	1.9%	16.71	72	0.07	\$71,144.35	\$988.12	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	449,325	47.2%	414.76	15,136	13.97	\$7,364,818.29	\$486.58	6.0%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	993	0.1%	0.92	352	0.32	\$78,468.30	\$222.92	0.1%	65%	35%
Don't perform Pap smears on women younger than 21	768	0.1%	0.71	674	0.62	\$153,692.66	\$228.03	0.1%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	19,167	2.0%	17.69	19,167	17.69	\$2,417,358.19	\$126.12	2.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	37,850	4.0%	34.94	29,902	27.60	\$6,875,772.41	\$229.94	5.6%	21%	79%
Don't perform routine general health checks for asymptomatic adults	9,697	1.0%	8.95	9,697	8.95	\$1,707,759.95	\$176.11	1.4%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	4,907	0.5%	4.53	4,907	4.53	\$487,847.89	\$99.42	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	16,402	1.7%	15.14	2,084	1.92	\$498,673.09	\$239.29	0.4%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	30,270	3.2%	27.94	6,720	6.20	\$3,000,060.59	\$446.44	2.4%	78%	22%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	64,125	6.7%	59.19	25,595	23.63	\$5,936,950.17	\$231.96	4.8%	60%	40%
Grand Total	952,578	100.0%	879.31	312,843	288.78	\$123,646,966.81	\$395.24	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Eastern Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	28,132	7.5%	60.58	27,169	58.50	\$3,572,327.00	\$131.49	6.3%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	26,321	7.0%	56.68	25,456	54.81	\$3,443,287.35	\$135.26	6.0%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	24	0.0%	0.05	24	0.05	\$8,167.81	\$340.33	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	699	0.2%	1.51	601	1.29	\$85,170.56	\$141.71	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$1,784.53	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	1,088	0.3%	2.34	1,088	2.34	\$33,916.63	\$31.17	0.1%	0%	100%
Diagnostic Testing	28,211	7.5%	60.75	11,454	24.66	\$14,151,161.00	\$1,235.48	24.8%	59%	41%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	5,301	1.4%	11.41	4,887	10.52	\$1,957,759.13	\$400.61	3.4%	8%	92%
Don't do imaging for uncomplicated headache.	2,942	0.8%	6.34	1,078	2.32	\$1,676,374.73	\$1,555.08	2.9%	63%	37%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	188	0.1%	0.40	187	0.40	\$451,641.12	\$2,415.19	0.8%	1%	99%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	185	0.0%	0.40	101	0.22	\$404,892.77	\$4,008.84	0.7%	45%	55%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$948.49	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$265.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	315	0.1%	0.68	176	0.38	\$233,818.66	\$1,328.52	0.4%	44%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	485	0.1%	1.04	191	0.41	\$438,952.87	\$2,298.18	0.8%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	13,453	3.6%	28.97	1,708	3.68	\$4,173,106.16	\$2,443.27	7.3%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,701	0.5%	3.66	865	1.86	\$611,278.11	\$706.68	1.1%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	48	0.0%	0.10	48	0.10	\$44,936.95	\$936.19	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,429	0.4%	3.08	889	1.91	\$1,300,385.37	\$1,462.75	2.3%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	171	0.0%	0.37	171	0.37	\$381,807.98	\$2,232.80	0.7%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	236	0.1%	0.51	85	0.18	\$116,605.89	\$1,371.83	0.2%	64%	36%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$10,530.41	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,757	0.5%	3.78	1,068	2.30	\$2,347,856.88	\$2,198.37	4.1%	39%	61%
Disease Approach	11,963	3.2%	25.76	9,932	21.39	\$6,414,579.00	\$645.85	11.3%	17%	83%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	84	0.0%	0.18	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	79	0.0%	0.17	79	0.17	\$266,598.52	\$3,374.66	0.5%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	367	0.1%	0.79	367	0.79	\$121,208.08	\$330.27	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	11,433	3.0%	24.62	9,486	20.43	\$6,026,771.96	\$635.33	10.6%	17%	83%
Preoperative evaluation	40,976	10.9%	88.23	33,671	72.50	\$12,976,692.00	\$385.40	22.8%	18%	82%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	32	0.0%	0.07	32	0.07	\$27,873.79	\$871.06	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	37,948	10.1%	81.71	30,643	65.98	\$11,864,285.98	\$387.18	20.8%	19%	81%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	2,996	0.8%	6.45	2,996	6.45	\$1,084,532.46	\$361.99	1.9%	0%	100%
Routine FU/Monitoring	3,519	0.9%	7.58	567	1.22	\$868,631.00	\$1,531.98	1.5%	84%	16%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,403	0.4%	3.02	55	0.12	\$106,943.35	\$1,944.42	0.2%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	93	0.0%	0.20	93	0.20	\$81,182.04	\$872.93	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	386	0.1%	0.83	68	0.15	\$83,818.21	\$1,232.62	0.1%	82%	18%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,637	0.4%	3.52	351	0.76	\$596,687.48	\$1,699.96	1.0%	79%	21%
Screening Tests	262,854	70.0%	566.01	78,165	168.31	\$18,966,105.00	\$242.64	33.3%	70%	30%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	6,209	1.7%	13.37	50	0.11	\$40,582.94	\$811.66	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	158,092	42.1%	340.42	12,310	26.51	\$4,591,715.74	\$373.01	8.1%	92%	8%
Don't perform Pap smears on women with previous hysterectomy	487	0.1%	1.05	260	0.56	\$63,787.72	\$245.34	0.1%	47%	53%
Don't perform Pap smears on women younger than 21	453	0.1%	0.98	389	0.84	\$110,267.97	\$283.47	0.2%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	14,682	3.9%	31.61	14,682	31.61	\$2,009,220.83	\$136.85	3.5%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	29,845	7.9%	64.27	23,698	51.03	\$6,017,060.23	\$253.91	10.6%	21%	79%
Don't perform routine general health checks for asymptomatic adults	8,887	2.4%	19.14	8,887	19.14	\$1,615,334.32	\$181.76	2.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	525	0.1%	1.13	525	1.13	\$63,269.79	\$120.51	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	5,072	1.4%	10.92	986	2.12	\$261,066.80	\$264.77	0.5%	81%	19%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	15,113	4.0%	32.54	1,364	2.94	\$515,465.73	\$377.91	0.9%	91%	9%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	23,489	6.3%	50.58	15,014	32.33	\$3,678,332.61	\$244.99	6.5%	36%	64%
Grand Total	375,677	100.0%	808.95	160,980	346.64	\$56,949,494.89	\$353.77	100.0%	57%	43%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Eastern Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	15,327	16.0%	48.75	14,705	46.77	\$658,554.00	\$44.78	4.8%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	6,266	6.5%	19.93	5,683	18.08	\$558,699.59	\$98.31	4.1%	9%	91%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	42	0.0%	0.13	38	0.12	\$2,519.02	\$66.29	0.0%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	261	0.3%	0.83	226	0.72	\$25,318.42	\$112.03	0.2%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$1,122.64	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	8,758	9.1%	27.86	8,758	27.86	\$70,894.80	\$8.09	0.5%	0%	100%
Diagnostic Testing	11,072	11.6%	35.22	3,968	12.62	\$6,438,336.00	\$1,622.56	47.2%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	944	1.0%	3.00	861	2.74	\$352,987.44	\$409.97	2.6%	9%	91%
Don't do imaging for uncomplicated headache.	1,989	2.1%	6.33	804	2.56	\$526,959.16	\$655.42	3.9%	60%	40%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	104	0.1%	0.33	103	0.33	\$84,743.71	\$822.75	0.6%	1%	99%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	99	0.1%	0.31	60	0.19	\$157,349.72	\$2,622.50	1.2%	39%	61%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	245	0.3%	0.78	93	0.30	\$39,694.54	\$426.82	0.3%	62%	38%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	107	0.1%	0.34	42	0.13	\$44,646.27	\$1,063.01	0.3%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,690	4.9%	14.92	618	1.97	\$3,904,877.17	\$6,318.57	28.6%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	801	0.8%	2.55	150	0.48	\$86,221.50	\$574.81	0.6%	81%	19%
Don't routinely do diagnostic testing in patients with chronic urticaria.	14	0.0%	0.04	14	0.04	\$9,986.76	\$713.34	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	408	0.4%	1.30	222	0.71	\$400,775.55	\$1,805.30	2.9%	46%	54%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	150	0.2%	0.48	150	0.48	\$145,051.91	\$967.01	1.1%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	578	0.6%	1.84	236	0.75	\$128,025.98	\$542.48	0.9%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,070.08	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	943	1.0%	3.00	615	1.96	\$553,945.85	\$900.72	4.1%	35%	65%
Disease Approach	6,963	7.3%	22.15	4,316	13.73	\$1,407,187.00	\$326.04	10.3%	38%	62%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	37	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$8,434.08	*	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	276	0.3%	0.88	276	0.88	\$116,308.45	\$421.41	0.9%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	6,650	6.9%	21.15	4,040	12.85	\$1,282,444.75	\$317.44	9.4%	39%	61%
Preoperative evaluation	8,629	9.0%	27.45	7,319	23.28	\$2,087,814.00	\$285.26	15.3%	15%	85%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	40	0.0%	0.13	40	0.13	\$14,765.98	\$369.15	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,963	8.3%	25.33	6,653	21.16	\$1,976,949.25	\$297.15	14.5%	16%	84%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	626	0.7%	1.99	626	1.99	\$96,098.97	\$153.51	0.7%	0%	100%
Routine FU/Monitoring	784	0.8%	2.49	54	0.17	\$73,055.00	\$1,352.88	0.5%	93%	7%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	365	0.4%	1.16	*	*	\$2,765.35	*	0.0%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	15	0.0%	0.05	15	0.05	\$8,933.72	\$595.58	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	102	0.1%	0.32	*	*	\$13,676.52	*	0.1%	91%	9%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	302	0.3%	0.96	39	0.12	\$47,679.74	\$1,222.56	0.3%	87%	13%
Screening Tests	52,977	55.3%	168.51	11,651	37.06	\$2,965,886.00	\$254.56	21.8%	78%	22%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,759	1.8%	5.59	*	*	\$13,073.99	*	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	37,956	39.6%	120.73	1,642	5.22	\$1,712,312.51	\$1,042.82	12.6%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	87	0.1%	0.28	52	0.17	\$7,480.07	\$143.85	0.1%	40%	60%
Don't perform Pap smears on women younger than 21	313	0.3%	1.00	283	0.90	\$43,206.48	\$152.67	0.3%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,192	2.3%	6.97	2,192	6.97	\$127,211.81	\$58.03	0.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	7,996	8.3%	25.43	6,195	19.70	\$857,247.90	\$138.38	6.3%	23%	77%
Don't perform routine general health checks for asymptomatic adults	723	0.8%	2.30	723	2.30	\$85,287.07	\$117.96	0.6%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	23	0.0%	0.07	23	0.07	\$729.99	\$31.74	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	410	0.4%	1.30	48	0.15	\$10,190.51	\$212.30	0.1%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	875	0.9%	2.78	104	0.33	\$43,309.95	\$416.44	0.3%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	643	0.7%	2.05	389	1.24	\$65,836.20	\$169.24	0.5%	40%	60%
Grand Total	95,772	100.0%	304.63	42,059	133.78	\$13,630,833.40	\$324.09	100.0%	56%	44%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.

2014 Northern Region Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	58,893	4.6%	38.28	56,672	36.83	\$6,481,296.00	\$114.37	3.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	51,512	4.0%	33.48	49,433	32.13	\$6,215,415.90	\$125.73	3.3%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	85	0.0%	0.06	75	0.05	\$7,581.18	\$101.08	0.0%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,586	0.1%	1.03	1,454	0.95	\$204,810.27	\$140.86	0.1%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	11	0.0%	0.01	11	0.01	\$1,088.08	\$98.92	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	5,699	0.4%	3.70	5,699	3.70	\$52,400.44	\$9.19	0.0%	0%	100%
Diagnostic Testing	88,470	6.9%	57.50	32,876	21.37	\$50,636,982.00	\$1,540.24	27.0%	63%	37%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	12,144	1.0%	7.89	10,507	6.83	\$4,686,513.94	\$446.04	2.5%	13%	87%
Don't do imaging for uncomplicated headache.	8,776	0.7%	5.70	3,420	2.22	\$3,626,797.55	\$1,060.47	1.9%	61%	39%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	649	0.1%	0.42	630	0.41	\$902,186.23	\$1,432.04	0.5%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,033	0.1%	0.67	459	0.30	\$1,724,387.71	\$3,756.84	0.9%	56%	44%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$606.89	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$13.51	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,196	0.1%	0.78	727	0.47	\$732,527.72	\$1,007.60	0.4%	39%	61%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,890	0.1%	1.23	709	0.46	\$1,060,474.94	\$1,495.73	0.6%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	43,572	3.4%	28.32	6,785	4.41	\$25,307,070.79	\$3,729.86	13.5%	84%	16%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	8,167	0.6%	5.31	3,998	2.60	\$2,461,701.71	\$615.73	1.3%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	264	0.0%	0.17	264	0.17	\$223,894.38	\$848.08	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,040	0.2%	1.98	1,243	0.81	\$2,895,043.88	\$2,329.08	1.5%	59%	41%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	18	0.0%	0.01	18	0.01	\$20,278.94	\$1,126.61	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	278	0.0%	0.18	278	0.18	\$593,789.07	\$2,135.93	0.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	818	0.1%	0.53	363	0.24	\$367,170.84	\$1,011.49	0.2%	56%	44%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	11	0.0%	0.01	11	0.01	\$12,511.62	\$1,137.42	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,614	0.5%	4.30	3,464	2.25	\$6,022,012.69	\$1,738.46	3.2%	48%	52%
Disease Approach	11,566	0.9%	7.52	9,377	6.09	\$6,832,167.00	\$728.61	3.6%	19%	81%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	184	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	160	0.0%	0.10	160	0.10	\$411,205.23	\$2,570.03	0.2%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	644	0.1%	0.42	644	0.42	\$166,297.10	\$258.23	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	10,578	0.8%	6.88	8,573	5.57	\$6,254,664.45	\$729.58	3.3%	19%	81%
Preoperative evaluation	133,517	10.5%	86.78	111,431	72.42	\$35,584,521.00	\$319.34	19.0%	17%	83%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	229	0.0%	0.15	229	0.15	\$131,289.52	\$573.32	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	123,202	9.7%	80.07	101,189	65.77	\$32,155,539.45	\$317.78	17.2%	18%	82%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	10,086	0.8%	6.56	10,013	6.51	\$3,297,691.55	\$329.34	1.8%	1%	99%
Routine FU/Monitoring	12,148	1.0%	7.90	2,319	1.51	\$2,775,163.00	\$1,196.71	1.5%	81%	19%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,843	0.5%	3.80	193	0.13	\$294,930.64	\$1,528.14	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	192	0.0%	0.12	192	0.12	\$165,104.90	\$859.92	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,235	0.1%	0.80	366	0.24	\$280,605.29	\$766.68	0.1%	70%	30%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	4,878	0.4%	3.17	1,568	1.02	\$2,034,522.08	\$1,297.53	1.1%	68%	32%
Screening Tests	969,293	76.1%	629.98	356,353	231.61	\$84,943,935.00	\$238.37	45.4%	63%	37%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	18,450	1.4%	11.99	343	0.22	\$164,496.22	\$479.58	0.1%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	579,645	45.5%	376.73	83,427	54.22	\$29,352,938.89	\$351.84	15.7%	86%	14%
Don't perform Pap smears on women with previous hysterectomy	910	0.1%	0.59	364	0.24	\$131,654.07	\$361.69	0.1%	60%	40%
Don't perform Pap smears on women younger than 21	1,015	0.1%	0.66	918	0.60	\$216,621.84	\$235.97	0.1%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	96,735	7.6%	62.87	96,735	62.87	\$13,281,758.94	\$137.30	7.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	80,238	6.3%	52.15	67,846	44.10	\$16,513,636.62	\$243.40	8.8%	15%	85%
Don't perform routine general health checks for asymptomatic adults	45,195	3.5%	29.37	45,195	29.37	\$9,899,557.75	\$219.04	5.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,588	0.4%	3.63	5,588	3.63	\$580,264.06	\$103.84	0.3%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	19,479	1.5%	12.66	5,379	3.50	\$1,342,859.50	\$249.65	0.7%	72%	28%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	39,117	3.1%	25.42	9,472	6.16	\$2,672,429.72	\$282.14	1.4%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	82,921	6.5%	53.89	41,086	26.70	\$10,787,717.16	\$262.56	5.8%	50%	50%
Grand Total	1,273,897	100.0%	827.95	569,038	369.84	\$187,254,063.26	\$329.07	100.0%	55%	45%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Northern Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	49,986	6.2%	47.28	48,192	45.59	\$6,079,744.00	\$126.16	4.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	47,352	5.9%	44.79	45,677	43.21	\$5,860,701.40	\$128.31	4.3%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	53	0.0%	0.05	45	0.04	\$5,231.88	\$116.26	0.0%	15%	85%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,465	0.2%	1.39	1,354	1.28	\$192,812.98	\$142.40	0.1%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$801.28	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	1,116	0.1%	1.06	1,116	1.06	\$20,195.96	\$18.10	0.0%	0%	100%
Diagnostic Testing	44,373	5.5%	41.98	20,836	19.71	\$26,585,132.00	\$1,275.92	19.6%	53%	47%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	8,283	1.0%	7.84	7,715	7.30	\$3,618,437.15	\$469.01	2.7%	7%	93%
Don't do imaging for uncomplicated headache.	5,772	0.7%	5.46	2,952	2.79	\$3,330,541.76	\$1,128.23	2.5%	49%	51%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	344	0.0%	0.33	338	0.32	\$623,563.71	\$1,844.86	0.5%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	254	0.0%	0.24	167	0.16	\$400,172.50	\$2,396.24	0.3%	34%	66%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$606.89	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$13.51	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	734	0.1%	0.69	495	0.47	\$506,590.98	\$1,023.42	0.4%	33%	67%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	563	0.1%	0.53	253	0.24	\$432,138.61	\$1,708.06	0.3%	55%	45%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	17,151	2.1%	16.22	3,115	2.95	\$9,880,813.52	\$3,172.01	7.3%	82%	18%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	6,441	0.8%	6.09	3,077	2.91	\$1,843,719.21	\$599.19	1.4%	52%	48%
Don't routinely do diagnostic testing in patients with chronic urticaria.	214	0.0%	0.20	214	0.20	\$187,335.31	\$875.40	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,857	0.2%	1.76	720	0.68	\$1,444,419.15	\$2,006.14	1.1%	61%	39%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$2,309.64	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	199	0.0%	0.19	199	0.19	\$475,487.40	\$2,389.38	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	478	0.1%	0.45	193	0.18	\$257,805.22	\$1,335.78	0.2%	60%	40%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$6,214.28	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	2,083	0.3%	1.97	1,398	1.32	\$3,574,962.68	\$2,557.20	2.6%	33%	67%
Disease Approach	9,636	1.2%	9.12	8,116	7.68	\$6,438,576.00	\$793.32	4.7%	16%	84%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	123	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	117	0.0%	0.11	117	0.11	\$347,484.82	\$2,969.96	0.3%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	578	0.1%	0.55	578	0.55	\$152,487.20	\$263.82	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	8,818	1.1%	8.34	7,421	7.02	\$5,938,603.87	\$800.24	4.4%	16%	84%
Preoperative evaluation	68,069	8.4%	64.39	59,343	56.14	\$19,828,422.00	\$334.13	14.6%	13%	87%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	185	0.0%	0.18	185	0.18	\$113,239.44	\$612.11	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	60,997	7.5%	57.70	52,271	49.45	\$17,464,466.35	\$334.11	12.9%	14%	86%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,887	0.9%	6.51	6,887	6.51	\$2,250,715.78	\$326.81	1.7%	0%	100%
Routine FU/Monitoring	3,110	0.4%	2.94	847	0.80	\$993,737.00	\$1,173.24	0.7%	73%	27%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,192	0.1%	1.13	83	0.08	\$159,795.76	\$1,925.25	0.1%	93%	7%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	84	0.0%	0.08	84	0.08	\$99,467.69	\$1,184.14	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	477	0.1%	0.45	154	0.15	\$91,488.69	\$594.08	0.1%	68%	32%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,357	0.2%	1.28	526	0.50	\$642,984.73	\$1,222.40	0.5%	61%	39%
Screening Tests	633,317	78.3%	599.09	320,552	303.23	\$75,747,146.00	\$236.30	55.8%	49%	51%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	9,516	1.2%	9.00	314	0.30	\$149,988.25	\$477.67	0.1%	97%	3%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	329,562	40.8%	311.75	79,997	75.67	\$26,125,949.67	\$326.59	19.3%	76%	24%
Don't perform Pap smears on women with previous hysterectomy	616	0.1%	0.58	338	0.32	\$127,886.02	\$378.36	0.1%	45%	55%
Don't perform Pap smears on women younger than 21	860	0.1%	0.81	780	0.74	\$189,949.08	\$243.52	0.1%	9%	91%
Don't perform population based screening for 25-OH-Vitamin D deficiency	87,438	10.8%	82.71	87,438	82.71	\$12,359,962.03	\$141.36	9.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	77,910	9.6%	73.70	65,834	62.28	\$16,021,046.75	\$243.36	11.8%	15%	85%
Don't perform routine general health checks for asymptomatic adults	44,317	5.5%	41.92	44,317	41.92	\$9,795,652.95	\$221.04	7.2%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	879	0.1%	0.83	879	0.83	\$105,691.77	\$120.24	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	10,413	1.3%	9.85	3,843	3.64	\$1,012,384.32	\$263.44	0.7%	63%	37%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	26,282	3.3%	24.86	4,203	3.98	\$994,593.03	\$236.64	0.7%	84%	16%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	45,524	5.6%	43.06	32,609	30.85	\$8,864,041.67	\$271.83	6.5%	28%	72%
Grand Total	808,521	100.0%	764.83	457,916	433.17	\$135,672,754.89	\$296.28	100.0%	43%	57%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Northern Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	7,861	17.6%	35.76	7,475	34.00	\$290,644.00	\$38.88	3.1%	5%	95%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	3,150	7.0%	14.33	2,779	12.64	\$245,480.95	\$88.33	2.6%	12%	88%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	32	0.1%	0.15	30	0.14	\$2,349.30	\$78.31	0.0%	6%	94%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	96	0.2%	0.44	83	0.38	\$10,322.22	\$124.36	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$286.80	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	4,583	10.2%	20.85	4,583	20.85	\$32,204.48	\$7.03	0.3%	0%	100%
Diagnostic Testing	5,984	13.4%	27.22	2,062	9.38	\$6,253,881.00	\$3,032.92	65.8%	66%	34%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	367	0.8%	1.67	311	1.41	\$146,770.02	\$471.93	1.5%	15%	85%
Don't do imaging for uncomplicated headache.	876	2.0%	3.98	321	1.46	\$157,804.55	\$491.60	1.7%	63%	37%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	55	0.1%	0.25	53	0.24	\$38,884.92	\$733.68	0.4%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	61	0.1%	0.28	27	0.12	\$106,268.21	\$3,935.86	1.1%	56%	44%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	150	0.3%	0.68	52	0.24	\$22,415.69	\$431.07	0.2%	65%	35%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	107	0.2%	0.49	33	0.15	\$54,895.18	\$1,663.49	0.6%	69%	31%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	2,641	5.9%	12.01	443	2.02	\$4,840,995.55	\$10,927.76	50.9%	83%	17%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	493	1.1%	2.24	80	0.36	\$24,864.93	\$310.81	0.3%	84%	16%
Don't routinely do diagnostic testing in patients with chronic urticaria.	13	0.0%	0.06	13	0.06	\$7,729.95	\$594.61	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	189	0.4%	0.86	102	0.46	\$273,588.65	\$2,682.24	2.9%	46%	54%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	48	0.1%	0.22	48	0.22	\$40,679.56	\$847.49	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	340	0.8%	1.55	170	0.77	\$109,365.62	\$643.33	1.2%	50%	50%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$6,297.34	*	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	644	1.4%	2.93	409	1.86	\$423,321.24	\$1,035.02	4.5%	36%	64%
Disease Approach	1,233	2.8%	5.61	607	2.76	\$155,866.00	\$256.78	1.6%	51%	49%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	60	0.1%	0.27	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$859.19	*	0.0%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	52	0.1%	0.24	52	0.24	\$10,986.43	\$211.28	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,121	2.5%	5.10	555	2.52	\$144,019.93	\$259.50	1.5%	50%	50%
Preoperative evaluation	2,589	5.8%	11.78	2,242	10.20	\$579,637.00	\$258.54	6.1%	13%	87%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	16	0.0%	0.07	16	0.07	\$4,673.54	\$292.10	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	2,285	5.1%	10.39	1,938	8.82	\$527,476.64	\$272.18	5.5%	15%	85%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	288	0.6%	1.31	288	1.31	\$47,487.17	\$164.89	0.5%	0%	100%
Routine FU/Monitoring	336	0.8%	1.53	29	0.13	\$65,074.00	\$2,243.94	0.7%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	143	0.3%	0.65	*	*	\$3,866.77	*	0.0%	99%	1%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$1,129.69	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	42	0.1%	0.19	*	#VALUE!	\$27,448.31	*	0.3%	79%	21%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	151	0.3%	0.69	29	0.13	\$32,629.63	\$1,125.16	0.3%	81%	19%
Screening Tests	26,721	59.7%	121.56	6,963	31.68	\$2,159,617.00	\$310.16	22.7%	74%	26%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	769	1.7%	3.50	*	*	\$1,168.32	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	19,333	43.2%	87.95	1,232	5.60	\$1,221,078.55	\$991.14	12.8%	94%	6%
Don't perform Pap smears on women with previous hysterectomy	*	*	*	*	*	\$351.82	*	0.0%	71%	29%
Don't perform Pap smears on women younger than 21	154	0.3%	0.70	137	0.62	\$26,321.08	\$192.12	0.3%	11%	89%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,492	5.6%	11.34	2,492	11.34	\$267,147.52	\$107.20	2.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	2,262	5.1%	10.29	1,957	8.90	\$478,647.22	\$244.58	5.0%	13%	87%
Don't perform routine general health checks for asymptomatic adults	820	1.8%	3.73	820	3.73	\$99,738.32	\$121.63	1.0%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	21	0.0%	0.10	21	0.10	\$1,079.28	\$51.39	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	229	0.5%	1.04	59	0.27	\$10,448.56	\$177.09	0.1%	74%	26%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	263	0.6%	1.20	32	0.15	\$10,324.23	\$322.63	0.1%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	378	0.8%	1.72	213	0.97	\$43,311.95	\$203.34	0.5%	44%	56%
Grand Total	44,745	100.0%	203.55	19,407	88.28	\$9,504,719.31	\$489.76	100.0%	57%	43%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Northwest Region Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results						
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs	Quality Index	Waste Index
Common Treatments	33,637	4.8%	41.83	32,441	40.34	\$3,487,301.00	\$107.50	3.3%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	28,683	4.1%	35.67	27,576	34.29	\$3,345,120.68	\$121.31	3.2%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	59	0.0%	0.07	50	0.06	\$4,787.93	\$95.76	0.0%	15%	85%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	838	0.1%	1.04	758	0.94	\$97,471.02	\$128.59	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$7,107.93	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	4,057	0.6%	5.05	4,057	5.05	\$32,813.19	\$8.09	0.0%	0%	100%
Diagnostic Testing	64,532	9.2%	80.25	19,053	23.69	\$32,444,851.00	\$1,702.87	31.1%	70%	30%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	6,774	1.0%	8.42	5,807	7.22	\$2,350,150.34	\$404.71	2.3%	14%	86%
Don't do imaging for uncomplicated headache.	5,048	0.7%	6.28	1,696	2.11	\$2,075,383.43	\$1,223.69	2.0%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	369	0.1%	0.46	359	0.45	\$578,658.38	\$1,611.86	0.6%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	849	0.1%	1.06	318	0.40	\$1,386,721.29	\$4,360.76	1.3%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$372.44	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$126.87	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	562	0.1%	0.70	304	0.38	\$311,512.65	\$1,024.71	0.3%	46%	54%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,487	0.2%	1.85	550	0.68	\$1,065,643.19	\$1,937.53	1.0%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	39,334	5.6%	48.92	4,665	5.80	\$16,400,064.98	\$3,515.56	15.7%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	2,953	0.4%	3.67	1,545	1.92	\$1,196,532.76	\$774.45	1.1%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	123	0.0%	0.15	123	0.15	\$170,362.34	\$1,385.06	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,767	0.3%	2.20	941	1.17	\$2,628,924.81	\$2,793.76	2.5%	47%	53%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,791.07	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	280	0.0%	0.35	280	0.35	\$452,552.77	\$1,616.26	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	628	0.1%	0.78	269	0.33	\$229,993.74	\$855.00	0.2%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,899.45	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,358	0.6%	5.42	2,196	2.73	\$3,590,160.80	\$1,634.86	3.4%	50%	50%
Disease Approach	7,507	1.1%	9.34	5,950	7.40	\$4,096,222.00	\$688.44	3.9%	21%	79%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	49	0.0%	0.06	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	60	0.0%	0.07	60	0.07	\$167,306.41	\$2,788.44	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	585	0.1%	0.73	585	0.73	\$171,896.66	\$293.84	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	6,813	1.0%	8.47	5,305	6.60	\$3,757,018.48	\$708.20	3.6%	22%	78%
Preoperative evaluation	95,822	13.6%	119.16	77,326	96.16	\$37,904,092.00	\$490.19	36.3%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	80	0.0%	0.10	78	0.10	\$54,224.71	\$695.19	0.1%	3%	98%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	90,767	12.9%	112.88	72,319	89.94	\$35,576,494.42	\$491.94	34.1%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	4,975	0.7%	6.19	4,929	6.13	\$2,273,373.23	\$461.22	2.2%	1%	99%
Routine FU/Monitoring	12,319	1.7%	15.32	1,875	2.33	\$2,672,768.00	\$1,425.48	2.6%	85%	15%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,985	0.9%	7.44	180	0.22	\$241,849.64	\$1,343.61	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	136	0.0%	0.17	136	0.17	\$85,903.40	\$631.64	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,171	0.2%	1.46	220	0.27	\$244,857.93	\$1,112.99	0.2%	81%	19%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,027	0.7%	6.25	1,339	1.67	\$2,100,157.35	\$1,568.45	2.0%	73%	27%
Screening Tests	490,166	69.6%	609.57	94,395	117.39	\$23,789,177.00	\$252.02	22.8%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	12,164	1.7%	15.13	66	0.08	\$48,599.80	\$736.36	0.0%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	343,736	48.8%	427.47	15,305	19.03	\$7,052,681.48	\$460.81	6.8%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	395	0.1%	0.49	155	0.19	\$35,273.79	\$227.57	0.0%	61%	39%
Don't perform Pap smears on women younger than 21	432	0.1%	0.54	387	0.48	\$92,134.24	\$238.07	0.1%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	22,173	3.1%	27.57	22,173	27.57	\$3,448,229.21	\$155.51	3.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	23,837	3.4%	29.64	19,079	23.73	\$4,488,514.32	\$235.26	4.3%	20%	80%
Don't perform routine general health checks for asymptomatic adults	9,045	1.3%	11.25	9,045	11.25	\$1,548,451.48	\$171.19	1.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	4,252	0.6%	5.29	4,252	5.29	\$470,957.33	\$110.76	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	9,873	1.4%	12.28	1,639	2.04	\$401,534.72	\$244.99	0.4%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	17,420	2.5%	21.66	4,106	5.11	\$1,822,255.40	\$443.80	1.7%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	46,839	6.7%	58.25	18,188	22.62	\$4,380,544.84	\$240.85	4.2%	61%	39%
Grand Total	704,017	100.0%	875.52	231,074	287.37	\$104,394,410.90	\$451.78	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 Northwest Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	22,918	8.3%	58.13	22,251	56.43	\$2,783,669.00	\$125.10	5.7%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	22,024	7.9%	55.86	21,407	54.29	\$2,704,228.34	\$126.32	5.6%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	35	0.0%	0.09	31	0.08	\$3,561.00	\$114.87	0.0%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	536	0.2%	1.36	490	1.24	\$71,670.79	\$146.27	0.1%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$139.83	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	323	0.1%	0.82	323	0.82	\$4,069.02	\$12.60	0.0%	0%	100%
Diagnostic Testing	20,594	7.4%	52.23	7,934	20.12	\$12,369,592.00	\$1,559.06	25.5%	61%	39%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,316	1.2%	8.41	3,041	7.71	\$1,344,339.73	\$442.07	2.8%	8%	92%
Don't do imaging for uncomplicated headache.	2,158	0.8%	5.47	950	2.41	\$1,464,694.15	\$1,541.78	3.0%	56%	44%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	144	0.1%	0.37	141	0.36	\$321,161.42	\$2,277.74	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	139	0.1%	0.35	72	0.18	\$328,532.07	\$4,562.95	0.7%	48%	52%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$372.44	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$126.87	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	187	0.1%	0.47	109	0.28	\$127,928.18	\$1,173.65	0.3%	42%	58%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	349	0.1%	0.89	133	0.34	\$261,546.66	\$1,966.52	0.5%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	10,509	3.8%	26.65	1,409	3.57	\$4,922,032.93	\$3,493.28	10.2%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,502	0.5%	3.81	786	1.99	\$583,061.68	\$741.81	1.2%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	68	0.0%	0.17	68	0.17	\$107,785.44	\$1,585.08	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	732	0.3%	1.86	345	0.87	\$1,002,777.35	\$2,906.60	2.1%	53%	47%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$761.66	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	104	0.0%	0.26	104	0.26	\$262,133.18	\$2,520.51	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	240	0.1%	0.61	108	0.27	\$138,092.23	\$1,278.63	0.3%	55%	45%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,146	0.4%	2.91	668	1.69	\$1,504,245.67	\$2,251.86	3.1%	42%	58%
Disease Approach	4,560	1.6%	11.57	4,009	10.17	\$3,440,978.00	\$858.31	7.1%	12%	88%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	25	0.0%	0.06	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	42	0.0%	0.11	42	0.11	\$137,275.85	\$3,268.47	0.3%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	311	0.1%	0.79	311	0.79	\$100,577.75	\$323.40	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	4,182	1.5%	10.61	3,656	9.27	\$3,203,123.91	\$876.13	6.6%	13%	87%
Preoperative evaluation	29,737	10.7%	75.42	24,345	61.74	\$12,507,775.00	\$513.77	25.8%	18%	82%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	37	0.0%	0.09	37	0.09	\$35,028.62	\$946.72	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	27,274	9.8%	69.17	21,882	55.50	\$11,544,105.13	\$527.56	23.8%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	2,426	0.9%	6.15	2,426	6.15	\$928,641.46	\$382.79	1.9%	0%	100%
Routine FU/Monitoring	2,691	1.0%	6.82	511	1.30	\$543,890.00	\$1,064.36	1.1%	81%	19%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,127	0.4%	2.86	49	0.12	\$27,302.30	\$557.19	0.1%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	40	0.0%	0.10	40	0.10	\$27,802.93	\$695.07	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	288	0.1%	0.73	68	0.17	\$51,533.47	\$757.85	0.1%	76%	24%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,236	0.4%	3.13	354	0.90	\$437,250.82	\$1,235.17	0.9%	71%	29%
Screening Tests	197,023	71.0%	499.69	67,907	172.23	\$16,827,659.00	\$247.80	34.7%	66%	34%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	4,181	1.5%	10.60	44	0.11	\$23,723.17	\$539.16	0.0%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	116,933	42.1%	296.57	13,191	33.46	\$5,086,292.57	\$385.59	10.5%	89%	11%
Don't perform Pap smears on women with previous hysterectomy	220	0.1%	0.56	110	0.28	\$25,797.58	\$234.52	0.1%	50%	50%
Don't perform Pap smears on women younger than 21	370	0.1%	0.94	333	0.84	\$82,800.70	\$248.65	0.2%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,934	5.7%	40.41	15,934	40.41	\$2,652,868.17	\$166.49	5.5%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	20,421	7.4%	51.79	16,513	41.88	\$4,104,276.24	\$248.55	8.5%	19%	81%
Don't perform routine general health checks for asymptomatic adults	8,612	3.1%	21.84	8,612	21.84	\$1,497,756.53	\$173.92	3.1%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	500	0.2%	1.27	500	1.27	\$77,706.93	\$155.41	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	3,393	1.2%	8.61	789	2.00	\$212,352.27	\$269.14	0.4%	77%	23%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	8,683	3.1%	22.02	1,035	2.62	\$325,716.00	\$314.70	0.7%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	17,776	6.4%	45.08	10,846	27.51	\$2,738,369.16	\$252.48	5.6%	39%	61%
Grand Total	277,539	100.0%	703.90	126,973	322.03	\$48,473,562.20	\$381.76	100.0%	54%	46%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Northwest Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	10,486	18.8%	56.12	9,962	53.31	\$681,219.00	\$68.38	7.6%	5%	95%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	6,431	11.5%	34.42	5,944	31.81	\$618,876.95	\$104.12	6.9%	8%	92%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	24	0.0%	0.13	19	0.10	\$1,226.93	\$64.58	0.0%	21%	79%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	297	0.5%	1.59	265	1.42	\$25,403.17	\$95.86	0.3%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$6,968.10	*	0.1%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	3,734	6.7%	19.98	3,734	19.98	\$28,744.17	\$7.70	0.3%	0%	100%
Diagnostic Testing	6,896	12.3%	36.91	2,357	12.61	\$4,623,069.00	\$1,961.42	51.3%	66%	34%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	458	0.8%	2.45	404	2.16	\$148,255.50	\$366.97	1.6%	12%	88%
Don't do imaging for uncomplicated headache.	1,134	2.0%	6.07	511	2.73	\$324,605.81	\$635.24	3.6%	55%	45%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	43	0.1%	0.23	42	0.22	\$34,216.44	\$814.68	0.4%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	52	0.1%	0.28	28	0.15	\$56,907.18	\$2,032.40	0.6%	46%	54%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	185	0.3%	0.99	82	0.44	\$36,127.74	\$440.58	0.4%	56%	44%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	85	0.2%	0.45	34	0.18	\$37,046.30	\$1,089.60	0.4%	60%	40%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,262	5.8%	17.46	471	2.52	\$3,241,846.53	\$6,882.90	36.0%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	489	0.9%	2.62	76	0.41	\$45,109.05	\$593.54	0.5%	84%	16%
Don't routinely do diagnostic testing in patients with chronic urticaria.	18	0.0%	0.10	18	0.10	\$11,994.56	\$666.36	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	246	0.4%	1.32	152	0.81	\$195,588.98	\$1,286.77	2.2%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	110	0.2%	0.59	110	0.59	\$101,290.46	\$920.82	1.1%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	388	0.7%	2.08	161	0.86	\$91,901.51	\$570.82	1.0%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,899.45	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	426	0.8%	2.28	268	1.43	\$294,279.03	\$1,098.06	3.3%	37%	63%
Disease Approach	2,702	4.8%	14.46	1,717	9.19	\$570,593.00	\$332.32	6.3%	36%	64%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	24	0.0%	0.13	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$4,394.39	*	0.0%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	251	0.4%	1.34	251	1.34	\$67,794.34	\$270.10	0.8%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	2,427	4.3%	12.99	1,466	7.85	\$498,404.16	\$339.98	5.5%	40%	60%
Preoperative evaluation	5,225	9.3%	27.96	4,336	23.21	\$1,399,931.00	\$322.86	15.5%	17%	83%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	20	0.0%	0.11	20	0.11	\$9,184.04	\$459.20	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	4,742	8.5%	25.38	3,853	20.62	\$1,286,214.65	\$333.82	14.3%	19%	81%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	463	0.8%	2.48	463	2.48	\$104,532.57	\$225.77	1.2%	0%	100%
Routine FU/Monitoring	462	0.8%	2.47	41	0.22	\$55,052.00	\$1,342.73	0.6%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	193	0.3%	1.03	11	0.06	\$6,305.59	\$573.24	0.1%	94%	6%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$1,407.47	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	81	0.1%	0.43	*	*	\$17,172.28	*	0.2%	93%	7%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	188	0.3%	1.01	30	0.16	\$30,166.76	\$1,005.56	0.3%	84%	16%
Screening Tests	30,102	53.8%	161.10	5,457	29.20	\$1,674,630.00	\$306.88	18.6%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	862	1.5%	4.61	*	*	\$4,633.49	*	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	23,320	41.7%	124.80	1,007	5.39	\$1,017,204.70	\$1,010.13	11.3%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	18	0.0%	0.10	12	0.06	\$2,038.97	\$169.91	0.0%	33%	67%
Don't perform Pap smears on women younger than 21	58	0.1%	0.31	50	0.27	\$9,064.03	\$181.28	0.1%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,193	2.1%	6.38	1,193	6.38	\$158,646.64	\$132.98	1.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	3,380	6.0%	18.09	2,538	13.58	\$378,315.64	\$149.06	4.2%	25%	75%
Don't perform routine general health checks for asymptomatic adults	364	0.7%	1.95	364	1.95	\$45,347.68	\$124.58	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	*	*	*	*	*	\$271.43	*	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	190	0.3%	1.02	25	0.13	\$6,270.59	\$250.82	0.1%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	399	0.7%	2.14	61	0.33	\$12,625.69	\$206.98	0.1%	85%	15%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	318	0.6%	1.70	207	1.11	\$40,211.00	\$194.26	0.4%	35%	65%
Grand Total	55,902	100.0%	299.18	23,910	127.96	\$9,004,493.97	\$376.60	100.0%	57%	43%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Southwest Region Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	54,059	6.0%	58.24	52,043	56.07	\$4,050,300.00	\$77.83	3.4%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	38,935	4.3%	41.94	37,057	39.92	\$3,843,580.43	\$103.72	3.2%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	33	0.0%	0.04	32	0.03	\$2,977.28	\$93.04	0.0%	3%	97%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,075	0.1%	1.16	938	1.01	\$100,546.41	\$107.19	0.1%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	29	0.0%	0.03	29	0.03	\$2,326.08	\$80.21	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	13,987	1.6%	15.07	13,987	15.07	\$100,870.02	\$7.21	0.1%	0%	100%
Diagnostic Testing	83,690	9.3%	90.16	25,351	27.31	\$41,733,106.00	\$1,646.21	34.8%	70%	30%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	9,243	1.0%	9.96	7,951	8.57	\$3,234,848.03	\$406.85	2.7%	14%	86%
Don't do imaging for uncomplicated headache.	5,889	0.7%	6.34	1,877	2.02	\$1,714,940.51	\$913.66	1.4%	68%	32%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	643	0.1%	0.69	625	0.67	\$714,810.63	\$1,143.70	0.6%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,112	0.1%	1.20	403	0.43	\$1,984,358.14	\$4,923.97	1.7%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$238.54	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	673	0.1%	0.73	371	0.40	\$307,344.41	\$828.42	0.3%	45%	55%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,920	0.2%	2.07	702	0.76	\$837,016.81	\$1,192.33	0.7%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	51,395	5.7%	55.37	6,410	6.91	\$23,310,981.83	\$3,636.66	19.4%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,683	0.4%	3.97	1,906	2.05	\$950,696.39	\$498.79	0.8%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	109	0.0%	0.12	109	0.12	\$91,681.36	\$841.11	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,848	0.3%	3.07	1,552	1.67	\$4,132,165.09	\$2,662.48	3.4%	46%	54%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$10,707.88	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	527	0.1%	0.57	527	0.57	\$650,127.79	\$1,233.64	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	649	0.1%	0.70	263	0.28	\$153,157.55	\$582.35	0.1%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$8,205.18	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,999	0.6%	5.39	2,655	2.86	\$3,631,826.22	\$1,367.92	3.0%	47%	53%
Disease Approach	18,123	2.0%	19.52	13,537	14.58	\$5,198,355.00	\$384.01	4.3%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	25	0.0%	0.03	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	111	0.0%	0.12	111	0.12	\$328,268.97	\$2,957.38	0.3%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,356	0.2%	1.46	1,356	1.46	\$267,996.86	\$197.64	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	16,631	1.8%	17.92	12,070	13.00	\$4,602,089.01	\$381.28	3.8%	27%	73%
Preoperative evaluation	119,835	13.3%	129.10	95,789	103.19	\$44,428,605.00	\$463.82	37.0%	20%	80%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	56	0.0%	0.06	56	0.06	\$25,861.57	\$461.81	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	113,785	12.6%	122.58	89,800	96.74	\$41,021,301.08	\$456.81	34.2%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	5,994	0.7%	6.46	5,933	6.39	\$3,381,442.64	\$569.94	2.8%	1%	99%
Routine FU/Monitoring	14,112	1.6%	15.20	1,400	1.51	\$2,163,628.00	\$1,545.45	1.8%	90%	10%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	7,137	0.8%	7.69	195	0.21	\$278,630.10	\$1,428.87	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	143	0.0%	0.15	143	0.15	\$88,865.96	\$621.44	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,365	0.2%	1.47	168	0.18	\$150,479.54	\$895.71	0.1%	88%	12%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,467	0.6%	5.89	894	0.96	\$1,645,652.03	\$1,840.77	1.4%	84%	16%
Screening Tests	609,901	67.8%	657.05	87,697	94.48	\$22,453,972.00	\$256.04	18.7%	86%	14%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	14,098	1.6%	15.19	64	0.07	\$74,211.82	\$1,159.56	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	452,802	50.3%	487.80	13,123	14.14	\$7,171,442.18	\$546.48	6.0%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	570	0.1%	0.61	219	0.24	\$46,982.10	\$214.53	0.0%	62%	38%
Don't perform Pap smears on women younger than 21	723	0.1%	0.78	585	0.63	\$109,817.53	\$187.72	0.1%	19%	81%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,084	1.7%	16.25	15,084	16.25	\$2,106,274.82	\$139.64	1.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	22,616	2.5%	24.36	16,553	17.83	\$3,572,612.17	\$215.83	3.0%	27%	73%
Don't perform routine general health checks for asymptomatic adults	8,029	0.9%	8.65	8,029	8.65	\$1,292,514.05	\$160.98	1.1%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,151	0.6%	5.55	5,151	5.55	\$557,223.81	\$108.18	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	13,617	1.5%	14.67	1,907	2.05	\$386,867.64	\$202.87	0.3%	86%	14%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	24,793	2.8%	26.71	6,414	6.91	\$2,649,410.83	\$413.07	2.2%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	52,418	5.8%	56.47	20,568	22.16	\$4,486,615.09	\$218.14	3.7%	61%	39%
Grand Total	899,747	100.0%	969.30	275,844	297.17	\$120,027,966.38	\$435.13	100.0%	69%	31%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Southwest Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	21,708	8.5%	70.04	20,981	67.69	\$2,387,327.00	\$113.79	6.4%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	20,630	8.1%	66.56	19,961	64.40	\$2,328,271.77	\$116.64	6.3%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	16	0.0%	0.05	15	0.05	\$1,704.69	\$113.65	0.0%	6%	94%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	456	0.2%	1.47	399	1.29	\$47,436.56	\$118.89	0.1%	13%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$525.68	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	606	0.2%	1.96	606	1.96	\$9,388.01	\$15.49	0.0%	0%	100%
Diagnostic Testing	20,140	7.9%	64.98	7,553	24.37	\$9,731,650.00	\$1,288.45	26.2%	62%	38%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,454	1.4%	11.14	3,114	10.05	\$1,166,180.19	\$374.50	3.1%	10%	90%
Don't do imaging for uncomplicated headache.	1,644	0.6%	5.30	650	2.10	\$950,614.60	\$1,462.48	2.6%	60%	40%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	134	0.1%	0.43	130	0.42	\$246,315.15	\$1,894.73	0.7%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	162	0.1%	0.52	76	0.25	\$418,810.81	\$5,510.67	1.1%	53%	47%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$238.54	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	160	0.1%	0.52	94	0.30	\$69,408.31	\$738.39	0.2%	41%	59%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	338	0.1%	1.09	117	0.38	\$181,517.24	\$1,551.43	0.5%	65%	35%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	11,011	4.3%	35.53	1,526	4.92	\$3,906,796.44	\$2,560.15	10.5%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,336	0.5%	4.31	736	2.37	\$359,308.51	\$488.19	1.0%	45%	55%
Don't routinely do diagnostic testing in patients with chronic urticaria.	51	0.0%	0.16	51	0.16	\$41,815.68	\$819.92	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	708	0.3%	2.28	359	1.16	\$1,071,143.81	\$2,983.69	2.9%	49%	51%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	#VALUE!	\$1,567.27	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	105	0.0%	0.34	105	0.34	\$214,400.57	\$2,041.91	0.6%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	142	0.1%	0.46	55	0.18	\$66,910.30	\$1,216.55	0.2%	61%	39%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,563.82	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	895	0.4%	2.89	540	1.74	\$1,033,058.50	\$1,913.07	2.8%	40%	60%
Disease Approach	5,457	2.1%	17.61	4,935	15.92	\$2,521,300.00	\$510.90	6.8%	10%	90%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	58	0.0%	0.19	58	0.19	\$215,129.52	\$3,709.13	0.6%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	369	0.1%	1.19	369	1.19	\$83,355.25	\$225.89	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	5,030	2.0%	16.23	4,508	14.54	\$2,222,815.23	\$493.08	6.0%	10%	90%
Preoperative evaluation	28,533	11.2%	92.06	22,819	73.62	\$11,303,517.00	\$495.36	30.5%	20%	80%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	14	0.0%	0.05	14	0.05	\$6,297.44	\$449.82	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	26,538	10.4%	85.62	20,824	67.19	\$10,195,049.94	\$489.58	27.5%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,981	0.8%	6.39	1,981	6.39	\$1,102,169.12	\$556.37	3.0%	0%	100%
Routine FU/Monitoring	2,822	1.1%	9.11	391	1.26	\$429,535.00	\$1,098.56	1.2%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,248	0.5%	4.03	55	0.18	\$43,238.10	\$786.15	0.1%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	40	0.0%	0.13	40	0.13	\$26,728.50	\$668.21	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	315	0.1%	1.02	60	0.19	\$37,255.33	\$620.92	0.1%	81%	19%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,219	0.5%	3.93	236	0.76	\$322,313.19	\$1,365.73	0.9%	81%	19%
Screening Tests	175,297	69.0%	565.59	48,150	155.35	\$10,744,284.00	\$223.14	28.9%	73%	27%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	3,843	1.5%	12.40	15	0.05	\$9,306.71	\$620.45	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	111,725	44.0%	360.48	8,413	27.14	\$2,851,530.91	\$338.94	7.7%	92%	8%
Don't perform Pap smears on women with previous hysterectomy	256	0.1%	0.83	141	0.45	\$30,603.92	\$217.05	0.1%	45%	55%
Don't perform Pap smears on women younger than 21	282	0.1%	0.91	224	0.72	\$49,293.36	\$220.06	0.1%	21%	79%
Don't perform population based screening for 25-OH-Vitamin D deficiency	8,703	3.4%	28.08	8,703	28.08	\$1,333,758.28	\$153.25	3.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	15,885	6.3%	51.25	12,012	38.76	\$2,547,592.86	\$212.09	6.9%	24%	76%
Don't perform routine general health checks for asymptomatic adults	7,461	2.9%	24.07	7,461	24.07	\$1,225,992.88	\$164.32	3.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	557	0.2%	1.80	557	1.80	\$86,076.99	\$154.54	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	3,425	1.3%	11.05	765	2.47	\$181,111.79	\$236.75	0.5%	78%	22%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	8,790	3.5%	28.36	956	3.08	\$418,188.23	\$437.44	1.1%	89%	11%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	14,370	5.7%	46.36	8,903	28.73	\$2,010,828.06	\$225.86	5.4%	38%	62%
Grand Total	253,983	100.0%	819.46	104,850	338.29	\$37,117,612.06	\$354.01	100.0%	59%	41%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 Southwest Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	30,805	23.3%	105.81	29,572	101.57	\$1,486,678.00	\$50.27	7.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	16,816	12.7%	57.76	15,649	53.75	\$1,344,540.46	\$85.92	6.8%	7%	93%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	17	0.0%	0.06	17	0.06	\$1,272.59	\$74.86	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	569	0.4%	1.95	503	1.73	\$47,582.82	\$94.60	0.2%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	22	0.0%	0.08	22	0.08	\$1,800.40	\$81.84	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	13,381	10.1%	45.96	13,381	45.96	\$91,482.01	\$6.84	0.5%	0%	100%
Diagnostic Testing	14,068	10.6%	48.32	5,061	17.38	\$9,581,764.00	\$1,893.26	48.2%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,222	0.9%	4.20	1,128	3.87	\$609,188.99	\$540.06	3.1%	8%	92%
Don't do imaging for uncomplicated headache.	1,732	1.3%	5.95	792	2.72	\$373,798.63	\$471.97	1.9%	54%	46%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	121	0.1%	0.42	121	0.42	\$75,169.17	\$621.23	0.4%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	107	0.1%	0.37	48	0.16	\$245,242.91	\$5,109.23	1.2%	55%	45%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	257	0.2%	0.88	127	0.44	\$42,165.59	\$332.01	0.2%	51%	49%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	167	0.1%	0.57	60	0.21	\$37,234.99	\$620.58	0.2%	64%	36%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	7,024	5.3%	24.13	1,187	4.08	\$6,552,327.35	\$5,520.07	32.9%	83%	17%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,112	0.8%	3.82	181	0.62	\$66,314.56	\$366.38	0.3%	84%	16%
Don't routinely do diagnostic testing in patients with chronic urticaria.	23	0.0%	0.08	23	0.08	\$20,879.88	\$907.82	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	690	0.5%	2.37	380	1.31	\$667,985.73	\$1,757.86	3.4%	45%	55%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	265	0.2%	0.91	265	0.91	\$218,989.13	\$826.37	1.1%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	506	0.4%	1.74	208	0.71	\$86,247.25	\$414.65	0.4%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$4,641.36	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	842	0.6%	2.89	541	1.86	\$581,578.44	\$1,075.01	2.9%	36%	64%
Disease Approach	10,460	7.9%	35.93	6,546	22.48	\$1,946,872.00	\$297.41	9.8%	37%	63%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	19	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	18	0.0%	0.06	18	0.06	\$17,558.75	\$975.49	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	921	0.7%	3.16	921	3.16	\$158,545.31	\$172.14	0.8%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	9,502	7.2%	32.64	5,607	19.26	\$1,770,767.59	\$315.81	8.9%	41%	59%
Preoperative evaluation	10,195	7.7%	35.02	8,720	29.95	\$2,157,818.00	\$247.46	10.9%	14%	86%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	36	0.0%	0.12	36	0.12	\$14,982.06	\$416.17	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	8,939	6.8%	30.70	7,464	25.64	\$1,907,467.69	\$255.56	9.6%	17%	83%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,220	0.9%	4.19	1,220	4.19	\$235,367.84	\$192.92	1.2%	0%	100%
Routine FU/Monitoring	905	0.7%	3.11	62	0.21	\$61,223.00	\$987.46	0.3%	93%	7%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	419	0.3%	1.44	*	#VALUE!	\$4,223.38	*	0.0%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	13	0.0%	0.04	13	0.04	\$7,473.29	\$574.87	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	125	0.1%	0.43	*	#VALUE!	\$6,007.46	*	0.0%	93%	7%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	348	0.3%	1.20	49	0.17	\$43,518.69	\$888.14	0.2%	86%	14%
Screening Tests	65,976	49.8%	226.61	11,343	38.96	\$4,653,191.00	\$410.23	23.4%	83%	17%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,645	1.2%	5.65	43	0.15	\$59,153.43	\$1,375.66	0.3%	97%	3%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	52,214	39.4%	179.34	3,383	11.62	\$3,133,473.67	\$926.24	15.8%	94%	6%
Don't perform Pap smears on women with previous hysterectomy	71	0.1%	0.24	34	0.12	\$9,045.75	\$266.05	0.0%	52%	48%
Don't perform Pap smears on women younger than 21	433	0.3%	1.49	354	1.22	\$59,867.95	\$169.12	0.3%	18%	82%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,622	1.2%	5.57	1,622	5.57	\$127,408.95	\$78.55	0.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	6,647	5.0%	22.83	4,465	15.34	\$1,011,333.65	\$226.50	5.1%	33%	67%
Don't perform routine general health checks for asymptomatic adults	395	0.3%	1.36	395	1.36	\$49,681.21	\$125.78	0.2%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	15	0.0%	0.05	15	0.05	\$483.02	\$32.20	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	469	0.4%	1.61	74	0.25	\$11,709.68	\$158.24	0.1%	84%	16%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	1,231	0.9%	4.23	191	0.66	\$43,856.60	\$229.62	0.2%	84%	16%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	1,234	0.9%	4.24	767	2.63	\$147,176.94	\$191.89	0.7%	38%	62%
Grand Total	132,415	100.0%	454.82	61,328	210.65	\$19,887,545.17	\$324.28	100.0%	54%	46%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 1 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	4,786	5.2%	44.89	4,605	43.19	\$368,555.00	\$80.03	2.8%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	3,763	4.1%	35.29	3,590	33.67	\$352,716.50	\$98.25	2.6%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$374.43	*	0.0%	20%	80%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	99	0.1%	0.93	91	0.85	\$8,757.03	\$96.23	0.1%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	924	1.0%	8.67	924	8.67	\$6,706.79	\$7.26	0.1%	0%	100%
Diagnostic Testing	8,085	8.7%	75.83	2,481	23.27	\$3,577,292.00	\$1,441.88	26.7%	69%	31%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,001	1.1%	9.39	878	8.23	\$669,613.27	\$762.66	5.0%	12%	88%
Don't do imaging for uncomplicated headache.	573	0.6%	5.37	191	1.79	\$236,127.37	\$1,236.27	1.8%	67%	33%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	67	0.1%	0.63	65	0.61	\$90,210.98	\$1,387.86	0.7%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	113	0.1%	1.06	44	0.41	\$190,950.29	\$4,339.78	1.4%	61%	39%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	88	0.1%	0.83	38	0.36	\$23,917.26	\$629.40	0.2%	57%	43%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	184	0.2%	1.73	68	0.64	\$105,440.26	\$1,550.59	0.8%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,966	5.4%	46.57	586	5.50	\$1,449,787.29	\$2,474.04	10.8%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	309	0.3%	2.90	157	1.47	\$91,492.72	\$582.76	0.7%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	11	0.0%	0.10	11	0.10	\$9,838.72	\$894.43	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	223	0.2%	2.09	114	1.07	\$305,711.26	\$2,681.68	2.3%	49%	51%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	54	0.1%	0.51	54	0.51	\$62,996.74	\$1,166.61	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	69	0.1%	0.65	32	0.30	\$24,915.71	\$778.62	0.2%	54%	46%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	427	0.5%	4.00	243	2.28	\$316,290.49	\$1,301.61	2.4%	43%	57%
Disease Approach	1,383	1.5%	12.97	1,138	10.67	\$624,479.00	\$548.75	4.7%	18%	82%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	34	0.0%	0.32	34	0.32	\$114,734.83	\$3,374.55	0.9%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	187	0.2%	1.75	187	1.75	\$35,930.37	\$192.14	0.3%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,162	1.3%	10.90	917	8.60	\$473,813.33	\$516.70	3.5%	21%	79%
Preoperative evaluation	14,266	15.4%	133.79	11,846	111.10	\$6,227,904.00	\$525.74	46.6%	17%	83%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$3,654.67	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	13,406	14.5%	125.73	10,997	103.14	\$5,525,328.44	\$502.44	41.3%	18%	82%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	860	0.9%	8.07	849	7.96	\$698,920.86	\$823.23	5.2%	1%	99%
Routine FU/Monitoring	1,644	1.8%	15.42	143	1.34	\$141,751.00	\$991.26	1.1%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	840	0.9%	7.88	41	0.38	\$17,780.66	\$433.67	0.1%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$7,914.79	*	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	184	0.2%	1.73	22	0.21	\$17,193.36	\$781.52	0.1%	88%	12%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	620	0.7%	5.81	80	0.75	\$98,861.91	\$1,235.77	0.7%	87%	13%
Screening Tests	62,527	67.4%	586.41	10,386	97.41	\$2,435,683.00	\$234.52	18.2%	83%	17%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,710	1.8%	16.04	*	*	\$14,657.84	*	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	45,787	49.4%	429.42	1,807	16.95	\$690,362.56	\$382.05	5.2%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	74	0.1%	0.69	29	0.27	\$9,114.82	\$314.30	0.1%	61%	39%
Don't perform Pap smears on women younger than 21	80	0.1%	0.75	65	0.61	\$14,554.25	\$223.91	0.1%	19%	81%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,444	1.6%	13.54	1,444	13.54	\$148,114.09	\$102.57	1.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	3,040	3.3%	28.51	2,279	21.37	\$459,600.30	\$201.67	3.4%	25%	75%
Don't perform routine general health checks for asymptomatic adults	1,326	1.4%	12.44	1,326	12.44	\$223,496.84	\$168.55	1.7%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	419	0.5%	3.93	419	3.93	\$33,554.70	\$80.08	0.3%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	832	0.9%	7.80	174	1.63	\$59,049.29	\$339.36	0.4%	79%	21%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,125	2.3%	19.93	533	5.00	\$302,588.53	\$567.71	2.3%	75%	25%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	5,690	6.1%	53.36	2,310	21.66	\$480,589.55	\$208.05	3.6%	59%	41%
Grand Total	92,712	100.0%	869.51	30,624	287.21	\$13,375,663.10	\$436.77	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 2 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,070	2.6%	21.37	2,998	20.87	\$333,077.00	\$111.10	2.2%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,623	2.2%	18.26	2,557	17.80	\$318,865.11	\$124.70	2.1%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$1,161.26	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	92	0.1%	0.64	86	0.60	\$9,990.75	\$116.17	0.1%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$11.27	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	355	0.3%	2.47	355	2.47	\$3,048.47	\$8.59	0.0%	0%	100%
Diagnostic Testing	7,660	6.4%	53.32	2,308	16.07	\$3,232,961.00	\$1,400.76	21.1%	70%	30%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	766	0.6%	5.33	655	4.56	\$270,889.33	\$413.57	1.8%	14%	86%
Don't do imaging for uncomplicated headache.	683	0.6%	4.75	180	1.25	\$210,640.96	\$1,170.23	1.4%	74%	26%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	41	0.0%	0.29	41	0.29	\$54,605.32	\$1,331.84	0.4%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	142	0.1%	0.99	51	0.35	\$243,419.67	\$4,772.93	1.6%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$33.39	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$113.36	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	91	0.1%	0.63	64	0.45	\$61,554.46	\$961.79	0.4%	30%	70%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	137	0.1%	0.95	45	0.31	\$71,603.54	\$1,591.19	0.5%	67%	33%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,146	3.5%	28.86	440	3.06	\$1,231,686.01	\$2,799.29	8.0%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	690	0.6%	4.80	356	2.48	\$195,069.66	\$547.95	1.3%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	35	0.0%	0.24	35	0.24	\$30,372.86	\$867.80	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	220	0.2%	1.53	116	0.81	\$326,886.52	\$2,817.99	2.1%	47%	53%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$111.55	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	22	0.0%	0.15	22	0.15	\$52,709.46	\$2,395.88	0.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	58	0.0%	0.40	18	0.13	\$18,263.78	\$1,014.65	0.1%	69%	31%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	629	0.5%	4.38	285	1.98	\$465,001.29	\$1,631.58	3.0%	55%	45%
Disease Approach	1,042	0.9%	7.25	692	4.82	\$471,262.00	\$681.01	3.1%	34%	66%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$16,173.04	*	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	84	0.1%	0.58	84	0.58	\$48,392.09	\$576.10	0.3%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	958	0.8%	6.67	608	4.23	\$406,696.48	\$668.91	2.7%	37%	63%
Preoperative evaluation	17,236	14.5%	119.97	13,942	97.04	\$6,042,208.00	\$433.38	39.4%	19%	81%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	14	0.0%	0.10	14	0.10	\$7,573.66	\$540.98	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	16,264	13.7%	113.21	12,981	90.36	\$5,688,738.18	\$438.24	37.1%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	958	0.8%	6.67	947	6.59	\$345,896.26	\$365.25	2.3%	1%	99%
Routine FU/Monitoring	1,691	1.4%	11.77	203	1.41	\$302,665.00	\$1,490.96	2.0%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	953	0.8%	6.63	56	0.39	\$42,410.02	\$757.32	0.3%	94%	6%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	20	0.0%	0.14	20	0.14	\$10,266.29	\$513.31	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	128	0.1%	0.89	13	0.09	\$9,911.22	\$762.40	0.1%	90%	10%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	590	0.5%	4.11	114	0.79	\$240,077.85	\$2,105.95	1.6%	81%	19%
Screening Tests	88,162	74.1%	613.66	16,479	114.70	\$4,952,382.00	\$300.53	32.3%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,570	1.3%	10.93	11	0.08	\$6,825.04	\$620.46	0.0%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	62,265	52.4%	433.40	3,196	22.25	\$1,610,625.29	\$503.95	10.5%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	58	0.0%	0.40	24	0.17	\$7,533.37	\$313.89	0.0%	59%	41%
Don't perform Pap smears on women younger than 21	59	0.0%	0.41	52	0.36	\$15,581.43	\$299.64	0.1%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	3,075	2.6%	21.40	3,075	21.40	\$583,652.62	\$189.81	3.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	4,748	4.0%	33.05	3,740	26.03	\$1,111,864.08	\$297.29	7.3%	21%	79%
Don't perform routine general health checks for asymptomatic adults	1,709	1.4%	11.90	1,709	11.90	\$310,966.42	\$181.96	2.0%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	526	0.4%	3.66	526	3.66	\$67,726.87	\$128.76	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	1,910	1.6%	13.29	263	1.83	\$69,401.23	\$263.88	0.5%	86%	14%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,695	2.3%	18.76	703	4.89	\$291,719.40	\$414.96	1.9%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	9,547	8.0%	66.45	3,180	22.13	\$876,486.66	\$275.62	5.7%	67%	33%
Grand Total	118,898	100.0%	827.60	36,651	255.11	\$15,334,555.52	\$418.39	100.0%	69%	31%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 3 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	4,692	5.5%	65.12	4,530	63	\$264,562.00	\$58.40	2.7%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,343	2.7%	32.52	2,187	30	\$231,788.83	\$105.98	2.4%	7%	93%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$125.79	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	83	0.1%	1.15	77	1	\$7,378.63	\$95.83	0.1%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$437.55	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,266	2.6%	31.45	2,266	31	\$24,831.39	\$10.96	0.3%	0%	100%
Diagnostic Testing	7,404	8.6%	102.75	2,423	34	\$4,133,854.00	\$1,706.09	42.4%	67%	33%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,066	1.2%	14.79	961	13	\$254,470.82	\$264.80	2.6%	10%	90%
Don't do imaging for uncomplicated headache.	479	0.6%	6.65	164	2	\$128,708.43	\$784.81	1.3%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	75	0.1%	1.04	72	1	\$75,584.01	\$1,049.78	0.8%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	55	0.1%	0.76	13	0	\$74,228.22	\$5,709.86	0.8%	76%	24%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	-	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	107	0.1%	1.48	68	1	\$35,179.09	\$517.34	0.4%	36%	64%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	223	0.3%	3.09	103	1	\$87,919.42	\$853.59	0.9%	54%	46%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,177	4.9%	57.97	373	5	\$2,495,780.63	\$6,691.10	25.6%	91%	9%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	352	0.4%	4.89	176	2	\$64,001.89	\$363.65	0.7%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	14	0.0%	0.19	14	0	\$5,376.01	\$384.00	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	280	0.3%	3.89	153	2	\$537,713.68	\$3,514.47	5.5%	45%	55%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	-	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	31	0.0%	0.43	31	0	\$35,704.02	\$1,151.74	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	43	0.1%	0.60	18	0	\$6,458.68	\$358.82	0.1%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$1,575.93	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	502	0.6%	6.97	277	4	\$331,153.66	\$1,195.50	3.4%	45%	55%
Disease Approach	1,567	1.8%	21.75	1,098	15	\$386,222.00	\$351.75	4.0%	30%	70%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$4,042.40	*	0.0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	57	0.1%	0.79	57	1	\$13,938.32	\$244.53	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,510	1.8%	20.96	1,041	14	\$368,241.66	\$353.74	3.8%	31%	69%
Preoperative evaluation	10,520	12.2%	146.00	8,191	114	\$3,383,938.00	\$413.13	34.7%	22%	78%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$856.47	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	10,203	11.9%	141.60	7,881	109	\$3,249,720.28	\$412.35	33.3%	23%	77%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	317	0.4%	4.40	310	4	\$133,361.39	\$430.20	1.4%	2%	98%
Routine FU/Monitoring	1,286	1.5%	17.85	98	1	\$141,033.00	\$1,439.11	1.4%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	704	0.8%	9.77	11	0	\$9,482.79	\$862.07	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	26	0.0%	0.36	26	0	\$13,761.16	\$529.28	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	89	0.1%	1.24	11	0	\$8,552.24	\$777.48	0.1%	88%	12%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	467	0.5%	6.48	50	1	\$109,236.82	\$2,184.74	1.1%	89%	11%
Screening Tests	60,435	70.3%	838.72	6,272	87	\$1,447,948.00	\$230.86	14.8%	90%	10%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	968	1.1%	13.43	-	-	\$0.00	\$0.00	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	48,122	56.0%	667.84	684	9	\$374,732.55	\$547.85	3.8%	99%	1%
Don't perform Pap smears on women with previous hysterectomy	25	0.0%	0.35	*	*	\$2,037.71	*	0.0%	64%	36%
Don't perform Pap smears on women younger than 21	58	0.1%	0.80	31	0	\$5,460.77	\$176.15	0.1%	47%	53%
Don't perform population based screening for 25-OH-Vitamin D deficiency	934	1.1%	12.96	934	13	\$122,229.93	\$130.87	1.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	1,761	2.0%	24.44	1,194	17	\$244,253.99	\$204.57	2.5%	32%	68%
Don't perform routine general health checks for asymptomatic adults	346	0.4%	4.80	346	5	\$59,515.05	\$172.01	0.6%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	508	0.6%	7.05	508	7	\$74,064.56	\$145.80	0.8%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	799	0.9%	11.09	92	1	\$13,867.87	\$150.74	0.1%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	3,006	3.5%	41.72	850	12	\$210,677.63	\$247.86	2.2%	72%	28%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,908	4.5%	54.24	1,633	23	\$341,108.05	\$208.88	3.5%	58%	42%
Grand Total	85,922	100.0%	1192.43	22,636	1,192	\$9,757,558.32	\$431.06	100.0%	74%	26%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 4 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,531	6.2%	51.05	3,435	49.66	\$331,279.00	\$96.44	3.2%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,957	5.2%	42.75	2,866	41.44	\$319,811.23	\$111.59	3.1%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$673.00	*	0.0%	13%	88%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	71	0.1%	1.03	66	0.95	\$7,810.97	\$118.35	0.1%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	503	0.9%	7.27	503	7.27	\$2,983.66	\$5.93	0.0%	0%	100%
Diagnostic Testing	6,553	11.6%	94.74	1,692	24.46	\$3,255,813.00	\$1,924.24	31.3%	74%	26%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	540	1.0%	7.81	434	6.27	\$210,097.22	\$484.09	2.0%	20%	80%
Don't do imaging for uncomplicated headache.	498	0.9%	7.20	137	1.98	\$172,243.10	\$1,257.25	1.7%	72%	28%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	25	0.0%	0.36	25	0.36	\$20,979.21	\$839.17	0.2%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	79	0.1%	1.14	21	0.30	\$77,754.60	\$3,702.60	0.7%	73%	27%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$143.12	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	48	0.1%	0.69	20	0.29	\$23,783.22	\$1,189.16	0.2%	58%	42%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	167	0.3%	2.41	47	0.68	\$109,106.11	\$2,321.41	1.1%	72%	28%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,104	7.2%	59.33	498	7.20	\$1,647,702.93	\$3,308.64	15.9%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	294	0.5%	4.25	148	2.14	\$96,180.73	\$649.87	0.9%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	16	0.0%	0.23	16	0.23	\$27,771.87	\$1,735.74	0.3%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	175	0.3%	2.53	93	1.34	\$458,735.39	\$4,932.64	4.4%	47%	53%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	30	0.1%	0.43	30	0.43	\$55,816.43	\$1,860.55	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	57	0.1%	0.82	24	0.35	\$14,572.61	\$607.19	0.1%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	520	0.9%	7.52	199	2.88	\$340,926.11	\$1,713.20	3.3%	62%	38%
Disease Approach	691	1.2%	9.99	505	7.30	\$291,872.00	\$577.96	2.8%	27%	73%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$13,926.17	*	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	39	0.1%	0.56	39	0.56	\$11,547.38	\$296.09	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	652	1.1%	9.43	466	6.74	\$266,398.18	\$571.67	2.6%	29%	71%
Preoperative evaluation	7,541	13.3%	109.02	6,414	92.73	\$4,399,280.00	\$685.89	42.3%	15%	85%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	13	0.0%	0.19	13	0.19	\$8,066.56	\$620.50	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,072	12.5%	102.24	5,947	85.98	\$4,048,367.40	\$680.74	39.0%	16%	84%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	456	0.8%	6.59	454	6.56	\$342,845.97	\$755.17	3.3%	0%	100%
Routine FU/Monitoring	932	1.6%	13.47	72	1.04	\$192,397.00	\$2,672.18	1.9%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	496	0.9%	7.17	14	0.20	\$89,016.11	\$6,358.29	0.9%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$4,763.18	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	103	0.2%	1.49	11	0.16	\$26,252.25	\$2,386.57	0.3%	89%	11%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	333	0.6%	4.81	47	0.68	\$72,365.26	\$1,539.69	0.7%	86%	14%
Screening Tests	37,453	66.0%	541.48	7,684	111.09	\$1,918,918.00	\$249.73	18.5%	79%	21%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	975	1.7%	14.10	*	#VALUE!	\$1,483.98	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	25,557	45.1%	369.49	1,194	17.26	\$527,242.80	\$441.58	5.1%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	34	0.1%	0.49	13	0.19	\$2,724.61	\$209.59	0.0%	62%	38%
Don't perform Pap smears on women younger than 21	40	0.1%	0.58	38	0.55	\$8,701.84	\$229.00	0.1%	5%	95%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,484	2.6%	21.46	1,484	21.46	\$254,680.98	\$171.62	2.5%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	2,089	3.7%	30.20	1,613	23.32	\$322,266.44	\$199.79	3.1%	23%	77%
Don't perform routine general health checks for asymptomatic adults	736	1.3%	10.64	736	10.64	\$132,185.91	\$179.60	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	531	0.9%	7.68	531	7.68	\$72,296.87	\$136.15	0.7%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	802	1.4%	11.59	137	1.98	\$26,380.97	\$192.56	0.3%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,166	3.8%	31.32	530	7.66	\$200,839.17	\$378.94	1.9%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,039	5.4%	43.94	1,408	20.36	\$370,114.90	\$262.87	3.6%	54%	46%
Grand Total	56,728	100.0%	820.15	19,827	286.65	\$10,389,558.44	\$524.01	100.0%	65%	35%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 5 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,458	5.8%	54.63	3,304	52.20	\$276,190.00	\$83.59	4.1%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,817	4.8%	44.50	2,674	42.24	\$265,656.94	\$99.35	3.9%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	79	0.1%	1.25	68	1.07	\$6,884.78	\$101.25	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$260.03	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	562	0.9%	8.88	562	8.88	\$3,388.63	\$6.03	0.1%	0%	100%
Diagnostic Testing	5,803	9.8%	91.68	1,693	26.75	\$2,447,830.00	\$1,445.85	36.3%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	576	1.0%	9.10	480	7.58	\$164,526.45	\$342.76	2.4%	17%	83%
Don't do imaging for uncomplicated headache.	441	0.7%	6.97	116	1.83	\$92,566.83	\$797.99	1.4%	74%	26%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	43	0.1%	0.68	42	0.66	\$40,374.85	\$961.31	0.6%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	90	0.2%	1.42	29	0.46	\$123,829.04	\$4,269.97	1.8%	68%	32%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	54	0.1%	0.85	29	0.46	\$39,881.26	\$1,375.22	0.6%	46%	54%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	158	0.3%	2.50	61	0.96	\$91,546.27	\$1,500.76	1.4%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,494	5.9%	55.20	452	7.14	\$1,352,594.08	\$2,992.46	20.1%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	214	0.4%	3.38	112	1.77	\$50,623.20	\$451.99	0.8%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	*	*	*	*	*	\$1,434.76	*	0.0%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	224	0.4%	3.54	122	1.93	\$206,264.38	\$1,690.69	3.1%	46%	54%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$493.41	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	36	0.1%	0.57	36	0.57	\$48,944.31	\$1,359.56	0.7%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	61	0.1%	0.96	19	0.30	\$9,674.87	\$509.20	0.1%	69%	31%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	412	0.7%	6.51	195	3.08	\$225,075.79	\$1,154.23	3.3%	53%	47%
Disease Approach	1,369	2.3%	21.63	1,007	15.91	\$431,378.00	\$428.38	6.4%	26%	74%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$12,181.69	*	0.2%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	90	0.2%	1.42	90	1.42	\$16,428.39	\$182.54	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,279	2.2%	20.21	917	14.49	\$402,768.25	\$439.22	6.0%	28%	72%
Preoperative evaluation	7,401	12.5%	116.92	5,823	91.99	\$2,085,226.00	\$358.10	31.0%	21%	79%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$1,448.75	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,080	12.0%	111.85	5,504	86.95	\$1,951,401.68	\$354.54	29.0%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	321	0.5%	5.07	319	5.04	\$132,375.52	\$414.97	2.0%	1%	99%
Routine FU/Monitoring	916	1.5%	14.47	153	2.42	\$158,687.00	\$1,037.17	2.4%	83%	17%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	359	0.6%	5.67	*	*	\$671.80	*	0.0%	99%	1%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	12	0.0%	0.19	12	0.19	\$7,016.66	\$584.72	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	87	0.1%	1.37	12	0.19	\$11,816.97	\$984.75	0.2%	86%	14%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	458	0.8%	7.24	129	2.04	\$139,181.19	\$1,078.92	2.1%	72%	28%
Screening Tests	40,271	68.0%	636.20	5,273	83.30	\$1,336,903.00	\$253.54	19.8%	87%	13%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,121	1.9%	17.71	*	*	\$7,577.38	*	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	30,502	51.5%	481.87	761	12.02	\$452,728.89	\$594.91	6.7%	98%	2%
Don't perform Pap smears on women with previous hysterectomy	26	0.0%	0.41	18	0.28	\$3,650.36	\$202.80	0.1%	31%	69%
Don't perform Pap smears on women younger than 21	58	0.1%	0.92	49	0.77	\$7,930.30	\$161.84	0.1%	16%	84%
Don't perform population based screening for 25-OH-Vitamin D deficiency	553	0.9%	8.74	553	8.74	\$93,979.28	\$169.94	1.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	1,244	2.1%	19.65	960	15.17	\$156,668.73	\$163.20	2.3%	23%	77%
Don't perform routine general health checks for asymptomatic adults	408	0.7%	6.45	408	6.45	\$60,191.87	\$147.53	0.9%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	447	0.8%	7.06	447	7.06	\$42,157.40	\$94.31	0.6%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	497	0.8%	7.85	74	1.17	\$17,269.44	\$233.37	0.3%	85%	15%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	1,874	3.2%	29.61	486	7.68	\$160,740.87	\$330.74	2.4%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,541	6.0%	55.94	1,517	23.97	\$334,008.73	\$220.18	5.0%	57%	43%
Grand Total	59,235	100.0%	935.80	17,279	272.97	\$6,736,214.03	\$389.85	100.0%	71%	29%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 6 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	7,621	5.0%	46.63	7,443	45.54	\$585,618.00	\$78.68	2.5%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	5,348	3.5%	32.72	5,189	31.75	\$556,476.01	\$107.24	2.4%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$328.44	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	162	0.1%	0.99	143	0.87	\$16,377.56	\$114.53	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,111	1.4%	12.92	2,111	12.92	\$12,436.13	\$5.89	0.1%	0%	100%
Diagnostic Testing	15,383	10.1%	94.13	4,922	30.12	\$8,356,119.00	\$1,697.71	36.3%	68%	32%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	2,126	1.4%	13.01	1,749	10.70	\$530,958.58	\$303.58	2.3%	18%	82%
Don't do imaging for uncomplicated headache.	944	0.6%	5.78	325	1.99	\$267,638.46	\$823.50	1.2%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	64	0.0%	0.39	63	0.39	\$56,069.52	\$889.99	0.2%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	222	0.1%	1.36	66	0.40	\$265,781.51	\$4,026.99	1.2%	70%	30%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$99.01	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	87	0.1%	0.53	58	0.35	\$52,004.45	\$896.63	0.2%	33%	67%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	172	0.1%	1.05	61	0.37	\$78,593.32	\$1,288.42	0.3%	65%	35%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	9,826	6.4%	60.12	1,513	9.26	\$5,538,173.07	\$3,660.39	24.0%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	734	0.5%	4.49	369	2.26	\$216,628.90	\$587.07	0.9%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	29	0.0%	0.18	29	0.18	\$18,442.54	\$635.95	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	372	0.2%	2.28	255	1.56	\$730,798.11	\$2,865.87	3.2%	31%	69%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,279.62	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	60	0.0%	0.37	60	0.37	\$78,416.26	\$1,306.94	0.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	97	0.1%	0.59	48	0.29	\$31,908.58	\$664.76	0.1%	51%	49%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	650	0.4%	3.98	326	1.99	\$485,326.59	\$1,488.73	2.1%	50%	50%
Disease Approach	2,126	1.4%	13.01	1,522	9.31	\$521,604.00	\$342.71	2.3%	28%	72%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	11	0.0%	0.07	11	0.07	\$19,011.42	\$1,728.31	0.1%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	245	0.2%	1.50	245	1.50	\$40,279.78	\$164.41	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,870	1.2%	11.44	1,266	7.75	\$462,312.59	\$365.18	2.0%	32%	68%
Preoperative evaluation	22,486	14.7%	137.59	18,283	111.87	\$8,405,630.00	\$459.75	36.5%	19%	81%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	12	0.0%	0.07	12	0.07	\$5,508.39	\$459.03	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	21,412	14.0%	131.02	17,216	105.34	\$7,981,756.27	\$463.62	34.6%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,062	0.7%	6.50	1,055	6.46	\$418,364.87	\$396.55	1.8%	1%	99%
Routine FU/Monitoring	2,352	1.5%	14.39	222	1.36	\$429,082.00	\$1,932.80	1.9%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,337	0.9%	8.18	31	0.19	\$20,974.05	\$676.58	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	27	0.0%	0.17	27	0.17	\$12,755.08	\$472.41	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	228	0.1%	1.40	47	0.29	\$24,612.52	\$523.67	0.1%	79%	21%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	760	0.5%	4.65	117	0.72	\$370,740.07	\$3,168.72	1.6%	85%	15%
Screening Tests	102,662	67.3%	628.17	19,143	117.13	\$4,743,437.00	\$247.79	20.6%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,937	1.3%	11.85	*	*	\$7,979.60	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	73,292	48.0%	448.46	2,535	15.51	\$1,438,191.87	\$567.33	6.2%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	97	0.1%	0.59	28	0.17	\$6,688.16	\$238.86	0.0%	71%	29%
Don't perform Pap smears on women younger than 21	86	0.1%	0.53	64	0.39	\$12,158.84	\$189.98	0.1%	26%	74%
Don't perform population based screening for 25-OH-Vitamin D deficiency	5,538	3.6%	33.89	5,538	33.89	\$761,177.31	\$137.45	3.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	4,058	2.7%	24.83	2,800	17.13	\$706,004.04	\$252.14	3.1%	31%	69%
Don't perform routine general health checks for asymptomatic adults	2,011	1.3%	12.30	2,011	12.30	\$326,472.63	\$162.34	1.4%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	1,135	0.7%	6.94	1,135	6.94	\$149,926.68	\$132.09	0.7%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	2,055	1.3%	12.57	352	2.15	\$67,332.25	\$191.28	0.3%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	4,957	3.2%	30.33	1,252	7.66	\$467,345.32	\$373.28	2.0%	75%	25%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	7,496	4.9%	45.87	3,428	20.98	\$800,160.40	\$233.42	3.5%	54%	46%
Grand Total	152,645	100.0%	934.01	51,555	315.46	\$23,041,488.80	\$446.93	100.0%	66%	34%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 7 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	42,473	5.2%	46.95	41,436	45.81	\$4,955,356.00	\$119.59	4.6%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	34,540	4.3%	38.18	33,611	37.16	\$4,789,630.60	\$142.50	4.4%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	28	0.0%	0.03	26	0.03	\$3,456.26	\$132.93	0.0%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	848	0.1%	0.94	742	0.82	\$94,307.69	\$127.10	0.1%	13%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	13	0.0%	0.01	13	0.01	\$1,391.03	\$107.00	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	7,044	0.9%	7.79	7,044	7.79	\$66,570.83	\$9.45	0.1%	0%	100%
Diagnostic Testing	64,859	8.0%	71.70	23,339	25.80	\$32,232,633.00	\$1,381.06	29.8%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	10,043	1.2%	11.10	9,109	10.07	\$3,147,235.31	\$345.51	2.9%	9%	91%
Don't do imaging for uncomplicated headache.	5,964	0.7%	6.59	2,085	2.30	\$2,420,535.72	\$1,160.93	2.2%	65%	35%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	481	0.1%	0.53	473	0.52	\$770,728.01	\$1,629.45	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	705	0.1%	0.78	264	0.29	\$1,330,191.67	\$5,038.60	1.2%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	22	0.0%	0.02	22	0.02	\$2,788.87	\$126.77	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	104	0.0%	0.11	104	0.11	\$21,585.65	\$207.55	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	562	0.1%	0.62	261	0.29	\$310,516.23	\$1,189.72	0.3%	54%	46%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,142	0.1%	1.26	440	0.49	\$536,896.37	\$1,220.22	0.5%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	33,014	4.1%	36.50	3,283	3.63	\$12,003,343.56	\$3,656.21	11.1%	90%	10%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,122	0.4%	3.45	1,587	1.75	\$1,175,861.89	\$740.93	1.1%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	117	0.0%	0.13	117	0.13	\$111,189.61	\$950.34	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,566	0.3%	2.84	1,484	1.64	\$3,380,938.35	\$2,278.26	3.1%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,052.47	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	342	0.0%	0.38	342	0.38	\$538,341.69	\$1,574.10	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	776	0.1%	0.86	322	0.36	\$447,543.73	\$1,389.89	0.4%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$2,262.66	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,899	0.7%	6.52	3,446	3.81	\$6,027,621.60	\$1,749.16	5.6%	42%	58%
Disease Approach	11,572	1.4%	12.79	9,052	10.01	\$5,105,000.00	\$563.96	4.7%	22%	78%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	105	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	111	0.0%	0.12	111	0.12	\$287,906.39	\$2,593.75	0.3%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	651	0.1%	0.72	651	0.72	\$152,929.18	\$234.91	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	10,705	1.3%	11.83	8,290	9.16	\$4,664,164.75	\$562.63	4.3%	23%	77%
Preoperative evaluation	103,480	12.7%	114.40	79,098	87.44	\$34,057,782.00	\$430.58	31.5%	24%	76%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	75	0.0%	0.08	74	0.08	\$29,984.75	\$405.20	0.0%	1%	99%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	98,031	12.1%	108.37	73,695	81.47	\$31,724,895.10	\$430.49	29.3%	25%	75%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	5,374	0.7%	5.94	5,329	5.89	\$2,302,902.35	\$432.15	2.1%	1%	99%
Routine FU/Monitoring	12,134	1.5%	13.41	1,538	1.70	\$3,351,337.00	\$2,179.02	3.1%	87%	13%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,348	0.7%	5.91	161	0.18	\$243,927.18	\$1,515.08	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	118	0.0%	0.13	118	0.13	\$112,596.45	\$954.21	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,308	0.2%	1.45	208	0.23	\$603,544.74	\$2,901.66	0.6%	84%	16%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,360	0.7%	5.93	1,051	1.16	\$2,391,268.24	\$2,275.23	2.2%	80%	20%
Screening Tests	577,094	71.1%	637.97	115,168	127.32	\$28,410,991.00	\$246.69	26.3%	80%	20%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	12,578	1.5%	13.90	72	0.08	\$86,940.97	\$1,207.51	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	391,016	48.2%	432.27	19,856	21.95	\$9,301,442.95	\$468.44	8.6%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	688	0.1%	0.76	309	0.34	\$65,009.63	\$210.39	0.1%	55%	45%
Don't perform Pap smears on women younger than 21	674	0.1%	0.75	586	0.65	\$134,193.94	\$229.00	0.1%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	19,423	2.4%	21.47	19,423	21.47	\$2,453,414.53	\$126.31	2.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	33,609	4.1%	37.15	26,905	29.74	\$5,866,215.29	\$218.03	5.4%	20%	80%
Don't perform routine general health checks for asymptomatic adults	11,248	1.4%	12.43	11,248	12.43	\$2,109,907.20	\$187.58	2.0%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	4,629	0.6%	5.12	4,629	5.12	\$469,602.07	\$101.45	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	16,384	2.0%	18.11	2,326	2.57	\$448,502.94	\$192.82	0.4%	86%	14%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	26,221	3.2%	28.99	4,649	5.14	\$2,003,198.07	\$430.89	1.9%	82%	18%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	60,624	7.5%	67.02	25,165	27.82	\$5,472,563.06	\$217.47	5.1%	58%	42%
Grand Total	811,619	100.0%	897.24	269,638	298.08	\$108,113,099.58	\$400.96	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 ACO Rating 8 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	11,151	5.7%	52.08	10,829	50.58	\$894,510.00	\$82.60	3.5%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	8,647	4.4%	40.39	8,358	39.04	\$854,926.05	\$102.29	3.4%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	11	0.0%	0.05	11	0.05	\$1,179.63	\$107.24	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	200	0.1%	0.93	167	0.78	\$21,585.67	\$129.26	0.1%	17%	84%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	13	0.0%	0.06	13	0.06	\$937.02	\$72.08	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,280	1.2%	10.65	2,280	10.65	\$15,881.97	\$6.97	0.1%	0%	100%
Diagnostic Testing	16,222	8.3%	75.77	4,683	21.87	\$8,420,562.00	\$1,798.11	33.2%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,603	0.8%	7.49	1,363	6.37	\$557,172.56	\$408.78	2.2%	15%	85%
Don't do imaging for uncomplicated headache.	1,047	0.5%	4.89	319	1.49	\$342,775.31	\$1,074.53	1.4%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	95	0.0%	0.44	92	0.43	\$117,348.89	\$1,275.53	0.5%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	288	0.1%	1.35	104	0.49	\$688,628.66	\$6,621.43	2.7%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	82	0.0%	0.38	38	0.18	\$32,557.13	\$856.77	0.1%	54%	46%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	272	0.1%	1.27	77	0.36	\$98,226.37	\$1,275.67	0.4%	72%	28%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	10,578	5.4%	49.41	1,426	6.66	\$4,657,387.16	\$3,266.05	18.4%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	869	0.4%	4.06	480	2.24	\$235,816.85	\$491.29	0.9%	45%	55%
Don't routinely do diagnostic testing in patients with chronic urticaria.	23	0.0%	0.11	23	0.11	\$29,603.68	\$1,287.12	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	434	0.2%	2.03	250	1.17	\$865,928.07	\$3,463.71	3.4%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	54	0.0%	0.25	54	0.25	\$78,647.43	\$1,456.43	0.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	64	0.0%	0.30	16	0.07	\$8,810.81	\$550.68	0.0%	75%	25%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	813	0.4%	3.80	441	2.06	\$707,659.52	\$1,604.67	2.8%	46%	54%
Disease Approach	3,342	1.7%	15.61	2,586	12.08	\$1,240,496.00	\$479.70	4.9%	23%	77%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	28	0.0%	0.13	28	0.13	\$101,848.89	\$3,637.46	0.4%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	336	0.2%	1.57	336	1.57	\$84,748.35	\$252.23	0.3%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	2,978	1.5%	13.91	2,222	10.38	\$1,053,898.51	\$474.30	4.2%	25%	75%
Preoperative evaluation	25,798	13.2%	120.50	20,663	96.51	\$9,181,262.00	\$444.33	36.2%	20%	80%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	17	0.0%	0.08	17	0.08	\$2,613.75	\$153.75	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	24,244	12.4%	113.24	19,128	89.34	\$8,288,406.99	\$433.31	32.7%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,537	0.8%	7.18	1,518	7.09	\$890,241.40	\$586.46	3.5%	1%	99%
Routine FU/Monitoring	2,992	1.5%	13.98	241	1.13	\$447,143.00	\$1,855.37	1.8%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,570	0.8%	7.33	52	0.24	\$27,798.33	\$534.58	0.1%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	17	0.0%	0.08	17	0.08	\$16,514.69	\$971.45	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	308	0.2%	1.44	31	0.14	\$29,338.25	\$946.40	0.1%	90%	10%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,097	0.6%	5.12	141	0.66	\$373,491.95	\$2,648.88	1.5%	87%	13%
Screening Tests	136,462	69.6%	637.40	21,122	98.66	\$5,193,565.00	\$245.88	20.5%	85%	15%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	3,021	1.5%	14.11	13	0.06	\$12,902.53	\$992.50	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	96,954	49.5%	452.86	3,570	16.67	\$1,703,837.96	\$477.27	6.7%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	113	0.1%	0.53	37	0.17	\$6,318.57	\$170.77	0.0%	67%	33%
Don't perform Pap smears on women younger than 21	63	0.0%	0.29	52	0.24	\$11,062.82	\$212.75	0.0%	17%	83%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,546	1.3%	11.89	2,546	11.89	\$327,558.42	\$128.66	1.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	6,202	3.2%	28.97	4,351	20.32	\$843,380.82	\$193.84	3.3%	30%	70%
Don't perform routine general health checks for asymptomatic adults	2,088	1.1%	9.75	2,088	9.75	\$339,034.79	\$162.37	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	944	0.5%	4.41	944	4.41	\$99,997.36	\$105.93	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	5,976	3.0%	27.91	868	4.05	\$151,917.29	\$175.02	0.6%	85%	15%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	5,771	2.9%	26.96	1,446	6.75	\$623,625.85	\$431.28	2.5%	75%	25%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	12,784	6.5%	59.71	5,207	24.32	\$1,073,928.87	\$206.25	4.2%	59%	41%
Grand Total	195,970	100.0%	915.35	60,124	280.83	\$25,377,539.17	\$422.09	100.0%	69%	31%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 9 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	39,530	4.8%	41.10	38,086	39.60	\$3,866,173.00	\$101.51	3.6%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	29,603	3.6%	30.78	28,285	29.41	\$3,654,250.42	\$129.19	3.4%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	62	0.0%	0.06	58	0.06	\$10,428.72	\$179.81	0.0%	6%	94%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	860	0.1%	0.89	738	0.77	\$100,585.20	\$136.29	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	18	0.0%	0.02	18	0.02	\$2,744.26	\$152.46	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	8,987	1.1%	9.34	8,987	9.34	\$98,164.46	\$10.92	0.1%	0%	100%
Diagnostic Testing	71,429	8.6%	74.26	24,155	25.11	\$32,362,484.00	\$1,339.78	29.9%	66%	34%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	9,141	1.1%	9.50	7,975	8.29	\$3,119,063.47	\$391.11	2.9%	13%	87%
Don't do imaging for uncomplicated headache.	6,539	0.8%	6.80	1,895	1.97	\$2,190,729.31	\$1,156.06	2.0%	71%	29%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	504	0.1%	0.52	493	0.51	\$731,886.20	\$1,484.56	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,093	0.1%	1.14	430	0.45	\$1,781,754.00	\$4,143.61	1.6%	61%	39%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$744.27	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$265.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	722	0.1%	0.75	366	0.38	\$385,990.04	\$1,054.62	0.4%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,887	0.2%	1.96	814	0.85	\$1,233,602.65	\$1,515.48	1.1%	57%	43%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	37,912	4.6%	39.41	4,630	4.81	\$12,765,909.84	\$2,757.22	11.8%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,757	0.5%	3.91	1,955	2.03	\$1,396,262.83	\$714.20	1.3%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	69	0.0%	0.07	69	0.07	\$97,296.61	\$1,410.10	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,860	0.3%	2.97	1,738	1.81	\$3,218,966.65	\$1,852.11	3.0%	39%	61%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$218.51	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	364	0.0%	0.38	364	0.38	\$590,289.32	\$1,621.67	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	723	0.1%	0.75	293	0.30	\$227,623.95	\$776.87	0.2%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$12,653.58	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,858	0.7%	6.09	3,133	3.26	\$4,609,226.74	\$1,471.19	4.3%	47%	53%
Disease Approach	17,263	2.1%	17.95	13,025	13.54	\$7,208,252.00	\$553.42	6.7%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	119	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	93	0.0%	0.10	93	0.10	\$266,556.96	\$2,866.20	0.2%	0%	100%

Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	580	0.1%	0.60	580	0.60	\$226,840.27	\$391.10	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	16,471	2.0%	17.12	12,352	12.84	\$6,714,854.27	\$543.62	6.2%	25%	75%
Preoperative evaluation	119,908	14.5%	124.66	97,265	101.12	\$36,105,703.00	\$371.21	33.4%	19%	81%
Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	68	0.0%	0.07	68	0.07	\$42,833.87	\$629.91	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	114,441	13.8%	118.98	91,867	95.51	\$33,816,458.96	\$368.10	31.2%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	5,399	0.7%	5.61	5,330	5.54	\$2,246,409.73	\$421.47	2.1%	1%	99%
Routine FU/Monitoring	12,521	1.5%	13.02	1,701	1.77	\$3,001,945.00	\$1,764.81	2.8%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,467	0.7%	5.68	199	0.21	\$232,234.56	\$1,167.01	0.2%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	262	0.0%	0.27	262	0.27	\$197,067.79	\$752.17	0.2%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,224	0.1%	1.27	167	0.17	\$297,959.26	\$1,784.19	0.3%	86%	14%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,568	0.7%	5.79	1,073	1.12	\$2,274,683.11	\$2,119.93	2.1%	81%	19%
Screening Tests	567,359	68.5%	589.84	103,385	107.48	\$25,683,918.00	\$248.43	23.7%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	15,744	1.9%	16.37	69	0.07	\$67,994.34	\$985.43	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	387,817	46.8%	403.18	13,849	14.40	\$6,451,873.87	\$465.87	6.0%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	873	0.1%	0.91	330	0.34	\$74,148.14	\$224.69	0.1%	62%	38%
Don't perform Pap smears on women younger than 21	706	0.1%	0.73	617	0.64	\$142,447.22	\$230.87	0.1%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	17,799	2.1%	18.50	17,799	18.50	\$2,234,997.13	\$125.57	2.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	35,000	4.2%	36.39	27,727	28.83	\$6,473,467.30	\$233.47	6.0%	21%	79%
Don't perform routine general health checks for asymptomatic adults	8,888	1.1%	9.24	8,888	9.24	\$1,577,525.82	\$177.49	1.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	4,081	0.5%	4.24	4,081	4.24	\$400,947.27	\$98.25	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	14,550	1.8%	15.13	1,759	1.83	\$420,663.94	\$239.15	0.4%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	26,680	3.2%	27.74	5,871	6.10	\$2,595,239.28	\$442.04	2.4%	78%	22%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	55,221	6.7%	57.41	22,395	23.28	\$5,244,613.32	\$234.19	4.8%	59%	41%
Grand Total	828,025	100.0%	860.84	277,632	288.63	\$108,228,473.38	\$389.83	100.0%	66%	34%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 ACO Rating 10 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	70,424	4.8%	39.64	67,765	38.14	\$7,820,736.00	\$115.41	3.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	61,880	4.2%	34.83	59,387	33.43	\$7,512,041.04	\$126.49	3.4%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	92	0.0%	0.05	81	0.05	\$8,261.09	\$101.99	0.0%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,837	0.1%	1.03	1,682	0.95	\$233,069.08	\$138.57	0.1%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	14	0.0%	0.01	14	0.01	\$7,683.52	\$548.82	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	6,601	0.4%	3.72	6,601	3.72	\$59,681.23	\$9.04	0.0%	0%	100%
Diagnostic Testing	109,242	7.4%	61.49	39,440	22.20	\$62,412,515.00	\$1,582.47	28.3%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	14,551	1.0%	8.19	12,608	7.10	\$5,504,774.00	\$436.61	2.5%	13%	87%
Don't do imaging for uncomplicated headache.	10,442	0.7%	5.88	4,106	2.31	\$4,516,998.49	\$1,100.10	2.0%	61%	39%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	775	0.1%	0.44	751	0.42	\$1,151,298.26	\$1,533.02	0.5%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,302	0.1%	0.73	553	0.31	\$2,102,812.90	\$3,802.55	1.0%	58%	42%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$606.89	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$13.51	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,384	0.1%	0.78	827	0.47	\$857,736.07	\$1,037.17	0.4%	40%	60%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,379	0.2%	1.34	910	0.51	\$1,464,999.10	\$1,609.89	0.7%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	56,074	3.8%	31.56	8,277	4.66	\$31,293,417.39	\$3,780.77	14.2%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	8,996	0.6%	5.06	4,456	2.51	\$2,932,463.76	\$658.09	1.3%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	295	0.0%	0.17	295	0.17	\$300,467.17	\$1,018.53	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,662	0.2%	2.06	1,585	0.89	\$3,746,397.65	\$2,363.66	1.7%	57%	43%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	19	0.0%	0.01	19	0.01	\$20,437.64	\$1,075.67	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	371	0.0%	0.21	371	0.21	\$755,816.83	\$2,037.24	0.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	1,052	0.1%	0.59	476	0.27	\$478,795.29	\$1,005.87	0.2%	55%	45%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	13	0.0%	0.01	13	0.01	\$15,533.97	\$1,194.92	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	7,927	0.5%	4.46	4,193	2.36	\$7,269,946.43	\$1,733.83	3.3%	47%	53%
Disease Approach	13,810	0.9%	7.77	11,286	6.35	\$8,198,571.00	\$726.44	3.7%	18%	82%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	203	0.0%	0.11	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	175	0.0%	0.10	175	0.10	\$458,769.05	\$2,621.54	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	788	0.1%	0.44	788	0.44	\$205,905.06	\$261.30	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	12,644	0.9%	7.12	10,323	5.81	\$7,533,896.89	\$729.82	3.4%	18%	82%
Preoperative evaluation	159,957	10.8%	90.03	132,817	74.75	\$45,742,827.00	\$344.40	20.7%	17%	83%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	258	0.0%	0.15	258	0.15	\$149,364.37	\$578.93	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	148,102	10.0%	83.36	121,050	68.13	\$41,750,630.50	\$344.90	18.9%	18%	82%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	11,597	0.8%	6.53	11,509	6.48	\$3,842,831.64	\$333.90	1.7%	1%	99%
Routine FU/Monitoring	16,361	1.1%	9.21	3,117	1.75	\$3,668,446.00	\$1,176.92	1.7%	81%	19%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	7,871	0.5%	4.43	236	0.13	\$332,111.67	\$1,407.25	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	240	0.0%	0.14	240	0.14	\$190,934.47	\$795.56	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,679	0.1%	0.95	466	0.26	\$357,381.13	\$766.91	0.2%	72%	28%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	6,571	0.4%	3.70	2,175	1.22	\$2,788,018.33	\$1,281.85	1.3%	67%	33%
Screening Tests	1,111,512	75.0%	625.60	389,753	219.37	\$92,605,313.00	\$237.60	42.0%	65%	35%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	22,455	1.5%	12.64	370	0.21	\$183,615.39	\$496.26	0.1%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	676,139	45.6%	380.56	89,010	50.10	\$31,703,791.01	\$356.18	14.4%	87%	13%
Don't perform Pap smears on women with previous hysterectomy	1,074	0.1%	0.60	435	0.24	\$146,721.72	\$337.29	0.1%	59%	41%
Don't perform Pap smears on women younger than 21	1,185	0.1%	0.67	1,071	0.60	\$252,308.07	\$235.58	0.1%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	105,978	7.2%	59.65	105,978	59.65	\$14,514,597.64	\$136.96	6.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	88,643	6.0%	49.89	74,852	42.13	\$18,137,987.58	\$242.32	8.2%	16%	84%
Don't perform routine general health checks for asymptomatic adults	47,748	3.2%	26.87	47,748	26.87	\$10,320,347.12	\$216.14	4.7%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	7,034	0.5%	3.96	7,034	3.96	\$725,979.02	\$103.21	0.3%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	21,909	1.5%	12.33	5,901	3.32	\$1,490,322.66	\$252.55	0.7%	73%	27%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	44,556	3.0%	25.08	10,664	6.00	\$3,085,848.57	\$289.37	1.4%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	94,791	6.4%	53.35	46,690	26.28	\$12,043,793.76	\$257.95	5.5%	51%	49%
Grand Total	1,481,316	100.0%	833.74	644,188	362.57	\$220,448,406.96	\$342.21	100.0%	57%	43%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2014 ACO Rating 11 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,369	5.7%	47.57	3,273	46.22	\$361,909.00	\$110.57	4.5%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	3,090	5.3%	43.63	3,003	42.41	\$352,581.84	\$117.41	4.4%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	87	0.1%	1.23	78	1.10	\$8,090.88	\$103.73	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$113.47	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	192	0.3%	2.71	192	2.71	\$1,122.35	\$5.85	0.0%	0%	100%
Diagnostic Testing	5,169	8.8%	72.99	1,475	20.83	\$2,902,146.00	\$1,967.56	35.9%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	549	0.9%	7.75	472	6.67	\$212,427.29	\$450.06	2.6%	14%	86%
Don't do imaging for uncomplicated headache.	426	0.7%	6.02	126	1.78	\$191,531.49	\$1,520.09	2.4%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	55	0.1%	0.78	54	0.76	\$87,871.46	\$1,627.25	1.1%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	69	0.1%	0.97	32	0.45	\$242,953.84	\$7,592.31	3.0%	54%	46%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	-	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	34	0.1%	0.48	12	0.17	\$12,012.97	\$1,001.08	0.1%	65%	35%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	102	0.2%	1.44	49	0.69	\$81,927.42	\$1,671.99	1.0%	52%	48%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,216	5.5%	45.41	349	4.93	\$1,493,527.62	\$4,279.45	18.5%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	132	0.2%	1.86	69	0.97	\$27,630.83	\$400.45	0.3%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	*	*	*	*	*	\$7,492.34	*	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	176	0.3%	2.49	100	1.41	\$199,495.13	\$1,994.95	2.5%	43%	57%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$366.22	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	18	0.0%	0.25	18	0.25	\$28,922.42	\$1,606.80	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	66	0.1%	0.93	22	0.31	\$20,219.44	\$919.07	0.2%	67%	33%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$263.16	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	326	0.6%	4.60	172	2.43	\$295,504.15	\$1,718.05	3.7%	47%	53%
Disease Approach	522	0.9%	7.37	436	6.16	\$403,574.00	\$925.63	5.0%	16%	84%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	11	0.0%	0.16	11	0.16	\$43,944.04	\$3,994.91	0.5%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	58	0.1%	0.82	58	0.82	\$15,741.60	\$271.41	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	453	0.8%	6.40	367	5.18	\$343,888.14	\$937.02	4.2%	19%	81%
Preoperative evaluation	7,649	13.0%	108.01	6,128	86.53	\$2,408,676.00	\$393.06	29.8%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$2,692.18	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,196	12.2%	101.61	5,681	80.22	\$2,235,660.84	\$393.53	27.6%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	453	0.8%	6.40	447	6.31	\$170,322.61	\$381.03	2.1%	1%	99%
Routine FU/Monitoring	1,040	1.8%	14.69	188	2.65	\$306,904.00	\$1,632.47	3.8%	82%	18%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	383	0.7%	5.41	14	0.20	\$10,973.34	\$783.81	0.1%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	18	0.0%	0.25	18	0.25	\$10,197.96	\$566.55	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	105	0.2%	1.48	18	0.25	\$17,199.28	\$955.52	0.2%	83%	17%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	534	0.9%	7.54	138	1.95	\$268,533.31	\$1,945.89	3.3%	74%	26%
Screening Tests	41,087	69.8%	580.19	7,379	104.20	\$1,711,531.00	\$231.95	21.1%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,065	1.8%	15.04	*	*	\$5,473.59	*	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	29,840	50.7%	421.37	1,213	17.13	\$430,581.92	\$354.97	5.3%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	26	0.0%	0.37	*	*	\$1,088.54	*	0.0%	77%	23%
Don't perform Pap smears on women younger than 21	27	0.0%	0.38	26	0.37	\$5,289.34	\$203.44	0.1%	4%	96%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,300	2.2%	18.36	1,300	18.36	\$206,231.81	\$158.64	2.5%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	1,620	2.8%	22.88	1,352	19.09	\$290,394.26	\$214.79	3.6%	17%	83%
Don't perform routine general health checks for asymptomatic adults	1,334	2.3%	18.84	1,334	18.84	\$224,446.51	\$168.25	2.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	272	0.5%	3.84	272	3.84	\$16,456.04	\$60.50	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	805	1.4%	11.37	138	1.95	\$34,440.38	\$249.57	0.4%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	1,162	2.0%	16.41	257	3.63	\$159,629.38	\$621.13	2.0%	78%	22%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,636	6.2%	51.34	1,487	21.00	\$337,499.23	\$226.97	4.2%	59%	41%
Grand Total	58,851	100.0%	831.03	18,906	266.97	\$8,094,738.62	\$428.16	100.0%	68%	32%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2014 ACO Rating 12 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	43,906	5.6%	55.65	42,069	53.32	\$3,417,408.00	\$81.23	3.3%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	31,560	4.0%	40.00	29,852	37.84	\$3,229,630.18	\$108.19	3.1%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	56	0.0%	0.07	50	0.06	\$4,028.33	\$80.57	0.0%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	991	0.1%	1.26	868	1.10	\$101,463.05	\$116.89	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	19	0.0%	0.02	19	0.02	\$1,496.88	\$78.78	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	11,280	1.4%	14.30	11,280	14.30	\$80,789.56	\$7.16	0.1%	0%	100%
Diagnostic Testing	75,819	9.7%	96.10	21,967	27.84	\$33,949,518.00	\$1,545.48	32.6%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	7,248	0.9%	9.19	6,289	7.97	\$2,495,488.96	\$396.80	2.4%	13%	87%
Don't do imaging for uncomplicated headache.	5,661	0.7%	7.18	1,724	2.19	\$1,605,859.68	\$931.47	1.5%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	556	0.1%	0.70	543	0.69	\$658,247.73	\$1,212.24	0.6%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	839	0.1%	1.06	354	0.45	\$1,357,782.04	\$3,835.54	1.3%	58%	42%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$443.07	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$1,001.29	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	565	0.1%	0.72	288	0.37	\$232,866.80	\$808.57	0.2%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,927	0.2%	2.44	683	0.87	\$1,008,545.09	\$1,476.64	1.0%	65%	35%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	47,334	6.0%	59.99	5,833	7.39	\$18,455,645.46	\$3,164.01	17.7%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	2,723	0.3%	3.45	1,388	1.76	\$892,205.34	\$642.80	0.9%	49%	51%
Don't routinely do diagnostic testing in patients with chronic urticaria.	84	0.0%	0.11	84	0.11	\$72,086.70	\$858.18	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,489	0.3%	3.15	1,305	1.65	\$2,894,449.52	\$2,217.97	2.8%	48%	52%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$8,089.45	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	451	0.1%	0.57	451	0.57	\$552,703.99	\$1,225.51	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	723	0.1%	0.92	283	0.36	\$165,455.44	\$584.65	0.2%	61%	39%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	11	0.0%	0.01	11	0.01	\$9,001.05	\$818.28	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,208	0.7%	6.60	2,731	3.46	\$3,539,645.93	\$1,296.10	3.4%	48%	52%
Disease Approach	15,225	1.9%	19.30	11,467	14.53	\$4,762,956.00	\$415.36	4.6%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	44	0.0%	0.06	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	68	0.0%	0.09	68	0.09	\$176,389.23	\$2,593.96	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	843	0.1%	1.07	843	1.07	\$155,174.49	\$184.07	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	14,270	1.8%	18.09	10,556	13.38	\$4,431,392.40	\$419.80	4.3%	26%	74%
Preoperative evaluation	106,003	13.5%	134.36	83,958	106.41	\$40,320,285.00	\$480.24	38.8%	21%	79%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	54	0.0%	0.07	52	0.07	\$38,448.16	\$739.39	0.0%	4%	96%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	101,281	12.9%	128.37	79,278	100.48	\$37,670,121.07	\$475.16	36.2%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	4,668	0.6%	5.92	4,628	5.87	\$2,611,715.73	\$564.33	2.5%	1%	99%
Routine FU/Monitoring	13,009	1.7%	16.49	1,553	1.97	\$2,427,398.00	\$1,563.04	2.3%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,115	0.8%	7.75	175	0.22	\$312,394.97	\$1,785.11	0.3%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	131	0.0%	0.17	131	0.17	\$108,902.31	\$831.32	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,258	0.2%	1.59	176	0.22	\$192,800.73	\$1,095.46	0.2%	86%	14%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,505	0.7%	6.98	1,071	1.36	\$1,813,300.12	\$1,693.09	1.7%	81%	19%
Screening Tests	529,915	67.6%	671.65	72,357	91.71	\$19,136,400.00	\$264.47	18.4%	86%	14%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	13,760	1.8%	17.44	55	0.07	\$54,395.21	\$989.00	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	391,970	50.0%	496.81	9,716	12.31	\$5,800,017.82	\$596.96	5.6%	98%	2%
Don't perform Pap smears on women with previous hysterectomy	512	0.1%	0.65	185	0.23	\$36,282.45	\$196.12	0.0%	64%	36%
Don't perform Pap smears on women younger than 21	666	0.1%	0.84	575	0.73	\$109,335.39	\$190.15	0.1%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	13,182	1.7%	16.71	13,182	16.71	\$2,099,846.58	\$159.30	2.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	17,851	2.3%	22.63	13,766	17.45	\$2,946,603.93	\$214.05	2.8%	23%	77%
Don't perform routine general health checks for asymptomatic adults	5,780	0.7%	7.33	5,780	7.33	\$925,314.23	\$160.09	0.9%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	4,639	0.6%	5.88	4,639	5.88	\$478,286.22	\$103.10	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	10,072	1.3%	12.77	1,302	1.65	\$287,087.45	\$220.50	0.3%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	19,917	2.5%	25.24	5,089	6.45	\$2,333,760.60	\$458.59	2.2%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	51,566	6.6%	65.36	18,068	22.90	\$4,065,470.13	\$225.01	3.9%	65%	35%
Grand Total	783,899	100.0%	993.57	233,393	295.82	\$104,013,964.76	\$445.66	100.0%	70%	30%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Statewide Wasteful Services- Total

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	263,174	5.1%	50.08	254,058	48.35	\$32,051,415.00	\$126.16	5.0%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	207,587	4.0%	39.50	199,123	37.89	\$30,980,282.17	\$155.58	4.8%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	272	0.0%	0.05	249	0.05	\$13,887.91	\$55.77	0.0%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	6,041	0.1%	1.15	5,412	1.03	\$705,329.32	\$130.33	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	106	0.0%	0.02	106	0.02	\$6,568.27	\$61.96	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	49,168	1.0%	9.36	49,168	9.36	\$345,347.32	\$7.02	0.1%	0%	100%
Diagnostic Testing	407,376	7.9%	77.52	131,650	25.05	\$194,923,712.00	\$1,480.62	30.4%	68%	32%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	49,039	1.0%	9.33	42,846	8.15	\$16,982,777.64	\$396.37	2.7%	13%	87%
Don't do imaging for uncomplicated headache.	33,565	0.7%	6.39	11,503	2.19	\$12,329,695.16	\$1,071.87	1.9%	66%	34%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	2,945	0.1%	0.56	2,829	0.54	\$3,822,527.34	\$1,351.19	0.6%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	4,839	0.1%	0.92	1,794	0.34	\$7,689,863.57	\$4,286.43	1.2%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	96	0.0%	0.02	96	0.02	\$7,167.08	\$74.66	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	142	0.0%	0.03	142	0.03	\$25,601.73	\$180.29	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	3,915	0.1%	0.75	2,148	0.41	\$2,334,684.28	\$1,086.91	0.4%	45%	55%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	8,961	0.2%	1.71	3,484	0.66	\$4,543,426.48	\$1,304.08	0.7%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	229,141	4.5%	43.61	26,885	5.12	\$91,328,343.28	\$3,397.00	14.3%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	22,722	0.4%	4.32	11,054	2.10	\$7,728,659.56	\$699.17	1.2%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	725	0.0%	0.14	725	0.14	\$903,777.35	\$1,246.59	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	16,464	0.3%	3.13	9,075	1.73	\$19,760,247.41	\$2,177.44	3.1%	45%	55%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	47	0.0%	0.01	47	0.01	\$38,351.39	\$815.99	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	1,892	0.0%	0.36	1,780	0.34	\$2,904,602.25	\$1,631.80	0.5%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	4,054	0.1%	0.77	1700	0.32	\$1,382,553.45	\$813.27	0.2%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	54	0.0%	0.01	54	0.01	\$88,170.46	\$1,632.79	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	28,775	0.6%	5.48	15,488	2.95	\$23,053,263.67	\$1,488.46	3.6%	46%	54%
Disease Approach	66,459	1.3%	12.65	51,249	9.75	\$24,333,210.00	\$474.80	3.8%	23%	77%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	427	0.0%	0.08	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	709	0.0%	0.13	709	0.13	\$1,589,097.22	\$2,241.32	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	4,500	0.1%	0.86	4,500	0.86	\$887,544.22	\$197.23	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	60,823	1.2%	11.57	46,040	8.76	\$21,856,568.89	\$474.73	3.4%	24%	76%
Preoperative evaluation	647,324	12.6%	123.19	521,141	99.17	\$197,650,456.00	\$379.26	30.8%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	534	0.0%	0.10	533	0.10	\$282,873.93	\$530.72	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	611,231	11.9%	116.32	485,367	92.37	\$181,066,683.60	\$373.05	28.3%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	35,559	0.7%	6.77	35,241	6.71	\$16,300,898.64	\$462.55	2.5%	1%	99%
Routine FU/Monitoring	75,362	1.5%	14.34	10,046	1.91	\$15,484,911.00	\$1,541.40	2.4%	87%	13%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	36,767	0.7%	7.00	1,017	0.19	\$1,621,808.77	\$1,594.70	0.3%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	945	0.0%	0.18	873	0.17	\$684,041.18	\$783.55	0.1%	8%	92%
Don't perform routine annual stress testing after coronary artery revascularization.	8,483	0.2%	1.61	1,278	0.24	\$1,771,007.65	\$1,385.76	0.3%	85%	15%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	29,167	0.6%	5.55	6,878	1.31	\$11,408,053.61	\$1,658.63	1.8%	76%	24%
Screening Tests	3,670,487	71.5%	698.50	761,131	144.84	\$176,294,676.00	\$231.62	27.5%	79%	21%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	86,421	1.7%	16.45	679	0.13	\$576,560.94	\$849.13	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	2,520,700	49.1%	479.69	129,275	24.60	\$53,115,640.64	\$410.87	8.3%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	3,950	0.1%	0.75	1,326	0.25	\$272,159.57	\$205.25	0.0%	66%	34%
Don't perform Pap smears on women younger than 21	6,299	0.1%	1.20	5,420	1.03	\$1,016,272.08	\$187.50	0.2%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	160,245	3.1%	30.49	160,245	30.49	\$20,778,297.74	\$129.67	3.2%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	215,534	4.2%	41.02	172,645	32.85	\$35,810,934.04	\$207.43	5.6%	20%	80%
Don't perform routine general health checks for asymptomatic adults	72,757	1.4%	13.85	72,757	13.85	\$13,925,692.19	\$191.40	2.2%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	30,557	0.6%	5.82	30,557	5.82	\$3,076,641.47	\$100.69	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	76,760	1.5%	14.61	12,098	2.30	\$2,867,111.03	\$236.99	0.4%	84%	16%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	154,151	3.0%	29.34	36,907	7.02	\$13,219,342.62	\$358.18	2.1%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	343,113	6.7%	65.30	139,222	26.49	\$31,636,023.92	\$227.23	4.9%	59%	41%
Grand Total	5,130,182	100.0%	976.28	1,729,275	329.08	\$640,738,381.00	\$370.52	100.0%	66%	34%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

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All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Statewide Wasteful Services- Commercial

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	162,997	7.9%	62.36	158,500	60.64	\$28,869,849.00	\$182.14	8.9%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	155,123	7.5%	59.35	150,987	57.77	\$28,250,289.01	\$187.10	8.7%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	111	0.0%	0.04	103	0.04	\$9,780.95	\$94.96	0.0%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	4,116	0.2%	1.57	3,763	1.44	\$587,948.06	\$156.24	0.2%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	37	0.0%	0.01	37	0.01	\$3,850.35	\$104.06	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	3,610	0.2%	1.38	3,610	1.38	\$17,980.61	\$4.98	0.0%	0%	100%
Diagnostic Testing	136,639	6.6%	52.28	59,421	22.74	\$74,255,783.00	\$1,249.66	23.0%	57%	43%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	26,276	1.3%	10.05	24,505	9.38	\$9,826,386.80	\$401.00	3.0%	7%	93%
Don't do imaging for uncomplicated headache.	14,692	0.7%	5.62	6,775	2.59	\$9,210,744.99	\$1,359.52	2.9%	54%	46%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	976	0.0%	0.37	950	0.36	\$1,992,086.80	\$2,096.93	0.6%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	730	0.0%	0.28	423	0.16	\$1,649,625.05	\$3,899.82	0.5%	42%	58%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	94	0.0%	0.04	94	0.04	\$7,154.24	\$76.11	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	141	0.0%	0.05	141	0.05	\$25,579.07	\$181.41	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,602	0.1%	0.61	947	0.36	\$1,057,248.73	\$1,116.42	0.3%	41%	59%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,043	0.1%	0.78	832	0.32	\$1,329,865.91	\$1,598.40	0.4%	59%	41%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	60,715	2.9%	23.23	8,487	3.25	\$25,052,963.19	\$2,951.92	7.8%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	12,338	0.6%	4.72	6,146	2.35	\$3,681,124.97	\$598.95	1.1%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	455	0.0%	0.17	455	0.17	\$550,884.81	\$1,210.74	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	7,071	0.3%	2.71	3,711	1.42	\$6,750,825.80	\$1,819.14	2.1%	48%	52%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	14	0.0%	0.01	14	0.01	\$7,794.77	\$556.77	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	652	0.0%	0.25	652	0.25	\$1,601,729.00	\$2,456.64	0.5%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	1,580	0.1%	0.60	621	0.24	\$766,424.99	\$1,234.18	0.2%	61%	39%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	16	0.0%	0.01	16	0.01	\$42,482.14	\$2,655.13	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	7,244	0.4%	2.77	4,652	1.78	\$10,702,861.68	\$2,300.70	3.3%	36%	64%
Disease Approach	32,462	1.6%	12.42	28,502	10.91	\$18,156,095.00	\$637.01	5.6%	12%	88%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	224	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	430	0.0%	0.16	430	0.16	\$1,185,926.49	\$2,757.97	0.4%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,546	0.1%	0.59	1,546	0.59	\$384,259.14	\$248.55	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	30,262	1.5%	11.58	26,526	10.15	\$16,585,908.99	\$625.27	5.1%	12%	88%
Preoperative evaluation	217,101	10.5%	83.07	178,960	68.47	\$68,949,293.00	\$385.28	21.4%	18%	82%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	323	0.0%	0.12	323	0.12	\$194,292.58	\$601.53	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	198,455	9.6%	75.93	160,314	61.34	\$61,664,128.57	\$384.65	19.1%	19%	81%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	18,323	0.9%	7.01	18,323	7.01	\$7,090,871.56	\$386.99	2.2%	0%	100%
Routine FU/Monitoring	14,876	0.7%	5.69	2,886	1.10	\$4,327,732.00	\$1,499.56	1.3%	81%	19%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	5,958	0.3%	2.28	319	0.12	\$646,472.68	\$2,026.56	0.2%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	308	0.0%	0.12	308	0.12	\$283,479.07	\$920.39	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	1,503	0.1%	0.58	366	0.14	\$440,551.43	\$1,203.69	0.1%	76%	24%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	7,107	0.3%	2.72	1,893	0.72	\$2,957,228.75	\$1,562.19	0.9%	73%	27%
Screening Tests	1,503,062	72.7%	575.09	562,877	215.36	\$128,368,378.00	\$228.06	39.8%	63%	37%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	30,049	1.5%	11.50	461	0.18	\$339,856.33	\$737.22	0.1%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	849,082	41.1%	324.87	110,027	42.10	\$36,804,162.52	\$334.50	11.4%	87%	13%
Don't perform Pap smears on women with previous hysterectomy	1,805	0.1%	0.69	1,019	0.39	\$227,736.66	\$223.49	0.1%	44%	56%
Don't perform Pap smears on women younger than 21	3,998	0.2%	1.53	3,469	1.33	\$835,854.72	\$240.95	0.3%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	124,210	6.0%	47.52	124,210	47.52	\$17,396,472.61	\$140.06	5.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	183,412	8.9%	70.18	148,250	56.72	\$33,597,766.23	\$226.63	10.4%	19%	81%
Don't perform routine general health checks for asymptomatic adults	69,507	3.4%	26.59	69,507	26.59	\$13,523,838.35	\$194.57	4.2%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	3,566	0.2%	1.36	3,566	1.36	\$461,701.44	\$129.47	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	25,483	1.2%	9.75	6,639	2.54	\$1,732,085.57	\$260.90	0.5%	74%	26%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	78,282	3.8%	29.95	9,528	3.65	\$2,774,392.66	\$291.18	0.9%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	133,668	6.5%	51.14	86,201	32.98	\$20,674,510.46	\$239.84	6.4%	36%	64%
Grand Total	2,067,137	100.0%	790.91	991,146	379.22	\$322,927,128.73	\$325.81	100.0%	52%	48%

Report based on APCD claims data for Commercial coverage.

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Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Statewide Wasteful Services- Medicaid

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	96,362	20.6%	73.95	91,865	70.49	\$2,765,914.00	\$30.11	4.7%	5%	95%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	48,742	10.4%	37.40	44,508	34.15	\$2,320,359.90	\$52.13	3.9%	9%	91%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	158	0.0%	0.12	143	0.11	\$3,818.29	\$26.70	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,835	0.4%	1.41	1,587	1.22	\$111,651.64	\$70.35	0.2%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	69	0.0%	0.05	69	0.05	\$2,717.92	\$39.39	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	45,558	9.7%	34.96	45,558	34.96	\$327,366.71	\$7.19	0.6%	0%	100%
Diagnostic Testing	47,890	10.2%	36.75	17,352	13.32	\$31,379,530.00	\$1,808.41	52.9%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,567	0.8%	2.74	3,269	2.51	\$1,392,756.69	\$426.05	2.3%	8%	92%
Don't do imaging for uncomplicated headache.	7,552	1.6%	5.80	3,253	2.50	\$1,752,048.17	\$538.59	3.0%	57%	43%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	458	0.1%	0.35	434	0.33	\$350,845.71	\$808.40	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	353	0.1%	0.27	169	0.13	\$484,394.90	\$2,866.24	0.8%	52%	48%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$12.84	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$22.66	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,022	0.2%	0.78	466	0.36	\$448,300.86	\$962.02	0.8%	54%	46%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	539	0.1%	0.41	203	0.16	\$250,269.99	\$1,232.86	0.4%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	20,742	4.4%	15.92	3,073	2.36	\$20,101,111.77	\$6,541.20	33.9%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	4,042	0.9%	3.10	677	0.52	\$571,087.16	\$843.56	1.0%	83%	17%
Don't routinely do diagnostic testing in patients with chronic urticaria.	81	0.0%	0.06	81	0.06	\$144,860.86	\$1,788.41	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,282	0.5%	1.75	1,309	1.00	\$1,953,976.41	\$1,492.72	3.3%	43%	57%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	708	0.2%	0.54	708	0.54	\$738,260.28	\$1,042.74	1.2%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	2,474	0.5%	1.90	1079	0.83	\$616,128.46	\$571.02	1.0%	56%	44%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	38	0.0%	0.03	38	0.03	\$45,688.32	\$1,202.32	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,032	0.9%	3.09	2,593	1.99	\$2,529,765.17	\$975.61	4.3%	36%	64%
Disease Approach	29,741	6.3%	22.82	18,804	14.43	\$4,929,747.00	\$262.16	8.3%	37%	63%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	199	0.0%	0.15	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	65	0.0%	0.05	65	0.05	\$77,388.77	\$1,190.60	0.1%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	2,835	0.6%	2.18	2,835	2.18	\$478,211.36	\$168.68	0.8%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	26,642	5.7%	20.44	15,904	12.20	\$4,374,146.91	\$275.03	7.4%	40%	60%
Preoperative evaluation	38,729	8.3%	29.72	33,212	25.49	\$6,808,473.00	\$205.00	11.5%	14%	86%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	128	0.0%	0.10	128	0.10	\$44,701.40	\$349.23	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	34,809	7.4%	26.71	29,292	22.48	\$6,139,032.82	\$209.58	10.3%	16%	84%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	3,792	0.8%	2.91	3,792	2.91	\$624,739.05	\$164.75	1.1%	0%	100%
Routine FU/Monitoring	3,068	0.7%	2.35	332	0.25	\$401,981.00	\$1,210.79	0.7%	89%	11%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,411	0.3%	1.08	31	0.02	\$35,784.21	\$1,154.33	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	47	0.0%	0.04	47	0.04	\$32,068.90	\$682.32	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	465	0.1%	0.36	51	0.04	\$72,369.03	\$1,419.00	0.1%	89%	11%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,145	0.2%	0.88	203	0.16	\$261,759.28	\$1,289.45	0.4%	82%	18%
Screening Tests	253,096	54.0%	194.22	58,559	44.94	\$13,036,092.00	\$222.61	22.0%	77%	23%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	6,507	1.4%	4.99	129	0.10	\$168,269.49	\$1,304.41	0.3%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	186,302	39.7%	142.96	12,275	9.42	\$9,184,816.44	\$748.25	15.5%	93%	7%
Don't perform Pap smears on women with previous hysterectomy	226	0.0%	0.17	129	0.10	\$16,317.55	\$126.49	0.0%	43%	57%
Don't perform Pap smears on women younger than 21	2,280	0.5%	1.75	1,935	1.48	\$177,445.10	\$91.70	0.3%	15%	85%
Don't perform population based screening for 25-OH-Vitamin D deficiency	13,952	3.0%	10.71	13,952	10.71	\$483,626.57	\$34.66	0.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	31,827	6.8%	24.42	24,136	18.52	\$2,161,094.03	\$89.54	3.6%	24%	76%
Don't perform routine general health checks for asymptomatic adults	2,491	0.5%	1.91	2,491	1.91	\$322,029.29	\$129.28	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	116	0.0%	0.09	116	0.09	\$3,971.07	\$34.23	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	1,507	0.3%	1.16	253	0.19	\$24,362.79	\$96.30	0.0%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	3,679	0.8%	2.82	504	0.39	\$181,563.02	\$360.24	0.3%	86%	14%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	4,209	0.9%	3.23	2,639	2.03	\$312,596.15	\$118.45	0.5%	37%	63%
Grand Total	468,889	100.0%	359.81	220,127	168.92	\$59,321,737.94	\$269.49	100.0%	53%	47%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Central Region Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	54,516	5.5%	54.86	53,180	53.51	\$7,064,780.00	\$132.85	5.9%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	42,897	4.3%	43.17	41,681	41.94	\$6,850,096.14	\$164.35	5.7%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	35	0.0%	0.04	33	0.03	\$2,338.00	\$70.85	0.0%	6%	94%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,157	0.1%	1.16	1,039	1.05	\$136,987.23	\$131.85	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	20	0.0%	0.02	20	0.02	\$1,166.89	\$58.34	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	10,407	1.0%	10.47	10,407	10.47	\$74,192.21	\$7.13	0.1%	0%	100%
Diagnostic Testing	76,602	7.7%	77.08	27,276	27.45	\$36,727,280.00	\$1,346.51	30.4%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	11,253	1.1%	11.32	10,267	10.33	\$3,516,499.33	\$342.51	2.9%	9%	91%
Don't do imaging for uncomplicated headache.	6,645	0.7%	6.69	2,366	2.38	\$2,476,681.95	\$1,046.78	2.1%	64%	36%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	602	0.1%	0.61	589	0.59	\$800,012.64	\$1,358.26	0.7%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	727	0.1%	0.73	278	0.28	\$1,281,157.92	\$4,608.48	1.1%	62%	38%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	52	0.0%	0.05	52	0.05	\$4,890.14	\$94.04	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	102	0.0%	0.10	102	0.10	\$22,422.78	\$219.83	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	623	0.1%	0.63	318	0.32	\$417,074.09	\$1,311.55	0.3%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,374	0.1%	1.38	497	0.50	\$605,932.43	\$1,219.18	0.5%	64%	36%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	39,685	4.0%	39.93	4,084	4.11	\$14,272,332.87	\$3,494.69	11.8%	90%	10%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,484	0.3%	3.51	1,715	1.73	\$1,257,609.10	\$733.30	1.0%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	115	0.0%	0.12	115	0.12	\$134,059.38	\$1,165.73	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,767	0.4%	3.79	2,266	2.28	\$4,942,548.19	\$2,181.18	4.1%	40%	60%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,376.67	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	365	0.0%	0.37	343	0.35	\$525,211.64	\$1,531.23	0.4%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	1,043	0.1%	1.05	437	0.44	\$490,214.22	\$1,121.77	0.4%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	15	0.0%	0.02	15	0.02	\$31,526.25	\$2,101.75	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,750	0.7%	6.79	3,832	3.86	\$5,945,730.26	\$1,551.60	4.9%	43%	57%
Disease Approach	12,989	1.3%	13.07	10,143	10.21	\$4,368,784.00	\$430.72	3.6%	22%	78%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	72	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	162	0.0%	0.16	162	0.16	\$388,567.81	\$2,398.57	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,094	0.1%	1.10	1,094	1.10	\$168,573.88	\$154.09	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	11,661	1.2%	11.73	8,887	8.94	\$3,811,641.89	\$428.90	3.2%	24%	76%
Preoperative evaluation	124,025	12.4%	124.80	96,209	96.81	\$37,845,745.00	\$393.37	31.4%	22%	78%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	83	0.0%	0.08	82	0.08	\$42,340.79	\$516.35	0.0%	1%	99%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	116,929	11.7%	117.66	89,168	89.73	\$34,552,845.38	\$387.50	28.6%	24%	76%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	7,013	0.7%	7.06	6,959	7.00	\$3,250,558.82	\$467.10	2.7%	1%	99%
Routine FU/Monitoring	15,019	1.5%	15.11	1,747	1.76	\$3,363,653.00	\$1,925.39	2.8%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,981	0.7%	7.02	168	0.17	\$326,689.59	\$1,944.58	0.3%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	146	0.0%	0.15	139	0.14	\$135,251.50	\$973.03	0.1%	5%	95%
Don't perform routine annual stress testing after coronary artery revascularization.	1,766	0.2%	1.78	231	0.23	\$377,714.56	\$1,635.13	0.3%	87%	13%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	6,126	0.6%	6.16	1,209	1.22	\$2,523,997.44	\$2,087.67	2.1%	80%	20%
Screening Tests	714,019	71.6%	718.48	134,130	134.97	\$31,334,814.00	\$233.62	26.0%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	16,040	1.6%	16.14	120	0.12	\$96,685.84	\$805.72	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	497,206	49.9%	500.31	22,064	22.20	\$10,145,853.43	\$459.84	8.4%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	773	0.1%	0.78	314	0.32	\$60,843.88	\$193.77	0.1%	59%	41%
Don't perform Pap smears on women younger than 21	1,383	0.1%	1.39	1,206	1.21	\$226,356.10	\$187.69	0.2%	13%	87%
Don't perform population based screening for 25-OH-Vitamin D deficiency	21,076	2.1%	21.21	21,076	21.21	\$2,279,140.03	\$108.14	1.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	40,712	4.1%	40.97	32,424	32.63	\$6,376,394.61	\$196.66	5.3%	20%	80%
Don't perform routine general health checks for asymptomatic adults	12,206	1.2%	12.28	12,206	12.28	\$2,190,927.23	\$179.50	1.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	6,098	0.6%	6.14	6,098	6.14	\$587,128.93	\$96.28	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	12,714	1.3%	12.79	1,803	1.81	\$413,658.83	\$229.43	0.3%	86%	14%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	33,504	3.4%	33.71	6,724	6.77	\$2,763,409.84	\$410.98	2.3%	80%	20%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	72,307	7.3%	72.76	30,095	30.28	\$6,194,414.83	\$205.83	5.1%	58%	42%
Grand Total	997,178	100.0%	1003.41	322,693	324.71	\$120,705,055.54	\$374.06	100.0%	68%	32%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Central Region Wasteful Services- Commercial

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	35,766	8.3%	71.77	35,182	70.60	\$6,506,446.00	\$184.94	10.2%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	34,242	8.0%	68.71	33,732	67.69	\$6,389,967.29	\$189.43	10.0%	1%	99%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	17	0.0%	0.03	17	0.03	\$1,253.33	\$73.73	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	842	0.2%	1.69	768	1.54	\$112,836.29	\$146.92	0.2%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$763.70	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	665	0.2%	1.33	665	1.33	\$1,625.52	\$2.44	0.0%	0%	100%
Diagnostic Testing	29,480	6.9%	59.16	13,674	27.44	\$16,715,752.00	\$1,222.45	26.2%	54%	46%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	6,935	1.6%	13.92	6,587	13.22	\$2,186,801.14	\$331.99	3.4%	5%	95%
Don't do imaging for uncomplicated headache.	2,922	0.7%	5.86	1,261	2.53	\$1,780,759.61	\$1,412.18	2.8%	57%	43%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	215	0.1%	0.43	211	0.42	\$482,791.05	\$2,288.11	0.8%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	125	0.0%	0.25	70	0.14	\$402,040.75	\$5,743.44	0.6%	44%	56%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	52	0.0%	0.10	52	0.10	\$4,890.14	\$94.04	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	102	0.0%	0.20	102	0.20	\$22,422.78	\$219.83	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	247	0.1%	0.50	139	0.28	\$202,460.31	\$1,456.55	0.3%	44%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	394	0.1%	0.79	140	0.28	\$229,306.64	\$1,637.90	0.4%	64%	36%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	12,136	2.8%	24.35	1,416	2.84	\$4,755,008.65	\$3,358.06	7.4%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,945	0.5%	3.90	1,016	2.04	\$522,548.98	\$514.32	0.8%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	70	0.0%	0.14	70	0.14	\$56,608.71	\$808.70	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,798	0.4%	3.61	1,048	2.10	\$2,265,374.02	\$2,161.62	3.5%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$831.55	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	115	0.0%	0.23	115	0.23	\$257,501.88	\$2,239.15	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	404	0.1%	0.81	158	0.32	\$234,345.46	\$1,483.20	0.4%	61%	39%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$17,878.77	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	2,020	0.5%	4.05	1,289	2.59	\$3,294,181.41	\$2,555.61	5.2%	36%	64%
Disease Approach	6,130	1.4%	12.30	5,497	11.03	\$3,197,050.00	\$581.60	5.0%	10%	90%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	37	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	106	0.0%	0.21	106	0.21	\$289,617.20	\$2,732.24	0.5%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	276	0.1%	0.55	276	0.55	\$60,898.80	\$220.65	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	5,711	1.3%	11.46	5,115	10.26	\$2,846,534.26	\$556.51	4.5%	10%	90%
Preoperative evaluation	47,473	11.0%	95.26	37,111	74.47	\$15,023,233.00	\$404.82	23.5%	22%	78%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	51	0.0%	0.10	51	0.10	\$32,389.71	\$635.09	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	43,541	10.1%	87.37	33,179	66.58	\$13,613,244.28	\$410.30	21.3%	24%	76%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	3,881	0.9%	7.79	3,881	7.79	\$1,377,599.16	\$354.96	2.2%	0%	100%
Routine FU/Monitoring	3,657	0.9%	7.34	605	1.21	\$1,361,865.00	\$2,251.02	2.1%	83%	17%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,466	0.3%	2.94	70	0.14	\$233,377.17	\$3,333.96	0.4%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	62	0.0%	0.12	62	0.12	\$67,596.28	\$1,090.26	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	317	0.1%	0.64	77	0.15	\$47,390.45	\$615.46	0.1%	76%	24%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,812	0.4%	3.64	396	0.79	\$1,013,500.67	\$2,559.35	1.6%	78%	22%
Screening Tests	307,177	71.5%	616.40	96,436	193.51	\$21,098,519.00	\$218.78	33.0%	69%	31%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	6,089	1.4%	12.22	51	0.10	\$48,456.43	\$950.13	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	181,121	42.2%	363.45	17,117	34.35	\$5,964,989.88	\$348.48	9.3%	91%	9%
Don't perform Pap smears on women with previous hysterectomy	405	0.1%	0.81	242	0.49	\$50,790.00	\$209.88	0.1%	40%	60%
Don't perform Pap smears on women younger than 21	922	0.2%	1.85	822	1.65	\$190,446.31	\$231.69	0.3%	11%	89%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,796	3.7%	31.70	15,796	31.70	\$1,758,430.92	\$111.32	2.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	34,211	8.0%	68.65	27,325	54.83	\$5,866,378.75	\$214.69	9.2%	20%	80%
Don't perform routine general health checks for asymptomatic adults	11,629	2.7%	23.34	11,629	23.34	\$2,115,921.96	\$181.95	3.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	863	0.2%	1.73	863	1.73	\$102,301.57	\$118.54	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	4,417	1.0%	8.86	1,076	2.16	\$259,762.39	\$241.41	0.4%	76%	24%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	18,971	4.4%	38.07	1,657	3.33	\$552,932.18	\$333.69	0.9%	91%	9%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	32,753	7.6%	65.72	19,858	39.85	\$4,188,108.89	\$210.90	6.6%	39%	61%
Grand Total	429,700	100.0%	862.26	188,522	378.30	\$63,902,865.24	\$338.97	100.0%	56%	44%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Central Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	18,082	19.2%	72.12	17,352	69.21	\$466,595.00	\$26.89	3.4%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	8,009	8.5%	31.94	7,321	29.20	\$369,207.27	\$50.43	2.7%	9%	91%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	17	0.0%	0.07	15	0.06	\$969.56	\$64.64	0.0%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	303	0.3%	1.21	263	1.05	\$23,448.06	\$89.16	0.2%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	11	0.0%	0.04	11	0.04	\$403.19	\$36.65	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,742	10.4%	38.85	9,742	38.85	\$72,566.69	\$7.45	0.5%	0%	100%
Diagnostic Testing	9,371	10.0%	37.37	3,701	14.76	\$6,610,036.00	\$1,786.01	48.3%	61%	39%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	630	0.7%	2.51	589	2.35	\$263,022.45	\$446.56	1.9%	7%	93%
Don't do imaging for uncomplicated headache.	1,606	1.7%	6.41	774	3.09	\$411,400.12	\$531.52	3.0%	52%	48%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	98	0.1%	0.39	93	0.37	\$77,534.68	\$833.71	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	55	0.1%	0.22	27	0.11	\$65,809.09	\$2,437.37	0.5%	51%	49%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	195	0.2%	0.78	83	0.33	\$130,004.68	\$1,566.32	1.0%	57%	43%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	83	0.1%	0.33	31	0.12	\$52,376.56	\$1,689.57	0.4%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,782	4.0%	15.08	592	2.36	\$3,873,654.53	\$6,543.34	28.3%	84%	16%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	617	0.7%	2.46	109	0.43	\$110,222.69	\$1,011.22	0.8%	82%	18%
Don't routinely do diagnostic testing in patients with chronic urticaria.	11	0.0%	0.04	11	0.04	\$30,534.70	\$2,775.88	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	517	0.6%	2.06	321	1.28	\$591,479.64	\$1,842.62	4.3%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	150	0.2%	0.60	150	0.60	\$172,458.62	\$1,149.72	1.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	639	0.7%	2.55	279	1.11	\$255,868.76	\$917.09	1.9%	56%	44%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$13,647.48	*	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	988	1.1%	3.94	642	2.56	\$562,021.76	\$875.42	4.1%	35%	65%
Disease Approach	6,136	6.5%	24.47	3,978	15.87	\$933,243.00	\$234.60	6.8%	35%	65%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	35	0.0%	0.14	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	11	0.0%	0.04	11	0.04	\$11,616.97	\$1,056.09	0.1%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	799	0.9%	3.19	799	3.19	\$100,851.02	\$126.22	0.7%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	5,291	5.6%	21.10	3,168	12.64	\$820,774.55	\$259.08	6.0%	40%	60%
Preoperative evaluation	7,787	8.3%	31.06	6,648	26.51	\$1,619,250.00	\$243.57	11.8%	15%	85%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	20	0.0%	0.08	20	0.08	\$3,559.63	\$177.98	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	6,792	7.2%	27.09	5,653	22.55	\$1,493,253.44	\$264.15	10.9%	17%	83%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	975	1.0%	3.89	975	3.89	\$122,437.25	\$125.58	0.9%	0%	100%
Routine FU/Monitoring	667	0.7%	2.66	46	0.18	\$92,219.00	\$2,004.77	0.7%	93%	7%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	311	0.3%	1.24	*	*	\$3,753.75	*	0.0%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$2,962.15	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	114	0.1%	0.45	12	0.05	\$33,805.03	\$2,817.09	0.2%	89%	11%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	242	0.3%	0.97	34	0.14	\$51,698.37	\$1,520.54	0.4%	86%	14%
Screening Tests	51,891	55.2%	206.96	13,218	52.72	\$3,962,866.00	\$299.81	29.0%	75%	25%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,178	1.3%	4.70	54	0.22	\$38,625.51	\$715.29	0.3%	95%	5%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	38,720	41.2%	154.43	3,834	15.29	\$3,115,156.31	\$812.51	22.8%	90%	10%
Don't perform Pap smears on women with previous hysterectomy	37	0.0%	0.15	26	0.10	\$3,628.18	\$139.55	0.0%	30%	70%
Don't perform Pap smears on women younger than 21	455	0.5%	1.81	378	1.51	\$34,595.31	\$91.52	0.3%	17%	83%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,619	2.8%	10.45	2,619	10.45	\$94,444.88	\$36.06	0.7%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	6,482	6.9%	25.85	5,080	20.26	\$506,965.83	\$99.80	3.7%	22%	78%
Don't perform routine general health checks for asymptomatic adults	481	0.5%	1.92	481	1.92	\$64,753.60	\$134.62	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	14	0.0%	0.06	14	0.06	\$352.74	\$25.20	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	211	0.2%	0.84	44	0.18	\$5,494.49	\$124.87	0.0%	79%	21%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	840	0.9%	3.35	107	0.43	\$30,741.32	\$287.30	0.2%	87%	13%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	854	0.9%	3.41	581	2.32	\$68,107.83	\$117.23	0.5%	32%	68%
Grand Total	93,949	100.0%	374.70	44,966	179.34	\$13,684,208.69	\$304.32	100.0%	52%	48%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Eastern Region Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	52,653	4.9%	47.62	50,572	45.73	\$6,462,959.00	\$127.80	5.1%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	40,584	3.8%	36.70	38,640	34.94	\$6,236,918.56	\$161.41	4.9%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	63	0.0%	0.06	54	0.05	\$2,329.08	\$43.13	0.0%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,175	0.1%	1.06	1,047	0.95	\$126,224.00	\$120.56	0.1%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$627.83	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	10,831	1.0%	9.80	10,831	9.80	\$96,859.07	\$8.94	0.1%	0%	100%
Diagnostic Testing	89,760	8.3%	81.17	29,174	26.38	\$37,792,207.00	\$1,295.41	29.6%	67%	33%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	10,716	1.0%	9.69	9,252	8.37	\$3,751,672.63	\$405.50	2.9%	14%	86%
Don't do imaging for uncomplicated headache.	7,701	0.7%	6.96	2,305	2.08	\$2,662,662.09	\$1,155.17	2.1%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	637	0.1%	0.58	612	0.55	\$890,017.41	\$1,454.28	0.7%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,307	0.1%	1.18	471	0.43	\$2,344,370.20	\$4,977.43	1.8%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$1,231.81	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	36	0.0%	0.03	36	0.03	\$3,021.38	\$83.93	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	764	0.1%	0.69	325	0.29	\$324,253.90	\$997.70	0.3%	57%	43%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,021	0.2%	1.83	817	0.74	\$964,791.88	\$1,180.90	0.8%	60%	40%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	50,189	4.6%	45.39	6,221	5.63	\$14,886,422.65	\$2,392.93	11.7%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	4,444	0.4%	4.02	2,199	1.99	\$1,661,688.41	\$755.66	1.3%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	113	0.0%	0.10	113	0.10	\$271,279.46	\$2,400.70	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,975	0.4%	3.59	2,519	2.28	\$4,020,494.17	\$1,596.07	3.1%	37%	63%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,067.84	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	345	0.0%	0.31	323	0.29	\$586,541.38	\$1,815.92	0.5%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	876	0.1%	0.79	367	0.33	\$258,289.02	\$703.78	0.2%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$8,003.15	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,636	0.6%	6.00	3,614	3.27	\$5,152,399.81	\$1,425.68	4.0%	46%	54%
Disease Approach	19,470	1.8%	17.61	14,511	13.12	\$7,491,427.00	\$516.26	5.9%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	138	0.0%	0.12	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	125	0.0%	0.11	125	0.11	\$305,293.93	\$2,442.35	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	801	0.1%	0.72	801	0.72	\$189,288.80	\$236.32	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	18,406	1.7%	16.65	13,585	12.29	\$6,996,844.68	\$515.04	5.5%	26%	74%
Preoperative evaluation	156,261	14.5%	141.31	125,294	113.31	\$43,720,364.00	\$348.94	34.3%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	95	0.0%	0.09	95	0.09	\$43,611.22	\$459.07	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	149,122	13.8%	134.86	118,230	106.92	\$40,732,219.43	\$344.52	31.9%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	7,044	0.7%	6.37	6,969	6.30	\$2,944,532.98	\$422.52	2.3%	1%	99%
Routine FU/Monitoring	16,270	1.5%	14.71	2,322	2.10	\$3,819,069.00	\$1,644.73	3.0%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	7,360	0.7%	6.66	265	0.24	\$316,208.98	\$1,193.24	0.2%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	303	0.0%	0.27	278	0.25	\$206,379.06	\$742.37	0.2%	8%	92%
Don't perform routine annual stress testing after coronary artery revascularization.	1,905	0.2%	1.72	245	0.22	\$501,137.71	\$2,045.46	0.4%	87%	13%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	6,702	0.6%	6.06	1,534	1.39	\$2,795,343.51	\$1,822.26	2.2%	77%	23%
Screening Tests	745,292	69.0%	674.00	122,420	110.71	\$28,355,511.00	\$231.62	22.2%	84%	16%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	20,869	1.9%	18.87	106	0.10	\$146,302.69	\$1,380.21	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	523,287	48.5%	473.23	15,619	14.13	\$6,921,173.36	\$443.13	5.4%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	1,084	0.1%	0.98	322	0.29	\$68,591.29	\$213.02	0.1%	70%	30%
Don't perform Pap smears on women younger than 21	1,455	0.1%	1.32	1,236	1.12	\$227,116.86	\$183.75	0.2%	15%	85%
Don't perform population based screening for 25-OH-Vitamin D deficiency	20,733	1.9%	18.75	20,733	18.75	\$2,406,144.62	\$116.05	1.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	39,406	3.6%	35.64	31,292	28.30	\$6,345,177.77	\$202.77	5.0%	21%	79%
Don't perform routine general health checks for asymptomatic adults	8,987	0.8%	8.13	8,987	8.13	\$1,607,832.05	\$178.91	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	6,115	0.6%	5.53	6,115	5.53	\$607,307.03	\$99.31	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	15,356	1.4%	13.89	1,830	1.65	\$463,173.73	\$253.10	0.4%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	35,333	3.3%	31.95	8,150	7.37	\$3,168,580.23	\$388.78	2.5%	77%	23%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	72,667	6.7%	65.72	28,030	25.35	\$6,394,111.42	\$228.12	5.0%	61%	39%
Grand Total	1,079,743	100.0%	976.46	344,330	311.39	\$127,641,537.08	\$370.70	100.0%	68%	32%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Eastern Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	33,171	8.5%	67.57	31,999	65.19	\$5,929,282.00	\$185.30	10.0%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	31,282	8.0%	63.72	30,194	61.51	\$5,808,708.74	\$192.38	9.8%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	16	0.0%	0.03	13	0.03	\$1,622.32	\$124.79	0.0%	19%	81%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	829	0.2%	1.69	748	1.52	\$107,780.88	\$144.09	0.2%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$477.48	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	1,044	0.3%	2.13	1,044	2.13	\$10,692.96	\$10.24	0.0%	0%	100%
Diagnostic Testing	28,289	7.2%	57.63	11,878	24.20	\$14,182,468.00	\$1,194.01	23.9%	58%	42%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	5,322	1.4%	10.84	4,945	10.07	\$2,177,001.33	\$440.24	3.7%	7%	93%
Don't do imaging for uncomplicated headache.	3,016	0.8%	6.14	1,167	2.38	\$1,863,235.12	\$1,596.60	3.1%	61%	39%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	200	0.1%	0.41	190	0.39	\$479,396.36	\$2,523.14	0.8%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	174	0.0%	0.35	101	0.21	\$452,777.71	\$4,482.95	0.8%	42%	58%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$1,231.81	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	35	0.0%	0.07	35	0.07	\$2,998.72	\$85.68	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	302	0.1%	0.62	141	0.29	\$143,681.36	\$1,019.02	0.2%	53%	47%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	399	0.1%	0.81	149	0.30	\$241,478.84	\$1,620.66	0.4%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	13,370	3.4%	27.24	1,847	3.76	\$4,026,698.20	\$2,180.13	6.8%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,620	0.4%	3.30	849	1.73	\$549,645.70	\$647.40	0.9%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	67	0.0%	0.14	67	0.14	\$171,637.46	\$2,561.75	0.3%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,756	0.4%	3.58	1,143	2.33	\$1,372,458.95	\$1,200.75	2.3%	35%	65%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$179.08	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	132	0.0%	0.27	132	0.27	\$338,948.13	\$2,567.79	0.6%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	286	0.1%	0.58	108	0.22	\$125,900.12	\$1,165.74	0.2%	62%	38%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$326.36	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,610	0.4%	3.28	1,004	2.05	\$2,234,873.21	\$2,225.97	3.8%	38%	62%
Disease Approach	10,847	2.8%	22.10	9,045	18.43	\$5,851,372.00	\$646.92	9.9%	17%	83%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	65	0.0%	0.13	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	76	0.0%	0.15	76	0.15	\$234,321.46	\$3,083.18	0.4%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	260	0.1%	0.53	260	0.53	\$84,965.42	\$326.79	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	10,446	2.7%	21.28	8,709	17.74	\$5,532,084.82	\$635.21	9.3%	17%	83%
Preoperative evaluation	45,533	11.7%	92.76	36,876	75.12	\$13,774,584.00	\$373.54	23.2%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	39	0.0%	0.08	39	0.08	\$23,349.75	\$598.71	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	42,140	10.8%	85.84	33,483	68.21	\$12,579,885.93	\$375.71	21.2%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	3,354	0.9%	6.83	3,354	6.83	\$1,171,347.95	\$349.24	2.0%	0%	100%
Routine FU/Monitoring	3,314	0.8%	6.75	651	1.33	\$1,039,696.00	\$1,597.08	1.8%	80%	20%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,265	0.3%	2.58	71	0.14	\$122,036.25	\$1,718.82	0.2%	94%	6%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	102	0.0%	0.21	102	0.21	\$79,617.99	\$780.57	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	319	0.1%	0.65	49	0.10	\$229,696.54	\$4,687.68	0.4%	85%	15%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,628	0.4%	3.32	429	0.87	\$608,345.37	\$1,418.05	1.0%	74%	26%
Screening Tests	269,159	69.0%	548.30	79,977	162.92	\$18,596,764.00	\$232.53	31.3%	70%	30%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	6,669	1.7%	13.59	80	0.16	\$124,283.46	\$1,553.54	0.2%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	160,642	41.2%	327.24	12,355	25.17	\$4,194,384.52	\$339.49	7.1%	92%	8%
Don't perform Pap smears on women with previous hysterectomy	409	0.1%	0.83	230	0.47	\$54,336.54	\$236.25	0.1%	44%	56%
Don't perform Pap smears on women younger than 21	809	0.2%	1.65	694	1.41	\$184,282.86	\$265.54	0.3%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,106	3.9%	30.77	15,106	30.77	\$1,962,630.75	\$129.92	3.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	29,689	7.6%	60.48	23,818	48.52	\$5,747,202.29	\$241.30	9.7%	20%	80%
Don't perform routine general health checks for asymptomatic adults	8,300	2.1%	16.91	8,300	16.91	\$1,526,293.42	\$183.89	2.6%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	609	0.2%	1.24	609	1.24	\$78,746.65	\$129.30	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	4,655	1.2%	9.48	888	1.81	\$247,981.37	\$279.26	0.4%	81%	19%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	17,091	4.4%	34.82	1,651	3.36	\$611,975.02	\$370.67	1.0%	90%	10%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	25,180	6.5%	51.29	16,246	33.09	\$3,864,647.34	\$237.88	6.5%	35%	65%
Grand Total	390,329	100.0%	795.14	170,442	347.21	\$59,374,166.54	\$348.35	100.0%	56%	44%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Eastern Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	19,334	17.2%	60.54	18,426	57.70	\$514,566.00	\$27.93	4.1%	5%	95%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	9,157	8.1%	28.67	8,301	25.99	\$409,263.69	\$49.30	3.3%	9%	91%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	47	0.0%	0.15	41	0.13	\$706.76	\$17.24	0.0%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	343	0.3%	1.07	297	0.93	\$18,279.07	\$61.55	0.1%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$150.35	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,787	8.7%	30.65	9,787	30.65	\$86,166.11	\$8.80	0.7%	0%	100%
Diagnostic Testing	11,355	10.1%	35.56	4,058	12.71	\$5,859,072.00	\$1,443.83	47.2%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	976	0.9%	3.06	882	2.76	\$344,998.68	\$391.15	2.8%	10%	90%
Don't do imaging for uncomplicated headache.	2,041	1.8%	6.39	840	2.63	\$517,957.84	\$616.62	4.2%	59%	41%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	101	0.1%	0.32	96	0.30	\$83,842.66	\$873.36	0.7%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	93	0.1%	0.29	49	0.15	\$173,544.90	\$3,541.73	1.4%	47%	53%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$22.66	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	232	0.2%	0.73	68	0.21	\$57,882.64	\$851.22	0.5%	71%	29%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	88	0.1%	0.28	32	0.10	\$49,643.15	\$1,551.35	0.4%	64%	36%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,545	4.0%	14.23	557	1.74	\$3,063,022.60	\$5,499.14	24.7%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,029	0.9%	3.22	177	0.55	\$158,800.67	\$897.18	1.3%	83%	17%
Don't routinely do diagnostic testing in patients with chronic urticaria.	18	0.0%	0.06	18	0.06	\$75,821.88	\$4,212.33	0.6%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	510	0.5%	1.60	301	0.94	\$390,040.69	\$1,295.82	3.1%	41%	59%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	128	0.1%	0.40	128	0.40	\$167,144.82	\$1,305.82	1.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	590	0.5%	1.85	259	0.81	\$132,388.90	\$511.15	1.1%	56%	44%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$7,676.79	*	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,004	0.9%	3.14	651	2.04	\$636,282.87	\$977.39	5.1%	35%	65%
Disease Approach	8,324	7.4%	26.07	5,192	16.26	\$1,536,183.00	\$295.88	12.4%	38%	62%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	72	0.1%	0.23	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	13	0.0%	0.04	13	0.04	\$14,802.64	\$1,138.66	0.1%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	532	0.5%	1.67	532	1.67	\$102,756.47	\$193.15	0.8%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	7,707	6.8%	24.13	4,647	14.55	\$1,418,624.24	\$305.28	11.4%	40%	60%
Preoperative evaluation	10,552	9.4%	33.04	9,099	28.49	\$1,738,862.00	\$191.10	14.0%	14%	86%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	39	0.0%	0.12	39	0.12	\$8,931.93	\$229.02	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	9,707	8.6%	30.40	8,254	25.85	\$1,582,434.99	\$191.72	12.7%	15%	85%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	806	0.7%	2.52	806	2.52	\$147,495.15	\$183.00	1.2%	0%	100%
Routine FU/Monitoring	737	0.7%	2.31	88	0.28	\$166,787.00	\$1,895.30	1.3%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	344	0.3%	1.08	11	0.03	\$28,987.90	\$2,635.26	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	15	0.0%	0.05	15	0.05	\$8,165.33	\$544.36	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	97	0.1%	0.30	12	0.04	\$18,826.88	\$1,568.91	0.2%	88%	12%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	281	0.2%	0.88	50	0.16	\$110,806.49	\$2,216.13	0.9%	82%	18%
Screening Tests	62,264	55.3%	194.97	14,179	44.40	\$2,600,381.00	\$183.40	20.9%	77%	23%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,926	1.7%	6.03	*	*	\$2,809.49	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	44,164	39.2%	138.29	1,952	6.11	\$1,613,815.01	\$826.75	13.0%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	85	0.1%	0.27	46	0.14	\$5,048.03	\$109.74	0.0%	46%	54%
Don't perform Pap smears on women younger than 21	643	0.6%	2.01	540	1.69	\$42,398.82	\$78.52	0.3%	16%	84%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,794	2.5%	8.75	2,794	8.75	\$95,530.15	\$34.19	0.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	9,691	8.6%	30.35	7,454	23.34	\$594,894.98	\$79.81	4.8%	23%	77%
Don't perform routine general health checks for asymptomatic adults	602	0.5%	1.89	602	1.89	\$76,506.03	\$127.09	0.6%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	24	0.0%	0.08	24	0.08	\$459.25	\$19.14	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	366	0.3%	1.15	34	0.11	\$3,220.58	\$94.72	0.0%	91%	9%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	996	0.9%	3.12	132	0.41	\$93,573.09	\$708.89	0.8%	87%	13%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	973	0.9%	3.05	601	1.88	\$72,125.53	\$120.01	0.6%	38%	62%
Grand Total	112,582	100.0%	352.53	51,062	159.89	\$12,415,850.71	\$243.15	100.0%	55%	45%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Northern Region Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	63,174	5.0%	44.53	60,821	42.87	\$9,050,334.00	\$148.80	5.3%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	53,395	4.2%	37.64	51,185	36.08	\$8,797,668.71	\$171.88	5.2%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	111	0.0%	0.08	101	0.07	\$5,237.34	\$51.85	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,625	0.1%	1.15	1,492	1.05	\$198,612.99	\$133.12	0.1%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$710.20	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	8,043	0.6%	5.67	8,043	5.67	\$48,104.70	\$5.98	0.0%	0%	100%
Diagnostic Testing	86,996	6.9%	61.32	31,078	21.91	\$47,379,563.00	\$1,524.54	27.9%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	11,062	0.9%	7.80	9,608	6.77	\$4,422,745.44	\$460.32	2.6%	13%	87%
Don't do imaging for uncomplicated headache.	8,271	0.7%	5.83	3,373	2.38	\$3,764,947.48	\$1,116.20	2.2%	59%	41%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	670	0.1%	0.47	646	0.46	\$908,370.98	\$1,406.15	0.5%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	832	0.1%	0.59	338	0.24	\$1,389,258.23	\$4,110.23	0.8%	59%	41%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	14	0.0%	0.01	14	0.01	\$383.61	\$27.40	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$43.63	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,239	0.1%	0.87	762	0.54	\$831,559.57	\$1,091.29	0.5%	38%	62%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,073	0.2%	1.46	804	0.57	\$1,086,446.27	\$1,351.30	0.6%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	44,551	3.5%	31.40	6,466	4.56	\$23,335,565.83	\$3,608.96	13.7%	85%	15%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	7,847	0.6%	5.53	3,600	2.54	\$2,303,239.35	\$639.79	1.4%	54%	46%
Don't routinely do diagnostic testing in patients with chronic urticaria.	263	0.0%	0.19	263	0.19	\$250,814.26	\$953.67	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,264	0.3%	2.30	1,444	1.02	\$3,326,770.72	\$2,303.86	2.0%	56%	44%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	11	0.0%	0.01	11	0.01	\$16,560.18	\$1,505.47	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	273	0.0%	0.19	264	0.19	\$562,040.13	\$2,128.94	0.3%	3%	97%
Don't perform computed tomography scans on children being treated for headache.	821	0.1%	0.58	354	0.25	\$301,048.67	\$850.42	0.2%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	16	0.0%	0.01	16	0.01	\$25,736.78	\$1,608.55	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,789	0.5%	4.08	3,115	2.20	\$4,854,032.19	\$1,558.28	2.9%	46%	54%
Disease Approach	10,060	0.8%	7.09	8,380	5.91	\$5,382,884.00	\$642.35	3.2%	17%	83%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	122	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	207	0.0%	0.15	207	0.15	\$456,753.31	\$2,206.54	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	646	0.1%	0.46	646	0.46	\$210,132.83	\$325.28	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	9,085	0.7%	6.40	7,527	5.31	\$4,715,998.18	\$626.54	2.8%	17%	83%
Preoperative evaluation	135,337	10.7%	95.40	113,455	79.98	\$33,639,416.00	\$296.50	19.8%	16%	84%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	242	0.0%	0.17	242	0.17	\$138,010.34	\$570.29	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	125,439	9.9%	88.42	103,637	73.06	\$30,167,140.22	\$291.08	17.8%	17%	83%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	9,656	0.8%	6.81	9,576	6.75	\$3,334,265.08	\$348.19	2.0%	1%	99%
Routine FU/Monitoring	14,394	1.1%	10.15	2,583	1.82	\$3,131,613.00	\$1,212.39	1.8%	82%	18%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	7,240	0.6%	5.10	234	0.16	\$328,917.77	\$1,405.63	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	171	0.0%	0.12	159	0.11	\$113,983.28	\$716.88	0.1%	7%	93%
Don't perform routine annual stress testing after coronary artery revascularization.	1,600	0.1%	1.13	388	0.27	\$423,231.52	\$1,090.80	0.2%	76%	24%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,383	0.4%	3.79	1,802	1.27	\$2,265,480.05	\$1,257.20	1.3%	67%	33%
Screening Tests	955,499	75.5%	673.54	311,234	219.39	\$71,211,427.00	\$228.80	41.9%	67%	33%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	18,912	1.5%	13.33	307	0.22	\$156,251.72	\$508.96	0.1%	98%	2%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	586,625	46.4%	413.52	63,912	45.05	\$23,151,806.30	\$362.25	13.6%	89%	11%
Don't perform Pap smears on women with previous hysterectomy	975	0.1%	0.69	358	0.25	\$80,126.33	\$223.82	0.0%	63%	37%
Don't perform Pap smears on women younger than 21	1,529	0.1%	1.08	1,340	0.94	\$271,465.42	\$202.59	0.2%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	83,051	6.6%	58.54	83,051	58.54	\$10,862,350.06	\$130.79	6.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	82,158	6.5%	57.91	68,378	48.20	\$15,290,362.06	\$223.62	9.0%	17%	83%
Don't perform routine general health checks for asymptomatic adults	34,984	2.8%	24.66	34,984	24.66	\$7,410,987.28	\$211.84	4.4%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	6,567	0.5%	4.63	6,567	4.63	\$621,246.32	\$94.60	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	18,836	1.5%	13.28	4,317	3.04	\$1,059,034.28	\$245.32	0.6%	77%	23%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	37,900	3.0%	26.72	9,906	6.98	\$2,715,823.55	\$274.16	1.6%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	83,962	6.6%	59.19	38,114	26.87	\$9,591,974.16	\$251.67	5.6%	55%	45%
Grand Total	1,265,471	100.0%	892.05	527,562	371.88	\$169,795,237.32	\$321.85	100.0%	58%	42%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Northern Region Wasteful Services- Commercial

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	49,543	7.0%	52.37	47,934	50.67	\$8,730,973.00	\$182.15	7.6%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	47,042	6.6%	49.73	45,536	48.14	\$8,533,731.60	\$187.41	7.4%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	50	0.0%	0.05	46	0.05	\$4,401.35	\$95.68	0.0%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,414	0.2%	1.49	1,315	1.39	\$190,167.87	\$144.61	0.2%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$710.20	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	1,037	0.1%	1.10	1,037	1.10	\$1,961.76	\$1.89	0.0%	0%	100%
Diagnostic Testing	38,978	5.5%	41.21	18,672	19.74	\$21,901,915.00	\$1,172.98	19.0%	52%	48%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	7,290	1.0%	7.71	6,843	7.23	\$3,106,084.59	\$453.91	2.7%	6%	94%
Don't do imaging for uncomplicated headache.	5,215	0.7%	5.51	2,841	3.00	\$3,396,558.10	\$1,195.55	2.9%	46%	54%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	302	0.0%	0.32	301	0.32	\$560,943.88	\$1,863.60	0.5%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	166	0.0%	0.18	115	0.12	\$263,942.14	\$2,295.15	0.2%	31%	69%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	14	0.0%	0.01	14	0.01	\$383.61	\$27.40	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$43.63	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	697	0.1%	0.74	462	0.49	\$488,803.32	\$1,058.02	0.4%	34%	66%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	575	0.1%	0.61	293	0.31	\$483,143.87	\$1,648.96	0.4%	49%	51%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	14,362	2.0%	15.18	2,582	2.73	\$7,235,508.27	\$2,802.29	6.3%	82%	18%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	5,903	0.8%	6.24	2,701	2.86	\$1,619,819.21	\$599.71	1.4%	54%	46%
Don't routinely do diagnostic testing in patients with chronic urticaria.	199	0.0%	0.21	199	0.21	\$197,076.75	\$990.34	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	1,894	0.3%	2.00	769	0.81	\$1,177,420.83	\$1,531.11	1.0%	59%	41%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,402.30	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	171	0.0%	0.18	171	0.18	\$439,881.49	\$2,572.41	0.4%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	510	0.1%	0.54	207	0.22	\$229,507.49	\$1,108.73	0.2%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$17,592.46	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,680	0.2%	1.78	1,174	1.24	\$2,681,802.96	\$2,284.33	2.3%	30%	70%
Disease Approach	7,306	1.0%	7.72	6,512	6.88	\$4,912,312.00	\$754.35	4.3%	11%	89%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	87	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	156	0.0%	0.16	156	0.16	\$400,487.36	\$2,567.23	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	475	0.1%	0.50	475	0.50	\$159,542.74	\$335.88	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	6,588	0.9%	6.96	5,881	6.22	\$4,352,281.84	\$740.06	3.8%	11%	89%
Preoperative evaluation	62,942	8.8%	66.54	55,349	58.51	\$17,267,378.00	\$311.97	15.0%	12%	88%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	184	0.0%	0.19	184	0.19	\$115,550.90	\$627.99	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	56,299	7.9%	59.52	48,706	51.49	\$14,929,453.81	\$306.52	12.9%	13%	87%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,459	0.9%	6.83	6,459	6.83	\$2,222,373.74	\$344.07	1.9%	0%	100%
Routine FU/Monitoring	2,822	0.4%	2.98	825	0.87	\$995,380.00	\$1,206.52	0.9%	71%	29%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,075	0.2%	1.14	86	0.09	\$185,864.72	\$2,161.22	0.2%	92%	8%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	61	0.0%	0.06	61	0.06	\$60,204.55	\$986.96	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	406	0.1%	0.43	141	0.15	\$101,896.44	\$722.67	0.1%	65%	35%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,280	0.2%	1.35	537	0.57	\$647,414.05	\$1,205.61	0.6%	58%	42%
Screening Tests	549,905	77.3%	581.32	269,635	285.04	\$61,582,933.00	\$228.39	53.4%	51%	49%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	8,390	1.2%	8.87	275	0.29	\$136,207.28	\$495.30	0.1%	97%	3%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	281,311	39.5%	297.38	60,403	63.85	\$19,288,083.69	\$319.32	16.7%	79%	21%
Don't perform Pap smears on women with previous hysterectomy	552	0.1%	0.58	330	0.35	\$76,105.83	\$230.62	0.1%	40%	60%
Don't perform Pap smears on women younger than 21	1,191	0.2%	1.26	1,043	1.10	\$247,422.47	\$237.22	0.2%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	71,002	10.0%	75.06	71,002	75.06	\$10,039,893.01	\$141.40	8.7%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	79,003	11.1%	83.52	65,657	69.41	\$15,068,784.81	\$229.51	13.1%	17%	83%
Don't perform routine general health checks for asymptomatic adults	34,301	4.8%	36.26	34,301	36.26	\$7,316,410.92	\$213.30	6.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	864	0.1%	0.91	864	0.91	\$99,611.21	\$115.29	0.1%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	9,146	1.3%	9.67	3,033	3.21	\$797,085.48	\$262.80	0.7%	67%	33%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	23,573	3.3%	24.92	4,034	4.26	\$901,554.63	\$223.49	0.8%	83%	17%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	40,572	5.7%	42.89	28,693	30.33	\$7,611,773.66	\$265.28	6.6%	29%	71%
Grand Total	711,518	100.0%	752.17	398,949	421.74	\$115,390,890.82	\$289.24	100.0%	44%	56%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Northern Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	12,679	21.2%	56.90	11,977	53.75	\$225,613.00	\$18.84	2.3%	6%	94%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	5,430	9.1%	24.37	4,757	21.35	\$171,991.61	\$36.16	1.7%	12%	88%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	60	0.1%	0.27	54	0.24	\$752.31	\$13.93	0.0%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	183	0.3%	0.82	160	0.72	\$6,726.15	\$42.04	0.1%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	7,006	11.7%	31.44	7,006	31.44	\$46,142.94	\$6.59	0.5%	0%	100%
Diagnostic Testing	6,466	10.8%	29.02	2,306	10.35	\$6,726,748.00	\$2,917.06	67.6%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	353	0.6%	1.58	301	1.35	\$220,220.04	\$731.63	2.2%	15%	85%
Don't do imaging for uncomplicated headache.	983	1.6%	4.41	379	1.70	\$227,269.17	\$599.65	2.3%	61%	39%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	73	0.1%	0.33	67	0.30	\$60,628.24	\$904.90	0.6%	8%	92%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	42	0.1%	0.19	20	0.09	\$54,290.45	\$2,714.52	0.5%	52%	48%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	176	0.3%	0.79	81	0.36	\$109,742.74	\$1,354.85	1.1%	54%	46%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	90	0.2%	0.40	24	0.11	\$26,543.47	\$1,105.98	0.3%	73%	27%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	2,798	4.7%	12.56	555	2.49	\$4,914,396.13	\$8,854.77	49.4%	80%	20%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	711	1.2%	3.19	108	0.48	\$86,418.91	\$800.18	0.9%	85%	15%
Don't routinely do diagnostic testing in patients with chronic urticaria.	16	0.0%	0.07	16	0.07	\$23,361.41	\$1,460.09	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	202	0.3%	0.91	121	0.54	\$363,079.80	\$3,000.66	3.6%	40%	60%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	74	0.1%	0.33	74	0.33	\$94,815.04	\$1,281.28	1.0%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	311	0.5%	1.40	147	0.66	\$71,541.18	\$486.67	0.7%	53%	47%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$8,144.32	*	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	637	1.1%	2.86	413	1.85	\$466,297.40	\$1,129.05	4.7%	35%	65%
Disease Approach	2,084	3.5%	9.35	1,226	5.50	\$325,853.00	\$265.79	3.3%	41%	59%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	34	0.1%	0.15	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$3,272.49	*	0.0%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	155	0.3%	0.70	155	0.70	\$45,328.75	\$292.44	0.5%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,895	3.2%	8.50	1,071	4.81	\$277,251.96	\$258.87	2.8%	43%	57%
Preoperative evaluation	3,592	6.0%	16.12	3,139	14.09	\$594,963.00	\$189.54	6.0%	13%	87%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	26	0.0%	0.12	26	0.12	\$10,735.47	\$412.90	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	3,295	5.5%	14.79	2,842	12.75	\$492,699.12	\$173.36	5.0%	14%	86%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	271	0.5%	1.22	271	1.22	\$91,527.99	\$337.74	0.9%	0%	100%
Routine FU/Monitoring	410	0.7%	1.84	52	0.23	\$56,892.00	\$1,094.07	0.6%	87%	13%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	175	0.3%	0.79	*	*	\$200.13	*	0.0%	99%	1%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$344.43	*	0.0%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	70	0.1%	0.31	11	0.05	\$11,803.97	\$1,073.09	0.1%	84%	16%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	165	0.3%	0.74	41	0.18	\$44,543.23	\$1,086.42	0.4%	75%	25%
Screening Tests	34,560	57.8%	155.09	10,975	49.25	\$2,019,003.00	\$183.96	20.3%	68%	32%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	781	1.3%	3.50	*	*	\$8,037.73	*	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	23,304	39.0%	104.58	1,689	7.58	\$1,524,361.78	\$902.52	15.3%	93%	7%
Don't perform Pap smears on women with previous hysterectomy	14	0.0%	0.06	12	0.05	\$1,666.01	\$138.83	0.0%	14%	86%
Don't perform Pap smears on women younger than 21	337	0.6%	1.51	296	1.33	\$23,850.38	\$80.58	0.2%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	5,141	8.6%	23.07	5,141	23.07	\$120,839.37	\$23.51	1.2%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	3,075	5.1%	13.80	2,649	11.89	\$203,319.78	\$76.75	2.0%	14%	86%
Don't perform routine general health checks for asymptomatic adults	638	1.1%	2.86	638	2.86	\$90,790.06	\$142.30	0.9%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	40	0.1%	0.18	40	0.18	\$1,731.71	\$43.29	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	245	0.4%	1.10	54	0.24	\$3,810.49	\$70.56	0.0%	78%	22%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	271	0.5%	1.22	46	0.21	\$16,108.57	\$350.19	0.2%	83%	17%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	714	1.2%	3.20	410	1.84	\$24,487.23	\$59.72	0.2%	43%	57%
Grand Total	59,802	100.0%	268.37	29,693	133.25	\$9,949,071.96	\$335.06	100.0%	50%	50%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Northwest Region Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	35,465	4.7%	45.66	34,164	43.99	\$4,600,979.00	\$134.67	4.4%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	29,662	3.9%	38.19	28,471	36.66	\$4,458,327.74	\$156.59	4.3%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	41	0.0%	0.05	40	0.05	\$2,660.49	\$66.51	0.0%	2%	98%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	931	0.1%	1.20	822	1.06	\$103,907.07	\$126.41	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	35	0.0%	0.05	35	0.05	\$1,816.23	\$51.89	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	4,796	0.6%	6.17	4,796	6.17	\$34,267.52	\$7.15	0.0%	0%	100%
Diagnostic Testing	66,642	8.8%	85.80	19,029	24.50	\$33,628,686.00	\$1,767.23	32.1%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	6,865	0.9%	8.84	5,897	7.59	\$2,449,646.09	\$415.41	2.3%	14%	86%
Don't do imaging for uncomplicated headache.	4,815	0.6%	6.20	1,545	1.99	\$1,777,283.92	\$1,150.35	1.7%	68%	32%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	399	0.1%	0.51	386	0.50	\$596,115.22	\$1,544.34	0.6%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	835	0.1%	1.08	285	0.37	\$1,142,339.53	\$4,008.21	1.1%	66%	34%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$343.04	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$113.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	602	0.1%	0.78	342	0.44	\$444,960.94	\$1,301.06	0.4%	43%	57%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,451	0.2%	1.87	544	0.70	\$915,781.42	\$1,683.42	0.9%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	41,111	5.4%	52.93	4,491	5.78	\$17,043,330.09	\$3,795.00	16.3%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,125	0.4%	4.02	1,613	2.08	\$1,326,474.06	\$822.36	1.3%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	126	0.0%	0.16	126	0.16	\$150,998.69	\$1,198.40	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,103	0.3%	2.71	1,064	1.37	\$3,626,986.07	\$3,408.82	3.5%	49%	51%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,394.48	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	335	0.0%	0.43	310	0.40	\$508,343.46	\$1,639.82	0.5%	7%	93%
Don't perform computed tomography scans on children being treated for headache.	636	0.1%	0.82	258	0.33	\$187,483.15	\$726.68	0.2%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$15,865.56	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	4,239	0.6%	5.46	2,168	2.79	\$3,437,226.74	\$1,585.44	3.3%	49%	51%
Disease Approach	7,082	0.9%	9.12	5,637	7.26	\$3,120,576.00	\$553.59	3.0%	20%	80%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	52	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	89	0.0%	0.11	89	0.11	\$192,643.34	\$2,164.53	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	623	0.1%	0.80	623	0.80	\$129,300.87	\$207.55	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	6,318	0.8%	8.13	4,925	6.34	\$2,798,631.62	\$568.25	2.7%	22%	78%
Preoperative evaluation	98,797	13.0%	127.20	79,831	102.78	\$37,541,531.00	\$470.26	35.9%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	61	0.0%	0.08	61	0.08	\$39,296.25	\$644.20	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	93,600	12.3%	120.51	74,691	96.17	\$34,918,808.77	\$467.51	33.4%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	5,136	0.7%	6.61	5,079	6.54	\$2,583,425.81	\$508.65	2.5%	1%	99%
Routine FU/Monitoring	13,361	1.8%	17.20	1,867	2.40	\$2,953,411.00	\$1,581.90	2.8%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,668	0.9%	8.59	172	0.22	\$491,959.64	\$2,860.23	0.5%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	160	0.0%	0.21	146	0.19	\$124,919.57	\$855.61	0.1%	9%	91%
Don't perform routine annual stress testing after coronary artery revascularization.	1,475	0.2%	1.90	228	0.29	\$232,224.39	\$1,018.53	0.2%	85%	15%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,058	0.7%	6.51	1,321	1.70	\$2,104,306.92	\$1,592.97	2.0%	74%	26%
Screening Tests	539,109	70.9%	694.12	94,718	121.95	\$22,849,319.00	\$241.24	21.8%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	13,608	1.8%	17.52	70	0.09	\$106,852.08	\$1,526.46	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	385,153	50.6%	495.90	14,060	18.10	\$6,333,190.01	\$450.44	6.0%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	447	0.1%	0.58	140	0.18	\$28,497.57	\$203.55	0.0%	69%	31%
Don't perform Pap smears on women younger than 21	730	0.1%	0.94	643	0.83	\$138,017.74	\$214.65	0.1%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	20,052	2.6%	25.82	20,052	25.82	\$3,175,213.96	\$158.35	3.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	27,011	3.6%	34.78	21,299	27.42	\$4,480,344.42	\$210.35	4.3%	21%	79%
Don't perform routine general health checks for asymptomatic adults	8,092	1.1%	10.42	8,092	10.42	\$1,375,654.91	\$170.00	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,041	0.7%	6.49	5,041	6.49	\$555,631.46	\$110.22	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	10,228	1.3%	13.17	1,610	2.07	\$421,456.66	\$261.77	0.4%	84%	16%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	18,532	2.4%	23.86	4,512	5.81	\$1,775,910.62	\$393.60	1.7%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	50,215	6.6%	64.65	19,199	24.72	\$4,458,549.16	\$232.23	4.3%	62%	38%
Grand Total	760,474	100.0%	979.13	235,264	302.91	\$104,694,501.22	\$445.01	100.0%	69%	31%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 Northwest Region Wasteful Services- Commercial

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	22,545	8.3%	60.94	21,956	59.35	\$4,111,089.00	\$187.24	8.7%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	21,644	7.9%	58.51	21,108	57.06	\$4,025,384.16	\$190.70	8.6%	2%	98%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	21	0.0%	0.06	20	0.05	\$1,788.86	\$89.44	0.0%	5%	95%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	556	0.2%	1.50	504	1.36	\$80,241.54	\$159.21	0.2%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$890.40	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	324	0.1%	0.88	324	0.88	\$2,784.27	\$8.59	0.0%	0%	100%
Diagnostic Testing	20,212	7.4%	54.64	7,832	21.17	\$11,885,316.00	\$1,517.53	25.3%	61%	39%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,400	1.2%	9.19	3,128	8.46	\$1,327,588.08	\$424.42	2.8%	8%	92%
Don't do imaging for uncomplicated headache.	1,969	0.7%	5.32	874	2.36	\$1,280,667.54	\$1,465.29	2.7%	56%	44%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	128	0.0%	0.35	124	0.34	\$255,648.98	\$2,061.69	0.5%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	114	0.0%	0.31	61	0.16	\$296,594.18	\$4,862.20	0.6%	46%	54%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$343.04	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$113.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	200	0.1%	0.54	111	0.30	\$127,606.06	\$1,149.60	0.3%	45%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	345	0.1%	0.93	126	0.34	\$211,693.10	\$1,680.10	0.5%	63%	37%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	10,336	3.8%	27.94	1,330	3.60	\$4,711,049.41	\$3,542.14	10.0%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,493	0.5%	4.04	804	2.17	\$619,272.24	\$770.24	1.3%	46%	54%
Don't routinely do diagnostic testing in patients with chronic urticaria.	67	0.0%	0.18	67	0.18	\$72,290.26	\$1,078.96	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	802	0.3%	2.17	362	0.98	\$1,086,445.97	\$3,001.23	2.3%	55%	45%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	117	0.0%	0.32	117	0.32	\$300,632.05	\$2,569.50	0.6%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	226	0.1%	0.61	82	0.22	\$109,362.94	\$1,333.69	0.2%	64%	36%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$6,684.55	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,015	0.4%	2.74	646	1.75	\$1,479,323.38	\$2,289.97	3.1%	36%	64%
Disease Approach	3,709	1.4%	10.03	3,352	9.06	\$2,419,824.00	\$721.90	5.1%	10%	90%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	22	0.0%	0.06	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	46	0.0%	0.12	46	0.12	\$130,819.82	\$2,843.91	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	232	0.1%	0.63	232	0.63	\$49,448.93	\$213.14	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	3,409	1.3%	9.22	3,074	8.31	\$2,239,555.26	\$728.55	4.8%	10%	90%
Preoperative evaluation	30,611	11.2%	82.75	24,992	67.56	\$12,140,043.00	\$485.76	25.8%	18%	82%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	33	0.0%	0.09	33	0.09	\$15,556.13	\$471.40	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	28,108	10.3%	75.98	22,489	60.79	\$11,070,753.06	\$492.27	23.6%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	2,470	0.9%	6.68	2,470	6.68	\$1,053,733.71	\$426.61	2.2%	0%	100%
Routine FU/Monitoring	2,475	0.9%	6.69	464	1.25	\$541,271.00	\$1,166.53	1.2%	81%	19%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	991	0.4%	2.68	52	0.14	\$77,937.53	\$1,498.80	0.2%	95%	5%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	45	0.0%	0.12	45	0.12	\$42,267.29	\$939.27	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	230	0.1%	0.62	51	0.14	\$32,379.71	\$634.90	0.1%	78%	22%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,209	0.4%	3.27	316	0.85	\$388,686.45	\$1,230.02	0.8%	74%	26%
Screening Tests	192,792	70.8%	521.16	65,141	176.09	\$15,907,568.00	\$244.20	33.8%	66%	34%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	4,506	1.7%	12.18	43	0.12	\$25,100.67	\$583.74	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	113,035	41.5%	305.56	11,716	31.67	\$4,472,954.34	\$381.78	9.5%	90%	10%
Don't perform Pap smears on women with previous hysterectomy	212	0.1%	0.57	106	0.29	\$23,205.44	\$218.92	0.0%	50%	50%
Don't perform Pap smears on women younger than 21	587	0.2%	1.59	514	1.39	\$125,438.22	\$244.04	0.3%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	13,463	4.9%	36.39	13,463	36.39	\$2,359,498.24	\$175.26	5.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	22,540	8.3%	60.93	17,923	48.45	\$4,170,242.24	\$232.68	8.9%	20%	80%
Don't perform routine general health checks for asymptomatic adults	7,700	2.8%	20.81	7,700	20.81	\$1,325,145.72	\$172.10	2.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	609	0.2%	1.65	609	1.65	\$91,073.96	\$149.55	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	3,281	1.2%	8.87	786	2.12	\$229,742.62	\$292.29	0.5%	76%	24%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	8,836	3.2%	23.89	1,069	2.89	\$297,383.39	\$278.19	0.6%	88%	12%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	18,023	6.6%	48.72	11,212	30.31	\$2,787,783.34	\$248.64	5.9%	38%	62%
Grand Total	272,364	100.0%	736.26	123,757	334.54	\$47,005,111.02	\$379.82	100.0%	55%	45%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Northwest Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	12,706	19.9%	66.61	12,003	62.92	\$469,577.00	\$39.12	5.4%	6%	94%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	7,819	12.2%	40.99	7,172	37.60	\$413,240.57	\$57.62	4.8%	8%	92%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	20	0.0%	0.10	20	0.10	\$871.63	\$43.58	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	370	0.6%	1.94	314	1.65	\$23,055.81	\$73.43	0.3%	15%	85%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	25	0.0%	0.13	25	0.13	\$925.83	\$37.03	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	4,472	7.0%	23.44	4,472	23.44	\$31,483.25	\$7.04	0.4%	0%	100%
Diagnostic Testing	7,098	11.1%	37.21	2,445	12.82	\$4,868,303.00	\$1,991.13	56.3%	66%	34%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	475	0.7%	2.49	441	2.31	\$223,837.84	\$507.57	2.6%	7%	93%
Don't do imaging for uncomplicated headache.	1,089	1.7%	5.71	460	2.41	\$274,468.31	\$596.67	3.2%	58%	42%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	50	0.1%	0.26	50	0.26	\$46,314.80	\$926.30	0.5%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	84	0.1%	0.44	38	0.20	\$92,744.63	\$2,440.65	1.1%	55%	45%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	172	0.3%	0.90	95	0.50	\$117,585.69	\$1,237.74	1.4%	45%	55%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	87	0.1%	0.46	35	0.18	\$48,806.65	\$1,394.48	0.6%	60%	40%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,198	5.0%	16.76	441	2.31	\$3,237,294.12	\$7,340.80	37.4%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	584	0.9%	3.06	104	0.55	\$84,183.13	\$809.45	1.0%	82%	18%
Don't routinely do diagnostic testing in patients with chronic urticaria.	19	0.0%	0.10	19	0.10	\$6,312.04	\$332.21	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	296	0.5%	1.55	155	0.81	\$214,843.88	\$1,386.09	2.5%	48%	52%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	118	0.2%	0.62	118	0.62	\$108,233.12	\$917.23	1.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	410	0.6%	2.15	176	0.92	\$78,120.21	\$443.86	0.9%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$9,181.01	*	0.1%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	516	0.8%	2.70	313	1.64	\$325,920.96	\$1,041.28	3.8%	39%	61%
Disease Approach	3,139	4.9%	16.46	2,065	10.83	\$563,735.00	\$273.00	6.5%	34%	66%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	30	0.0%	0.16	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	12	0.0%	0.06	12	0.06	\$17,021.26	\$1,418.44	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	385	0.6%	2.02	385	2.02	\$79,031.95	\$205.28	0.9%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	2,712	4.2%	14.22	1,668	8.74	\$467,682.08	\$280.38	5.4%	38%	62%
Preoperative evaluation	5,762	9.0%	30.21	4,918	25.78	\$1,198,034.00	\$243.60	13.9%	15%	85%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	15	0.0%	0.08	15	0.08	\$13,404.43	\$893.63	0.2%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	5,284	8.3%	27.70	4,440	23.28	\$1,080,950.24	\$243.46	12.5%	16%	84%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	463	0.7%	2.43	463	2.43	\$103,678.98	\$223.93	1.2%	0%	100%
Routine FU/Monitoring	497	0.8%	2.61	36	0.19	\$48,295.00	\$1,341.54	0.6%	93%	7%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	234	0.4%	1.23	*	*	\$1,726.13	*	0.0%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	*	*	*	*	*	\$12,133.21	*	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	78	0.1%	0.41	*	*	\$3,718.49	*	0.0%	91%	9%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	185	0.3%	0.97	36	0.19	\$30,717.45	\$853.26	0.4%	81%	19%
Screening Tests	34,629	54.2%	181.53	7,231	37.91	\$1,501,663.00	\$207.67	17.4%	79%	21%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	868	1.4%	4.55	12	0.06	\$68,947.67	\$5,745.64	0.8%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	26,013	40.7%	136.37	1,207	6.33	\$934,757.25	\$774.45	10.8%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	17	0.0%	0.09	*	*	\$1,300.22	*	0.0%	53%	47%
Don't perform Pap smears on women younger than 21	139	0.2%	0.73	126	0.66	\$12,113.94	\$96.14	0.1%	9%	91%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,808	2.8%	9.48	1,808	9.48	\$77,814.43	\$43.04	0.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	4,452	7.0%	23.34	3,362	17.62	\$307,228.17	\$91.38	3.6%	24%	76%
Don't perform routine general health checks for asymptomatic adults	331	0.5%	1.74	331	1.74	\$45,649.53	\$137.91	0.5%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	12	0.0%	0.06	12	0.06	\$630.67	\$52.56	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	194	0.3%	1.02	37	0.19	\$4,002.37	\$108.17	0.0%	81%	19%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	362	0.6%	1.90	49	0.26	\$8,255.09	\$168.47	0.1%	86%	14%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	433	0.7%	2.27	287	1.50	\$40,963.57	\$142.73	0.5%	34%	66%
Grand Total	63,840	100.0%	334.66	28,727	150.59	\$8,649,150.61	\$301.08	100.0%	55%	45%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Southwest Region Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	57,347	5.7%	62.21	55,302	59.99	\$4,872,363.00	\$88.10	4.2%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	41,049	4.1%	44.53	39,146	42.46	\$4,637,271.02	\$118.46	4.0%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	22	0.0%	0.02	21	0.02	\$1,323.00	\$63.00	0.0%	5%	95%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,153	0.1%	1.25	1,012	1.10	\$139,598.03	\$137.94	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	32	0.0%	0.03	32	0.03	\$2,247.12	\$70.22	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	15,091	1.5%	16.37	15,091	16.37	\$91,923.82	\$6.09	0.1%	0%	100%
Diagnostic Testing	85,755	8.5%	93.02	24,656	26.75	\$38,820,676.00	\$1,574.49	33.4%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	9,011	0.9%	9.77	7,710	8.36	\$2,798,488.94	\$362.97	2.4%	14%	86%
Don't do imaging for uncomplicated headache.	6,036	0.6%	6.55	1,903	2.06	\$1,633,243.76	\$858.25	1.4%	68%	32%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	627	0.1%	0.68	586	0.64	\$616,740.63	\$1,052.46	0.5%	7%	93%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,112	0.1%	1.21	408	0.44	\$1,475,247.05	\$3,615.80	1.3%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	13	0.0%	0.01	13	0.01	\$318.48	\$24.50	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	683	0.1%	0.74	399	0.43	\$314,923.54	\$789.28	0.3%	42%	58%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,999	0.2%	2.17	810	0.88	\$965,125.43	\$1,191.51	0.8%	59%	41%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	52,611	5.2%	57.07	5,535	6.00	\$21,609,661.53	\$3,904.18	18.6%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,775	0.4%	4.10	1,893	2.05	\$1,136,216.56	\$600.22	1.0%	50%	50%
Don't routinely do diagnostic testing in patients with chronic urticaria.	107	0.0%	0.12	107	0.12	\$96,260.22	\$899.63	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,290	0.3%	3.57	1,744	1.89	\$3,685,731.81	\$2,113.38	3.2%	47%	53%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	16	0.0%	0.02	16	0.02	\$7,952.22	\$497.01	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	573	0.1%	0.62	539	0.58	\$721,067.80	\$1,337.79	0.6%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	678	0.1%	0.74	284	0.31	\$145,518.39	\$512.39	0.1%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$7,038.72	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,224	0.5%	5.67	2,709	2.94	\$3,607,141.06	\$1,331.54	3.1%	48%	52%
Disease Approach	16,854	1.7%	18.28	12,576	13.64	\$3,967,854.00	\$315.51	3.4%	25%	75%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	41	0.0%	0.04	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	124	0.0%	0.13	124	0.13	\$244,153.47	\$1,968.98	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	1,336	0.1%	1.45	1,336	1.45	\$190,247.84	\$142.40	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	15,353	1.5%	16.65	11,116	12.06	\$3,533,452.52	\$317.87	3.0%	28%	72%
Preoperative evaluation	129,985	12.9%	141.00	104,024	112.84	\$44,183,629.00	\$424.74	38.0%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	53	0.0%	0.06	53	0.06	\$19,615.33	\$370.10	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	123,308	12.2%	133.76	97,398	105.65	\$40,012,748.46	\$410.82	34.4%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,624	0.7%	7.19	6,573	7.13	\$4,151,264.94	\$631.56	3.6%	1%	99%
Routine FU/Monitoring	15,881	1.6%	17.23	1,476	1.60	\$2,164,232.00	\$1,466.28	1.9%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	8,333	0.8%	9.04	172	0.19	\$154,543.14	\$898.51	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	161	0.0%	0.17	147	0.16	\$101,596.77	\$691.13	0.1%	9%	91%
Don't perform routine annual stress testing after coronary artery revascularization.	1,691	0.2%	1.83	181	0.20	\$235,272.27	\$1,299.85	0.2%	89%	11%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,696	0.6%	6.18	976	1.06	\$1,672,819.72	\$1,713.95	1.4%	83%	17%
Screening Tests	702,178	69.7%	761.70	97,525	105.79	\$22,307,454.00	\$228.74	19.2%	86%	14%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	16,575	1.6%	17.98	76	0.08	\$70,468.61	\$927.22	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	517,372	51.3%	561.23	13,592	14.74	\$6,548,720.76	\$481.81	5.6%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	663	0.1%	0.72	188	0.20	\$33,309.50	\$177.18	0.0%	72%	28%
Don't perform Pap smears on women younger than 21	1,200	0.1%	1.30	995	1.08	\$153,315.96	\$154.09	0.1%	17%	83%
Don't perform population based screening for 25-OH-Vitamin D deficiency	15,188	1.5%	16.48	15,188	16.48	\$2,038,007.39	\$134.19	1.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	26,247	2.6%	28.47	19,252	20.88	\$3,318,655.18	\$172.38	2.9%	27%	73%
Don't perform routine general health checks for asymptomatic adults	8,481	0.8%	9.20	8,481	9.20	\$1,339,856.01	\$157.98	1.2%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	6,454	0.6%	7.00	6,454	7.00	\$679,776.11	\$105.33	0.6%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	19,248	1.9%	20.88	2,505	2.72	\$503,486.65	\$200.99	0.4%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	28,214	2.8%	30.61	7,398	8.03	\$2,701,205.53	\$365.13	2.3%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	62,536	6.2%	67.84	23,396	25.38	\$4,920,651.88	\$210.32	4.2%	63%	37%
Grand Total	1,008,009	100.0%	1093.46	295,568	320.62	\$116,316,207.17	\$393.53	100.0%	71%	29%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Southwest Region Wasteful Services- Commercial

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	21,928	8.3%	73.00	21,385	71.19	\$3,592,058.00	\$167.97	9.6%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	20,913	7.9%	69.62	20,417	67.97	\$3,492,497.22	\$171.06	9.4%	2%	98%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$715.09	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	475	0.2%	1.58	428	1.42	\$96,921.48	\$226.45	0.3%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$1,008.57	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	540	0.2%	1.80	540	1.80	\$916.10	\$1.70	0.0%	0%	100%
Diagnostic Testing	19,629	7.5%	65.34	7,314	24.35	\$9,570,332.00	\$1,308.49	25.7%	63%	37%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	3,329	1.3%	11.08	3,002	9.99	\$1,028,911.66	\$342.74	2.8%	10%	90%
Don't do imaging for uncomplicated headache.	1,570	0.6%	5.23	632	2.10	\$889,524.62	\$1,407.48	2.4%	60%	40%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	131	0.0%	0.44	124	0.41	\$213,306.53	\$1,720.21	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	151	0.1%	0.50	76	0.25	\$234,270.27	\$3,082.50	0.6%	50%	50%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	11	0.0%	0.04	11	0.04	\$305.64	\$27.79	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	156	0.1%	0.52	94	0.31	\$94,697.68	\$1,007.42	0.3%	40%	60%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	330	0.1%	1.10	124	0.41	\$164,243.46	\$1,324.54	0.4%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	10,511	4.0%	34.99	1,312	4.37	\$4,324,698.66	\$3,296.26	11.6%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,377	0.5%	4.58	776	2.58	\$369,838.84	\$476.60	1.0%	44%	56%
Don't routinely do diagnostic testing in patients with chronic urticaria.	52	0.0%	0.17	52	0.17	\$53,271.63	\$1,024.45	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	821	0.3%	2.73	389	1.29	\$849,126.03	\$2,182.84	2.3%	53%	47%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,381.84	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	117	0.0%	0.39	117	0.39	\$264,765.45	\$2,262.95	0.7%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	154	0.1%	0.51	66	0.22	\$67,308.98	\$1,019.83	0.2%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	919	0.3%	3.06	539	1.79	\$1,012,680.72	\$1,878.81	2.7%	41%	59%
Disease Approach	4,470	1.7%	14.88	4,096	13.64	\$1,775,537.00	\$433.48	4.8%	8%	92%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	13	0.0%	0.04	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	46	0.0%	0.15	46	0.15	\$130,680.65	\$2,840.88	0.4%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	303	0.1%	1.01	303	1.01	\$29,403.25	\$97.04	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	4,108	1.6%	13.68	3,747	12.47	\$1,615,452.81	\$431.13	4.3%	9%	91%
Preoperative evaluation	30,542	11.6%	101.67	24,632	82.00	\$10,744,055.00	\$436.18	28.8%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	16	0.0%	0.05	16	0.05	\$7,446.09	\$465.38	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	28,367	10.8%	94.43	22,457	74.76	\$9,470,791.49	\$421.73	25.4%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	2,159	0.8%	7.19	2,159	7.19	\$1,265,817.00	\$586.30	3.4%	0%	100%
Routine FU/Monitoring	2,608	1.0%	8.68	341	1.14	\$389,520.00	\$1,142.29	1.0%	87%	13%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,161	0.4%	3.86	40	0.13	\$27,257.01	\$681.43	0.1%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	38	0.0%	0.13	38	0.13	\$33,792.96	\$889.29	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	231	0.1%	0.77	48	0.16	\$29,188.29	\$608.09	0.1%	79%	21%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,178	0.4%	3.92	215	0.72	\$299,282.21	\$1,392.01	0.8%	82%	18%
Screening Tests	184,029	69.9%	612.62	51,688	172.07	\$11,182,593.00	\$216.35	30.0%	72%	28%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	4,395	1.7%	14.63	12	0.04	\$5,808.49	\$484.04	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	112,973	42.9%	376.08	8,436	28.08	\$2,883,750.09	\$341.84	7.7%	93%	7%
Don't perform Pap smears on women with previous hysterectomy	227	0.1%	0.76	111	0.37	\$23,298.85	\$209.90	0.1%	51%	49%
Don't perform Pap smears on women younger than 21	489	0.2%	1.63	396	1.32	\$88,264.86	\$222.89	0.2%	19%	81%
Don't perform population based screening for 25-OH-Vitamin D deficiency	8,843	3.4%	29.44	8,843	29.44	\$1,276,019.69	\$144.30	3.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	17,969	6.8%	59.82	13,527	45.03	\$2,745,158.14	\$202.94	7.4%	25%	75%
Don't perform routine general health checks for asymptomatic adults	7,577	2.9%	25.22	7,577	25.22	\$1,240,066.33	\$163.66	3.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	621	0.2%	2.07	621	2.07	\$89,968.05	\$144.88	0.2%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	3,984	1.5%	13.26	856	2.85	\$197,513.71	\$230.74	0.5%	79%	21%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	9,811	3.7%	32.66	1,117	3.72	\$410,547.44	\$367.54	1.1%	89%	11%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	17,140	6.5%	57.06	10,192	33.93	\$2,222,197.23	\$218.03	6.0%	41%	59%
Grand Total	263,226	100.0%	876.26	109,476	364.44	\$37,254,095.11	\$340.29	100.0%	58%	42%

Report based on APCD claims data for Commercial coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 Southwest Region Wasteful Services- Medicaid

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	33,555	24.2%	112.13	32,101	107.27	\$1,089,564.00	\$33.94	7.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	18,327	13.2%	61.24	16,957	56.67	\$956,656.76	\$56.42	6.5%	7%	93%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	14	0.0%	0.05	13	0.04	\$518.03	\$39.85	0.0%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	636	0.5%	2.13	553	1.85	\$40,142.55	\$72.59	0.3%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	27	0.0%	0.09	27	0.09	\$1,238.55	\$45.87	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	14,551	10.5%	48.63	14,551	48.63	\$91,007.72	\$6.25	0.6%	0%	100%
Diagnostic Testing	13,562	9.8%	45.32	4,804	16.05	\$7,315,828.00	\$1,522.86	50.0%	65%	35%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,133	0.8%	3.79	1,056	3.53	\$340,677.68	\$322.61	2.3%	7%	93%
Don't do imaging for uncomplicated headache.	1,833	1.3%	6.13	800	2.67	\$320,952.73	\$401.19	2.2%	56%	44%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	136	0.1%	0.45	128	0.43	\$82,525.33	\$644.73	0.6%	6%	94%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	79	0.1%	0.26	35	0.12	\$98,005.83	\$2,800.17	0.7%	56%	44%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$12.84	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	247	0.2%	0.83	139	0.46	\$33,085.11	\$238.02	0.2%	44%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	191	0.1%	0.64	81	0.27	\$72,900.16	\$900.00	0.5%	58%	42%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	6,419	4.6%	21.45	928	3.10	\$5,012,744.39	\$5,401.66	34.3%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	1,101	0.8%	3.68	179	0.60	\$131,461.76	\$734.42	0.9%	84%	16%
Don't routinely do diagnostic testing in patients with chronic urticaria.	17	0.0%	0.06	17	0.06	\$8,830.83	\$519.46	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	757	0.5%	2.53	411	1.37	\$394,532.40	\$959.93	2.7%	46%	54%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	238	0.2%	0.80	238	0.80	\$195,608.68	\$821.89	1.3%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	524	0.4%	1.75	218	0.73	\$78,209.41	\$358.76	0.5%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$7,038.72	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	887	0.6%	2.96	574	1.92	\$539,242.18	\$939.45	3.7%	35%	65%
Disease Approach	10,056	7.2%	33.60	6,341	21.19	\$1,570,733.00	\$247.71	10.7%	37%	63%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	28	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	27	0.0%	0.09	27	0.09	\$30,675.41	\$1,136.13	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	964	0.7%	3.22	964	3.22	\$150,243.17	\$155.85	1.0%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	9,037	6.5%	30.20	5,350	17.88	\$1,389,814.08	\$259.78	9.5%	41%	59%
Preoperative evaluation	11,036	8.0%	36.88	9,408	31.44	\$1,657,365.00	\$176.17	11.3%	15%	85%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	28	0.0%	0.09	28	0.09	\$8,069.94	\$288.21	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	9,731	7.0%	32.52	8,103	27.08	\$1,489,695.03	\$183.84	10.2%	17%	83%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,277	0.9%	4.27	1,277	4.27	\$159,599.68	\$124.98	1.1%	0%	100%
Routine FU/Monitoring	744	0.5%	2.49	61	0.20	\$37,788.00	\$619.48	0.3%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	347	0.3%	1.16	*	*	\$1,116.30	*	0.0%	99%	1%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	19	0.0%	0.06	19	0.06	\$8,463.78	\$445.46	0.1%	0%	100%
Don't perform routine annual stress testing after coronary artery revascularization.	106	0.1%	0.35	*	*	\$4,214.66	*	0.0%	92%	8%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	272	0.2%	0.91	42	0.14	\$23,993.74	\$571.28	0.2%	85%	15%
Screening Tests	69,752	50.3%	233.09	12,939	43.24	\$2,952,179.00	\$228.16	20.2%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,754	1.3%	5.86	54	0.18	\$49,849.09	\$923.13	0.3%	97%	3%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	54,101	39.0%	180.79	3,593	12.01	\$1,996,726.09	\$555.73	13.7%	93%	7%
Don't perform Pap smears on women with previous hysterectomy	73	0.1%	0.24	37	0.12	\$4,675.11	\$126.35	0.0%	49%	51%
Don't perform Pap smears on women younger than 21	706	0.5%	2.36	595	1.99	\$64,486.65	\$108.38	0.4%	16%	84%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,590	1.1%	5.31	1,590	5.31	\$94,997.74	\$59.75	0.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	8,127	5.9%	27.16	5,591	18.68	\$548,685.27	\$98.14	3.8%	31%	69%
Don't perform routine general health checks for asymptomatic adults	439	0.3%	1.47	439	1.47	\$44,330.07	\$100.98	0.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	26	0.0%	0.09	26	0.09	\$796.70	\$30.64	0.0%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	491	0.4%	1.64	84	0.28	\$7,834.86	\$93.27	0.1%	83%	17%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	1,210	0.9%	4.04	170	0.57	\$32,884.95	\$193.44	0.2%	86%	14%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	1,235	0.9%	4.13	760	2.54	\$106,911.99	\$140.67	0.7%	38%	62%
Grand Total	138,716	100.0%	463.55	65,679	219.48	\$14,623,455.97	\$222.65	100.0%	53%	47%

Report based on claims data for VA Medicaid FFS as well as Medicaid Managed Care coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 1 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	4,845	4.6%	45.39	4,696	43.99	\$485,733.00	\$103.44	3.7%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	3,838	3.7%	35.95	3,704	34.70	\$469,726.45	\$126.82	3.5%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$62.59	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	124	0.1%	1.16	109	1.02	\$10,107.40	\$92.73	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$223.59	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	883	0.8%	8.27	883	8.27	\$5,613.33	\$6.36	0.0%	0%	100%
Diagnostic Testing	8,610	8.2%	80.65	2,554	23.92	\$3,476,436.00	\$1,361.17	26.3%	70%	30%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	969	0.9%	9.08	818	7.66	\$280,139.69	\$342.47	2.1%	16%	84%
Don't do imaging for uncomplicated headache.	607	0.6%	5.69	195	1.83	\$229,687.51	\$1,177.88	1.7%	68%	32%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	52	0.0%	0.49	50	0.47	\$72,642.89	\$1,452.86	0.5%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	116	0.1%	1.09	50	0.47	\$133,209.35	\$2,664.19	1.0%	57%	43%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	61	0.1%	0.57	34	0.32	\$33,017.29	\$971.10	0.2%	44%	56%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	186	0.2%	1.74	78	0.73	\$97,477.93	\$1,249.72	0.7%	58%	42%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	5,365	5.1%	50.26	579	5.42	\$1,697,133.71	\$2,931.15	12.8%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	283	0.3%	2.65	147	1.38	\$77,397.19	\$526.51	0.6%	48%	52%
Don't routinely do diagnostic testing in patients with chronic urticaria.	11	0.0%	0.10	11	0.10	\$20,808.76	\$1,891.71	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	330	0.3%	3.09	197	1.85	\$323,332.21	\$1,641.28	2.4%	40%	60%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	77	0.1%	0.72	76	0.71	\$124,315.84	\$1,635.73	0.9%	1%	99%
Don't perform computed tomography scans on children being treated for headache.	66	0.1%	0.62	29	0.27	\$20,875.46	\$719.84	0.2%	56%	44%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$2,690.96	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	487	0.5%	4.56	290	2.72	\$363,706.85	\$1,254.16	2.7%	40%	60%
Disease Approach	1,211	1.2%	11.34	972	9.11	\$489,898.00	\$504.01	3.7%	20%	80%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	19	0.0%	0.18	19	0.18	\$45,308.28	\$2,384.65	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	161	0.2%	1.51	161	1.51	\$19,596.27	\$121.72	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,031	1.0%	9.66	792	7.42	\$424,993.05	\$536.61	3.2%	23%	77%
Preoperative evaluation	14,980	14.4%	140.33	12,341	115.60	\$6,125,523.00	\$496.36	46.3%	18%	82%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$1,035.20	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	14,089	13.5%	131.98	11,451	107.27	\$5,394,400.30	\$471.09	40.7%	19%	81%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	891	0.9%	8.35	890	8.34	\$730,087.08	\$820.32	5.5%	0%	100%
Routine FU/Monitoring	1,957	1.9%	18.33	147	1.38	\$200,920.00	\$1,366.80	1.5%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,121	1.1%	10.50	30	0.28	\$8,408.48	\$280.28	0.1%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	12	0.0%	0.11	11	0.10	\$14,718.11	\$1,338.01	0.1%	8%	92%
Don't perform routine annual stress testing after coronary artery revascularization.	204	0.2%	1.91	18	0.17	\$19,167.09	\$1,064.84	0.1%	91%	9%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	620	0.6%	5.81	88	0.82	\$158,626.56	\$1,802.57	1.2%	86%	14%
Screening Tests	72,745	69.7%	681.44	11,729	109.87	\$2,462,099.00	\$209.92	18.6%	84%	16%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,943	1.9%	18.20	*	*	\$2,647.33	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	52,709	50.5%	493.75	1,848	17.31	\$607,519.81	\$328.74	4.6%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	71	0.1%	0.67	25	0.23	\$4,606.35	\$184.25	0.0%	65%	35%
Don't perform Pap smears on women younger than 21	121	0.1%	1.13	101	0.95	\$17,225.90	\$170.55	0.1%	17%	83%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,592	1.5%	14.91	1,592	14.91	\$174,119.07	\$109.37	1.3%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	3,518	3.4%	32.95	2,609	24.44	\$487,349.45	\$186.80	3.7%	26%	74%
Don't perform routine general health checks for asymptomatic adults	1,426	1.4%	13.36	1,426	13.36	\$237,351.82	\$166.45	1.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	507	0.5%	4.75	507	4.75	\$43,734.75	\$86.26	0.3%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	1,141	1.1%	10.69	216	2.02	\$60,023.40	\$277.89	0.5%	81%	19%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,647	2.5%	24.80	642	6.01	\$286,486.36	\$446.24	2.2%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	7,070	6.8%	66.23	2,763	25.88	\$541,034.30	\$195.81	4.1%	61%	39%
Grand Total	104,367	100.0%	977.66	32,461	304.08	\$13,240,607.96	\$407.89	100.0%	69%	31%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 2 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,211	2.4%	23.31	3,132	22.74	\$490,091.00	\$156.48	3.3%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,666	2.0%	19.35	2,597	18.85	\$476,650.89	\$183.54	3.2%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$235.94	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	97	0.1%	0.70	87	0.63	\$7,626.48	\$87.66	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$29.57	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	448	0.3%	3.25	448	3.25	\$5,548.25	\$12.38	0.0%	0%	100%
Diagnostic Testing	8,109	6.1%	58.86	2,285	16.59	\$3,560,307.00	\$1,558.12	24.0%	72%	28%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	765	0.6%	5.55	643	4.67	\$320,796.55	\$498.91	2.2%	16%	84%
Don't do imaging for uncomplicated headache.	596	0.4%	4.33	166	1.20	\$218,168.66	\$1,314.27	1.5%	72%	28%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	39	0.0%	0.28	38	0.28	\$67,006.03	\$1,763.32	0.5%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	134	0.1%	0.97	54	0.39	\$199,505.03	\$3,694.54	1.3%	60%	40%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$113.94	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	124	0.1%	0.90	95	0.69	\$119,490.90	\$1,257.80	0.8%	23%	77%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	124	0.1%	0.90	31	0.23	\$69,249.90	\$2,233.87	0.5%	75%	25%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,620	3.5%	33.54	422	3.06	\$1,287,858.35	\$3,051.80	8.7%	91%	9%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	674	0.5%	4.89	360	2.61	\$284,994.80	\$791.65	1.9%	47%	53%
Don't routinely do diagnostic testing in patients with chronic urticaria.	36	0.0%	0.26	36	0.26	\$28,345.97	\$787.39	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	269	0.2%	1.95	120	0.87	\$456,517.90	\$3,804.32	3.1%	55%	45%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$483.14	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	20	0.0%	0.15	19	0.14	\$33,699.17	\$1,773.64	0.2%	5%	95%
Don't perform computed tomography scans on children being treated for headache.	63	0.0%	0.46	26	0.19	\$20,081.76	\$772.38	0.1%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	0	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	645	0.5%	4.68	275	2.00	\$453,994.42	\$1,650.89	3.1%	57%	43%
Disease Approach	1,057	0.8%	7.67	730	5.30	\$415,842.00	\$569.65	2.8%	31%	69%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	12	0.0%	0.09	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	19	0.0%	0.14	19	0.14	\$40,039.21	\$2,107.33	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	72	0.1%	0.52	72	0.52	\$11,950.61	\$165.98	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	954	0.7%	6.93	639	4.64	\$363,852.07	\$569.41	2.4%	33%	67%
Preoperative evaluation	17,944	13.5%	130.26	14,513	105.35	\$5,496,960.00	\$378.76	37.0%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$7,901.41	*	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	16,952	12.8%	123.05	13,533	98.24	\$5,042,406.29	\$372.60	33.9%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	992	0.7%	7.20	980	7.11	\$446,652.52	\$455.77	3.0%	1%	99%
Routine FU/Monitoring	1,855	1.4%	13.47	188	1.36	\$234,577.00	\$1,247.75	1.6%	90%	10%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,044	0.8%	7.58	39	0.28	\$16,991.01	\$435.67	0.1%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	17	0.0%	0.12	16	0.12	\$16,801.30	\$1,050.08	0.1%	6%	94%
Don't perform routine annual stress testing after coronary artery revascularization.	169	0.1%	1.23	22	0.16	\$32,925.13	\$1,496.60	0.2%	87%	13%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	625	0.5%	4.54	111	0.81	\$167,859.60	\$1,512.25	1.1%	82%	18%
Screening Tests	100,499	75.7%	729.52	17,635	128.01	\$4,659,927.00	\$264.24	31.4%	82%	18%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,844	1.4%	13.39	15	0.11	\$8,317.36	\$554.49	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	71,817	54.1%	521.32	3,132	22.74	\$1,276,350.70	\$407.52	8.6%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	57	0.0%	0.41	19	0.14	\$4,842.06	\$254.85	0.0%	67%	33%
Don't perform Pap smears on women younger than 21	121	0.1%	0.88	109	0.79	\$30,688.97	\$281.55	0.2%	10%	90%
Don't perform population based screening for 25-OH-Vitamin D deficiency	3,033	2.3%	22.02	3,033	22.02	\$550,271.95	\$181.43	3.7%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	5,565	4.2%	40.40	4,324	31.39	\$1,121,817.91	\$259.44	7.6%	22%	78%
Don't perform routine general health checks for asymptomatic adults	1,784	1.3%	12.95	1,784	12.95	\$318,942.97	\$178.78	2.1%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	829	0.6%	6.02	829	6.02	\$112,938.17	\$136.23	0.8%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	2,472	1.9%	17.94	330	2.40	\$90,696.34	\$274.84	0.6%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,844	2.1%	20.64	772	5.60	\$245,046.65	\$317.42	1.6%	73%	27%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	10,133	7.6%	73.56	3,288	23.87	\$900,013.50	\$273.73	6.1%	68%	32%
Grand Total	132,695	100.0%	963.23	38,503	279.49	\$14,857,703.38	\$385.88	100.0%	71%	29%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 3 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	5,146	5.2%	70.15	4,984	67.94	\$351,490.00	\$70.52	3.5%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,767	2.8%	37.72	2,615	35.65	\$327,449.58	\$125.22	3.2%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$363.70	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	93	0.1%	1.27	83	1.13	\$5,876.47	\$70.80	0.1%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$184.51	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,286	2.3%	31.16	2,286	31.16	\$17,616.01	\$7.71	0.2%	0%	100%
Diagnostic Testing	7,651	7.8%	104.30	2,489	33.93	\$3,969,172.00	\$1,594.69	39.1%	67%	33%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,086	1.1%	14.80	970	13.22	\$314,648.32	\$324.38	3.1%	11%	89%
Don't do imaging for uncomplicated headache.	494	0.5%	6.73	183	2.49	\$144,829.19	\$791.42	1.4%	63%	37%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	62	0.1%	0.85	59	0.80	\$61,728.45	\$1,046.24	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	78	0.1%	1.06	28	0.38	\$68,946.10	\$2,462.36	0.7%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	107	0.1%	1.46	79	1.08	\$40,409.91	\$511.52	0.4%	26%	74%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	231	0.2%	3.15	115	1.57	\$100,344.60	\$872.56	1.0%	50%	50%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,382	4.5%	59.73	372	5.07	\$2,333,678.08	\$6,273.33	23.0%	92%	8%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	369	0.4%	5.03	173	2.36	\$139,750.68	\$807.81	1.4%	53%	47%
Don't routinely do diagnostic testing in patients with chronic urticaria.	14	0.0%	0.19	14	0.19	\$8,603.54	\$614.54	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	297	0.3%	4.05	171	2.33	\$357,615.83	\$2,091.32	3.5%	42%	58%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	24	0.0%	0.33	23	0.31	\$48,289.43	\$2,099.54	0.5%	4%	96%
Don't perform computed tomography scans on children being treated for headache.	62	0.1%	0.85	29	0.40	\$12,451.67	\$429.37	0.1%	53%	47%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	0	0.0%	0.00	-	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	445	0.5%	6.07	273	3.72	\$337,876.19	\$1,237.64	3.3%	39%	61%
Disease Approach	1,660	1.7%	22.63	1,149	15.66	\$305,866.00	\$266.20	3.0%	31%	69%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$25,600.27	*	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	72	0.1%	0.98	72	0.98	\$5,692.45	\$79.06	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,588	1.6%	21.65	1,077	14.68	\$274,573.69	\$254.94	2.7%	32%	68%
Preoperative evaluation	11,619	11.8%	158.39	9,171	125.02	\$3,298,146.00	\$359.63	32.5%	21%	79%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$1,366.32	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	11,191	11.4%	152.55	8,747	119.24	\$3,088,767.26	\$353.12	30.4%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	428	0.4%	5.83	424	5.78	\$208,012.38	\$490.60	2.0%	1%	99%
Routine FU/Monitoring	1,497	1.5%	20.41	113	1.54	\$128,263.00	\$1,135.07	1.3%	92%	8%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	843	0.9%	11.49	17	0.23	\$25,377.06	\$1,492.77	0.2%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	25	0.0%	0.34	22	0.30	\$8,841.14	\$401.87	0.1%	12%	88%
Don't perform routine annual stress testing after coronary artery revascularization.	138	0.1%	1.88	13	0.18	\$7,483.63	\$575.66	0.1%	91%	9%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	491	0.5%	6.69	61	0.83	\$86,561.43	\$1,419.04	0.9%	88%	12%
Screening Tests	70,562	71.9%	961.89	7,834	106.79	\$2,104,446.00	\$268.63	20.7%	89%	11%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,156	1.2%	15.76	*	*	\$527.10	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	54,967	56.0%	749.30	810	11.04	\$854,510.04	\$1,054.95	8.4%	99%	1%
Don't perform Pap smears on women with previous hysterectomy	33	0.0%	0.45	13	0.18	\$2,685.13	\$206.55	0.0%	61%	39%
Don't perform Pap smears on women younger than 21	112	0.1%	1.53	68	0.93	\$10,375.45	\$152.58	0.1%	39%	61%
Don't perform population based screening for 25-OH-Vitamin D deficiency	947	1.0%	12.91	947	12.91	\$138,914.87	\$146.69	1.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	2,357	2.4%	32.13	1,581	21.55	\$236,847.44	\$149.81	2.3%	33%	67%
Don't perform routine general health checks for asymptomatic adults	409	0.4%	5.58	409	5.58	\$67,404.58	\$164.80	0.7%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	659	0.7%	8.98	659	8.98	\$89,604.48	\$135.97	0.9%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	1,392	1.4%	18.98	159	2.17	\$26,991.56	\$169.76	0.3%	89%	11%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	3,666	3.7%	49.97	1,105	15.06	\$258,449.05	\$233.89	2.5%	70%	30%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	4,864	5.0%	66.30	2,083	28.39	\$418,135.95	\$200.74	4.1%	57%	43%
Grand Total	98,159	100.0%	1338.08	25,764	351.21	\$10,157,383.54	\$394.25	100.0%	74%	26%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 4 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,661	6.1%	54.80	3,557	53.24	\$663,306.00	\$186.48	6.9%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,958	4.9%	44.28	2,859	42.79	\$654,040.62	\$228.77	6.8%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$402.50	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	62	0.1%	0.93	57	0.85	\$4,825.68	\$84.66	0.0%	8%	92%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$150.70	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	641	1.1%	9.59	641	9.59	\$3,886.69	\$6.06	0.0%	0%	100%
Diagnostic Testing	6,598	10.9%	98.76	1,648	24.67	\$2,906,790.00	\$1,763.83	30.1%	75%	25%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	589	1.0%	8.82	478	7.15	\$194,187.68	\$406.25	2.0%	19%	81%
Don't do imaging for uncomplicated headache.	438	0.7%	6.56	114	1.71	\$129,136.82	\$1,132.78	1.3%	74%	26%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	24	0.0%	0.36	24	0.36	\$31,513.53	\$1,313.06	0.3%	0%	100%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	68	0.1%	1.02	26	0.39	\$98,562.06	\$3,790.85	1.0%	62%	38%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$181.88	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	45	0.1%	0.67	19	0.28	\$44,071.23	\$2,319.54	0.5%	58%	42%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	149	0.2%	2.23	37	0.55	\$89,696.95	\$2,424.24	0.9%	75%	25%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	4,197	6.9%	62.82	460	6.89	\$1,580,851.07	\$3,436.63	16.4%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	336	0.6%	5.03	151	2.26	\$99,887.11	\$661.50	1.0%	55%	45%
Don't routinely do diagnostic testing in patients with chronic urticaria.	11	0.0%	0.16	11	0.16	\$52,097.93	\$4,736.18	0.5%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	178	0.3%	2.66	77	1.15	\$230,944.73	\$2,999.28	2.4%	57%	43%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	29	0.0%	0.43	29	0.43	\$55,647.75	\$1,918.89	0.6%	0%	100%
Don't perform computed tomography scans on children being treated for headache.	84	0.1%	1.26	31	0.46	\$19,796.56	\$638.60	0.2%	63%	37%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	450	0.7%	6.74	191	2.86	\$280,214.70	\$1,467.09	2.9%	58%	42%
Disease Approach	662	1.1%	9.91	493	7.38	\$189,783.00	\$384.96	2.0%	26%	74%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$10,569.84	*	0.1%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	56	0.1%	0.84	56	0.84	\$7,189.40	\$128.38	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	606	1.0%	9.07	437	6.54	\$172,024.17	\$393.65	1.8%	28%	72%
Preoperative evaluation	7,507	12.4%	112.37	6,367	95.30	\$3,782,305.00	\$594.05	39.2%	15%	85%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$11,948.95	*	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,136	11.8%	106.82	5,998	89.78	\$3,542,839.20	\$590.67	36.7%	16%	84%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	371	0.6%	5.55	369	5.52	\$227,517.01	\$616.58	2.4%	1%	99%
Routine FU/Monitoring	920	1.5%	13.77	85	1.27	\$153,023.00	\$1,800.27	1.6%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	504	0.8%	7.54	11	0.16	\$7,086.45	\$644.22	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	15	0.0%	0.22	14	0.21	\$12,428.77	\$887.77	0.1%	7%	93%
Don't perform routine annual stress testing after coronary artery revascularization.	103	0.2%	1.54	*	*	\$11,502.41	*	0.1%	90%	10%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	298	0.5%	4.46	60	0.90	\$122,005.18	\$2,033.42	1.3%	80%	20%
Screening Tests	41,033	67.9%	614.20	7,897	118.21	\$1,957,144.00	\$247.83	20.3%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,060	1.8%	15.87	*	*	\$1,850.42	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	28,517	47.2%	426.86	1,216	18.20	\$457,770.36	\$376.46	4.7%	96%	4%
Don't perform Pap smears on women with previous hysterectomy	32	0.1%	0.48	*	*	\$1,631.87	*	0.0%	69%	31%
Don't perform Pap smears on women younger than 21	51	0.1%	0.76	42	0.63	\$8,027.42	\$191.13	0.1%	18%	82%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,371	2.3%	20.52	1,371	20.52	\$346,344.02	\$252.62	3.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	2,359	3.9%	35.31	1,823	27.29	\$344,292.81	\$188.86	3.6%	23%	77%
Don't perform routine general health checks for asymptomatic adults	753	1.2%	11.27	753	11.27	\$129,982.59	\$172.62	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	499	0.8%	7.47	499	7.47	\$67,198.20	\$134.67	0.7%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	740	1.2%	11.08	120	1.80	\$27,505.39	\$229.21	0.3%	84%	16%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,256	3.7%	33.77	548	8.20	\$208,323.81	\$380.15	2.2%	76%	24%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,395	5.6%	50.82	1,525	22.83	\$364,216.73	\$238.83	3.8%	55%	45%
Grand Total	60,402	100.0%	904.13	20,087	300.67	\$9,652,351.19	\$480.53	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 5 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,569	5.4%	56.26	3,415	53.84	\$238,179.00	\$69.75	3.5%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	2,923	4.4%	46.08	2,779	43.81	\$230,809.23	\$83.05	3.4%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$30.65	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	73	0.1%	1.15	63	0.99	\$3,509.00	\$55.70	0.1%	14%	86%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	573	0.9%	9.03	573	9.03	\$3,830.56	\$6.69	0.1%	0%	100%
Diagnostic Testing	5,953	9.0%	93.85	1,724	27.18	\$2,206,326.00	\$1,279.77	32.8%	71%	29%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	613	0.9%	9.66	530	8.36	\$182,833.50	\$344.97	2.7%	14%	86%
Don't do imaging for uncomplicated headache.	435	0.7%	6.86	134	2.11	\$91,206.63	\$680.65	1.4%	69%	31%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	38	0.1%	0.60	36	0.57	\$38,042.80	\$1,056.74	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	85	0.1%	1.34	32	0.50	\$119,442.74	\$3,732.59	1.8%	62%	38%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$66.60	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	47	0.1%	0.74	24	0.38	\$14,313.29	\$596.39	0.2%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	177	0.3%	2.79	63	0.99	\$78,414.45	\$1,244.67	1.2%	64%	36%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,588	5.4%	56.56	429	6.76	\$1,064,664.35	\$2,481.74	15.8%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	206	0.3%	3.25	98	1.54	\$59,628.24	\$608.45	0.9%	52%	48%
Don't routinely do diagnostic testing in patients with chronic urticaria.	*	*	*	*	*	\$1,681.30	*	0.0%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	250	0.4%	3.94	137	2.16	\$261,991.43	\$1,912.35	3.9%	45%	55%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$300.68	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	52	0.1%	0.82	51	0.80	\$43,558.23	\$854.08	0.6%	2%	98%
Don't perform computed tomography scans on children being treated for headache.	51	0.1%	0.80	18	0.28	\$6,294.22	\$349.68	0.1%	65%	35%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$327.33	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	411	0.6%	6.48	172	2.71	\$243,560.37	\$1,416.05	3.6%	58%	42%
Disease Approach	1,187	1.8%	18.71	882	13.90	\$336,784.00	\$381.84	5.0%	26%	74%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	*	*	*	*	*	\$4,142.52	*	0.1%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	66	0.1%	1.04	66	1.04	\$12,227.89	\$185.27	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,121	1.7%	17.67	816	12.86	\$320,413.19	\$392.66	4.8%	27%	73%
Preoperative evaluation	8,292	12.6%	130.72	6,509	102.61	\$2,504,680.00	\$384.80	37.2%	22%	78%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$3,161.92	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,921	12.0%	124.87	6,139	96.78	\$2,362,107.65	\$384.77	35.1%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	371	0.6%	5.85	370	5.83	\$139,410.89	\$376.79	2.1%	0%	100%
Routine FU/Monitoring	1,042	1.6%	16.43	138	2.18	\$168,778.00	\$1,223.03	2.5%	87%	13%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	429	0.7%	6.76	*	*	\$10,611.96	*	0.2%	99%	1%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	11	0.0%	0.17	*	*	\$6,781.76	*	0.1%	9%	91%
Don't perform routine annual stress testing after coronary artery revascularization.	127	0.2%	2.00	*	*	\$12,490.80	*	0.2%	92%	8%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	475	0.7%	7.49	138	2.18	\$138,893.85	\$1,006.48	2.1%	71%	29%
Screening Tests	45,781	69.5%	721.72	5,852	92.25	\$1,272,840.00	\$217.51	18.9%	87%	13%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,296	2.0%	20.43	*	*	\$6,900.52	*	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	34,773	52.8%	548.18	836	13.18	\$297,020.10	\$355.29	4.4%	98%	2%
Don't perform Pap smears on women with previous hysterectomy	32	0.0%	0.50	*	*	\$1,670.98	*	0.0%	69%	31%
Don't perform Pap smears on women younger than 21	82	0.1%	1.29	75	1.18	\$9,763.52	\$130.18	0.1%	9%	91%
Don't perform population based screening for 25-OH-Vitamin D deficiency	638	1.0%	10.06	638	10.06	\$93,847.12	\$147.10	1.4%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	1,384	2.1%	21.82	1,126	17.75	\$175,252.48	\$155.64	2.6%	19%	81%
Don't perform routine general health checks for asymptomatic adults	460	0.7%	7.25	460	7.25	\$67,987.31	\$147.80	1.0%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	536	0.8%	8.45	536	8.45	\$48,851.94	\$91.14	0.7%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	590	0.9%	9.30	79	1.25	\$19,298.44	\$244.28	0.3%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	2,023	3.1%	31.89	506	7.98	\$176,754.04	\$349.32	2.6%	75%	25%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	3,967	6.0%	62.54	1,596	25.16	\$375,493.47	\$235.27	5.6%	60%	40%
Grand Total	65,845	100.0%	1038.02	18,582	292.94	\$6,727,587.95	\$362.05	100.0%	72%	28%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 6 Wasteful Services- Overall

Waste Measure Rule				Total Wasteful Results					Quality Index	Waste Index
	Total Services Measured	Percent of all Services	Services Measured per 1000	Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	8,110	4.8%	51.18	7,935	50.07	\$612,528.00	\$77.19	3.1%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	5,608	3.3%	35.39	5,453	34.41	\$580,581.97	\$106.47	2.9%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$101.18	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	172	0.1%	1.09	152	0.96	\$16,018.78	\$105.39	0.1%	12%	88%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$853.75	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,330	1.4%	14.70	2,330	14.70	\$14,972.55	\$6.43	0.1%	0%	100%
Diagnostic Testing	13,955	8.2%	88.06	4,254	26.84	\$7,063,545.00	\$1,660.45	35.7%	70%	30%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	2,096	1.2%	13.23	1,749	11.04	\$562,399.20	\$321.55	2.8%	17%	83%
Don't do imaging for uncomplicated headache.	964	0.6%	6.08	303	1.91	\$227,197.79	\$749.83	1.1%	69%	31%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	72	0.0%	0.45	62	0.39	\$49,451.59	\$797.61	0.2%	14%	86%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	252	0.1%	1.59	92	0.58	\$393,589.16	\$4,278.14	2.0%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	66	0.0%	0.42	36	0.23	\$23,143.69	\$642.88	0.1%	45%	55%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	148	0.1%	0.93	45	0.28	\$44,636.21	\$991.92	0.2%	70%	30%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	8,290	4.9%	52.31	833	5.26	\$4,419,565.69	\$5,305.60	22.3%	90%	10%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	809	0.5%	5.11	441	2.78	\$274,588.12	\$622.65	1.4%	45%	55%
Don't routinely do diagnostic testing in patients with chronic urticaria.	31	0.0%	0.20	31	0.20	\$36,776.09	\$1,186.33	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	359	0.2%	2.27	224	1.41	\$475,217.09	\$2,121.50	2.4%	38%	62%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$999.11	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	77	0.0%	0.49	76	0.48	\$83,835.15	\$1,103.09	0.4%	1%	99%
Don't perform computed tomography scans on children being treated for headache.	77	0.0%	0.49	42	0.27	\$28,327.57	\$674.47	0.1%	45%	55%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$550.58	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	714	0.4%	4.51	320	2.02	\$443,267.90	\$1,385.21	2.2%	55%	45%
Disease Approach	2,081	1.2%	13.13	1,518	9.58	\$543,430.00	\$357.99	2.7%	27%	73%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	20	0.0%	0.13	20	0.13	\$32,629.92	\$1,631.50	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	280	0.2%	1.77	280	1.77	\$61,708.90	\$220.39	0.3%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDS) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	1,781	1.0%	11.24	1,218	7.69	\$449,091.60	\$368.71	2.3%	32%	68%
Preoperative evaluation	24,500	14.4%	154.60	19,904	125.60	\$6,782,006.00	\$340.74	34.2%	19%	81%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$1,678.91	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	23,362	13.7%	147.42	18,776	118.48	\$6,347,883.65	\$338.08	32.0%	20%	80%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,138	0.7%	7.18	1,128	7.12	\$432,443.84	\$383.37	2.2%	1%	99%
Routine FU/Monitoring	2,459	1.4%	15.52	224	1.41	\$397,486.00	\$1,774.49	2.0%	91%	9%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,427	0.8%	9.00	33	0.21	\$24,881.76	\$753.99	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	33	0.0%	0.21	32	0.20	\$13,847.80	\$432.74	0.1%	3%	97%
Don't perform routine annual stress testing after coronary artery revascularization.	289	0.2%	1.82	43	0.27	\$18,756.82	\$436.21	0.1%	85%	15%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	710	0.4%	4.48	116	0.73	\$339,999.55	\$2,931.03	1.7%	84%	16%
Screening Tests	119,025	70.0%	751.09	20,769	131.06	\$4,412,213.00	\$212.44	22.3%	83%	17%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	2,404	1.4%	15.17	13	0.08	\$10,978.84	\$844.53	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	82,858	48.7%	522.87	2,530	15.97	\$1,224,965.49	\$484.18	6.2%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	121	0.1%	0.76	27	0.17	\$4,896.97	\$181.37	0.0%	78%	22%
Don't perform Pap smears on women younger than 21	174	0.1%	1.10	138	0.87	\$24,881.96	\$180.30	0.1%	21%	79%
Don't perform population based screening for 25-OH-Vitamin D deficiency	5,510	3.2%	34.77	5,510	34.77	\$703,852.36	\$127.74	3.6%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	4,491	2.6%	28.34	3,123	19.71	\$560,201.60	\$179.38	2.8%	30%	70%
Don't perform routine general health checks for asymptomatic adults	1,940	1.1%	12.24	1,940	12.24	\$319,372.04	\$164.62	1.6%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	1,507	0.9%	9.51	1,507	9.51	\$170,338.29	\$113.03	0.9%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	6,244	3.7%	39.40	911	5.75	\$164,016.02	\$180.04	0.8%	85%	15%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	5,271	3.1%	33.26	1,409	8.89	\$400,873.45	\$284.51	2.0%	73%	27%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	8,505	5.0%	53.67	3,661	23.10	\$827,836.34	\$226.12	4.2%	57%	43%
Grand Total	170,150	100.0%	1073.71	54,620	344.67	\$19,811,209.28	\$362.71	100.0%	68%	32%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 7 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	49,341	5.5%	53.71	48,184	52.45	\$7,202,717.00	\$149.48	6.4%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	40,396	4.5%	43.97	39,344	42.82	\$7,010,401.80	\$178.18	6.2%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	25	0.0%	0.03	24	0.03	\$1,947.72	\$81.16	0.0%	4%	96%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,059	0.1%	1.15	955	1.04	\$134,755.27	\$141.10	0.1%	10%	90%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	16	0.0%	0.02	16	0.02	\$970.21	\$60.64	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	7,845	0.9%	8.54	7,845	8.54	\$54,642.30	\$6.97	0.0%	0%	100%
Diagnostic Testing	69,503	7.7%	75.65	25,346	27.59	\$34,155,961.00	\$1,347.59	30.4%	64%	36%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	10,675	1.2%	11.62	9,750	10.61	\$3,364,558.24	\$345.08	3.0%	9%	91%
Don't do imaging for uncomplicated headache.	6,088	0.7%	6.63	2,183	2.38	\$2,357,441.61	\$1,079.91	2.1%	64%	36%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	545	0.1%	0.59	532	0.58	\$718,686.65	\$1,350.91	0.6%	2%	98%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	709	0.1%	0.77	266	0.29	\$1,241,190.26	\$4,666.13	1.1%	62%	38%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	50	0.0%	0.05	50	0.05	\$4,869.32	\$97.39	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	103	0.0%	0.11	103	0.11	\$22,568.20	\$219.11	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	581	0.1%	0.63	296	0.32	\$431,157.76	\$1,456.61	0.4%	49%	51%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,214	0.1%	1.32	472	0.51	\$531,409.51	\$1,125.87	0.5%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	35,253	3.9%	38.37	3,623	3.94	\$12,797,655.57	\$3,532.34	11.4%	90%	10%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	3,296	0.4%	3.59	1,631	1.78	\$1,205,954.32	\$739.40	1.1%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	103	0.0%	0.11	103	0.11	\$124,705.16	\$1,210.73	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,518	0.4%	3.83	2,085	2.27	\$4,743,071.27	\$2,274.85	4.2%	41%	59%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,376.67	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	337	0.0%	0.37	319	0.35	\$495,720.82	\$1,553.98	0.4%	5%	95%
Don't perform computed tomography scans on children being treated for headache.	919	0.1%	1.00	389	0.42	\$457,920.19	\$1,177.17	0.4%	58%	42%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	12	0.0%	0.01	12	0.01	\$28,109.35	\$2,342.45	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	6,100	0.7%	6.64	3,532	3.84	\$5,627,565.95	\$1,593.31	5.0%	42%	58%
Disease Approach	11,159	1.2%	12.15	8,863	9.65	\$4,065,498.00	\$458.70	3.6%	21%	79%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	62	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	144	0.0%	0.16	144	0.16	\$372,637.92	\$2,587.76	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	953	0.1%	1.04	953	1.04	\$207,871.17	\$218.12	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	10,000	1.1%	10.88	7,766	8.45	\$3,484,989.22	\$448.75	3.1%	22%	78%
Preoperative evaluation	112,591	12.4%	122.55	87,236	94.95	\$34,294,583.00	\$393.12	30.5%	23%	77%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	77	0.0%	0.08	76	0.08	\$38,556.58	\$507.32	0.0%	1%	99%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	105,871	11.7%	115.24	80,570	87.70	\$31,246,801.91	\$387.82	27.8%	24%	76%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,643	0.7%	7.23	6,590	7.17	\$3,009,224.87	\$456.64	2.7%	1%	99%
Routine FU/Monitoring	13,260	1.5%	14.43	1,591	1.73	\$3,459,238.00	\$2,174.25	3.1%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,180	0.7%	6.73	144	0.16	\$575,539.24	\$3,996.80	0.5%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	135	0.0%	0.15	129	0.14	\$129,572.10	\$1,004.43	0.1%	4%	96%
Don't perform routine annual stress testing after coronary artery revascularization.	1,587	0.2%	1.73	207	0.23	\$402,414.56	\$1,944.03	0.4%	87%	13%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,358	0.6%	5.83	1,111	1.21	\$2,351,712.34	\$2,116.75	2.1%	79%	21%
Screening Tests	649,183	71.7%	706.60	126,264	137.43	\$29,303,190.00	\$232.08	26.1%	81%	19%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	14,192	1.6%	15.45	116	0.13	\$88,556.75	\$763.42	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	448,938	49.6%	488.65	21,550	23.46	\$9,589,439.72	\$444.99	8.5%	95%	5%
Don't perform Pap smears on women with previous hysterectomy	717	0.1%	0.78	277	0.30	\$53,970.31	\$194.84	0.0%	61%	39%
Don't perform Pap smears on women younger than 21	1,204	0.1%	1.31	1,057	1.15	\$203,050.15	\$192.10	0.2%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	20,203	2.2%	21.99	20,203	21.99	\$2,142,872.89	\$106.07	1.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	38,758	4.3%	42.19	30,976	33.72	\$6,165,413.85	\$199.04	5.5%	20%	80%
Don't perform routine general health checks for asymptomatic adults	11,818	1.3%	12.86	11,818	12.86	\$2,136,596.81	\$180.79	1.9%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,292	0.6%	5.76	5,292	5.76	\$510,187.01	\$96.41	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	11,535	1.3%	12.56	1,698	1.85	\$386,118.07	\$227.40	0.3%	85%	15%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	29,875	3.3%	32.52	5,520	6.01	\$2,374,032.37	\$430.08	2.1%	82%	18%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	66,651	7.4%	72.55	27,757	30.21	\$5,652,952.29	\$203.66	5.0%	58%	42%
Grand Total	905,045	100.0%	985.09	297,492	323.80	\$112,481,188.28	\$378.10	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 ACO Rating 8 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	12,256	5.6%	57.77	11,953	56.34	\$1,042,076.00	\$87.18	4.0%	2%	98%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	9,431	4.3%	44.45	9,153	43.14	\$1,005,596.73	\$109.87	3.9%	3%	97%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$247.33	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	227	0.1%	1.07	202	0.95	\$21,958.60	\$108.71	0.1%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	15	0.0%	0.07	15	0.07	\$742.01	\$49.47	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	2,583	1.2%	12.17	2,583	12.17	\$13,530.97	\$5.24	0.1%	0%	100%
Diagnostic Testing	17,612	8.0%	83.01	4,720	22.25	\$7,862,443.00	\$1,665.77	30.5%	73%	27%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	1,472	0.7%	6.94	1,255	5.92	\$462,329.80	\$368.39	1.8%	15%	85%
Don't do imaging for uncomplicated headache.	1,202	0.5%	5.67	359	1.69	\$366,285.50	\$1,020.29	1.4%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	91	0.0%	0.43	84	0.40	\$96,530.23	\$1,149.17	0.4%	8%	92%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	287	0.1%	1.35	95	0.45	\$383,255.44	\$4,034.27	1.5%	67%	33%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	89	0.0%	0.42	42	0.20	\$35,796.35	\$852.29	0.1%	53%	47%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	341	0.2%	1.61	146	0.69	\$180,286.67	\$1,234.84	0.7%	57%	43%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	11,552	5.3%	54.45	1,347	6.35	\$4,451,677.90	\$3,304.88	17.3%	88%	12%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	870	0.4%	4.10	459	2.16	\$202,365.40	\$440.88	0.8%	47%	53%
Don't routinely do diagnostic testing in patients with chronic urticaria.	24	0.0%	0.11	24	0.11	\$16,570.72	\$690.45	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	535	0.2%	2.52	304	1.43	\$817,850.38	\$2,690.30	3.2%	43%	57%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$3,693.56	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	50	0.0%	0.24	47	0.22	\$68,854.42	\$1,464.99	0.3%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	99	0.0%	0.47	32	0.15	\$21,221.35	\$663.17	0.1%	68%	32%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$672.33	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	1,000	0.5%	4.71	526	2.48	\$755,053.26	\$1,435.46	2.9%	47%	53%
Disease Approach	3,244	1.5%	15.29	2,548	12.01	\$917,901.00	\$360.24	3.6%	21%	79%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	11	0.0%	0.05	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	35	0.0%	0.16	35	0.16	\$86,443.07	\$2,469.80	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	383	0.2%	1.81	383	1.81	\$53,586.20	\$139.91	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	2,815	1.3%	13.27	2,130	10.04	\$777,871.36	\$365.20	3.0%	24%	76%
Preoperative evaluation	28,521	13.0%	134.43	22,850	107.70	\$10,124,330.00	\$443.08	39.3%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	23	0.0%	0.11	23	0.11	\$9,515.34	\$413.71	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	26,630	12.2%	125.52	20,978	98.88	\$8,709,997.05	\$415.20	33.8%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	1,868	0.9%	8.80	1,849	8.72	\$1,404,817.53	\$759.77	5.5%	1%	99%
Routine FU/Monitoring	3,253	1.5%	15.33	225	1.06	\$402,854.00	\$1,790.46	1.6%	93%	7%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	1,819	0.8%	8.57	32	0.15	\$20,792.78	\$649.77	0.1%	98%	2%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	19	0.0%	0.09	16	0.08	\$12,480.39	\$780.02	0.0%	16%	84%
Don't perform routine annual stress testing after coronary artery revascularization.	328	0.1%	1.55	33	0.16	\$81,304.42	\$2,463.77	0.3%	90%	10%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	1,087	0.5%	5.12	144	0.68	\$288,276.55	\$2,001.92	1.1%	87%	13%
Screening Tests	154,034	70.4%	726.02	23,096	108.86	\$5,402,624.00	\$233.92	21.0%	85%	15%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	3,516	1.6%	16.57	13	0.06	\$8,419.36	\$647.64	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	109,067	49.8%	514.07	3,651	17.21	\$1,695,020.57	\$464.26	6.6%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	146	0.1%	0.69	38	0.18	\$7,282.02	\$191.63	0.0%	74%	26%
Don't perform Pap smears on women younger than 21	123	0.1%	0.58	100	0.47	\$19,467.21	\$194.67	0.1%	19%	81%
Don't perform population based screening for 25-OH-Vitamin D deficiency	2,598	1.2%	12.25	2,598	12.25	\$314,508.54	\$121.06	1.2%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	7,028	3.2%	33.13	4,991	23.52	\$902,907.51	\$180.91	3.5%	29%	71%
Don't perform routine general health checks for asymptomatic adults	2,096	1.0%	9.88	2,096	9.88	\$332,117.57	\$158.45	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	1,152	0.5%	5.43	1,152	5.43	\$123,878.26	\$107.53	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	5,920	2.7%	27.90	764	3.60	\$145,220.65	\$190.08	0.6%	87%	13%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	6,774	3.1%	31.93	1,738	8.19	\$689,041.07	\$396.46	2.7%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	15,614	7.1%	73.59	5,955	28.07	\$1,164,761.27	\$195.59	4.5%	62%	38%
Grand Total	218,933	100.0%	1031.91	65,405	308.28	\$25,752,227.67	\$393.73	100.0%	70%	30%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 9 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	48,111	5.1%	48.77	46,207	46.84	\$5,812,525.00	\$125.79	5.2%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	37,159	4.0%	37.67	35,379	35.86	\$5,606,138.92	\$158.46	5.1%	5%	95%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	61	0.0%	0.06	52	0.05	\$2,223.05	\$42.75	0.0%	15%	85%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,048	0.1%	1.06	933	0.95	\$116,394.08	\$124.75	0.1%	11%	89%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$627.83	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,843	1.0%	9.98	9,843	9.98	\$87,141.14	\$8.85	0.1%	0%	100%
Diagnostic Testing	76,210	8.1%	77.25	25,536	25.89	\$32,546,171.00	\$1,274.52	29.4%	66%	34%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	9,407	1.0%	9.54	8,170	8.28	\$3,347,271.96	\$409.70	3.0%	13%	87%
Don't do imaging for uncomplicated headache.	6,809	0.7%	6.90	2,062	2.09	\$2,487,414.99	\$1,206.31	2.2%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	560	0.1%	0.57	539	0.55	\$816,829.70	\$1,515.45	0.7%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,166	0.1%	1.18	422	0.43	\$2,200,955.81	\$5,215.54	2.0%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	*	*	*	*	*	\$912.47	*	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	31	0.0%	0.03	31	0.03	\$2,264.69	\$73.05	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	697	0.1%	0.71	303	0.31	\$308,085.28	\$1,016.78	0.3%	57%	43%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,713	0.2%	1.74	688	0.70	\$810,085.72	\$1,177.45	0.7%	60%	40%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	41,361	4.4%	41.93	5,207	5.28	\$12,044,707.83	\$2,313.18	10.9%	87%	13%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	4,036	0.4%	4.09	1,983	2.01	\$1,470,972.46	\$741.79	1.3%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	98	0.0%	0.10	98	0.10	\$253,516.97	\$2,586.91	0.2%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,518	0.4%	3.57	2,274	2.31	\$3,469,453.15	\$1,525.70	3.1%	35%	65%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,067.84	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	306	0.0%	0.31	287	0.29	\$541,627.48	\$1,887.20	0.5%	6%	94%
Don't perform computed tomography scans on children being treated for headache.	771	0.1%	0.78	319	0.32	\$233,320.82	\$731.41	0.2%	59%	41%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$6,511.42	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,737	0.6%	5.82	3,153	3.20	\$4,547,172.85	\$1,442.17	4.1%	45%	55%
Disease Approach	17,635	1.9%	17.88	13,123	13.30	\$6,666,344.00	\$507.99	6.0%	26%	74%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	134	0.0%	0.14	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	110	0.0%	0.11	110	0.11	\$261,860.20	\$2,380.55	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	690	0.1%	0.70	690	0.70	\$173,508.21	\$251.46	0.2%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	16,701	1.8%	16.93	12,323	12.49	\$6,230,975.30	\$505.64	5.6%	26%	74%
Preoperative evaluation	134,754	14.4%	136.60	108,290	109.77	\$37,045,784.00	\$342.10	33.4%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	87	0.0%	0.09	87	0.09	\$37,658.92	\$432.86	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	128,517	13.7%	130.28	102,118	103.52	\$34,504,158.43	\$337.89	31.1%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	6,150	0.7%	6.23	6,085	6.17	\$2,503,966.62	\$411.50	2.3%	1%	99%
Routine FU/Monitoring	13,831	1.5%	14.02	1,985	2.01	\$3,239,283.00	\$1,631.88	2.9%	86%	14%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,211	0.7%	6.30	229	0.23	\$268,952.71	\$1,174.47	0.2%	96%	4%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	263	0.0%	0.27	242	0.25	\$178,478.58	\$737.51	0.2%	8%	92%
Don't perform routine annual stress testing after coronary artery revascularization.	1,592	0.2%	1.61	189	0.19	\$340,599.96	\$1,802.12	0.3%	88%	12%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,765	0.6%	5.84	1,325	1.34	\$2,451,251.60	\$1,850.00	2.2%	77%	23%
Screening Tests	646,888	69.0%	655.74	110,183	111.69	\$25,539,804.00	\$231.79	23.0%	83%	17%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	18,256	1.9%	18.51	101	0.10	\$141,827.67	\$1,404.23	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	450,695	48.1%	456.87	14,219	14.41	\$6,192,130.49	\$435.48	5.6%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	920	0.1%	0.93	293	0.30	\$63,204.49	\$215.71	0.1%	68%	32%
Don't perform Pap smears on women younger than 21	1,338	0.1%	1.36	1,149	1.16	\$212,826.26	\$185.23	0.2%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	19,160	2.0%	19.42	19,160	19.42	\$2,222,945.13	\$116.02	2.0%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	36,046	3.8%	36.54	28,718	29.11	\$5,909,836.42	\$205.79	5.3%	20%	80%
Don't perform routine general health checks for asymptomatic adults	8,189	0.9%	8.30	8,189	8.30	\$1,485,137.87	\$181.36	1.3%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,133	0.5%	5.20	5,133	5.20	\$507,928.22	\$98.95	0.5%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	13,606	1.5%	13.79	1,586	1.61	\$403,274.41	\$254.27	0.4%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	31,262	3.3%	31.69	7,096	7.19	\$2,754,167.57	\$388.13	2.5%	77%	23%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	62,283	6.6%	63.14	24,539	24.87	\$5,646,525.06	\$230.10	5.1%	61%	39%
Grand Total	937,463	100.0%	950.30	305,358	309.54	\$110,849,910.58	\$363.02	100.0%	67%	33%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 ACO Rating 10 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	75,777	5.1%	46.00	72,920	44.27	\$10,573,230.00	\$145.00	5.2%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	64,587	4.3%	39.21	61,913	37.59	\$10,282,964.60	\$166.09	5.1%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	118	0.0%	0.07	107	0.06	\$5,734.30	\$53.59	0.0%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,921	0.1%	1.17	1,749	1.06	\$227,194.14	\$129.90	0.1%	9%	91%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	21	0.0%	0.01	21	0.01	\$1,352.50	\$64.40	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	9,130	0.6%	5.54	9,130	5.54	\$55,984.80	\$6.13	0.0%	0%	100%
Diagnostic Testing	108,536	7.3%	65.89	37,736	22.91	\$59,449,753.00	\$1,575.41	29.3%	65%	35%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	13,511	0.9%	8.20	11,785	7.15	\$5,329,389.69	\$452.22	2.6%	13%	87%
Don't do imaging for uncomplicated headache.	9,935	0.7%	6.03	3,990	2.42	\$4,432,314.39	\$1,110.86	2.2%	60%	40%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	795	0.1%	0.48	767	0.47	\$1,113,784.83	\$1,452.13	0.5%	4%	96%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	1,098	0.1%	0.67	420	0.25	\$1,727,024.57	\$4,111.96	0.8%	62%	38%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	17	0.0%	0.01	17	0.01	\$491.02	\$28.88	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$43.63	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	1,433	0.1%	0.87	872	0.53	\$970,295.99	\$1,112.72	0.5%	39%	61%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	2,582	0.2%	1.57	1,001	0.61	\$1,402,760.52	\$1,401.36	0.7%	61%	39%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	57,572	3.9%	34.95	7,983	4.85	\$29,367,650.32	\$3,678.77	14.4%	86%	14%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	8,745	0.6%	5.31	4,069	2.47	\$2,760,284.00	\$678.37	1.4%	53%	47%
Don't routinely do diagnostic testing in patients with chronic urticaria.	287	0.0%	0.17	287	0.17	\$275,281.13	\$959.17	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	3,976	0.3%	2.41	1,828	1.11	\$4,649,110.51	\$2,543.28	2.3%	54%	46%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	11	0.0%	0.01	11	0.01	\$16,560.18	\$1,505.47	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	390	0.0%	0.24	361	0.22	\$752,742.52	\$2,085.16	0.4%	7%	93%
Don't perform computed tomography scans on children being treated for headache.	1,045	0.1%	0.63	447	0.27	\$379,591.18	\$849.20	0.2%	57%	43%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	18	0.0%	0.01	18	0.01	\$31,521.84	\$1,751.21	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	7,121	0.5%	4.32	3,880	2.36	\$6,240,906.93	\$1,608.48	3.1%	46%	54%
Disease Approach	12,221	0.8%	7.42	10,262	6.23	\$6,584,590.00	\$641.65	3.2%	16%	84%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	131	0.0%	0.08	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	233	0.0%	0.14	233	0.14	\$515,305.06	\$2,211.61	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	839	0.1%	0.51	839	0.51	\$228,692.75	\$272.58	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	11,018	0.7%	6.69	9,190	5.58	\$5,840,592.66	\$635.54	2.9%	17%	83%
Preoperative evaluation	163,261	11.0%	99.12	136,060	82.60	\$44,522,722.00	\$327.23	21.9%	17%	83%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	267	0.0%	0.16	267	0.16	\$150,879.46	\$565.09	0.1%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	151,642	10.2%	92.06	124,543	75.61	\$40,267,234.81	\$323.32	19.8%	18%	82%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	11,352	0.8%	6.89	11,250	6.83	\$4,104,608.16	\$364.85	2.0%	1%	99%
Routine FU/Monitoring	19,090	1.3%	11.59	3,351	2.03	\$4,138,039.00	\$1,234.87	2.0%	82%	18%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	9,589	0.6%	5.82	280	0.17	\$432,987.90	\$1,546.39	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	220	0.0%	0.13	202	0.12	\$150,638.61	\$745.74	0.1%	8%	92%
Don't perform routine annual stress testing after coronary artery revascularization.	2,161	0.1%	1.31	493	0.30	\$521,922.42	\$1,058.67	0.3%	77%	23%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	7,120	0.5%	4.32	2,376	1.44	\$3,032,490.01	\$1,276.30	1.5%	67%	33%
Screening Tests	1,106,218	74.5%	671.59	342,768	208.10	\$77,971,316.00	\$227.48	38.4%	69%	31%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	23,252	1.6%	14.12	335	0.20	\$173,491.37	\$517.88	0.1%	99%	1%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	690,937	46.5%	419.47	68,392	41.52	\$24,933,314.62	\$364.56	12.3%	90%	10%
Don't perform Pap smears on women with previous hysterectomy	1,146	0.1%	0.70	413	0.25	\$90,826.97	\$219.92	0.0%	64%	36%
Don't perform Pap smears on women younger than 21	1,789	0.1%	1.09	1,568	0.95	\$317,826.13	\$202.70	0.2%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	91,106	6.1%	55.31	91,106	55.31	\$11,873,626.72	\$130.33	5.8%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	91,154	6.1%	55.34	75,744	45.98	\$16,827,067.73	\$222.16	8.3%	17%	83%
Don't perform routine general health checks for asymptomatic adults	37,132	2.5%	22.54	37,132	22.54	\$7,770,628.71	\$209.27	3.8%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	8,228	0.6%	5.00	8,228	5.00	\$776,892.17	\$94.42	0.4%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	21,477	1.4%	13.04	4,790	2.91	\$1,184,335.30	\$247.25	0.6%	78%	22%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	43,580	2.9%	26.46	11,218	6.81	\$3,174,840.30	\$283.01	1.6%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	96,417	6.5%	58.54	43,842	26.62	\$10,848,466.21	\$247.44	5.3%	55%	45%
Grand Total	1,485,105	100.0%	901.62	603,099	366.15	\$203,239,651.66	\$336.99	100.0%	59%	41%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

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All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

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Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful



2013 ACO Rating 11 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	3,465	5.4%	50.77	3,349	49.07	\$473,781.00	\$141.47	5.0%	3%	97%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	3,138	4.9%	45.98	3,028	44.37	\$444,578.70	\$146.82	4.7%	4%	96%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	*	*	*	*	*	\$322.23	*	0.0%	0%	100%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	83	0.1%	1.22	77	1.13	\$27,238.42	\$353.75	0.3%	7%	93%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	*	*	*	*	*	\$365.14	*	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	244	0.4%	3.58	244	3.58	\$1,276.42	\$5.23	0.0%	0%	100%
Diagnostic Testing	5,540	8.6%	81.17	1,536	22.51	\$4,028,784.00	\$2,622.91	42.5%	72%	28%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	569	0.9%	8.34	450	6.59	\$205,610.52	\$456.91	2.2%	21%	79%
Don't do imaging for uncomplicated headache.	402	0.6%	5.89	151	2.21	\$214,486.35	\$1,420.44	2.3%	62%	38%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	65	0.1%	0.95	63	0.92	\$95,570.01	\$1,516.98	1.0%	3%	97%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	49	0.1%	0.72	18	0.26	\$86,015.16	\$4,778.62	0.9%	63%	37%
Don't perform a postcoital test (PCT) for the evaluation of infertility.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.**	0	0.0%	0.00	0	0.00	\$0.00	\$0.00	0.0%	0%	0%
Don't perform electroencephalography (EEG) for headaches.	34	0.1%	0.50	12	0.18	\$12,646.97	\$1,053.91	0.1%	65%	35%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	138	0.2%	2.02	64	0.94	\$97,732.84	\$1,527.08	1.0%	54%	46%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	3,594	5.6%	52.66	412	6.04	\$2,533,046.56	\$6,148.17	26.7%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	179	0.3%	2.62	99	1.45	\$59,563.24	\$601.65	0.6%	45%	55%
Don't routinely do diagnostic testing in patients with chronic urticaria.	*	*	*	*	*	\$9,146.90	*	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	246	0.4%	3.60	113	1.66	\$476,460.26	\$4,216.46	5.0%	54%	46%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$2,708.12	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	21	0.0%	0.31	19	0.28	\$30,675.07	\$1,614.48	0.3%	10%	90%
Don't perform computed tomography scans on children being treated for headache.	36	0.1%	0.53	22	0.32	\$13,100.46	\$595.48	0.1%	39%	61%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$3,395.95	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	207	0.3%	3.03	113	1.66	\$188,625.56	\$1,669.25	2.0%	45%	55%
Disease Approach	457	0.7%	6.70	379	5.55	\$205,888.00	\$543.24	2.2%	17%	83%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	*	*	*	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	15	0.0%	0.22	15	0.22	\$30,441.44	\$2,029.43	0.3%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	48	0.1%	0.70	48	0.70	\$4,514.19	\$94.05	0.0%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	394	0.6%	5.77	316	4.63	\$170,932.23	\$540.92	1.8%	20%	80%
Preoperative evaluation	7,790	12.1%	114.14	6,248	91.55	\$2,432,634.00	\$389.35	25.7%	20%	80%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	*	*	*	*	*	\$82.12	*	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	7,352	11.4%	107.72	5,815	85.20	\$2,229,147.58	\$383.34	23.5%	21%	79%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	438	0.7%	6.42	433	6.34	\$203,404.61	\$469.76	2.1%	1%	99%
Routine FU/Monitoring	1,100	1.7%	16.12	185	2.71	\$455,888.00	\$2,464.26	4.8%	83%	17%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	432	0.7%	6.33	13	0.19	\$59,841.08	\$4,603.16	0.6%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	19	0.0%	0.28	14	0.21	\$11,107.19	\$793.37	0.1%	26%	74%
Don't perform routine annual stress testing after coronary artery revascularization.	130	0.2%	1.90	17	0.25	\$17,893.63	\$1,052.57	0.2%	87%	13%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	519	0.8%	7.60	141	2.07	\$367,045.90	\$2,603.16	3.9%	73%	27%
Screening Tests	46,225	71.6%	677.30	7,325	107.33	\$1,882,606.00	\$257.01	19.9%	84%	16%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	1,296	2.0%	18.99	*	*	\$1,873.92	*	0.0%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	34,197	52.9%	501.06	1,108	16.23	\$657,613.80	\$593.51	6.9%	97%	3%
Don't perform Pap smears on women with previous hysterectomy	36	0.1%	0.53	*	*	\$1,857.96	*	0.0%	72%	28%
Don't perform Pap smears on women younger than 21	52	0.1%	0.76	46	0.67	\$8,255.20	\$179.46	0.1%	12%	88%
Don't perform population based screening for 25-OH-Vitamin D deficiency	1,211	1.9%	17.74	1,211	17.74	\$200,163.95	\$165.29	2.1%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	2,022	3.1%	29.63	1,665	24.40	\$324,785.71	\$195.07	3.4%	18%	82%
Don't perform routine general health checks for asymptomatic adults	977	1.5%	14.32	977	14.32	\$165,349.59	\$169.24	1.7%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	341	0.5%	5.00	341	5.00	\$25,048.27	\$73.46	0.3%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	816	1.3%	11.96	152	2.23	\$39,324.52	\$258.71	0.4%	81%	19%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	1,265	2.0%	18.54	316	4.63	\$161,689.02	\$511.67	1.7%	75%	25%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	4,012	6.2%	58.78	1,509	22.11	\$296,643.86	\$196.58	3.1%	62%	38%
Grand Total	64,603	100.0%	946.58	19,058	279.24	\$9,479,580.65	\$497.41	100.0%	70%	30%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

** No services were available for analysis.



2013 ACO Rating 12 Wasteful Services- Overall

Waste Measure Rule	Total Services Measured	Percent of all Services	Services Measured per 1000	Total Wasteful Results					Quality Index	Waste Index
				Services	Wasteful Services per 1000	Total Proxy Allowed Costs	Average Proxy Allowed Costs	Percent of Waste Proxy Allowed Costs		
Common Treatments	45,624	5.3%	58.69	43,668	56.18	\$4,105,757.00	\$94.02	4.0%	4%	96%
Don't indiscriminately prescribe antibiotics for uncomplicated acute rhinosinusitis.	32,116	3.7%	41.32	30,299	38.98	\$3,891,342.68	\$128.43	3.8%	6%	94%
Don't order antibiotics for adenoviral conjunctivitis (pink eye).	42	0.0%	0.05	40	0.05	\$2,216.72	\$55.42	0.0%	5%	95%
Don't prescribe oral antibiotics for uncomplicated acute external otitis.	1,082	0.1%	1.39	945	1.22	\$129,825.00	\$137.38	0.1%	13%	87%
Don't prescribe oral antibiotics for uncomplicated acute tympanostomy tube otorrhea.	22	0.0%	0.03	22	0.03	\$1,068.46	\$48.57	0.0%	0%	100%
Don't prescribe or recommend cough and cold medicines for respiratory illnesses in children under four years of age.	12,362	1.4%	15.90	12,362	15.90	\$81,304.30	\$6.58	0.1%	0%	100%
Diagnostic Testing	77,455	8.9%	99.64	21,356	27.47	\$33,123,796.00	\$1,551.03	32.2%	72%	28%
Don't do imaging for low back pain within the first six weeks, unless red flags are present.	7,155	0.8%	9.20	6,136	7.89	\$2,374,887.28	\$387.04	2.3%	14%	86%
Don't do imaging for uncomplicated headache.	5,499	0.6%	7.07	1,652	2.13	\$1,416,649.76	\$857.54	1.4%	70%	30%
Don't obtain brain imaging studies (CT or MRI) in the evaluation of simple syncope and a normal neurological examination.	592	0.1%	0.76	565	0.73	\$649,470.17	\$1,149.50	0.6%	5%	95%
Don't order computed tomography (CT) scan of the head/brain for sudden hearing loss.	771	0.1%	0.99	277	0.36	\$980,677.25	\$3,540.35	1.0%	64%	36%
Don't perform a postcoital test (PCT) for the evaluation of infertility.	15	0.0%	0.02	15	0.02	\$645.79	\$43.05	0.0%	0%	100%
Don't perform advanced sperm function testing, such as sperm penetration or hemizona assays, in the initial evaluation of the infertile couple.	*	*	*	*	*	\$611.27	*	0.0%	0%	100%
Don't perform electroencephalography (EEG) for headaches.	627	0.1%	0.81	334	0.43	\$300,343.38	\$899.23	0.3%	47%	53%
Don't perform imaging of the carotid arteries for simple syncope without other neurologic symptoms.	1,915	0.2%	2.46	732	0.94	\$1,035,982.13	\$1,415.28	1.0%	62%	38%
Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.	48,379	5.6%	62.24	5,131	6.60	\$17,569,894.83	\$3,424.26	17.1%	89%	11%
Don't perform unproven diagnostic tests, such as immunoglobulin G (IgG) testing or an indiscriminate battery of immunoglobulin E (IgE) tests, in the evaluation of allergy.	2,872	0.3%	3.69	1,409	1.81	\$1,049,841.92	\$745.10	1.0%	51%	49%
Don't routinely do diagnostic testing in patients with chronic urticaria.	97	0.0%	0.12	97	0.12	\$75,877.54	\$782.24	0.1%	0%	100%
Don't routinely obtain radiographic imaging for patients who meet diagnostic criteria for uncomplicated acute rhinosinusitis.	2,923	0.3%	3.76	1,507	1.94	\$3,340,966.20	\$2,216.96	3.2%	48%	52%
Don't use coronary artery calcium scoring for patients with known coronary artery disease (including stents and bypass grafts).	*	*	*	*	*	\$5,162.09	*	0.0%	0%	100%
Don't order CT scans of the abdomen and pelvis in young otherwise healthy emergency department patients (age <50) with known histories of kidney stones, or ureterolithiasis, presenting with symptoms consistent with uncomplicated renal colic.	508	0.1%	0.65	472	0.61	\$624,238.53	\$1,322.54	0.6%	7%	93%
Don't perform computed tomography scans on children being treated for headache.	781	0.1%	1.00	316	0.41	\$169,572.21	\$536.62	0.2%	60%	40%
Don't perform Neuroimaging (CT, MRI) in a child with simple febrile seizure.	*	*	*	*	*	\$14,390.70	*	0.0%	0%	100%
Don't perform routine head CT scans for emergency room visits for severe dizziness.	5,321	0.6%	6.85	2,713	3.49	\$3,514,585.08	\$1,295.46	3.4%	49%	51%
Disease Approach	13,841	1.6%	17.81	10,309	13.26	\$3,609,701.00	\$350.15	3.5%	26%	74%
Don't schedule elective, non-medically indicated inductions of labor or Cesarean deliveries before 39 weeks, 0 days gestational age.	54	0.0%	0.07	0	0.00	\$0.00	\$0.00	0.0%	100%	0%
Don't perform an arthroscopic knee surgery for knee osteoarthritis.	93	0.0%	0.12	93	0.12	\$162,434.13	\$1,746.60	0.2%	0%	100%
Don't prescribe antidepressants as monotherapy in patients with bipolar I disorder.	880	0.1%	1.13	880	1.13	\$101,006.18	\$114.78	0.1%	0%	100%
Don't prescribe nonsteroidal anti-inflammatory drugs (NSAIDs) in individuals with hypertension or heart failure or CKD of all causes, including diabetes.	12,814	1.5%	16.48	9,336	12.01	\$3,346,260.35	\$358.43	3.3%	27%	73%
Preoperative evaluation	112,614	13.0%	144.87	89,292	114.87	\$40,521,031.00	\$453.80	39.4%	21%	79%

Don't obtain baseline diagnostic cardiac testing or cardiac stress testing in asymptomatic stable patients with known cardiac disease undergoing low or moderate risk non-cardiac surgery.	45	0.0%	0.06	45	0.06	\$19,088.80	\$424.20	0.0%	0%	100%
Don't obtain baseline laboratory studies in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery	107,738	12.4%	138.60	84,459	108.65	\$37,648,040.22	\$445.76	36.6%	22%	78%
Don't obtain EKG, chest X rays or Pulmonary function test in patients without significant systemic disease (ASA I or II) undergoing low-risk surgery.	4,831	0.6%	6.21	4,788	6.16	\$2,853,902.12	\$596.05	2.8%	1%	99%
Routine FU/Monitoring	14,664	1.7%	18.86	1,729	2.22	\$2,454,699.00	\$1,419.72	2.4%	88%	12%
Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.	6,984	0.8%	8.98	178	0.23	\$166,848.69	\$937.35	0.2%	97%	3%
Don't perform MRI of the peripheral joints to routinely monitor inflammatory arthritis.	172	0.0%	0.22	161	0.21	\$126,434.43	\$785.31	0.1%	6%	94%
Don't perform routine annual stress testing after coronary artery revascularization.	1,609	0.2%	2.07	218	0.28	\$303,119.58	\$1,390.46	0.3%	86%	14%
Don't perform radionuclide imaging as part of routine follow-up in asymptomatic patients	5,899	0.7%	7.59	1,172	1.51	\$1,858,296.36	\$1,585.58	1.8%	80%	20%
Screening Tests	603,934	69.6%	776.94	78,622	101.14	\$19,090,748.00	\$242.82	18.6%	87%	13%
Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease.	15,791	1.8%	20.31	61	0.08	\$131,170.30	\$2,150.33	0.1%	100%	0%
Don't order annual electrocardiograms (EKGs) or any other cardiac screening for low-risk patients without symptoms.	450,191	51.9%	579.16	9,955	12.81	\$5,315,088.16	\$533.91	5.2%	98%	2%
Don't perform Pap smears on women with previous hysterectomy	631	0.1%	0.81	187	0.24	\$33,893.46	\$181.25	0.0%	70%	30%
Don't perform Pap smears on women younger than 21	1,130	0.1%	1.45	967	1.24	\$153,883.91	\$159.14	0.1%	14%	86%
Don't perform population based screening for 25-OH-Vitamin D deficiency	12,731	1.5%	16.38	12,731	16.38	\$1,999,389.44	\$157.05	1.9%	0%	100%
Don't perform routine annual cervical cytology screening (Pap tests) in women 21–65 years of age.	20,852	2.4%	26.83	15,965	20.54	\$2,755,161.13	\$172.58	2.7%	23%	77%
Don't perform routine general health checks for asymptomatic adults	5,766	0.7%	7.42	5,766	7.42	\$894,385.62	\$155.11	0.9%	0%	100%
Don't screen women older than 65 years of age for cervical cancer who have had adequate prior screening and are not otherwise at high risk for cervical cancer.	5,592	0.6%	7.19	5,592	7.19	\$574,490.09	\$102.73	0.6%	0%	100%
Don't use dual-energy x-ray absorptiometry (DEXA) screening for osteoporosis in women younger than 65 or men younger than 70 with no risk factors.	10,450	1.2%	13.44	1,261	1.62	\$314,327.00	\$249.27	0.3%	88%	12%
Don't order unnecessary screening for colorectal cancer in adults older than age 50 years.	22,021	2.5%	28.33	5,820	7.49	\$2,395,226.08	\$411.55	2.3%	74%	26%
Don't perform PSA-based screening for prostate cancer in all men regardless of age.	58,779	6.8%	75.62	20,317	26.14	\$4,523,733.15	\$222.66	4.4%	65%	35%
Grand Total	868,151	100.0%	1116.85	244,995	315.18	\$102,905,732.49	\$420.03	100.0%	72%	28%

Report based on APCD claims data for Commercial, Medicaid FFS, Medicaid Managed Care, Medicare FFS and Medicare Advantage coverage.

* Indicates observed values less than 11. Suppressed values are still reflected in total and index calculations.

All reports utilize a standardized proxy reimbursement amount and are based on Virginia APCD claims volumes as of 1/15/16.

Services defined as wasteful or necessary are subject to the completeness of diagnosis and procedure fields submitted within the claims data analyzed.

Total Wasteful services reported include a combination of services categorized as wasteful and likely wasteful

Appendix C: Integrated Care Models

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Integrated Primary and Behavioral Health Care Services for Children and Adolescents
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) in Primary Care or Behavioral Health Settings
Objective	
Provide patient-centered, trauma-informed, and recovery oriented treatment and prevention services for uninsured, Medicaid-covered, and FAMIS-covered children from birth through adolescence. The goals of these interventions are to effectively screen and identify children who have mental illness and/or are at risk for developing mental illness. By co-treating these children's primary and behavioral health care needs, a cost-effective delivery system will be established that will increase immediate and downstream clinical outcomes and improve quality of life, while decreasing immediate and downstream costs to the Medicaid program.	
Rationale/Justification	
Integrated delivery of primary and behavioral healthcare services would improve treatment compliance and identify families at risk of developing adverse life consequences. Improving health care delivery would improve quality of life and reduce health care cost over the long run. Recognition of risk factors among children, adolescents and parents can mitigate adverse consequences later on in life by assessing risk factors, targeting treatments and linking to specialized providers. The model is important to: 1) improve access for children to behavioral health and primary care services; 2) enhance existing infrastructure; and 3) restructure financing and reimbursement mechanisms.	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. Behavioral health screenings of all children in both primary care and behavioral health care settings: <ul style="list-style-type: none"> • Co-locate behavioral health professionals in targeted primary care settings with children 2. Standardization screenings in behavioral health and primary care settings using evidence-based best practices (e.g. Ages and Stages for children ages 0-5 y/o, M-CHAT screening for autism at 18 month and 2 y/o, Edinburgh Screen for postpartum depression, etc.) of the following groups: <ul style="list-style-type: none"> • Mother • Infant • Child/Adolescent 3. Family education available in both primary care and behavioral health settings. <ul style="list-style-type: none"> • Parent educator available in primary care settings when teaching is needed beyond primary care provider's capability. 4. Common referral routes <ul style="list-style-type: none"> • Established referral routes to community behavioral health providers (including clinical psychologist and psychiatrist) from primary care providers who identify children with behavioral health problems, at risk for developing behavioral health problems, or have mothers suffering from postpartum depression. • Established referral routes to primary care providers from behavioral health providers to establish 	

patient-centered medical homes for patients.

- Co-located behavioral health providers in primary care settings (including LCSW, LPC, clinical psychologist and/or child/adolescent psychiatrist) and primary care providers in behavioral health settings to provide “warm hand offs” and immediate access to care.
 - Could be employees of either primary care or behavioral health organizations
 - Availability of behavioral health provider in primary care settings for easy referrals
 - Easily accessible behavioral health/psychiatry evaluation for children needing evaluation beyond primary care provider
 - Telepsychiatry services available to patients in primary care settings.
 - Community Care Coordinator on site in primary care settings to facilitate referrals.
 - Universal Referral and HIPAA Compliant Release of Information forms.
- 5. Availability of bilingual providers in both primary care and behavioral health care settings for non-English speaking patients and families.
- 6. Centralized and established location for assessment and referral to community providers and resources.
- 7. Case management for clients already connected to services and use of Community Care Coordinators to connect children with appropriate community resources.
 - Case managers and Community Care Coordinators serve as part of interprofessional team.
- 8. Training for behavioral health providers on trauma-informed care best practices – identifying and addressing trauma
- 9. Establish outcomes and evaluations for assessing progress, quality of care, and health care improvements.
- 10. Use telemedicine to treat patients with geographic or transportation barriers.
 - More complex patients could be better served in home setting.
- 11. Open referral routes to behavioral health providers from schools and other non-clinical community settings.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Prenatal Care for At-Risk Pregnant Women, Mothers, and Families to Reduce Risk Factors Predisposing Fetuses to Developmental Delays, Intellectual Challenges, and Mental Illness During the Prenatal Period
Target Population	<p>Women of childbearing age (low-income, Medicaid-covered and/or uninsured) and their existing family members who are considered to be “at-risk” based on experiencing one or more of the following factors:</p> <ol style="list-style-type: none"> 1. Poor housing and living conditions 2. Homeless or living in shelters, jails, or are transient 3. Exposed to toxins due to housing conditions (i.e. lead poisoning) 4. Infections during pregnancy with a potential delay or lack of treatment 5. Lack of a patient-centered medical home 6. Immigrants or refugees 7. Living in a food desert resulting in lack of micronutrients, malnutrition, iodine deficiency 8. Other vitamin deficiencies, potential risk for eating pica, and having a low birth weight infant 9. Teenage mom or unplanned or undesired pregnancy 10. Poor adaptation to pregnancy 11. History of mental illness including a history of postpartum depression. 12. History of domestic abuse 13. Insecure attachment challenges 14. Greater maternal stress 15. Use of tobacco, alcohol, and/or illegal drugs 16. Chronic physical diseases (e.g., Hypertension, Diabetes, HIV/AIDs) 17. Family members with mental illness
Objective	
To reduce the volume and acuity of children requiring ongoing, acute behavioral health needs by identifying and addressing strategies that can improve the prenatal care for at-risk pregnant women, mothers, and families	
Rationale/Justification	
Children impacted by intellectual/developmental disabilities and mental illnesses are at risk of suffering from a lack of sustainable employment and independence due to social risk factors. The development of intellectual disabilities and mental illness will cause these children to utilize Medicaid services unnecessarily in childhood, as well as emergency and other services later in life. Due to the root causes of poor socioeconomic status, lack of adequate prenatal care, and high-risk lifestyle choices, these children will often end up requiring acute, high cost mental health services, resulting in a significant cost to the Medicaid program that could be avoided with a focus on comprehensive prenatal care, prevention, and early	

intervention.

Core Clinical and Programmatic Components

Primary care and obstetric providers are responsible for identifying women who are at risk of not receiving adequate prenatal care due to any of the risk factors listed above. A comprehensive screening tool will be provided to identify any condition or circumstance that will be a barrier to receiving adequate prenatal care. Appropriate referrals, resources and continuity of care will be provided to prevent an outcome that could result in intellectual challenges and future risk of mental illness for the developing fetus during the prenatal period. Model components include the following:

1. Provider accountability for identifying "at-risk" women of childbearing age using comprehensive screening tool.
2. Coordination with Medicaid Managed Care plans to increase level of accountability for providers to provide comprehensive screening of pregnant women.
3. Coordination between WIC, Social Services, Family Planning, and other organizations to deliver services to these "at-risk" women.
4. Connecting "at-risk" pregnant women with prenatal women.
5. Comprehensive education to pregnant women before the child is born.
6. Coordination by Community Care Coordinators, including training for services for pregnant women and children.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	High Quality Early Childhood and Preschool Education and Intervention Program
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-5)
Objective	
<p>Support all children in developing to their full potential, and to ensure that preventable issues are avoided, thus preserving resources to provide early interventions for children with identified issues. Improved child health outcomes and significant cost savings can be realized through a timely screening process to identify and address any medical or developmental issues a child may have. Screening can occur in the home, primary care sites, or in preschool settings. Lastly, access to high-quality preschool programs for all children allows them to gain the skills necessary for school success and (if necessary) ensure that any screening they receive will be thorough, comprehensive and well-informed. This would allow the early identification of any issues and the provision of intervention when it is most effective.</p>	
Rationale/Justification	
<p>An Early Intervention program implemented by Colonial Behavioral Health, a public behavioral health provider in Virginia, demonstrated that over half of enrolled children acquire the skills they need to “catch up” to normally developing peers, avoiding costly interventions and treatments. This program exceeded State targets for key determinates of health such as early language, literacy development, use of appropriate behavior to meet needs and social/emotional skills.</p> <p>Adverse Childhood Experiences (ACE) are known to have substantial negative impacts on young children’s physical, emotional, and intellectual health and development. Young children are sometimes diagnosed with developmental delays or conditions such as autism or ADHD because they were not provided with opportunities to develop basic social and emotional skills, while children lacking basic skills such as potty training are at risk for disruptions in educational settings.</p> <p>Evidence-based nurse home visitation programs yield cost savings by addressing ACE-related issues in the home (thereby reducing the impact these experiences have on young children). These programs benefit children by decreasing child abuse/neglect and injuries by 20-50%, improving cognitive/educational outcomes, decreasing rates of future substance abuse and mental illness, and decreasing lifetime arrests/convictions.¹ The mothers experience a 10-20% reduction in subsequent births, fewer arrests/convictions, less behavioral impairment attributable to substance abuse, and decreased use of welfare.² Addressing these issues prevents future unnecessary utilization of medical services and avoids future Medicaid spending. Eligibility for enrollment in EHS, HS, CHIP and PAT is prioritized by the number of risk factors that a child experiences, which are consistent with items found on the ACE screening tool.</p>	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. The most significant cost savings can be realized by ensuring the availability of appropriate screenings for all preschool age children provided by pediatricians, primary care doctors, and early intervention program(s). 2. Include screenings for developmental delays/disabilities, mental health/behavioral health issues, and physical issues (audiology screenings, lead screenings) and appropriate interventions. 	

- Build capacity in infant and toddler mental health (training, certification)
 - Provide parental support and education (via nurse home visitation programs).
3. Case management to identify and mediate social determinates of health (poverty, limited transportation, etc.)
 4. Access to high-quality preschool programming.
 5. Examine models that allow more family-centered and home-based work (instead of a strict 'medical model'), which is more appropriate and effective for this population.
 6. Proper assessment and intervention for postpartum depression at this stage is critical for newborn/infant health.
 7. Educate primary care providers about how to identify a concern and make a referral to early intervention without need for a diagnosis.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Addressing the Ongoing and Acute Behavioral Health Needs of Children and Adolescents
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) with identified ongoing and/or acute behavioral health needs
Objective	
<p>Identify and address the ongoing/acute behavioral health needs of children and adolescents in order to facilitate opportunities for recovery, resiliency and wellness with the overall goal of preventing the need for emergency and/or intensive behavioral health treatment at any point in a child's life. This goal is achieved through the establishment of a comprehensive coordinated care approach with existing community primary care and behavioral health providers, public health departments, local schools, juvenile justice and social services systems; and the establishment of a "single point of access to care" for acute behavioral health needs.</p>	
Rationale/Justification	
<p>In a four year review of intake assessments of youth (ages 0-18) at Colonial Behavioral Health, a suburban public behavioral health provider in Virginia, 40% of youth were assessed as having a serious emotional disturbance (SED), while 9% of youth (ages 0-6) were at-risk of SED and 1% of youth had a serious mental illness.</p> <p>The establishment of a "single point of access to care" to address the acute behavioral health needs of children and adolescents will provide a comprehensive approach to treating the holistic needs of youth and their family. In turn, reductions in barriers, fragmentation of services, and duplication of efforts can be achieved. Additionally, more cost-effective approaches to care can be realized, especially in diverting youth from hospitalization, residential and other settings that account for high Medicaid costs.</p>	
Core Clinical and Programmatic Components	
<p>1. Child Assessment Center: "single point of access to care" that provides trauma-informed, recovery oriented, and patient-centered comprehensive and integrated behavioral health, primary care, and other primary support systems for children/adolescents and their families including:</p> <ul style="list-style-type: none"> • Coordinated referral process across all child servicing agencies including: <ul style="list-style-type: none"> ○ Universal referral form ○ HIPAA compliant release of information form • Comprehensive clinical assessment to determine treatment and support needs. <ul style="list-style-type: none"> ○ Treatment services including: <ul style="list-style-type: none"> ▪ Outpatient services: trauma-informed treatment, substance use disorder treatment, psychiatric evaluation, psychological testing, intensive in-home services (IIHS) / therapeutic day treatment (TDT) targeted case management ▪ Support services to address education, familial, social, and medical needs including: <ul style="list-style-type: none"> • Referrals for parent therapy services • Parental education, mentoring & support groups (NAMI) • Respite services 	

- 2.** Address acute behavioral health needs to divert youth from hospitalization, residential and other high cost settings.
 - Provision of services including:
 - Crisis Mobile team (CMIT)
 - Crisis assessment
 - Short-term crisis counseling to stabilize youth and divert hospitalizations
 - Psychiatric evaluation/medication management services coordinated with primary care using telemedicine
 - Wrap-around services for youth and family in order obtain and build community supports for the youth's successful reintegration into their home community including but not be limited to:
 - Outpatient services
 - Intensive in-home services (IHHS) / therapeutic day treatment (TDT)
 - Psychiatric services
 - Targeted case management
- 3.** Community-based wrap-around services from intensive case managers with additional staffing of community providers on-site to include:
 - Medical care - referral/linkage to medical home if child does not have a primary care provider
 - Social services (on site social worker) - Assistance with TANF, daycare, Medicaid/Waiver, prevention, respite
 - Linkage to community behavioral health providers
 - In-home support / visitation
 - On-going monitoring and support to prevent residential placement
 - Information dissemination
 - Central source of regional support services online
 - Educational hand-outs
- 4.** Community Education
 - Mental Health First Aid training for employees of local school systems, Department of Social Services, and
Department of Juvenile Justice

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Identification and Support of Parents with Serious Mental Illness and their Children
Target Population	Medicaid-covered, FAMIS-covered, and uninsured children (ages 0-18) of parents with Behavioral Health Impairments with a focus on Serious Mental Illness (SIM)
Objective	
Identify, assess and intervene early and appropriately in families characterized by having parents with mental health impairments, most notably Serious Mental Illness (SMI). By supporting children and families in health management (including self-management supports), this model aims to produce healthier children and adolescents.	
Rationale/Justification	
Children of parents with SMI, including major depressive disorder and bipolar depression, are significantly more likely to develop mental illness as they get older. ³ Mental illness, especially depression, has been found to negatively impact parenting, and is associated with more negativity expressed by parents and more harsh and punitive discipline. ⁴ These parenting struggles have been found to be associated with children's increased likelihood of developing mental illness. Children with parents with mental illness are also more likely to experience social and behavioral problems, are four times as likely to commit serious criminal behaviors, ⁵ and are more likely to attempt suicide. ⁶ Early interventions that address and treat parents with Serious Mental Illness can substantially improve their mental health and parenting skills, resulting in improved health, educational, and social outcomes for their children. Preventing mental illness among children can result in significant downstream cost savings to the Medicaid program by avoiding hospitalizations, Emergency Department visits, and residential treatment and significant savings to taxpayers by avoiding juvenile justice costs.	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> Enhanced focus on family health histories in ALL health care settings <ul style="list-style-type: none"> Include risk factors for mental problems (utilizing a standardized instrument such as Adverse Childhood Events (ACE) screening tool or similar tool) <u>Expand targeted case management (TCM) services to include assistance with parenting skills as an allowable service - including management of healthcare for minor children in their custody.</u> <u>Training for behavioral health staff on best practices of trauma-informed care</u> - how to identify and address trauma with trauma-informed therapy Consistent coordination between the parent's behavioral health case manager and psychiatrist and the child's primary care provider and any other child service providers. Use of home based-parenting, mentoring or coaching services, and other community supports or community-based prevention services. Inclusion of services to treat Substance Use Disorders (SUDs). Develop information package that can be provided to parents that list resources in community for their children to make sure they have support services and access to child development resources, behavioral health resources, and any other needed resources Design communication model to inform parents' behavioral health providers how to consult with and obtain prevention services for children and families. 	

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Rural Coordinated Care for Transition Age Youth and Young Adults
Target Population	<p>Medicaid-covered, FAMIS-covered, and uninsured “transition age youth” (ages 16-25) who currently experience or are at risk of experiencing mental illness and/or substance use disorders.</p> <p><u>Transition age youth must meet one or more of the following criteria to receive this intervention:</u></p> <ol style="list-style-type: none"> 1. Not completing typical developmental milestones: driving, attending school as required / passing academically on grade-level, graduating high school, employed or in secondary education 2. In contact with juvenile justice system 3. In Foster Care or with an active Foster Care prevention case 4. Known to have used/abused substances (possibly including smoking under age) 5. Diagnosed with Serious Mental Illness (SMI), Serious Emotional Disturbance (SED), or Substance Use Disorder (SUD) in primary care or behavioral health settings 6. Uninsured 7. Utilizing the emergency department as their primary resource for primary care 8. Not connected to any organized but unpaid social connection (church, clubs, organized sport, etc.) 9. Meets at least one of the ACEs (child abuse, child neglect, parental mental illness, parental substance abuse and/or alcoholism, lack of food or clothing at home, loss of a parent due to abandonment, death, or divorce)
Objective	
To reduce the costs to organizations treating the target populations in addition to saving costs at state and county levels by improving short term and long term health and social outcomes for youth-in-transition and decreasing the number of young adults who “graduate” from juvenile services into the adult mental health, substance abuse, criminal justice, social services, and emergency services.	
Rationale/Justification	
Youth and young adults with co-occurring physical and mental health conditions or physical and substance use disorders face an even more difficult transition to independence and successful lives when compounded by involvement in the judicial system. These young people are at heightened risk of utilizing emergency medical, behavioral health, legal, and social service services, in ways that disrupt their successful transition to adulthood and increase costs to local, state, and federal funding entities. Outreach and engagement is paramount to these youth and young adults and their families because many are disconnected from social and other community supports. These youth may not be working, out of school, or lack access to vocational or higher education programs. This population is faced with many challenges, including the possibility of being homeless, contact with the justice/judicial systems and detainment within juvenile and adult	

correctional facilities, and increased likelihood of admissions to hospitals and mental health facilities. Early *identification* of at risk youth and young adults is crucial to the development of *outreach* and *engagement* processes to provide timely, supportive, and effective clinical/medical/treatment/counseling, education and financial management and supportive intervention services. Once *identified and engaged*, it is essential to improve the emotional and behavioral functioning of these individuals so they can progress into positive adult roles, assumes responsibilities, and lead productive lives.⁷

Children who meet one or more of the ACEs criteria become costly members to the health care system and community supports services. According to a recent report published by the CDC, the estimated average lifetime cost per victim of nonfatal child maltreatment includes: \$32,648 in childhood health care costs, \$10,530 in adult medical costs, \$144,360 in productivity losses, \$7,728 in child welfare costs, \$6,747 in criminal justice costs, and \$7,999 in special education costs. The estimated average lifetime cost per death includes \$14,100 in medical costs and \$1,258,800 in productivity losses.⁷

Core Clinical and Programmatic Components

Create “one-stop-shop” options for youth and their families, ideally located at the community college campuses to reduce stigma. Based at that location are both electronic and hard-copy resources related to a wide array of community services, a welcoming space in which to receive walk-in inquiries, and meeting space to allow for coordinated staffing by an interprofessional team. Within this shop, a robust social media outreach program will also be created that will use current social media outlets to provide education, outreach, and community resource education (including linkages to telehealth resources) to the target population. This shop will support the following core components:

1. Prevention/Community Outreach and Education

- Increase community, youth, and family* awareness of available resources, both formal and informal
- Decrease stigma related to accessing behavioral health, educational, and social services
- Provide outreach and access to information and resources through social media
- Improved primary care and behavioral health engagement through a health and strength-based approach (Focus on health behaviors rather than behavioral health)

2. Increased and Efficient Access to Key Resources/Services

- Create/unify/link methods of identification and assessment of target population
- Identify/create key pathways to treatment and services
- Support/prioritize healthy family efforts to guide the process of assisting their youth/young adult in achieving successful transition
- Increase access to and utilization of preventive and primary care services
- Increase access to and appropriate utilization of mental health and substance use disorder treatment services
- Improve coordination of services and communication between service providers
- Use of telehealth to increase access to specialty mental health treatment and reduce stigma of treatment

3. Robust Community Supports

- Improve access to stable housing options
- Improve access to reliable transportation, both public and private
- Establish network of “Coaches” to assist parents, families, and individuals in navigating the transition process
- Increase opportunities for adult education and vocational training; provide in-school interventions and supports for youth who are still in school
- Improve relationship between employment training agencies and employers to increase availability of jobs for target population; support efforts to become self-employed when appropriate

4. Coordination of services through organized communication between community agencies, community resources, and the individuals and families being served.

- Prior to initiation of this project and on-going, partnering agencies will provide cross-training on the services, mechanisms for access, priority populations, etc.
- Develop an agreed upon mechanism/process for sharing as much information as possible within HIPAA and other legal guidelines

5. Trauma-informed, patient-centered, and recovery oriented treatment.

*Family may be defined as biological family, legal guardians, natural supports, or others identified by the youth.

- The “one stop shop” will be located at the community college campuses, and will have a welcoming lobby, resource library with café and Wi-Fi to provide a lounge-like environment to the facility.
- This shop will be staffed by
 - A greeter/coordinator (peer navigator preferred) with training on the resources and collaborating partners.
 - These resources will include primary care and social resources, including employment and housing.
 - Employment and education specialist/counselors (if not already offered at location)
 - Benefits/Resource Specialist (specifically including, but not limited to, housing and transportation, health insurance including healthcare.gov, GAP, TANF)
 - Medical Care Coordinator / Nurse (LPN) to provide initial medical screening and provide treatment recommendations and referrals. Access to a primary care physician through telehealth. May include a dental screening and referral/connection to dental services (a list of community primary care, specialty care, behavioral health, and dental providers will be available on-site)
 - Clients can be connected to Nurse Practitioner if they need advanced treatment.
 - Mental Health/Substance Abuse Clinician for immediate assessment for mental health/substance abuse concerns, intervention and consult.
 - May be available in-person or via telehealth depending on capacity from partnering organizations
 - Probation officers and foster care staff
 - Will use meeting room to meet with clients and use shop to connect to needed services
 - Marketing Coordinator who will promote available resources through most popular social media

mediums, distribute flyers to regional areas where target population can be found (i.e. movie theaters, restaurants, schools, etc.), reach out to newspapers

- DMV staff to connect clients with license and/or ID.

****Participating organizations will designate staff to be available during business hours, either in-person or via telehealth.**

- This shop will possess:
 - A medical exam room for basic medical screenings and assessments
 - One or two private meeting rooms, equipped with telehealth for immediate connection to services not on-site
 - Conference room for interprofessional team meetings, during which time providers will meet regularly in an multidisciplinary team format to create and review comprehensive treatment plans.
 - Room will also be made available for classes and special events
 - Resource center with flyers promoting various medical and social community services that are available and computers to allow clients to research jobs, resources, schools, etc.
 - Transportation to shop with drivers receiving training to begin the welcome and introduction process and will have knowledge of community resources

****If feasible, a telehealth physical screening tool/peripheral device could be used to perform initial physical screenings.**

- Clients and potential clients will be incentivized to visit center through:
 - Using center as meeting location for mandatory meetings through probation and social services
 - Using center as linkage to desired tangibles for target population, i.e. housing and employment
 - Assistance with education
 - Use of center for GED training
 - Incentives for utilizing stigmatized services will be provided through the distribution of gift cards to locations such as: gas stations, restaurants, movie theaters, grocery stores, cell phone minutes/data, etc.
- Strongly consider creation of a neutral 501(c)(3) organization that has arrangements with participating organizations so that data can be shared among providers.
 - Consent and notice of data-sharing will be given and emphasized to each new client

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Integration of Behavioral Health into Primary Care Practices
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with behavioral health needs in primary care settings
Objective	
Integration of behavioral health screening and treatment (mental health, substance abuse treatment, and health psychology) with primary care to ensure coordination of care for both services and to improve outcomes for both behavioral health conditions and chronic physical diseases. Integration will decrease costs by decreasing preventable utilization, including Emergency Room visits and inpatient hospitalization and costs.	
Rationale/Justification	
<p>Integrated behavioral health is defined as: “the care that results from a practice team of primary care and behavioral health clinicians, working together with patients and families, using a systematic and cost-effective approach to provide patient-centered care for a defined population. This care may address mental health, substance abuse conditions, health behavioral (including their contribution to chronic medical illnesses), life stressors and crises, stress-related physical symptoms, and ineffective patterns of health care utilization.”</p> <p>Integrating behavioral health into primary care can serve to 1) assess for and identify behavioral health conditions early, promoting rapid treatment, 2) ensure treatments for medical and behavioral health conditions are compatible and do not cause adverse effects, and 3) de-stigmatize treatment for behavioral health conditions. Care for all conditions is delivered at a single location by known providers who provide continuity of care.</p> <p>Integration is especially important in Medicaid because many high-cost enrollees have behavioral conditions. Unaddressed behavioral conditions can exacerbate physical conditions, which increases disability and cost. Over 75 trials in collaborative care have proven that integration has a significant benefit for depression and anxiety disorders. When treated simultaneously with mental health, chronic physical health also improves significantly. Medicaid “health home” initiatives are working to bring primary care into behavioral health practices and provide behavioral health care in primary care settings. Some states use NCQA’s PCMH and PCSP standards to define health home capabilities. NCQA now defines PCMH care team as a primary clinician and associated clinical (including behavioral health providers where appropriate) and support staff who work with the clinician. Updated NCQA criteria delineate the required capabilities a PCMH must have to treat unhealthy behaviors and conditions related to mental health or substance use</p>	
Core Clinical and Programmatic Components	
<p>Primary care clinics undertaking this project will develop co-located, integrated behavioral health services on-site. The aim is to achieve national recognition as a NCQA Patient-Centered Medical Home (PCMH) within 2 years because this level of integrated and collaborative care is required to implement this project. The following components must be met to achieve integrated behavioral health and primary care:</p> <ol style="list-style-type: none"> 1. Extended hours for access to integrated care, with 24 hour support line and specialty clinics. 2. Conduct a community assessment of most efficient delivery models. 	

3. Assess community, facility, educational, and governmental resources to identify behavioral health providers interested in developing the collaborative care model with the PCMH.
4. Systems will work with interested behavioral health providers to develop a structure for organizational integration (governance, supervision, financial feasibility and meeting regulatory requirements).
5. Behavioral health clinicians will be co-located and work alongside primary care clinicians in a team-based approach to design and implement a unified care plan.
 - Warm handoffs will occur between the primary care providers and behavioral health clinicians.
 - Behavioral health clinicians will address the mental health and substance use conditions that commonly present in primary care (e.g., anxiety, depression, PTSD, ADHD, smoking cessation substance use, etc.) as well as the behavioral health contributors to chronic medical conditions (e.g., medication non-adherence, insomnia, psychosomatic symptoms, stress-linked physical symptoms).
 - Behavioral health and primary care providers will be cross-trained and use unified terminology.
 - Behavioral health providers can provide short-term interventions and counseling (1-4 sessions) and serve as a bridge for patients who need long-term specialty behavioral health treatment.
 - Behavioral health and primary care providers will provide patient-centered, trauma-informed, and recovery oriented treatment.
6. Primary care and behavioral health providers will collaborate on evidence based standards of care including:
 - Unified behavioral health screenings (including PHQ-9 for depression, GAD-7 for anxiety, and SBIRT for substance use or similar evidence-based tools) will be implemented for all patients to identify unmet behavioral health needs. Decision trees/algorithms will be developed to address appropriate follow-up and treatment for all positive screens.
 - Medication management and care engagement processes (stepped care).
7. Primary care and behavioral health providers will comply with updated NCQA PCMH criteria for addressing behavioral health in primary care including:
 - Comprehensive health assessment that includes mental health and substance use history of patient and their family.
 - Implementation of clinical decision support following evidence-based guidelines for mental health disorders.
 - Patient education on behavioral health in primary care settings.
 - Practice communicates the scope of services available, including how behavioral health concerns are addressed.
 - Identification of patients with behavioral health conditions for case management or care coordination
 - Common referral routes if patients need long-term specialty behavioral health treatment with referral tracking and follow-up.
 - Unified communication pathways with accountability for adhering to communication techniques.
 - Systems will develop common referral tools and identified key measures will be shared when making outside referrals.
8. A shared EHR/clinical record between co-located primary care and behavioral health providers should be implemented to ensure coordination of care planning and delivery, where feasible
9. Linkages between peer-recovery supports once referral is needed to help with patient who screens positive on SBIRT for substance use or who needs referral and bridge to specialty behavioral health treatment.

10. A quality process and outcome program will be implemented to ensure integration is efficient and appropriate outcome metrics are met.
11. Explore telepsychiatry consults in primary care to expedite referrals, reduce stigma, prevent unnecessary emergency room utilization, and increase PCP and specialty care capacity.
 - Session facilitated by in-person provider.
 - Support connection of primary care with specialty care providers.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Behavioral Health Home: Integrated Primary Care in Behavioral Health Settings
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) with a chronic physical disease in behavioral health settings
Objective	
Full integration of primary and behavioral health care services for individuals with Serious Mental Illness and co-occurring/co-morbid Substance Use Disorders and other Chronic Medical Conditions will result in an increase in quality of life and life expectancy, reduce emergency room and inpatient hospital use and costs due to decreased exacerbations of chronic physical disease, and support positive health outcomes, including recovery and continuity of care.	
Rationale/Justification	
<p>Individuals with Serious Mental Illness (SMI) have a high incidence of co-occurring Substance Use Disorders (SUD) along with a higher risk for the development of multiple, chronic health conditions due to a combination of lifestyle choices, poorer socioeconomic status and/or secondary treatment effects (such as the increased risk of obesity and high cholesterol associated with taking antipsychotic medications). For example, people with SMI have a greater risk of HIV, Type 2 diabetes, hypertension, strokes, and myocardial infarctions. As a result, people with SMI have mortality rates that are two to three times as high as that in the general population, which results in life expectancy that is shorter by an average of 25 years.⁸ About 60% of this excess mortality is due to physical illness.⁹</p> <p>The increased morbidity and mortality is due to a combination of factors, including barriers to accessing health care and lower quality health care for people with SMI.¹⁰ Individuals with SMI frequently do not have a primary care physician, and they tend to access primary care more often through the emergency departments of local hospitals, and less frequently through a sustained provider relationship where attention can be given to wellness and health education, along with risk assessment, early identification and treatment. This leads to an overreliance on higher cost emergency department (ED) utilization and higher rates of inpatient treatment. Integrating primary care into behavioral health can improve health outcomes and reduce Medicaid spending by decreasing ED utilization. For example, one study found that ED visits were 42% lower and recommended preventive screenings were 44% higher for individuals with SMI who received integrated primary care and behavioral health services compared with those who did not.¹¹</p>	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. Trauma-informed, patient-centered, recovery oriented treatment 2. Comprehensive, integrated primary care (urgent care, preventive care, disease management) in Community Service Boards and other behavioral health settings 3. Provide primary care services integrated within behavioral health settings serving individuals with SMI and serious Substance Use Disorders (SUD) 4. Co-location of services to allow for bi-directional, warm hand-offs. 5. Extended hours for access to integrated care, with 24 hour support line and crisis services 6. Implement an enhanced care coordination model in support of a fully integrated treatment plan 	

addressing behavioral and physical health issues, including social determinants of health (i.e., social engagement, stable housing, and meaningful vocational/employment activities)

7. Provide regular health screenings and track person-specific markers of health and population related health disparities and early identification of at-risk patients through periodic health & wellness checks
8. Sponsor wellness/health promoting activities in support of lifestyle change including open educational groups, nutritional counseling, and organized wellness/leisure activities
9. Establish standard screening protocols/metrics across providers in support of accurate identification of major problem areas and appropriate placement into specific care settings, consistent with the 4 quadrants model
10. Health behaviors (smoking, eating habits, medication management, etc.) are assessed and addressed (30 minute treatment periods)
11. Unified health record, shared EHR/clinical records is preferred.
12. Enhance capacity for the treatment of anxiety/depression in primary care settings
13. Use integrated qualified behavioral health providers in primary care settings to increase treatment outcomes and as a bridge into specialty behavioral health treatment
14. Medication access (affordability), management, and adherence training.
15. Social worker can provide benefits management, including helping eligible individuals apply for Medicaid, GAP, SSI, and other services
16. Peer support and navigation with outreach and transportation
17. Behavioral Health Urgent Care Center will provide treatment outside of Emergency Department (triage for basic ED Diversion), urgent care, and referrals to appropriate community behavioral health resources.
18. Use telemedicine for outreach to other community sites and specialty clinics
19. Explore telepsychiatry consults from Primary Care to expedite referrals, reduce stigma, prevent unnecessary emergency room utilization, and increase PCP and specialty care capacity.
 - Session facilitated by in-person provider.
 - Support connection with specialty care providers.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Permanent Supportive Housing and Intensive Wrap-Around Services for the Homeless
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) who are Homeless
Objective	
Provide permanent supportive housing with comprehensive wrap-around services to the homeless population to prevent unnecessary utilization of emergency department services and reduce the use of other high-cost, emergency services, including the criminal justice system.	
Rationale/Justification	
<p>The homeless population has high rates of disability, including SMI and SUD. The 2015 Point in Time Survey identified 300-500 homeless adults with disabilities in Metro Richmond: 71.2% indicated that their disability was drug or alcohol abuse and 50.2% indicated that their disability was a mental illness. In spite of high rates of disability, less than a third of chronically homeless individuals report receiving SSI and Medicaid. Furthermore, 72.6% of these adults report having served time in jail or prison. The lack of Medicaid and SSI benefits, community-based behavioral health services, and affordable housing contribute to an over-utilization of expensive resources.</p> <p>Nationally, permanent supportive housing using the Housing First approach is recognized as the solution to chronic homelessness.¹² A local study found that the provision of PSH using a housing first approach resulted in a 71% reduction of ED and inpatient utilization at one urban Richmond hospital. Additionally, SAMHSA's national SSI/DI, Outreach, Access, and Recovery (SOAR) initiative is highly effective in assisting the target population with successfully securing SSA disability benefits. Currently, access to trained SOAR workers and behavioral health providers to facilitate disability applications for eligible individuals is limited.¹³ Permanent supportive housing resources are maximized in Virginia without established mechanisms to fund additional rental subsidies and community-based behavioral health care services. Expanding street outreach, SOAR, behavioral health treatment access, and PSH will create linkages between homeless, health care, and criminal justice services that are currently fractured and not effectively serving this highly vulnerable population.</p> <p>A North Carolina study demonstrated the significant savings in health care costs and reductions in incarceration obtained by providing permanent supportive housing to the homeless population. The Moore Place facility houses 85 chronically homeless adults and found that, in its first year, tenants saved \$1.8 million in health care costs, with 447 fewer emergency room visits (a 78% reduction) and 372 fewer days in the hospital (a 79% reduction). The tenants also spent 84% fewer days in jail, with a 78% reduction in arrests, largely due to a decrease in crimes related to homelessness (trespassing, loitering, public urination, begging and public consumption of alcohol).¹⁴</p>	
Core Clinical and Programmatic Components	

1. Targeted Street Outreach
 - Outreach workers who rapidly engage with homeless individuals with SMI when they are identified at Emergency Departments, hospitals, jails, courts etc.
 - Works with existing regional Outreach Consortium and Coordinated Entry Efforts in local communities.
2. SOAR (SSI/DI Outreach, Access, and Recovery)
 - Staff a central “hub” to process disability applications using this national training and Technical Assistance model from SAMHSA.
 - Access to physicians and clinical psychologists to conduct comprehensive disability evaluations and meet the medical evidence standard for disability claims.
 - Trained SOAR worker dedicated to the project.
3. Psychiatric treatment
 - Access to psychiatrist, psychiatric NP, or other prescribers for target population.
 - Providers are able to make home visits.
4. Permanent Supportive Housing
 - Long-term rental assistance for target population to lease apartments from private landlords
 - Community-based case management.
 - Ensures housing retention, links and coordinates community services.
 - Evidence-based models include ACT/ICT/PACT (Assertive Community Treatment), IDDT (Integrated Dual Disorder Treatment), and ICM (Intensive Case Management).
5. Nurse Care Coordination
 - Home-visiting nurse to provide health education and medication administration
 - Coordinates care with behavioral health and health care providers.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Jail Diversion and Jail Transitions
Target Population	Medicaid-covered or uninsured Adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorder (SUD) who are incarcerated or involved in a jail diversion program
Objective	
Design new care models that integrate behavioral health with primary care to improve care and decrease costs for Medicaid and uninsured populations with mental illness and substance use disorders. Specifically, individuals with behavioral health conditions in contact with the criminal justice system have multiple, complex needs including high rates of trauma and chronic medical conditions. Addressing both physical and behavioral health needs “early” with an array of community-based diversion services designed to be patient centered, trauma informed and recovery oriented will enhance the quality of life, promote public safety, and save taxpayer dollars.	
Rationale/Justification	
<p>As in other states across the country, Virginia has seen a steady increase in the number of people behind bars on any given day, and the rates of the incarcerated who have mental illness and SUD is consistent with national rates. According to the Virginia Compensation Board, a total of 6,322 inmates known or suspected to be mentally ill were incarcerated in 2012, a significant increase from the 4,867 in 2010. Of these mentally ill inmates, 27.80% were female and 72.20% were male. Further, 56.02% of the mentally ill population and 13.17% of the general population of jails who provided data on the number and diagnoses of inmates with mental illness were diagnosed as having a Serious Mental Illness.¹⁵</p> <p>Incarcerating people with SMI and SUD results in higher costs to taxpayers and often delays access to treatment for a highly vulnerable population. A national survey estimated that 40% of people with SMI had been in jail at some point in their lives.¹⁶ One study found that the odds of a person with SMI being in jail or prison compared to a hospital was 3.6 from 2004-05, indicating that there were three times more Virginians with SMI in jails and prisons than in hospitals. In Virginia and other states, the high incarceration rates for people with SMI and SUD are driven in part by inadequate access to community-based behavioral health services. People with SMI and SUD also experience high recidivism rates because they are often released from jail without any connection to outpatient behavioral health treatment.</p>	
Core Clinical and Programmatic Components	
<p>1. Physical and Behavioral Health Assessment Center</p> <ul style="list-style-type: none"> • Provides pre-arrest/jail diversion crisis triage services • Serves as bridge to behavioral health treatment for jail diversion programs, alternative sentencing • Provides re-entry services to people leaving jail or prison • Provides short-term residential services • Provides community-based medical detox for alcohol and opiates • Education of key local stakeholders and providers about appropriate referral pathways (e.g. local law enforcement, school officials, health care providers, etc.) <p>2. Behavioral Health Urgent Care Center with open access will serve the following functions:</p>	

- Provides same day, “walk in” services to all community members with any behavioral health needs
- Referral center that primary care providers can send patients to who need urgent behavioral health services but are not unstable enough for ED or crisis stabilization
- Assess and stabilize people and connect them with community-based behavioral health services
- Serve as a bridge for people re-entering the community from jails/prisons or who need urgent follow-up after hospitalization or an ED visit to provide short-term medications and connect them with long-term services

3. Jail Diversion

- Expand specialty courts/dockets that balance clinical intervention/stability with court/sentencing obligations
- “Behavioral Health Docket” (model endorsed by National Center for State Courts, Office of Justice Programs and SAMSHA)

4. Jail Transitions and Re-entry Services

- Expand clinical staffing teams in local jails to initiate release planning (reentry into the community) and coordination of institutional and community-based treatment (including benefit and housing planning).
 - Case manager to coordinate care transitions and help people with SMI and/or SUD meet essential needs for reentry (such as helping people secure driver’s licenses)
 - Housing and employment navigator who supports re-entry into the community by helping people with SMI and/or SUD secure permanent supportive housing (using Housing First model) and employment.
 - Design healthcare pre-eligibility model prior to release from incarceration.
 - Implement the national SAMHSA SOAR (SSI/DI Outreach, Access, and Recovery) screening initiative in jails prior to reentry to help eligible individuals apply for SSI and Medicaid.
 - Design a program to evaluate eligibility for GAP program prior to release from incarceration.
- Expand peer recovery support specialists in jail diversion programs and institutional settings.
- Design communication model and protocols so that criminal justice practitioners and service providers share information and data to promote stability and continuity of behavioral and physical health services when individuals with SMI and/or SUD transition back into the community.
- Design communication model that educates the target population on what resources should be used for various situations upon release into the community.
- Arrange transportation to and from medical and behavioral health appointments.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Behavioral Health Super-Utilizers: Improving Stability and Decreasing Costs
Target Population	<p>Medicaid-covered and uninsured adults (ages 18-64) with Serious Mental Illness (SMI) and/or Substance Use Disorders (SUD) who are Emergency Department and inpatient hospital "super-utilizers."</p> <p>In an urban area, behavioral health "super-utilizers" could be defined as:</p> <ul style="list-style-type: none"> • 6 emergency department visits in 3 months OR • 2 or more inpatient admissions in 3 months OR • 3 or more inpatient admissions in 6 months OR • 4 or more crisis stabilization admissions in a year
Objective	
<p>Improve behavioral health and physical health outcomes and the emotional stability of adults with SMI and/or SUD. Provide early intervention, improved access to treatment, care coordination and comprehensive discharge planning with the goal of reducing utilization of high-cost inpatient and Emergency Department (ED).</p>	
Rationale/Justification	
<p>Behavioral health patients recover better in a stable home environment. This can be achieved by improving coping skills to aid in self-regulation in their home and creating a support structure in the community. Developing supportive services that foster the achievement of that goal is critical to the emotional well-being of the population. This can be accomplished by building a system of support in the community that delivers access to needed services without having to utilize the ED. During a period of crisis, behavioral health patients know that immediate care can be accessed through the ED. Providing earlier interventions and improving access to recovery services will reduce the dependence on the ED as a point of access to intensive, expensive inpatient services and decrease the costs associated with each episode of care. This should result in a reduction in the cost of treatment which can be used to support the development of more intensive community services designed to promote improved coping skills, self-regulation and aid in recovery.</p>	
Core Clinical and Programmatic Components	
<p>Common reasons for readmissions by people with SMI and SUD are transportation difficulties, inability to access community-based behavioral health services, inadequate housing, seasonal/cyclical variations in utilization, discharge planning engagement, outreach, and consumer adherence issues (medications).</p> <p>This model will create an accessible, supportive community network that allows individuals to reduce dependence on intensive, expensive short-term services and reduce ED visits and inpatient admissions.</p> <p>1. Increased Access to Behavioral and Physical Health Services</p> <ul style="list-style-type: none"> • Early identification of at-risk patients through periodic health and wellness checks • Reserved appointment blocks at outpatient treatment centers and crisis stabilization centers for same 	

day treatment of those in crisis with walk in-slots for same day access

- Access to behavioral health services without entering the ED, including treatment for health behaviors
- Priority scheduling for super-utilizers at community-based behavioral health providers
- Access to medication post-discharge and pre-outpatient engagement
- Direct Admissions to hospital in order to avoid ED utilization
- Triage team educates emergency physicians on services available to support crisis intervention and divert inpatient admission if emergency physician decides it is clinically indicated
- Increased in-home services
- Creation of Home Hospital, home physician, and community support structure
- **Creation of a Behavioral Health Urgent Care Center that provides the following services**
 - Same-day, open access to behavioral health services (no appointments necessary) including medication initiation by psychiatrist
 - Physical health assessments and evaluations
 - Linkages to permanent, supportive housing and supportive employment
 - Probation services

2. Care Navigation

- Person-centered, trauma-informed, recovery oriented coordination of screening process
- Intensive case management with interprofessional team approach including a “peer super-utilizer navigator”
- Creation of a “peer super-utilizer navigator” who employs person-centered thinking in navigating behavioral health services and provides benefits screening and support using SOAR (SSI/SSDI Outreach and Recovery) model
- Standard screening instruments across providers
- Established central point of contact for system navigation

3. Real-Time Data Exchange

- Shared EHR across providers (shares minimum necessary information)
- Read-only data by community providers from health systems
- Admission-Discharge-Transfer Feeds will provide real-time alerts when a super-utilizer is admitted to any hospital or ED in the region
- Two-way communication between hospitals and community providers

4. Care Coordination

- Includes use of ICT (Intensive Community Treatment) approach
- Establish referral networks, protocols, and criteria from regional hospitals to treatment center
- Transportation provided to and from services needed for individual patients
- Fully integrated treatment plan addressing behavioral health issues including social determinants of wellness, social engagement, stable housing and meaningful vocational/employment activities
- Interprofessional care coordination team with behavioral health providers who will build authentic, healing relationships and work intensively with patients to address social barriers (team members can include LPCs and LPC interns, LCSWs and MSW students, psychologists and psychology students, substance abuse counselors, peer super-utilizer navigators, etc.)

- Unified care-transition protocols when patients are discharged from hospitals and EDs and released from jails
- Team will serve as bridge to outpatient, community-based provider and consistent outpatient treatment plans
- Enhanced integrated care coordination around behavioral health and physical health needs

5. Recovery Support

- Transportation to outpatient primary care, behavioral health, and specialist appointments
- Community Engagement (faith community, non-profit organizations, etc.)
- Systems of either keeping families engaged or re-engaging families once a patient is stabilized
- Promote meaningful vocational/employment and activities and social engagement
- Connect patients with permanent, supportive housing using Housing First approach
- Continue engagement with patients even after recovery, checking in quarterly

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Medication Assisted Treatment (MAT) of Opiate Addiction in Urban Communities
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with heroin and/or prescription opiate addiction
Objective	
The goals of this model are to: (a) improve access to (and remove barriers to access) community-based, evidence-based Opioid Addiction Treatment services; and (b) increase access to non-stigmatizing peer recovery support and recovery coaching services; (c) maximize Medicaid enrollment for those who are eligible for, but not currently enrolled in Medicaid, among this target population; (d) reduce avoidable emergency department visits and inpatient hospital admissions and associated costs that result from substance use disorders, specifically opioid dependence, and/or chronic pain; and (e) reduce Medicaid transportation costs by embedding multiple, integrated health care services in a “one-stop-shop” setting with which the recipient of services is already comfortable and familiar.	
Rationale/Justification	
Opioid addiction has become the most rapidly growing drug addiction In Virginia, and opioid overdoses have become the most prevalent type of accidental death in the Commonwealth over the past five years. From 2007 to 2013, nearly 70% of all deaths from drugs/poisons were attributed to opioids. In 2013, 468 Virginians died from prescription opioid overdose and 213 died from heroin overdose. ¹⁷ The number of heroin overdoses has increased dramatically over the past decade; there were no fatal overdoses from heroin in Virginia in 2004 and only four cases in 2005.	
Medication Assisted Treatment (MAT) for opiate addiction is an evidence-based best practice strongly encouraged by SAMHSA. According to SAMHSA's MAT Overview, “Medication Assisted Treatment is the use of pharmacological medications, in combination with counseling and behavioral therapies, to provide a “whole patient” approach to the treatment of substance use disorders....MAT can help sustain recovery”	

because the ultimate goal is patient recovery with full social functioning. Unfortunately, access to MAT for opiate addiction is extremely limited in the Commonwealth, especially for uninsured and Medicaid patients.

Medicaid enrollment rates, among adults with prescription opiate addiction and heroin who are eligible for Medicaid, are low and highly unstable. Among those enrolled in Medicaid, most are only temporarily able to access Medicaid-reimbursable services because their Medicaid coverage stems from their being impoverished, single-parent heads-of-household, with time-limited TANF benefits. The utilization of Medicaid reimbursement as a strategy to support the delivery of evidence-based opioid treatment services by private and public providers has been almost non-existent, due to: (a) low reimbursement rates; (b) the uptake of buprenorphine/suboxone prescribing by private physicians has been limited to mostly “cash and carry” “pill mills” that do not provide or require concurrent psychotherapy or counseling; and (c) public providers have difficulty finding physicians who are buprenorphine-certified and willing to care for uninsured and Medicaid-covered patients. This has resulted in a situation where buprenorphine/suboxone is largely only available to those in the upper-middle and upper socioeconomic classes

A substantial number of people with opioid addiction suffer from co-occurring mental health disorders, and a significant portion also suffer from one or more other chronic health conditions that have both long and short-term, significant health care and health care cost implications (e.g., nicotine addiction, asthma, HIV, hepatitis, and obesity). These individuals chronically overuse expensive and intensive health care services, including EDs for primary care services, as a result of the lack of access to community-based, integrated primary and behavioral health services. These people also are frequently shunned from the traditional, 12-step-based, community-based recovery support and self-help communities.

Core Clinical and Programmatic Components

1. Workforce Development (pipeline) to support Medication Assisted Treatment (MAT) for opiate addiction
 - Financial incentives to providers for becoming certified to prescribe buprenorphine/suboxone.
 - Addiction medicine fellowships in academic health centers and teaching hospitals with rotations at public sector sites such as Community Service Boards.
2. MAT prescribers at all safety-net behavioral health providers in any community that selects this project
 - All Community Services Boards must have MAT prescribers on staff or have contracts with groups who have MAT prescribers.
 - FQHCs must have MAT prescribers or formal, written referral agreements with CSBs or other providers who have MAT prescriber capacities.
3. MAT services are integrated with primary care services, with all Opioid Treatment Programs (OTPs) providing primary care services on-site, or establishing formal agreements with primary care providers to ensure timely, bi-directional referral routes to primary care and OTP services;
4. Mandatory routine and random drug screening for patients in OTPs or receiving other MAT services from other prescribers (e.g., FQHCs, Pain clinics, CSB physicians).
5. All people receiving MAT services are assessed for co-occurring mental health problems or other chronic medical conditions, and treated for same in an integrated manner.
6. Intensive outpatient group or individual counseling services are available and provided for all individuals receiving MAT services, with intensity based on ongoing assessments of needs based on ASAM patient placement criteria.
7. All components of the integrated care for people receiving MAT services are person-centered, trauma-

informed and recovery -oriented for all patients.

8. To support person-specific recovery goals, all integrated services/treatment plans for people receiving MAT services also address the housing, social engagement, and employment needs for all patients.
9. Peer recovery support specialists are available within all OTPs, either directly or through formal, written agreements with peer recovery support provider organizations.
10. Peer-based recovery support services provider organizations develop and are reimbursed for providing peer-based recovery support services that are friendly to and supportive of people receiving MAT services.
11. Naloxone-based opioid overdose-reversing kits, and training on Naloxone administration for opioid overdose prevention, is increased by subsidizing the cost of the naloxone kits (current prohibitive price is \$100/2-syringe kit).

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Primary Care Treatment of Opioid Addiction in Rural Communities
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with heroin and/or prescription opiate addiction
Objective	
<p>To empower the existing provider workforce to treat the epidemic of opioid addiction. The magnitude of the epidemic requires us to use the resources we currently have available. Just as our epidemic of diabetes cannot be addressed by hiring endocrinologists, so addiction cannot be addressed by recruiting "addictionologists." They do not exist to be hired and most patients do not need this level of expertise. Instead, we will train and, most importantly, support primary care physicians to treat opioid addiction.</p>	
Rationale/Justification	
<p>Magnitude of the Problem: Opioid addiction is the most rapidly growing drug addiction in Virginia. The sparse population of southwest Virginia is impacted at alarmingly higher rates than the rest of the Commonwealth. According to the Chief Medical Examiner for the Western District of Virginia, drug deaths increased by 41% in Western Virginia between 2007 and 2011. Individuals at most risk are low-income individuals living in rural communities. Individuals with Medicaid are prescribed pain killers at twice the rate of non-Medicaid patients and are at six times the risk of prescription pain killer overdose, according to the Centers for Disease Control and Prevention.</p> <p>Workforce: Treatment of opioid addiction is well within the scope of primary care. Unfortunately, most primary care physicians received little education in the treatment of addiction. They also do not typically have the ancillary staff in place to provide the counseling services so crucial to effective addiction treatment. Treating the substance abuse community is mistakenly considered "high risk" by most primary care physicians and compensation does not support taking on this "risk."</p> <p>Patient Engagement: One of the biggest challenges to providing effective treatment is the easy and ineffective treatment provided by "pill mills" and often preferred by patients. Patients choose these programs for multiple reasons, chief among them that they require less patient effort and are often less expensive due to the greater interval between visits.</p>	
Core Clinical and Programmatic Components	
<p>1. Physician Workforce</p> <ul style="list-style-type: none"> Recruit and compensate a panel of regional addiction specialists who are available to support primary care physicians in their treatment of addiction. <ul style="list-style-type: none"> Organized by region and assigned participating primary care physicians. Review and approve any buprenorphine dose over 16 mg per day. Pay by the encounter or monthly stipend based on number of students. Pay for physician to become certified to treat opioid addiction with buprenorphine/suboxone. Training will include education in addiction in general and development of a relationship with the regional addiction specialist who will serve as a subject matter expert they can call as needed for free consultation. Provide a monthly management fee for each patient treated. This amount will offset: 	

- The perceived risk in treating the population
 - The increased uncompensated work (phone calls, extended interactions with staff in person, repeated education to insure understanding, etc.) involved in treating a population known for their noncompliance and demanding nature.
 - Physicians will provide services in the evenings when their clinic is more available and patients are typically off work.
 - Resources will be used to educate the public and health care provider about the availability of treatment.
2. Counselor Workforce
- Minimum standards for counselor are: LCSW, LPC, or Certified Substance Abuse Counselor (CSAC)
 - Recruit counselors from existing workforce who would like to earn additional revenue providing services in primary care physician's offices.
 - Pay above going rate to offset evening hours and work load beyond a 40 hour week.
 - Send counselors to 2 day "boot camp" on this model so they can function as the quality control individual.
 - Counselor responsible for developing relationships with higher levels of care like intensive outpatient programs (IOPs) and inpatient treatment options.
 - Recruit peer recovery support specialists to assist with labs, PMP and registration.
3. Standard of Care
- Establish minimum standard of care as follows:
 - Medication Assisted Therapy: No benzodiazepines prescribed, maximum buprenorphine dose 16 mg,
 - Mental Health Counseling: weekly group visits, weekly group counseling, monthly individual counseling, psychiatry evaluation required within the first 6 months of therapy.
 - Monitoring Compliance: weekly Urine Drug Screen, quarterly check of Physician Monitoring Program (PMP)
 - Monitor standard of care by:
 - Quarterly report by counselor to regional addiction specialist for each patient. This would be a simple check off form to document standard of care being met.
 - Create established referral options into IOP programs (usually provided by CSBs) to ease primary care physicians' perception of risk in treating addiction.
4. Patient Engagement
- Facilitate engagement by providing easy transportation to evening appointments.
 - Financially support uninsured patients so their copay is approximately \$10 per visit.
5. Enhance Local Hospital Emergency Department and Urgent Care Center capacity to treat people with opiate addiction
- Local Hospital Emergency Departments and Urgent Care Centers must have prescribers on staff to initiate services and must have formal written agreements with community prescribers for ongoing MAT services.
 - Local Hospital medical staff - Physicians and Nurses - will have on-going educational opportunities, at least annually to broaden awareness of addiction issues and to be informed about MAT services.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Chronic Pain Initiative: Primary Care Treatment of Chronic Pain in Rural Communities
Target Population	Medicaid-covered and uninsured adults (ages 18-64 y/o) with chronic pain
Objective	
<p>The Virginia Chronic Pain Initiative (CPI) is designed to improve the medical care received by patients with chronic pain and in the process, to reduce the misuse, abuse, and overdose of medications used to treat patients with chronic pain. This model will provide guidelines for the assessment and treatment of chronic pain by primary care providers that increases access to first line non-pharmacological treatments for pain; decreases mortality due to unintentional overdose deaths from opioid prescriptions; decreases inappropriate use of emergency departments (ED) for pain management; decreases inappropriate ED use of imaging with diagnosis of chronic pain; and increases engagement of primary care providers in providing appropriate treatment for chronic pain through treatment protocols.</p> <p>Overall goals of the CPI model are to avert deaths from unintentional poisoning; address the rapidly rising problem of uncoordinated and excessive use of opioids; change systems of care and prescribing patterns to promote quality and safe care for patients with chronic pain; improve the coordination of care for patients with chronic pain; ensure appropriate use of prescription pain medications; enhance collaboration with the local systems of care to ensure safe and quality care for patients; and lower health care costs associated with higher service utilization to treat chronic pain.</p>	
Rationale/Justification	
<p>Virginia's communities will be able to respond to rising opioid overdose death rates and inadequate treatment of pain conditions through establishment of a regional Chronic Pain Initiative (CPI). In the past decade, there are increasing indicators that the misuse and abuse of prescription opioid analgesics by patients contributes to this epidemic. Most chronic pain presents to and is managed by primary care; yet, access to evidence-based, comprehensive treatment in the primary care setting is difficult for Virginia's Medicaid and uninsured populations. A new model of care is imperative to meets the needs of patients suffering with disabling chronic pain syndromes, while ensuring that the care provided is interdisciplinary and evidence-based in order to limit abuse of medications commonly prescribed to treat pain syndromes.</p> <p>The CPI will initially target Medicaid-covered and uninsured patients, but the recommended tools and strategies can be used for any patient struggling with pain issues. Medical providers will be encouraged to engage in the education processes integrated in the CPI as well as adopt the practices and policies provided in the CPI, regardless of payment source. The CPI will be based on a public health model, which has proven to decrease prescription opioid overdose while improving access to appropriate pain treatment in other states.</p>	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. The CPI will be a collaborative effort between the region's local public health department, social services office, Federally Qualified Health Centers, physician practices, non-profit organizations, and other stakeholders. State agencies including the Virginia Department of Medical Services Assistance, Virginia 	

Department of Health, and Virginia Department of Social Services will support these regional collaborations. The regional CPI will:

- Form a community-based, public-private partnership that takes a population management approach to improving health care and containing costs for Virginia's most vulnerable populations.
 - Partner with the certified "medical home" practices in Virginia to support Medicaid beneficiaries, individuals eligible for both Medicare and Medicaid, and uninsured people.
2. Work together collaboratively to develop community-based approaches to improving care and care outcomes for underserved populations.
 3. The CPI will be a comprehensive proposal that addresses the appropriate treatment of chronic pain. The plan will be developed by an interdisciplinary team including pain specialists, clinical pharmacists, behavioral health providers, nurses, social workers, and case managers.
 4. Primary care providers (PCPs) in the region will be encouraged to participate in their region's CPI.
 5. CPI care managers will provide case management for patients with chronic pain syndrome.
 - Care managers are vital participants in the care team who will empower patients to understand and access quality, coordinated, effective health care.
 - Care managers will be placed strategically in each region in order to work with each primary care provider. Each ED will also have access to a care manager to coordinate care with PCPs participating in the CPI.
 - Responsibilities of the care manager in coordinating care for patients with chronic pain include:
 - Assessing the total person, including their medical, psychosocial, behavioral, and spiritual needs
 - Involving the recipient and their support systems (i.e. caregiver, family, etc.) in the decision-making process
 - Communicating and coordinating with all providers and members of the care team, in an effort to minimize fragmented care
 - Monitoring quality and effectiveness of interventions to the population by setting both long-term and short-term specific, measurable goals.
 - Supporting the medical home through education and outreach to recipients & providers
 - Care managers will work directly with PCPs to assist the patient in obtaining first-line non-pharmacological treatments for chronic pain including physical therapy and interventional treatments.
 6. The CPI will develop toolkits for education and practice for primary care providers and emergency physicians. Key components of the tool kit will include:
 - Opioids in the Management of Chronic Pain: Review of chronic pain issues and regulations and outlines key tools for managing the care of patients with chronic pain
 - Assessment and Management Algorithms: These flowcharts summarize the optimal processes for assessing and managing chronic pain
 - Screening tools for assessment of risk of addiction before controlled substances are prescribed and to assess for abuse during treatment
 - Standardized Pain (Opioid) Management Agreement: This agreement is helpful in clarifying patient guidelines and protecting the provider from prescribing to drug-seeking patients.
 - Chronic Pain Progress Note: This form provides a convenient record of the pain visits and a template of questions to ask regarding risk factors for opioid misuse.

- Special training on the evaluation of patient functioning and appropriate documentation of goals in the Electronic Medical Record (EMR).
 - Education on appropriate use and documentation of review of the prescription drug monitoring report.
 - Education on the appropriate use and evaluation of point-of-care urine drug screens
 - Education on appropriate referral process to chronic pain specialists when the daily morphine milligram equivalent (MME) required by a patient is greater than 100.
7. PCP mentoring groups will be organized that will provide on-site consultation and technical assistance to PCPs trained in the appropriate care of patients with chronic pain through the CPI.
 - Mentor will assist PCP and interdisciplinary team in setting up chronic pain visits according to the CPI guidelines.
 - Mentoring will include setting-up group visits, making sure the interdisciplinary team is in place, training on appropriate documentation in the EMR, and training on urine drug screen testing and other measures of adherence (i.e., random pill counts), and standardization processes of checking the prescription monitoring program (PMP) as part of the treatment process.
 8. PCPs trained through the CPI process will be eligible for reimbursement for the team-based approach. Reimbursement will be provided that covers ALL key components of the appropriate care of the patient with chronic pain syndromes; including physical therapy and interventional treatments.
 9. Physician leaders of the regional CPI will offer a telephonic consultation service to help other PCPs manage high-risk patients as a way to leverage the resources of each network to support PCPs around the management of chronic pain.
 - The consultation will consist of an interdisciplinary team of specialists that includes a pain specialist, behavioral health provider, clinical pharmacist, and care manager. The PCP and multidisciplinary team communicate via teleconference for approximately 20 minutes for each case presentation—at no cost to the provider.
 10. Screening, Brief Intervention and Referral to Treatment (SBIRT) should be a part of every PCP office participating in the CPI. SBIRT, as a standard of care, is a process that should be reimbursed as part of the team-based approach to chronic pain.¹⁸
 11. Every site participating in the CPI will educate patients prescribed opioids about opioid overdose prevention. Each patient prescribed an opioid will be trained on naloxone administration and be provided with a prescription for a naloxone overdose kit. This education process will also be reimbursed as part of the team-approach to chronic pain care.
 12. Drug formularies for Medicaid patients will preferentially pay for abuse-deterrent formulations of opioids when treatment with an opioid is required for the treatment of chronic pain. For the uninsured, care managers will work with the PCP office to help obtain abuse-deterrent formulations directly through the pharmaceutical company through patient assistance programs.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Enhanced Opiate Addiction Treatment and Care Transitions in Rural Communities: Medication Assisted Recovery (MAT), Intensive Outpatient Therapy, and Emergency Department Transitions
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with opiate addiction and/or alcohol abuse
Objective	
<p>Create effective, assessable substance abuse treatment for residents of rural communities. A variety of services will need to be available because of the complex nature of substance abuse including intensive outpatient and case management services and Medication Assisted Treatment (MAT) resources to treat opiate addiction. Due to transportation barriers in rural communities, these services will need to work closely with one another to provide multiple services through a variety of access points and coordinate closely with emergency departments (EDs) to provide seamless care transitions. Community Service Boards are equipped to deal with substance abuse issues and the mental health issues that often accompany them with a variety of services. Typically, primary care physicians often deal with ongoing medical issues associated with continued substance use independently from the packaged services offered by the CSB.</p> <p>This model will integrate medical care with behavioral health care for residents dealing with substance abuse needs while expanding access to the spectrum of essential opiate addiction treatments from Intensive Outpatient Therapy (IOP) to MAT. These programs will differ from the current substance abuse treatment reimbursed by Medicaid because they will: offer comprehensive treatment protocols; be accessible and adequate in capacity to meet the needs of all communities; be recovery and person-centered focused, utilize peer support specialists to engage, support, coach and encourage; and be trauma-informed. By focusing on the whole person and integrating care with primary and behavioral health providers, this model will increase overall health outcomes and decrease avoidable emergency department (ED) visits and psychiatric and medical hospitalizations.</p>	
Rationale/Justification	
<p>Opioid addiction is the most rapidly growing drug addiction in Virginia. The sparse population of southwest Virginia is impacted at alarmingly higher rates than the rest of the Commonwealth. According to the Chief Medical Examiner, drug deaths increased by 41% in Western Virginia between 2007 and 2011. Prescription opioids were found to be responsible for 53.8% of drug-only deaths. Individuals at most risk are low-income individuals living in rural communities. Individuals with Medicaid are prescribed pain killers at twice the rate of non-Medicaid patients and are at six times the risk of prescription pain killer overdose, according to the Centers for Disease Control and Prevention. The cycle of addiction is compounded by the fact that many addicted individuals access drugs illegally. Many individuals also suffer from co-occurring mental health issues and a large number also suffer from chronic health conditions, intersecting with the healthcare community at times of intensity/crisis. Due to the significant overlap in physical and mental health needs, it is essential for residents to have consistent access to medical and behavioral health care throughout their treatment.</p> <p>Low Medicaid reimbursement rates combined with the high rate of uninsured residents in need of substance</p>	

abuse treatment results in difficulty maintaining substance abuse treatment programs required to meet the needs of communities. Virginia's Medicaid reimbursement rates for substance abuse are too low to support a comprehensive array of services and supports. In addition, Medicaid reimbursement has historically been accompanied by multiple administrative barriers; as a result, many physicians refuse to accept new Medicaid patients. This coupled with the low physician to patient ratio for rural communities has resulted in decreased access to care for Medicaid patients. Furthermore, there is a shortage of physicians who are buprenorphine-certified and can treat people with heroin addiction in rural areas. Finally, uninsured residents are less likely to seek medical attention until their symptoms have become severe due to lack of affordable access to the healthcare system. CSBs offer sliding scale fees, but other barriers such as childcare and transportation often create difficulty with service access. Residents are often forced to attend substance abuse services less frequently than is recommended or desired due to these and financial barriers.

Core Clinical and Programmatic Components

Medication Assisted Treatment (MAT) for Opiate Addiction in Behavioral Health Settings:

1. Incentivize physicians to become certified to provide buprenorphine/suboxone treatment,
2. Require physicians to incorporate mental health assessments and referrals into their practice and require both mental health and substance use treatment as a condition of MAT services.
3. Integrate MAT with existing safety-net mental health and primary care clinics in comprehensive behavioral health, substance use treatment, and primary care:
 - Community Services Boards (CSBs) must have MAT prescribers on staff or have formal, written agreements with groups who do have MAT prescribers.
 - Federally Qualified Healthcare Centers (FQHCs) must have MAT prescribers on staff or have formal written, referral agreements with CSBs or other groups who have MAT prescribers.
 - MAT services are integrated with primary care services, or will have formal, written agreements with primary care providers to ensure timely referral routes to primary care services.
4. All components of integrated care for individuals receiving MAT services are person-centered, trauma informed and recovery focused.
5. All individuals receiving MAT services are assessed for co-occurring mental health issues and chronic medical conditions, and receive treatment for needs in an integrated manner.
6. Routine drug screening for MAT services and other SA treatment services will be provided by behavioral health or primary care providers.
7. Mentor and support of new MAT providers
 - Designate expert MAT clinician who can serve as required clinical mentor and support local providers in becoming certified to provide Suboxone treatment
 - Expert MAT clinician will lead weekly case conferences with new local providers
8. Create interdisciplinary teams will provide wrap-around comprehensive services to support physician who is providing MAT in CSB or FQHC settings
 - MAT-certified provider - leads the team and prescribes Suboxone to individuals with opiate addiction
 - LCSW, LPC, or Certified Substance Abuse Counselor (CSAC) - provides comprehensive individual and group therapy and counseling
 - NP - provides comprehensive screening for HIV/AIDS, Hepatitis B and C as well as comprehensive primary care services
 - Care manager and peer recovery coach - facilitate access to transportation, safe housing options, educational and vocational services, recreational and spiritual supports, and other services that

support long term recovery.

9. Universal screening of people with opiate addiction for HIV/AIDS and Hepatitis B and C: MAT prescribers, primary care providers and emergency department nurses and physicians will screen for HIV/hepatitis and refer for treatment as appropriate.
10. Require behavioral health and primary care Medicaid prescribers to utilize universal precautions for detecting addiction issues to identify and address risky behavior and identify early patterns of abuse and addiction. Employ assertive outreach to patients with patterns of abuse and addiction to encourage them to engage in a pathway of treatment and recovery.
11. A regional consortium will develop a marketing strategy to inform the public and other human service organizations and public safety organizations about MAT services and the risks associated with addiction. Varied media methods will be utilized and local Coalitions will be mobilized to promote services.

Comprehensive Intensive Outpatient Therapy (IOP)

1. Comprehensive program will provide evidence-based Intensive Outpatient Therapy (IOP) as well as the following enhanced and expanded services:
 - Multi-family Group Therapy - engages patient and family in therapy in a group setting to prepare the patient to re-enter society
 - Enhanced social supports that reduce barriers to treatments such as a case manager who connects people with supportive housing, an employment counselor who helps connect people with meaningful work when they exit the IOP, transportation, and childcare
 - Enhanced treatment including tobacco cessation
 - Flexible treatment options to accommodate work schedules including evening and weekend hours
 - Screening, treatment, and education for patients with HIV/AIDS and Hepatitis B and C
2. Physician and all behavioral health and care management staff will be trained in trauma-informed care
3. Peer recovery coaches with lived experience with substance abuse will help support patients
4. All CSBs must have a primary care physician on staff or have formal, written agreements with groups or organizations that do have primary care physicians to ensure timely, bi-directional referral routes to primary and IOP services
5. Increased substance abuse (SA) screening in Primary Care with Warm Hand-Offs to integrated SA treatment program in a CSB such as IOP

Emergency Department Transitions

1. Enhance local emergency department (ED) and Urgent Care Center capacity to treat people with opiate addiction
 - Local hospital ED and Urgent Care Centers must have prescribers on staff to initiate services and must have formal written agreements with community prescribers for ongoing MAT services.
 - Local hospital medical staff - Physicians and Nurses - will have on-going educational opportunities, at least annually to broaden awareness of addiction issues and to be informed about MAT services.
2. Care Transitions Team handles discharge planning from EDs and hospitals for patients after opiate overdose:
 - Called by hospitals when patient who had opiate overdose are ready for discharge from the ED or the inpatient hospital to provide "warm hand-off"
 - Interdisciplinary Care Transition Team includes the following members:

- a. Case manager – clinically assesses patients after opiate overdose who are ready for discharge from ER and hospital to determine if they need IOP; ensures that patients are connected with IOP or have an appointment at a local clinic that provides SA treatment if they need less intensive services
 - b. Peer recovery support specialist – meets patients before discharge to inform them about options for MAT treatment in the community, uses motivational interviewing to assess readiness for treatment and encourage patient to seek treatment
 - Team also arranges for transitions from IOP into the community by connecting patients with primary care clinics that offer comprehensive SA treatment including MAT and community supports such as Narcotics Anonymous
3. Uniform drug-seeking diversion protocol and referral routes across EDs

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Comprehensive Residential Services: Medically Supervised Detox, Crisis Stabilization, and Medication Assisted Recovery (MAT) for Opiate Addiction in Rural Communities
Target Population	Medicaid-covered and uninsured adults (ages 18-64) with opiate addiction and/or alcohol abuse
Objective	
<p>Provide residential detox and residential crisis stabilization services and centralized MAT services that are community-based, culturally sensitive and responsive, trauma-informed, person-centered, non-judgmental, recovery-oriented, evidence based, and specifically designed to meet the complex needs of adults who typically have addictions to more than one substance and who often have co-occurring mental health and physical health conditions. This model will also meet the immediate crisis needs of adults with psychiatric or co-occurring disorders who require short term community-based residential treatment, avoiding the high-cost and intensive level of care associated with inpatient hospitalizations.</p>	
Rationale/Justification	
<p>The opiate and prescription drug epidemic continues to plague rural areas of Virginia, especially economically disadvantages and geographically remote areas such as Southwest Virginia, and has become generational. Southwest VA has labor intensive industries (i.e., mining and lumber) that often result in injuries and chronic pain issues. Rural communities in Southwest VA and the bordering states (Kentucky, West Virginia, and Tennessee) have been devastated by the opiate epidemic, and are now struggling with “pill mills” that dispense copious opioids with no monitoring of patients, exacerbating the problem and resulting in escalating numbers of accidental overdoses and deaths. The ravages of the epidemic include out of control/uninterrupted addictions, repeated involvement with the criminal justice system and incarcerations, fractured families, frequent hospitalizations, increased numbers of individuals with communicable diseases, and deaths. The CDC included the counties of Southwest VA in a new epidemic of Hepatitis cases among young adults in rural communities with IV drug histories. The Office of the Medical Examiner (OME) reported a 13.3% increase for 2012- 2013 accidental poisonings and overdose deaths in Virginia. According to the OME, the Western District, which includes the counties of Southwest VA, had the highest number and percentage of deaths per 100,000.....246 (27 %) of the recorded 921 deaths in VA in 2013. Southwest Virginia experienced the greatest growth of Drug Courts in VA in recent years as a direct response to the opiate and prescription drug epidemic; these courts are underfunded and rely on donated resources and federal funding to operate. The Supreme Court of VA added a fifth Circuit Court Judge in 2014 to the 29th Judicial Circuit because of the continued burden of substance abuse related cases on the criminal dockets.</p> <p>Limited access to affordable MAT programs that also provide the necessary mental health counseling, case management, support, and wrap around services has led individuals to purchase “street suboxone” to manage cravings and withdrawal until they can get in a program. This has led to a “black market” and to increased arrests and related burdens on the criminal justice system. The extremely limited access to MAT, especially for Medicaid and uninsured patients, is a major barrier that must be overcome to help Virginians with opiate addiction enter and sustain recovery.</p>	
Core Clinical and Programmatic Components	

1. Establish a regional center that offers combined: 1) community-based substance abuse detox; 2) crisis stabilization program; and 3) an outpatient MAT maintenance program to treat opiate addiction. The facility's beds will be "fluid" with admissions to each service based on the community's needs at the time.
 - Provides medically supervised detoxification services for all substances of abuse or combinations of substances, including tobacco, caffeine, over the counter medications, street synthetics, etc., as well as prescription opiates and traditional "street" drugs of abuse. Provide buprenorphine/suboxone detox to manage opiate withdrawal.
 - Provides short term crisis stabilization services for individuals with psychiatric or co-occurring issues in the community to more quickly stabilize individuals in acute crisis and to reduce need for more costly levels of care, i.e., inpatient psychiatric hospitalizations and/or emergency room admissions.
 - Offers medically supervised detox services for individuals with co-occurring issues admitted to the crisis stabilization program.
 - Induct individuals accepted for all medication assisted therapies (including starting buprenorphine/suboxone and methadone for individuals with opiate abuse)
 - House MAT maintenance services at detox facility to include medication management with the prescriber, medication management with the nurse, dosing, drug screens, etc.
 - On-site pharmacy licensed to house all medications needed for both detox and crisis stabilization programs.
2. Accepts patients under TDOs in both programs to ensure that individuals requiring this level of intervention are treated locally; this also serves to divert inappropriate referrals from state hospitals.
3. Accepts "step down" admissions from both state and private inpatient programs when appropriate.
4. Universal screenings during admission to all services:
 - Screen each person admitted to the detox program for co-occurring mental health issues and provide treatment as indicated.
 - Screen each person admitted to the crisis stabilization program for co-occurring substance abuse issues and provide treatment as indicated.
 - Use the Prescription Monitoring Program for each person admitted to assess if they have signs of opiate abuse and drug-seeking behavior.
5. Assess uninsured patients for eligibility for the GAP program, Medicaid, and private insurance on the health insurance marketplace, and assist with the application process.
6. Provide adequate staffing for nursing, counseling, and support providers:
 - Staff for all programming who are trauma informed and person centered.
 - Funding for a minimum of two RNs/shift, one LPN/shift, and one CNA/shift for a 16 bed facility; provide funding for a minimum of two RNs/shift, one LPN/shift, and two CNAs/shift should facility expand to 24 beds.
 - Funding for a minimum of three counselors/day shift, two counselors/evening shift, and part time staff for weekends and holidays. A minimum of one counselor per shift who is licensed or licensed eligible with the other counselors being Masters/QMHP.
 - Ensure all staff, for all programs, are cross-trained across programs.
 - Clinical staff trained in Eye Movement Desensitization and Reprocessing (EMDR) and Dialectical Behavioral Therapy (DBT).
 - Dedicated psychiatric and nurse practitioner coverage for psychiatric evaluations and medication management services.

7. On-site peer recovery support specialists with lived experience with co-occurring mental illness and substance abuse and/or lived experience as current or past recipients of MAT to treat their heroin addiction who can provide peer support to patients admitted to any of the programs.
8. Provide comprehensive, integrated primary care and public health screenings on-site:
 - Establish integrated primary health care clinic with a family nurse practitioner on-site to assess and address primary health care needs while working with the facility's Medical Director.
 - Local health department will provide screening/testing on site for TB, HIV/AIDS, Hepatitis B, Hepatitis C, and STDs and provide related referrals, counseling, education, etc.
 - Provide a nutritionist/dietician, recreational specialist, and an acupuncturist.
9. Contract with a local pharmacist as consultant to the programs.
10. Serve as a training site for local nursing programs and medical students.
11. Establish collaborations with local providers and community organizations:
 - Ensure continuity of working relationships with local hospitals, EDs, law enforcement, pharmacies, etc.
 - Work with local 12 Step and other community support programs and with the faith based community to provide additional supports and to facilitate mutual aid groups on site.
12. In rural areas, provide a minimum of four vehicles with four wheel drive capability to transport individuals to and from the program and to other community resources and to transport staff during hazardous road and weather conditions to ensure adequate coverage.
13. Purchase laboratory urinalysis equipment to test for substances and their blood levels to ensure appropriate recommendations are being made for individuals requiring detox. Provide staff/technicians trained to operate the equipment and ensure accurate results.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	Comprehensive Substance Abuse Treatment for Pregnant Women and Mothers
Target Population	Medicaid-covered or uninsured pregnant women or parenting women with dependent children with opiate addiction and/or alcohol abuse
Objective	
<p>Develop a continuum of care that is community based, culturally sensitive and responsive, trauma informed, person-centered, non-judgmental, recovery oriented, evidence based, and specifically designed to meet the myriad of needs of women with Substance-Use Disorders or co-occurring mental illness who are pregnant, postpartum, and/or parenting or who are of child bearing age. The continuum of care will also target women with substance use disorders or co-occurring mental illness who do not meet one of these four targeted populations. Objectives are to: (a) provide a continuum of care that includes, but is not limited to, screening, assessment, gender specific outpatient and intensive outpatient services, intensive case management, peer support, Medication Assisted Treatment (MAT) for opiate addiction, residential treatment, and Drug Courts; (b) increase capacity to ensure immediate access to services included in the continuum of care; (c) identify and reduce barriers to immediate access to services, i.e., transportation and child care; (d) ensure integrated primary and behavioral health care with community providers for gynecological and/or obstetric care, pediatric care, communicable diseases, family planning, pain management, nutrition, dental care, etc.; (e) increase positive birth and early childhood outcomes; (f) decrease infant and maternal mortality rates; (g) increase retention in treatment and increase potential for sustainable and successful recovery outcomes; (h) provide MAT services that include medication therapies and behavioral health interventions for opiate, alcohol, and nicotine dependence; (i) increase access to high-quality residential treatment services; and (j) maximize Medicaid enrollment for these targeted populations.</p>	
Rationale/Justification	
<p>Alcohol and drug use among women of reproductive age continues to increase. According to "Pregnancy-Associated Deaths from Drug Overdose in Virginia," a report by the Virginia Department of Health and Office of the Chief Medical Examiner (April 2015), there has been a fivefold increase in women's deaths from prescription pain killers between 1999-2010. The study examined 397 maternal deaths and found that substance abuse was identified as a factor in nearly 25% of deaths regardless of the actual cause or manner of death during pregnancy or within one year of the end of the pregnancy and 10% of the deaths were the direct result of an overdose. Furthermore, 46% of deaths were due to violence. According to the report, opiates and benzodiazepines were the most common found substances in these overdose deaths, one in five women were receiving treatment for pain, 56% had co-occurring mental illness, and the most deaths occurred in Southwest Virginia with 12 deaths (29.3%). The study reported that another contributing factor is the "accepted culture" of drug use which is most pronounced in Southwest Virginia, which includes numerous medications prescribed for a variety of illnesses at the same time, several prescriptions for a single problem, using someone else's prescription medication, and using over the counter medications in combination with prescription medications. According to data provided by the Virginia Department of Behavioral Health and Developmental Services, 13,718 babies were born in Region III, which includes the counties of Southwest VA, in 2013. Unfortunately, 391 (2.8%) of these babies were reported to Child Protective Services as Substance Exposed Infants (SEI), more than with any other health region in Virginia.</p>	

Only 72 of these women had been seen by the Community Service Board (CSB). This data supports the urgent need for a continuum of care for women of child-bearing age, especially in rural areas such as Southwest Virginia where women, children, and families are being torn apart by the epidemic of prescription opiate abuse.

Core Clinical and Programmatic Components

1. Establish Workforce Development requirements for all services on the continuum of care that ensures competency in (a) addiction and substance use disorders/issues, (b) gender specific treatment; (c) trauma informed care; (d) EMDR; (e) medication assisted treatment; (f) peer recovery support; (g) obstetric care for high risk pregnancies; (h) pediatric care for substance exposed infants and for children/adolescents with related developmental delays and/or disabilities; (i) SBIRT; (j) Motivational Interviewing; (k) crisis intervention; and/or (l) intensive case management provision for high risk individuals with complex needs.
2. Establish new project LINK site or expand/enhance existing site. Project LINK provides intensive case management and home visiting services to pregnant and parenting women who are "at risk" or are currently abusing substances.
3. Place dedicated Project LINK Case Manager positions in each CSB in the region to:
 - Serve as the point of contact for all community partners, stakeholders, resources, etc.;
 - Provide intensive case management services to include assessing, linking, referral, etc. to ensure immediate and long term needs are being met; and
 - Serve as the overall care coordinator to ensure continuity of care with all providers.
4. Assign LINK Case Managers to be on-site working with community partners (i.e., community obstetricians, gynecologists, Health Departments, pediatricians, hospitals, primary care physicians, Social Services, FQHCs, etc.) to accept referrals, make contact with targeted women, establish relationships, provide services, etc.
5. Provide female Peer Recovery Support Specialists with lived experience with pregnancy, parenting, and/or MAT to increase peer to peer connectivity and to increase program retention and positive outcomes.
6. In absence of available public transportation, provide vouchers to assist with costs associated with transportation in rural areas and/or utilize LINK Case Managers or Peer Recovery Support Specialists to provide transportation.
7. If inadequate capacity or resources for approved child care, provide vouchers to assist with costs associated with child care, provide child care on-site at CSBs, and/or provide vouchers to allow women to access family or friends for child care at home. Increase frequency of home visiting contacts.
8. Build a 16 bed residential long-term treatment program for pregnant and/or parenting women in order to: (a) ensure more culturally sensitive programming; (b) reduce travel and distance previously associated with accessing and utilizing this service in VA, thus increasing the likelihood that women needing this level of care will utilize the service; (c) ensure connectivity with immediate and extended family; (d) ensure continuity of obstetric, gynecological, pediatric, and/or other necessary medical care; (e) ensure connectivity with Social Services, Victim Witness, Court, Probation, Drug Courts, etc., if needed; (f) ensure continued access to MAT if need indicated; (g) support community-based and person-centered service options.
9. Residential treatment program for pregnant and parenting women will offer the following services:
 - Residents will be able to access detox, psychiatric, psychosocial, outpatient counseling, case management, peer support, and MAT services.

- Locate the residential program for pregnant and parenting women in communities with high prevalence of substance abuse ensures women to stay locally, in a community that is both familiar to them and their families and that is reflective of their culture.
 - Allow pregnant women and parenting women with dependent children who need this level of care to continue to participate in Drug Courts if applicable.
10. Screen each woman for co-occurring issues/disorders and provide access to psychiatric clinic and medication management services for eligible women. Provide access to residential and community crisis stabilization services.
 11. Provide access to medically supervised detox services, Intensive Outpatient Program (IOP), and MAT.
 12. Screen each woman for eligibility and appropriateness for and interest in IOP and/or MAT for opioid, alcohol, and/or nicotine dependence. Provide access to IOP and MAT either through CSB or through partnerships with other community MAT providers.
 13. Provide nicotine cessation services.
 14. Provide screening/testing for TB, Hepatitis B, Hepatitis C, HIV/AIDS, STDs, etc., and access to related education, treatment, and/or support services.
 15. Provide access to transitional or emergency housing.
 16. Screen each woman and her dependent children for eligibility for Medicaid, affordable health care, and/or other public benefits and assist with application process.
 17. Link to 12 Step, mutual aid, and/or other community based recovery support services/programming, and/or other community peer mentoring services.
 18. All providers utilize the Prescription Monitoring Program (PMP) for treatment planning and monitoring.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Behavioral Health and Primary Care
Project Title	SBIRT (Screening, Brief Intervention, and Referral to Treatment) for Substance Use Disorders in Primary Care
Target Population	Medicaid-covered and uninsured adults (ages 18-64) seen in primary care with or at risk of opiate addiction and/or alcohol abuse
Objective	
<p>The goals of this model are to:</p> <ul style="list-style-type: none"> • Increase the integration and utilization of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) approach in primary care clinics to identify, reduce, and prevent problematic substance use and dependence; • Increase the number of primary care patients who are: <ul style="list-style-type: none"> ○ Screened for use of tobacco and illegal substances and misuse of alcohol and prescribed medications, and ○ Provided brief interventions for risky substance abuse behaviors, and ○ Referred for specialty treatment, when appropriate; • Increase the capacity of communities to provide treatment options for patients who screen positive for substance abuse issues, either through in-person or technology-based appointments; • Reduce avoidable emergency department visits and inpatient hospital admissions and associated costs that result from substance use disorders or misuse of substances; and • Increase education and training about substance abuse issues and appropriate assessment and treatment options, including SBIRT, for behavioral health students and providers. 	
Rationale/Justification	
<p>Rural communities in the Commonwealth, especially Southwest Virginia, are plagued by substance misuse and abuse. Complicating factors include limited community resources for substance abuse treatment (due to low numbers of substance abuse providers and treatment options); limited access to available resources because of geographical obstacles, long distances, and poverty; and the social stigma associated with substance abuse treatment. The combination of high prevalence of substance abuse and limited treatment options drains rural economies due to unemployment and loss of productivity, increased criminal behavior, and increased medical complications and costs related to the adverse impact of substance abuse on physical health.</p> <p>According to CMS, "Screening, Brief Intervention, and Referral to Treatment (SBIRT) services are an evidence-based practice designed to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs. ... SBIRT services aim to prevent the unhealthy consequences of alcohol and drug use among those who may not reach the diagnostic level of a substance use disorder, and helping those with the disease of addiction enter and stay with treatment. ... SBIRT services [can be used] in primary care settings ... to systematically screen and assist people who may not be seeking help for a substance use problem, but whose drinking or drug use may cause or complicate their ability to successfully handle health, work, or family issues." SBIRT provides the following benefits to primary care providers (PCPs) and their patients:¹⁸</p> <ul style="list-style-type: none"> • Integration of substance abuse and primary care services increases positive health outcomes and 	

reduces costs;

- PCPs are most often the first point of contact for a person with substance abuse issue;
- No delay in referral to outside screener or treatment provider;
- Less stigma for a patient to go to PCP office;
- The PCP can assess and treat for any medical complications or withdrawal concerns;
- Convenience of location and trust in the PCP relationship increases likelihood of patients' treatment engagement and adherence; and
- Reduced costs to the community because of early intervention and reduced need for hospitalization or ER visit.

Core Clinical and Programmatic Components

1. Increased incentives for primary care providers to choose to practice (and stay) in rural areas.
2. SBIRT will be provided in primary care practices by appropriately trained staff (e.g., RN, LCSW, LPC, LCP, NP, MD/DO):
 - Nursing staff provides the brief screening for substance abuse;
 - If patients screen positive, they will be referred to a behavioral health provider or trained medical provider to provide brief intervention and referral for treatment, if necessary.
3. Primary care medical providers, behavioral health providers, and staff will receive training appropriate to their roles in the following:
 - The rationale for SBIRT, including basic information on substance use / misuse,
 - The flow of patients through the intervention,
 - How to administer and score screening and follow-up measures, including outcome assessments,
 - How to conduct brief interventions in a patient-centered and trauma-informed manner,
 - Who to contact for immediate clinical consultation and for systemic questions,
 - How and where to make referrals for more intense / specialized treatment.
4. Primary care medical practices will be provided with:
 - Standardized screening measures that are consistent across the Commonwealth, in the format most easily used in their settings (e.g., paper, tablet-based that interface with electronic records systems),
 - Training on how to submit claims for reimbursement when appropriate,
 - Timely reimbursement when submitting SBIRT-type claims,
 - Standardized outcome assessments that are consistent across the Commonwealth in the format most easily used in their settings (e.g., paper, tablet-based that interface with electronic records systems),
 - Assistance in using HIPAA and HITECH-compliant technology to connect with off-site behavioral health providers,
 - Information about and incentives for integrating behavioral health providers into medical practices so they can decide whether to attempt to offer behavioral health services in their clinics,
 - Education and training regarding Medication Assisted Treatment,
 - Training and education about co-occurring substance abuse and
 - Chronic and acute pain
 - Serious mental illness
 - HIV/Hepatitis-C patients
5. Community capacity to offer behavioral health services to substance-using individuals will be increased:
 - Increased incentives for behavioral health providers to choose to practice (and stay) in rural areas.

- Incentives for behavioral health providers to receive additional training to provide trauma-informed care to patients with Substance Use Disorders (SUD)
6. Community capacity to assist people with SUD in stopping misuse and adhering to medical and behavioral health treatment recommendations is enhanced through increasing infrastructure (e.g., affordable housing, employment training and opportunities, reliable and efficient transportation, affordable and safe child care) and paraprofessional / peer supports (e.g., recovery coaches, peer navigators).
 7. Hospitals are provided with supports to collaborate with primary care clinics to improve clinical care of patients with substance abuse issues or high risk behaviors:
 - Standardized mechanisms for screening, tracking, and reporting substance related visits to patients' PCPs
 - Uniform emergency department drug-seeking diversion protocol and referral routes
 - Education about patients with HIV/Hepatitis-C, serious mental illness, or chronic pain
 8. Case managers will be embedded in primary care to assist patients and providers with the following:
 - Substance abuse treatment services
 - Medical services
 - Referrals to social supports including housing, employment assistance, transportation, childcare, and peer recovery support specialists

State Innovation Model Integrated Care Model Overview	
Project Category	Complex Care
Project Title	Integrated Care for Pediatric Super-Utilizers: Team-Based-Care for Children with Medical Complexity
Target Population	Medicaid, FAMIS, or uninsured children (ages 0-18 y/o) who are emergency department and/or inpatient super-utilizers
Objective	
Improve clinical outcomes and decrease hospital (inpatient and ED) utilization and costs for uninsured and Medicaid pediatric super-utilizers by addressing social and medical complexity with expanded coordination of care, family support, novel partnerships and innovation.	
Rationale/Justification	
<p>Children with medical complexity (CMC) are generally defined as having: 1) multiple, severe, chronic health conditions, 2) functional limitations, 3) high resource utilization including being technology dependent, and 4) high service needs and utilization of health care. Although CMC account for less than 0.5% of the pediatric population, they account for as much as 80% of pediatric in-patient spending, and 33% of all pediatric health care dollars.¹⁹ With rapid advances in life-saving therapies, the population of CMC continues to grow as do the resources they require for chronic care. Children with complex needs live in every community, often traveling long distances to tertiary care centers for essential medical treatment. All CMC have multiple providers with overlapping and sometimes competing interests. All CMC rely primarily on family care-givers for the majority of day-to-day needs and therapies, often resulting in family stress, and lost employment. According to Kuo et al., more than half (57%) reported financial problems, and 54% reported that a family member stopped working because of their child's health.²⁰ Families with CMC have limited support in the home for the care of their child with complex daily needs. Addressing the additional social complexities such as family stress, poverty, and cultural barriers adds to the challenge of providing high quality, low cost care for CMC.</p> <p>Coordination of care including augmented primary care and case management has been shown to decrease overall costs and increase quality for CMC. In Milwaukee, Gordon et al, report a decrease in hospital days from 7926 to 3831, with an increase in clinic visits from 3150 to 5420 with aggregate savings of \$10.7 million, over 3 years for 227 patients enrolled in a complex care clinic for increased coordination of care.²¹ In Arkansas, Casey et al show overall Medicaid savings of \$1179 per patient (CMC) per month following the implementation of a multi-disciplinary, complex care clinic.²² Kuo et al. demonstrate inter-organizational partnerships between tertiary care and the community facilitates coordination of care.²⁰</p> <p>Currently, in the state of Virginia, coordination of care for CMC is spotty and segregated by geography, by health system and insurance carrier, and even by clinics within each institution. Moreover, CMC in Virginia experience fragmented care across multiple sub-specialty clinics, and often are unsure about whom to contact for concerns. The primary provider is often completely out of the loop. Although electronic medical records have helped to increase inter-provider communication within a given institution, there is often no uniform communication strategy between institutions, between tertiary and primary care providers, or for families as they move from provider to provider, clinic to clinic. These gaps in care lead to duplication of services, prolonged or multiple hospitalizations, re-hospitalization, increased use of the emergency department, and increased family stress and insecurity.</p>	

Core Clinical and Programmatic Components

Caring for Children with Medical Complexity (CMC) requires an interdisciplinary team, which includes family caregivers. Clear communication and coordination strategies are essential to high quality care, and have been shown to limit inpatient costs. Supporting family caregivers has great potential to decrease utilization of high cost resources such as hospitals and residential care facilities. Novel partnerships are critical to extending services. Augmenting the medical home with case management is key to expanding comprehensive care coordination. Creating communication systems between providers, and including the families, limits duplication of service.

This model will use the following approaches to scale up comprehensive, coordinated, interdisciplinary, and team-based services in each region:

1. Scale up home visiting models such as CHIP of Virginia to increase family support and RN case management

- Currently CHIP is in 6 sites, serving 27 localities. CHIP serves 2,266 families with 20,000 home visits annually, with reduction of unmet maternal needs (28%), unmet food needs (42%), and housing instability (52%) annually.
- Expand current training for CHIP family support workers and RN case managers to include the complex medical needs of CMC, augmenting their current training for at risk child and their families with social complexities. This would also provide a needed layer of family support for CMC in the home and serve to provide invaluable psycho-social information to the entire team.
- Expand the Parents As Teachers training to include complex medical needs
- Build CHIP teams into pediatric complex care clinic staff across the state

2. Establish and support statewide Interdisciplinary, complex care clinics (already in planning stages at UVA and CHKD) in each pediatric tertiary care center to enhance coordination of care and provide necessary consultation for primary care providers and families. These clinics would ideally include and/or provide:

- Complex Care Pediatrician (PT) and/or Nurse Practitioner (FT)
- RN Case Manager to facilitate referrals and coordination of care
- Behavioral Health Provider (Psychologist, LCSW, LPC etc.) for child and family screening and referral/linkage of children, parents and siblings to services, if needs are identified
- Pediatric Pharmacist to review current medications and check for interactions, assist families in developing medication schedules, and provide teaching on medication administration.
- Orthotist/Physical Therapist/Occupational Therapist to provide adaptive medical equipment and bracing along with adjustments necessary for growth, perform therapeutic consults to identify treatment needs and assist in communicating therapeutic needs to community providers.
- Social Worker for assessment, referral, identification of needs, and provision of resources and support to families.
- Nutritionist (many CMC utilize complex feeding modalities) to develop feeding plans and monitor for adequate growth.
- Home visiting team from CHIP Virginia imbedded in the complex care clinic to provide family education and in-home screenings.
- Established referral networks with pediatric sub-specialists
- Legal support to assist with issues such as housing, disability and transitions of care
- Teams that are tailored to each clinic's organization and need

- Shared interprofessional care plan that supports patients and families in achieving their goals
 - CME/Internships for primary care champions (ie, community providers with an interest in this population) who would participate in case conferences and spend time attending Complex Care Clinic.
 - Complex Care Practice Management Education, Coaching, Capacity Building
 - Multidisciplinary team rounds before clinic sessions to ensure efficient longitudinal care and facilitate communication among all members of the care team..
 - Continuity of care after hospital discharge and around elective admissions
3. A more appropriate alternative to the Emergency Department for non-emergency care
 4. *Develop portable or shared EMR care plans* for CMC, with participation from family caregiver
 5. *Establish novel partnerships* with schools of nursing and medicine to augment family support, and advocacy
 6. *Ensure a dedicated medical home* for every CMC
 7. *Identify CMC primary care champions* across the state
 8. *Provide telemedicine* to support community providers and extend specialty care into the home
 - Station necessary equipment at FQHC
 - Furnish CHIP of VA Team and Care Managers with iPads or peripheral devices for use in homes
 - Provide primary clinicians access to complex care specialists and pediatric subspecialists for consults
 - Weekly Case Conferences in which CMC specialist provides advice and guidance to CMC primary care champions on specific complex patients by videoconference
 9. *Provide financial incentives for primary care champions* to reflect the extra time needed to care for CMC
 10. *Develop Respite care programs* (part-time, semi-skilled care in the home to give family care-givers a break)
 11. *Develop technology to facilitate real time data exchange*
 12. Integrate Care Connection Teams into complex care clinics and with primary care champion

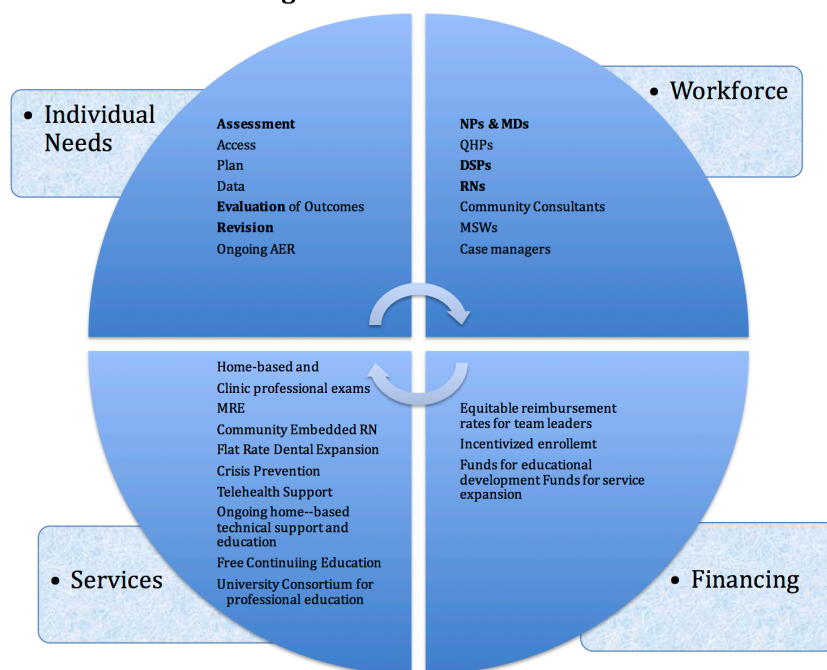
State Innovation Model Integrated Care Model Overview	
Project Category	Complex Care
Project Title	Individuals with Intellectual and Developmental Disabilities (IDD): Improving Access, Decreasing Costs.
Target Population	Approximately 140,000 individuals with intellectual and developmental disabilities currently on the wait lists for the Medicaid ID and DD waivers, Medicaid waiver recipients, or residing in Nursing Facilities in Virginia
Objective	
To reduce avoidable hospitalizations and unnecessary Medicaid service utilization by building a new community oriented vision for care coordination; providing access to the holistic care needs of individuals with IDD through mobile and community integrated region-based service options that include preventative care, medical and dental intervention, mobile crisis services, and behavioral supports while addressing the social determinants of health for the patient and family/caregivers.	
Rationale/Justification	
<p>Currently more than 10,000 individuals with IDD are on the state waiting lists for waiver services. Another 10,000 of Virginia citizens with IDD reside in institutions, and receive waiver services through the ID, DD, and Day support waivers. Other citizens with IDD receive limited support through the Elderly or Disabled with Consumer Direction (EDCD) and Technology Assisted Waivers. While there are limited services available within all programs provided for the Commonwealth, there are no comprehensive community-based service models available, leaving Virginia 49th in the national of service provision²³ despite being the 9th wealthiest state in the country.²⁴ Virginia has universal health care challenges that include an ever increasing aging population, a decreasing health workforce, and substantial rates of chronic disease.²⁵ These issues are magnified for people with intellectual and developmental disabilities. Adults with IDD are at higher risk for developing chronic health conditions and often at younger ages than other adults. "Age-related diseases" such as Alzheimer's and osteoporosis can occur as early as age 20 or 30.²⁶ At the same time, life spans have lengthened with the enhancements in medical care and environment, while life-style related illnesses have escalated.²⁷ Like other Virginians, people with IDD are facing increased rates of obesity, hypertension, diabetes, and dyslipidemia.²⁸</p> <p>Barriers to care, as for many Virginians, include a lack of access to competent, quality, affordable, and convenient healthcare professionals. People with IDD may also lack the ability to fully participate in their healthcare. Limitations resulting in a lack of effective communication compound the ability of healthcare professionals to adequately assess the range of health conditions that affect people with IDD. Core curriculums for health professionals do not universally address these barriers resulting in both a real and perceived lack of preparedness to care for patients within the current community-based health infrastructure.²⁹ Understanding these challenges and barriers, Virginia proactively looks to remedy this public health issue through education and creative solutions for health care delivery.</p>	
Core Clinical and Programmatic Components	
Conceptually, the Developmental Disabilities Health Support Network (DDHSN) is a state-based infrastructure to ensure appropriate quality supports toward barrier-free, community integrated healthcare for people with intellectual and developmental disabilities. The DDHSN exists to provide person-centered services to meet the needs for those who choose to access its providers, and proactively seeks to ensure that	

former residents of Training Centers, large Intermediate Care Facilities for Individuals with Intellectual Disabilities (ICFs-IID) and Nursing Facilities (NFs) with IDD and concomitant medical issues (considered *medically fragile*), receive the right health services, at the right time, provided by the right providers. In the short term, the DDHSN will provide a supports solution that meets the region-based health needs for people who have moved into the community from a large institutionalized setting. The long-term goal of this initiative is mainstream practice and normative social policy through improved IDD education of health professionals.

Core components include:

1. Providing regional baccalaureate prepared Registered Nurse Care Consultants (RNCCs) assisting with community based assessments, coordination and development of DDHSN programs, technical assistance and data gathering.
2. Establishing fixed rate regional dental service pilots to demonstrate usage, cost-effectiveness, and quality outcomes
3. Utilizing Mobile Rehab Engineering to provide onsite services of evaluation, maintenance, cleaning and repair of mobility and other adaptive equipment not covered by Medicaid or other waiver or insurance plans.
4. Offering individual healthcare via APRN-led models of multi-disciplinary team care coordination/health homes, providing home visitation and clinic-based care including sick and wellness exams, labs tests, immunizations, health screenings, women's health services, nutritional counseling, chronic disease management
5. Developing free Continuing Education Unit (CEU) and Continuing Medical Education (CME) educational programs that train community health partners in how to meet the needs of individuals with intellectual and developmental disabilities
6. Partnering with statewide universities offering health professional education for the development of a consortium to create an interdisciplinary online educational course specific to the care of individuals with intellectual and developmental disabilities.
7. Utilizing Adobe connect and Skype-like programs to provide real-time consultative support for health care providers and develop telehealth programs to support individuals in communities lacking direct clinical expertise.
8. Expanding mobile crisis service increasing prevention strategies targeting the 25 % of the population needing recurrent though infrequent acute services
9. Establishing regional, community-based nursing forums to increase nursing competence and support, establish practice standards, develop quality outcome monitors, and overcome barriers to providing person-centered preventative and habilitative healthcare.

Integrated Model Considerations



State Innovation Model Integrated Care Model Overview	
Project Category	Complex Care
Project Title	Integrated Care for Adult Super-Utilizers with Complex Chronic Physical and Behavioral Health Conditions in Rural Communities
Target Population	<p>Medicaid-covered and uninsured adults (ages 18-64 y/o) who are classified as “super-utilizers” based on the following scoring system: Emergency Department Visit = 1 Point Ambulance Call = 1 Point Inpatient Admission (Non-Obstetric) = 2 Points If a patient scores 6 or greater in the past year and has at least one chronic illness, they will be considered a super-utilizer</p> <p>If a patient is categorized as being high-risk due to social risk factors (e.g., difficulty accessing services, inadequate social support, mental illness, substance abuse, homeless, recent trauma history or ACE) or difficulty accessing health care due to location in an underserved area (HPSA or MUA) in addition to scoring above a 6, they will be prioritized for this intervention.</p> <p><u>The following types of patients will be excluded from this intervention:</u> 1. Patients whose only chronic illness is Serious Mental Illness and who are already connected to psychiatric care 2. Patients who have had two or more Substance Abuse Rehab stays or admissions and are still actively using a substance <i>*These could be candidates for the behavioral health super-utilizers intervention</i></p>
Objective	
Provide trauma-informed, patient-centered treatment to improve clinical outcomes and decrease preventable hospital (inpatient and ED) utilization, ambulance utilization, and costs for uninsured and Medicaid adult inpatient and ED super-utilizers so they can function within the community.	
Rationale/Justification	
<p>A disproportionate share of Medicaid spending in the United States is used to provide care to a small number of individuals, with 1% of Medicaid beneficiaries accounting for 25% of total Medicaid expenditures.³⁰ Among this top 1% percent, over 80% have at least three chronic conditions and more than 60% have five or more chronic conditions.³¹ Many of these high-cost patients are not receiving coordinated care or care in the most appropriate outpatient settings. The term “super-utilizer” refers to patients who accumulate large numbers of emergency department visits and hospital admissions which might have been prevented by relatively inexpensive early interventions and primary care. Super-utilizers face additional obstacles in rural settings due to the scarcity of health care providers, more limited health care resources and social services, and difficulty with transportation.</p> <p>Several state Medicaid programs targeting “super-utilizers” in rural communities have demonstrated</p>	

significant improvements in clinical outcomes and cost savings. The Community Care of North Carolina (CCNC) Priority Patients Program and Transitional Care Programs that targets high-cost Medicaid patients and those with multiple readmissions demonstrated a 20% decrease in readmission rates for clients in the transitional care group and an estimated cost savings of \$25.40 PMPM, for a total of \$382 million in costs savings to the state Medicaid program in 2011. For ABD beneficiaries, the average cost savings was \$42 PMPM, representing 3.3% decrease in costs. A separate analysis showed that ABD beneficiaries participating in the CCNC program experienced a 34% lower rate of hospitalizations and a 15% lower rate of ED visits compared to non-participating ABD beneficiaries in 2012.³²

The Vermont Chronic Care Program (VCCI), which targets the 5% of the Medicaid population with the highest utilization, achieved net financial savings of \$11.5 million in 2012. Their evaluation also demonstrated improvement on 6 of 12 clinical measures for Medicaid patients in the top 5% of utilization who participated in VCCI when compared to patients in the top 5% who did not receive VCCI services.³²

Core Clinical and Programmatic Components

1. Patient-centered models with interventions based on health complexity and the interaction of patients' biologic, psychological and social needs, and health systems factors.
2. Trauma-informed approaches that recognize and address the impact of trauma on a patient's life and its relationship to high utilization.³³
3. Identify super-utilizers who are receptive to change, motivated and willing to develop a personal action plan.
4. **Case Managers will serve as the key patient navigation and care coordination resource.** Case managers will be embedded in primary care practices and emergency departments throughout the region and will provide in-person services including home visits. Principal case manager functions will include:
 - Conducting a comprehensive assessment of the patient's health needs.
 - Educating the patient and members of the health care delivery team about case management, identified barriers to health improvement, community resources, insurance benefits, and so forth, so that informed decisions can be made.
 - Serves as a part of the interprofessional integrated case management support team that supports the patient and family/care-giver.
 - Developing and carrying out a care plan collaboratively with the patient, the patient's family, the primary care physician/provider, other health care providers, the payer, and/or the community that maximizes health, quality of life, appropriate use of health services, and conservation of health care resources.
 - Facilitating communication and coordination among members of the patient's biological and psychological health care teams to minimize fragmentation and maximize evidence-based care delivery.
 - Involving the patient in the decision-making process.
 - Problem solving and exploring options for improving care.
 - Considering alternative plans, when necessary, to achieve desired outcomes.
 - Striving to improve the quality of care and maintain cost effectiveness on a case-by-case basis.
 - Assisting patients in safely transitioning their care information and needed procedures across the care continuum (e.g., inpatient, outpatient, nursing facility, rehabilitation center, etc.)

- Advocating for patients to receive quality care, the health care team to be supported in providing quality services, the payer to conserve health resources, and the purchaser to minimize disability and impairment at an affordable cost.
 - Encouraging the patient to similarly self-advocate.³⁴
5. If patient has more complex medical, behavioral health, and/or social needs that can't be fully addressed by the Case Manager, they will be referred to the Integrated Case Management Support Team for comprehensive treatment
 6. **Integrated Case Management Support Team** will support the Case Managers at multiple primary care practices and emergency departments in a geographic region. This team could be located at an academic health center, teaching hospital, or FQHC that is centrally located in the region. The members of this interprofessional team will vary based on the needs of each region but should typically include:
 - Medical Director, MD
 - Nurse Manager, RN, CCM - provides education and clinical support
 - Behavioral Health Provider (Psychologist, LCSW, LPC, and/or Psychiatric NP) - implements interventions for mental health disorders and facilitate referrals to specialty mental health resources.
 - Primary Care Provider (MD, NP, or PA) - diagnosis, treatment and management of chronic disease
 - Pharmacist - provides comprehensive medication management
 - Social Worker - connects patients with community resources and enrolls eligible patients in coverage programs such as Medicaid and GAP
 - Dentist (if needed) and Podiatrist (if needed)
 - Level of engagement from each provider should vary based on complexity of each patient's needs to allow for team to operate at maximum efficiency.
 7. Address social determinants of health that often drive high utilization
 8. Provide transportation for geographically isolated patients and patients in underserved areas
 9. Strong connections with supportive housing agencies and prioritization of homeless or marginally housed patients for permanent, supportive housing using the Housing First model
 10. **Real Time Data Exchange such as Admission-Discharge-Transfer (ADT) feeds** is essential so the RN case manager or Community Care Coordinator is notified when a patient is in the ED or hospitalized and can engage them.
 11. Establish a state level office that builds collaborative environment to support regions implementing this model by sharing and disseminating best practices so they become standard practices.
 - Create State Clearing House for lessons learned as program develops.
 - Provide technical assistance to communities that establish complex care programs.
 - Provide forums, both real and virtual that allow for constructive dialogue.
 - Charter Panels to review emerging processes and technology to translate to services in a timely fashion.
 - Develop tool kit/sets that assist communities to perform rapid gap assessments.
 - Develop social media and provide communication tools for teams to be updated as soon and new methods are developed.
 - Disseminated telemedicine pods to more remote or austere communities.

State Innovation Model Integrated Care Model Overview	
Project Category	Complex Care
Project Title	Integrated Care for Adult Super-Utilizers with Complex Chronic Physical and Behavioral Health Conditions Living in Urban Communities
Target Population	<p>Uninsured or Medicaid-covered Adults (ages 18 and older) with at least one chronic illness who are classified as “super-utilizers” based on review of healthcare utilization over 3 months using the following scoring system:</p> <p>Emergency Department Visit = 1 Point Inpatient Admission (Non-Obstetric) = 2 Points If a patient scores above a 6 in the past year and has at least one chronic illness, they will be considered a super-utilizer</p> <p>If a patient is categorized as being high-risk due to social risk factors (e.g., difficulty accessing services, inadequate social support, mental illness, substance abuse, homeless, recent trauma history or ACE) or difficulty accessing health care due to location in an underserved area (HPSA or MUA) in addition to scoring above a 6, they will be prioritized for this intervention.</p> <p><u>The following types of patients will be excluded from this intervention:</u></p> <ol style="list-style-type: none"> 1. Patients whose only chronic illness is Serious Mental Illness and are already connected to psychiatric care 2. Patients who have had two or more Substance Abuse Rehab stays or admissions and are still actively using a substance <p><i>*These patients could be candidates for a separate behavioral health super-utilizers intervention</i></p>
Objective	
Improve clinical outcomes for physical and behavioral health conditions for very vulnerable and medically fragile patients while decreasing preventable inpatient hospital and emergency department (ED) utilization and total health care costs for uninsured and Medicaid adult inpatient and ED super-utilizers.	
Rationale/Justification	
<p>A disproportionate share of Medicaid spending in the United States is used to provide care to a small number of individuals, with 1% of Medicaid beneficiaries accounting for 25% of total Medicaid expenditures.³⁰ Among this top 1% percent, over 80% have at least three chronic conditions and more than 60% have five or more chronic conditions.³¹ Many of these high-cost patients are not receiving coordinated care or care in the most appropriate outpatient settings. The term “super-utilizer” refers to patients who accumulate large numbers of emergency department visits and hospital admissions which might have been prevented by relatively inexpensive early interventions and primary care. Advanced Health Homes (also known as Ambulatory ICUs or Complex Care Clinics) provide comprehensive treatment and intensive care coordination to these super-utilizers, using a patient-centered and holistic approach that can improve patients’ physical, behavioral, social, and emotional well-being.</p>	

Several Advanced Health Homes located at teaching hospitals in large and mid-size cities across the country have demonstrated significant improvements in clinical outcomes as well as cost savings. Hennepin County Medical Center in Minneapolis, Minnesota has a Coordinated Care Clinic that functions as an Ambulatory ICU with an interprofessional team comprised of MD, RN care coordinator, social worker, pharmacist, psychologist, chemical dependency worker providing comprehensive care to Medicaid and uninsured “super-utilizers” with 2 or more hospital admissions in the past year. This clinic observed a 38% reduction in ED visits and a 25% decrease in inpatient hospitalizations compared to baseline utilization in their population of 232 patients during the first 30 months compared to baseline utilization in their population of 232 patients during the first 30 months. Total charges for all medical care for these patients dropped by 23% over the first year, representing an average savings of \$24,170 per patient.³²

The Spectrum Health Center for Integrative Medicine in Grand Rapids, Michigan is an ambulatory ICU that provides comprehensive, interdisciplinary services to a population of ED super-utilizers, primarily covered by Medicaid. This clinic observed a 65% decrease in ED visits in a cohort of 53 prospectively randomized patients over their first six months in the program. Spectrum Health demonstrated a \$3.2 million reductions in charges over one year for patients seen in the clinic. Priority Health, the Medicaid MCO testing an “episode of care” payment model with the clinic saved close to \$500,000 for its members who participated in the program in the first year.³²

Core Clinical and Programmatic Components

1. Patient-centered models with interventions based on health complexity and the interaction of patients’ biologic, psychological and social needs, and health systems factors.
2. Trauma-informed approaches that recognize and address the impact of trauma on a patient’s life and its relationship to high utilization.³³
3. Identify “impactable” patients who are motivated to engage with the intervention:
 - Use available tools to measure patient activation such as; Patient Activation Measure (PAM) and Universal Patient Compact and Comprehensive Risk Assessment/Intake with comprehensive past medical history, behavioral health history, medications, and social history
 - Identify patients willing to engage in the intervention using principles of patient and provider engagement as outlined in the National Patient Safety Foundation’s Universal Patient Compact
4. **Advanced Health Home** will provide comprehensive, coordinated and centralized care for adults with complex chronic physical diseases, mental illness, substance use disorders, and/or social needs (serves as an ICU) who require intensive outpatient services in an Ambulatory ICU. The Advanced Health Home could be located at an academic health center, teaching hospital, or large FQHC. The interprofessional team at the Advanced Health Home will vary based on the needs of each region but should typically include:
 - Medical Director, MD
 - Nurse Manager, RN, CCM - provides education and clinical support
 - Behavioral Health Provider (Psychologist, LCSW, LPC, and/or Psychiatric NP) - implements interventions for mental health disorders and facilitate referrals to specialty mental health resources.
 - Primary Care Provider (MD, NP, or PA) - diagnosis, treatment and management of chronic disease
 - Pharmacist - provides comprehensive medication management
 - Social Worker - connects patients with community resources and enrolls eligible patients in coverage programs such as Medicaid and GAP

- Community Health Coordinator – assists with health education and navigation of health and community resources
 - Legal Aide (if needed) and Podiatrist (if needed)
 - Level of engagement from each provider should vary based on complexity of each patient’s needs to allow for team to operate at maximum efficiency.
 - Team will work with patient to develop a shared interprofessional care plan that supports patients in achieving their goals
 - Patients will be assigned either CHC, RN case manager or social worker as primary navigator based on their care needs
5. Community Care Coordinator will provide outreach and peer support, including visits to the patients’ homes. This role has the following functions:
- Supports workforce development: additional training beyond CNA or BSW certification
 - Receives specialized training to work with complex “super-utilizers,” including extensive training in motivational interviewing
 - Supervised by advanced practitioners on the interprofessional team
 - Leverages technology to obtain any needed support from the advanced practitioners during home visits (e.g. iPads)
6. Advanced Health Home will provide Consultative/Transitional care to stabilize patient over 6-9 months and then transition patient back to initial primary care provider
7. **Real Time Data Exchange such as Admission-Discharge-Transfer (ADT) feeds** is essential so the RN case manager or Community Care Coordinator is notified when a patient is in the ED or hospitalized and can engage them
8. Advanced Health Home will have linkages to local emergency departments and relationships with care coordinators in local hospitals and emergency department staff

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Oral Health and Primary Care
Project Title	Healthy Moms and Babies: Providing Oral Health Services During Pregnancy
Target Population	Medicaid-covered and uninsured pregnant women in prenatal care and oral health settings
Objective	
To improve perinatal health outcomes, facilitate establishment of early dental homes and reduce health care costs by establishing an integrated care delivery model that incorporates oral health education, screening, and appropriate treatment and/or care coordination/referrals for underserved populations who are pregnant.	
Rationale/Justification	
Good oral health is an important component of a healthy pregnancy. Research has demonstrated that women with periodontal disease are up to eight times more likely to deliver prematurely - over 25% of pregnant women have periodontal disease. The average costs during the first year of life for a preterm baby are more than ten times that of a baby born at full term (\$50,000 for the first year) and prematurity is often a precursor to significant health and wellness issues. Reducing bacteria in a mother's mouth through dental care during pregnancy significantly reduces her risk of developing oral diseases and spreading decay-causing bacteria to her baby; reducing tooth decay in early childhood can reduce the need for children to receive costly dental treatment in the operating room under general anesthesia. In 2011, Virginia Medicaid spent \$8 million treating children's dental issues in the operating room. ³⁵ Pregnancy is also an excellent time to educate moms about the need to establish a dental home for their child by age one - leading to better pediatric utilization, improved health outcomes and lower costs.	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. Establish core group of administrative staff and clinicians to lead implementation of integrated model of care 2. Provide clinicians and staff education about oral-systemic health, why integration matters, what the proposed workflow would entail, what it looks like for staff on a day-to-day basis, and desired outcomes (additional education guided by integration model) 3. Identify and assess patient population: pregnant patients 4. Detail services to be provided by clinicians and staff. For example: oral health education for mother, information about the importance of an early dental home for children, basic oral assessment/screening, referrals between medical OBYN and dental provider, oral exam, cleaning, periodontal treatment; ongoing oral health education and clinical support by nurse and/or case managers, and referral of patients from primary care to necessary dental care. 5. Secure Clinical Information System and support tools that enable information sharing and coordination among medical and dental providers. Can include: Electronic Health Records and templates, Shared scheduling system for medical and dental, Protocol for making referrals and follow up, Access to patient health information and data 6. Select process and outcome measures to assess access to care, utilization of services and health outcomes: preterm birth (HEDIS); Child Dental Visit (HEDIS); periodontal treatment/score; patient satisfaction (PCMH) 	

7. Determine payment models and funding streams. Ex. Medicaid/FAMIS MOMS provides comprehensive coverage (excluding orthodontics) for dental and medical care during pregnancy and 2 months postpartum, sliding fee scale.
8. Identify infrastructure needs: Expanded capacity in dental/medical clinic, Clinical information systems (EHR), staff training, case managers
9. Identify/Access community supports: Clinical, Social (faith-based, transportation services, WIC, CHIP etc.), Environmental (assessment mapping)

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Oral Health and Primary Care
Project Title	Improving Children's Overall Health By Integrating Basic Oral Health Screenings, Education, Fluoride Varnish, Assessments and Referrals in Primary Care Settings
Target Population	Medicaid, FAMIS, and uninsured children (ages 0-20) in primary care and oral health settings
Objective	
Increase the number of Medicaid and FAMIS enrollees age 0 up to age 20 that receive oral health education, screening, appropriate prevention services and age appropriate dental referrals in pediatric medical primary care settings.	
Rationale/Justification	
<p>Dental disease is the number one childhood chronic disease—five times more common than asthma.³⁶ Almost half of third graders in Virginia have or had a (untreated or treated) cavity experience.³⁷ Poor oral health impacts children's ability to learn, grow and thrive; when left untreated dental disease can result in unnecessary pain, systemic infection and in extreme cases, even death. In 2011, Virginia Medicaid spent over \$8 million treating dental issues in the operating room, most of which were preventable.³⁸ In 2014, 61% of children age 3-20 enrolled in Medicaid and FAMIS had a dental visit; about 26% of children between ages 1-2 received any dental service.³⁹ Children who have their first preventive dental visit by age one have average dental costs roughly 40% lower than those who have their first visit after age one.⁴⁰ Research suggests early oral health prevention activities such as oral screenings, education and appropriate and timely dental referrals in primary medical care settings are critical to helping establish a dental home, can reduce the cost of oral care later in life and help set a child on a trajectory to a lifetime of good oral health.⁴⁰</p>	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. Establish core group of administrative staff and clinicians to lead implementation of integrated model of care 2. Provide clinicians and staff education about oral-systemic health, why integration matters, what the proposed workflow would entail, what it looks like for staff on a day-to-day basis, and desired outcomes (additional education guided by integration model and may also include training for dental providers about caring for very young children) 3. Identify and assess patient population: can break down into subsets by age, health status, etc. <ul style="list-style-type: none"> • Screen all uninsured children for Medicaid/FAMIS eligibility 4. Detail services provided by clinical providers and staff in model. For example: Oral health education, Risk assessment/screening, Application of Fluoride Varnish (as appropriate), Referrals between medical and dental to ensure dental home is established and maintained (services provided based on facility resources) 5. Secure Clinical Information Systems (health IT) and support tools that enable integration of oral and primary care and coordination between medical and dental (co-located or in the community). Can include: EHR templates, Shared scheduling system, Protocol for making referrals and follow up, Access to patient health information and data 6. Select process and outcome measures to assess access to care, utilization of services and health outcomes. Can include: HEDIS: Annual Dental Visit; EPSDT related measures (CMS 416 Report), Children receiving topical fluoride in medical primary care (CMS, proposed NCQA); Potential for tracking dental 	

referral as possible QI project for pediatric practices and/or larger health system/insurer with access to shared patient data

7. Determine payment model. Ex. Medicaid/FAMIS provides comprehensive coverage for dental and medical care for children. Medical providers can be reimbursed for application of fluoride varnish up to two times a year until the third birthday (service is to be accompanied by oral health education screening and age appropriate dental referral), sliding fee scale.
8. Identify infrastructure needs: Expanded capacity in dental/medical clinic, Clinical information systems (EHR), Access to reliable data/data collection capacities, Staff training
9. Identify/Assess community supports: Clinical (partner dental clinic for facilities without dental, home-visiting programs), Social (faith-based, community and education organizations), Environmental (assessment mapping).

State Innovation Model Integrated Care Model Overview

Project Category	Integrated Oral Health and Primary Care
Project Title	Treating and Preventing Periodontal Disease to Improve Overall Health of Patients With Type 2 Diabetes
Target Population	Medicaid-covered and uninsured adults (ages 18 to 64) in oral health or primary care settings who have Type 1 or 2 diabetes or are at risk for developing Type 1 or 2 diabetes
Objective	
Improve oral/overall health and reduce treatment costs by incorporating oral health education, screening, appropriate treatment and care coordination within the patient centered medical home model for underserved populations with Type 1 or 2 diabetes or are at risk for developing Type 1 or 2 diabetes.	
Rationale/Justification	
Oral health improves diabetes outcomes and reduces related costs. Diabetes and health issues that lead to diabetes such as overweight or obesity are common in Virginia. In 2010, 8.7% (531,366) of adults in Virginia reported having been diagnosed with diabetes by a physician. It is estimated that an additional 300,000 adults have undiagnosed diabetes. ⁴¹ Diabetes management is costly, resource intensive, and, because diabetes is so often associated with other chronic health conditions, requires a team approach to care. In 2009, 163,476 hospital discharges in Virginia (19.8% of all discharges) had diabetes listed as a primary or secondary diagnosis, with an average total charge of \$31,538 per stay, resulting in a combined total of \$5.16 billion for the year. ⁴¹ Periodontal disease is one of the most common complications of diabetes. Almost 46% of adults over 30 in the U.S. have periodontitis. ⁴² About 1/3 of people with diabetes have severe periodontal disease (consisting of loss of attachment of the gums to teeth). ⁴³ Research indicates diabetics who receive adequate treatment for periodontal disease can better manage their blood sugar levels. ⁴⁴ Diabetic patients who received treatment for periodontal disease saw an average of \$1,800 reduction in medical costs, a 33% reduction in hospital visits, and 13% fewer physician visits annually. ⁴⁵	
Core Clinical and Programmatic Components	
<ol style="list-style-type: none"> 1. Establish core group of administrative staff and clinicians to lead implementation of integrated model of care 2. Provide clinicians and staff education about oral-systemic health, why integration matters, what the 	

proposed workflow would entail, what it looks like for staff on a day-to-day basis, and desired outcomes (additional education guided by integration model)

3. Identify and assess patient population and/or subgroup for integration model. For example: is there an existing diabetes management or prevention program where oral health education and/or dental services can be included?
4. Detail services to be provided by clinicians and staff in model. For example: Oral health education, Screening, Referrals between medical and dental, HbA1c testing, Comprehensive oral exam and cleaning, Perio treatment, Ongoing oral health education and clinical support by nurse and/or case managers
5. Screening of all patients in oral health settings to identify who is at-risk for developing diabetes or has undiagnosed diabetes, followed by referral to primary care for diagnosis.
6. Secure clinical information systems (health IT) and support tools for staff that enable information sharing and collaboration among medical and dental providers (co-located or in the community). For example: EHR, Shared scheduling system, Protocol for referrals and follow up, Access to patient health information and data, Patient portal
7. Determine payment model: Billed medical services for diabetes education that includes oral health; Screening for diabetes in dental clinic may identify new patients and increase use of medical services; Large health systems have the potential to partner with safety net and/or private practices for care coordination and treatment of patients.
8. Identify infrastructure needs: Expanded capacity in dental/medical clinic, Clinical information systems (EHR), Access to reliable data/ability to collect data, Staff training, Case managers
9. Identify community supports including clinical, social (faith-based, community pharmacy), environmental

State Innovation Model Integrated Care Model Overview

Project Category	Integrated Oral Health and Primary Care
Project Title	Dental Diversion Plan for Emergency Department Patients
Target Population	Medicaid-covered and uninsured adults (ages 18-64) presenting to emergency department with oral health diagnosis/oral pain
Objective	
Improve patient outcomes, introduce a dental home with continuity of care, and reduce health care costs by improving the management of patients that report to hospital Emergency Departments (EDs) for dental-related complaints. Program will also reduce drug seeking behavior of patients seeking medications from hospital Emergency Departments.	
Rationale/Justification	

An analysis by the American Dental Association (ADA) reports that ED visits for dental pain nearly doubled between 2000 and 2010; a total of 2.2 million such visits occurred in 2012 costing the U.S. healthcare system \$1.6 billion. Between 2007-2009, VCU medical center's emergency department reported that over 4% ED visits were attributable to dental issues.⁴⁶ To address the costly issue, VCU School of Dentistry, in conjunction with the VCU medical center ED conducted a pilot ED diversion program in 2010, which was associated with a reduction in ED use because of dental issues by 52%. Uninsured individuals are found to visit the emergency department for dental issues more than any other diagnosis, with some relying on the visit to secure prescription pain medication. The average cost of these visits is \$669 yet no dental treatment is provided; patients presenting at hospital EDs for dental pain are only provided pain medications and antibiotics. The underlying source of pain and disease is left untreated because emergency departments are unable to extract teeth, provide restorative services, or take x-rays. With a diversion plan in place, patients will be sent from the ED to a nearby participating dental clinic for treatment; prescription pain pills will be limited to what is necessary to reduce pain until scheduled appointment.^{47,48}

Core Clinical and Programmatic Components

1. Education will be provided (as well as an emergency flow chart) to triage nurses and call nurses so that they can diagnose a true dental emergency and direct patients to correct location for treatment.
2. Uniform education of integrated oral health, *why integration matters, proposed workflow for care delivery and diversion, baseline data measures and desired outcomes*
3. A direct referral will be made from the ED to a community dental clinic via a scheduling system - ED blocks will be provided so that ED staff will know exactly where to schedule patients
4. Blocks will be made in community dental clinics for ED patients so that all patients will be seen at a neighboring dental clinic no more than 12-24 hours after arrival to ED
 - Unified protocol to assure that patient referrals are followed up on.
5. If no scheduling system is available, appointment cards with set date/time will be provided to ED patients; *additional referral method can include use of community health worker, nurse or other staff to make direct referral and warm hand-off to dental clinic to help patients keep their appointments and reduce no-shows*
6. If pain medication is given, it will be limited to treat symptoms until their scheduled dental appointment (12-24 hours) making patients more likely to keep their dental appointment and less dependent on narcotic.
 - Community dental providers and ED physicians will collaborate on treatment plans/prescriptions.
7. Data infrastructure to allow for a unified method of collecting and sharing patient health information; *staff personnel and/or additional education to support referral management and follow up for ED patients.*
8. Identifying community supports to assure that all avoidable dental emergency room visits are prevented via established referral networks.

State Innovation Model Integrated Care Model Overview	
Project Category	Integrated Oral Health and Primary Care
Project Title	Adults with Serious Mental Illness (SMI): Reducing the Burden of Disease by Improving Patients' Oral Health
Target Population	Medicaid-covered, GAP-covered, and uninsured adults (ages 18-64) with SMI in oral health or primary care settings
Objective	
Improve health, promote coordinated care and reduce health care costs by establishing an integrated delivery model that incorporates oral health education, screening, appropriate treatment and care coordination for underserved populations with a diagnosis of severe mental illness. The model includes training dental providers to care for individuals with SMI.	
Rationale/Justification	
Patients with SMI have high rates of diabetes and other chronic diseases that share a two-way relationship with periodontal disease; individuals with SMI also have a high smoking rate, which increases the likelihood of oral cancer. Many of the medicines used to treat SMI lead to severe xerostomia (dry mouth), which significantly increases the risk of caries (cavities), erosion, tooth loss, mouth infections, loss of taste, and difficulty chewing and swallowing, leading to poor nutrition and failure to thrive. ⁴⁹ Individuals affected by SMI often do not seek oral health care services that could assist in disease management and help curtail disease process; SMI patients that do seek care are often unable to receive services due to severe workforce shortages in providers that treat SMI patients. With coordinated care that includes oral health (and an educated workforce) patients will better managed chronic disease and symptoms related to SMI and SMI treatment.	
Core Clinical and Programmatic Components	
<p><i>Workgroup members recommend this model be included as part of the behavioral health and primary care integration model for persons with SMI and GAP Program</i></p> <ol style="list-style-type: none"> 1. Workforce: Continuing education/dental school curriculum for providers to treat patients with SMI and/or substance use disorders. 2. Establish core group of administrative staff and clinicians to lead implementation of integrated model of care 3. Provide clinicians and staff education about oral-systemic health, issues related to SMI and why integration can improve health, what the proposed workflow would entail, what it looks like for staff on a day-to-day basis, and desired outcomes (a workforce trained to comfortably treat individuals with SMI is necessary) 4. Identify and assess patient population. Determine if a specific subgroup can be targeted. Identify any existing management or prevention programs where oral health education and/or dental services could be added. 5. Detail services provided by clinical providers and staff. For example, oral health education, oral assessment/screening, referrals between medical and dental, HbA1c testing, oral exam, cleaning, periodontal treatment (all dental); Ongoing oral health education and clinical support by nurse and/or case managers 6. Secure clinical Information systems (health IT) and support tools that enable information sharing and coordination between medical and dental (co-located or in the community). Can include: EHR templates, 	

Shared scheduling system, Protocol for referrals and follow up, Access to patient health information and data, Patient Portal

7. Determine payment model: Reimbursable medical services for patient education (that includes oral health); new patient referrals to dental clinic result in increased utilization of services (safety net clinics have sliding scale for adults). Larger health systems may partner with safety net dental providers and/or private practices for care coordination and treatment of patients.
8. Identify infrastructure needs: expand capacity in dental/medical clinic, clinical information systems, training, case managers
9. Assess community supports: clinical, social (faith-based, community pharmacy), environmental (assessment mapping)

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INNOVATIVE, FOCUSED AND SCALABLE DELIVERY SYSTEM TRANSFORMATION: VIRGINIA'S SECTION 1115 WAIVER APPLICATION

A Demonstration Waiver Application for Medicaid Managed Long-Term Services and Supports (MLTSS), Delivery System Reform Incentive Payment (DSRIP), and transition of authority for existing HCBS Waivers: Technology Assisted and Elderly and Disabled with Consumer Direction



Contents

Executive Summary	1
Program Description	3
Rationale for the §1115 Demonstration Waiver.....	4
Background	4
The Case for a Unified Waiver Approach	5
Managed Long-term Services and Supports (MLTSS) and the Need for Operational Authority	5
Streamline HCBS Waiver Authority.....	6
Delivery System Reform Incentive Payment (DSRIP) and the Need for Infrastructure	7
Virginia’s Plan to Test the Demonstration Hypotheses: MLTSS and DSRIP	7
MLTSS Program Design	8
DSRIP Program Design.....	11
Other Required Application Elements by Centers for Medicare and Medicaid Services	28
Demonstration Eligibility.....	28
Demonstration Benefits and Cost Sharing Requirements.....	31
Delivery System and Payment Rates for Services	32
Implementation of Demonstration.....	35
Demonstration Financing and Budget Neutrality.....	37
List of Proposed Waivers and Expenditure Authorities	38
Public Notice.....	40
Demonstration Administration	43
Application Appendix Documents.....	44
Appendix A – MLTSS Covered Services	45
Appendix B – MLTSS and Medallion 3.0 Eligibility Chart(s)	65
Appendix C – Budget Neutrality and Financing Forms	67
Appendix D – Public Comment Aggregated Themes and DMAS Summary Responses	68



Executive Summary

The Department of Medical Assistance Services (DMAS) is submitting a §1115 waiver demonstration application seeking authority to implement two strategic initiatives: (1) Medicaid Managed Long-term Services and Supports (MLTSS) and (2) the Delivery System Reform Incentive Payment (DSRIP) programs. Alignment of the MLTSS and DSRIP programs creates a powerful opportunity to strengthen and integrate Virginia Medicaid's community delivery structure and accelerate payment reforms toward value-based purchasing.

This comprehensive innovation waiver gives the Centers for Medicare and Medicaid Services (CMS) the opportunity to invest in a waiver program that will accelerate transformation of how care is delivered and paid for in Virginia's Medicaid system. Through this application, DMAS seeks to ensure that high-value care is the norm and even the most medically complex enrollees with significant behavioral, physical, sensory, and developmental disabilities are supported to live safely and thrive in the community. DMAS has partnered with Department of Behavioral Health and Developmental Services (DBHDS), Virginia Department of Health (VDH), Department for Aging and Rehabilitative Services (DARS), and numerous other stakeholders to develop program ideas and will leverage their expertise to achieve sustainable transformation.

DMAS recognizes that the Medicaid spending trajectory must change and the best opportunity to accomplish this is through delivery system transformation. Historically, states could address increases in spending by cutting payment rates, services, and people covered. In the 1990's DMAS looked to managed care to achieve budget predictability and improve care delivery. Managed care has been extremely successfully in Virginia for close to two decades. During this time, however, Virginia had few opportunities to invest in how care is delivered at the provider-level. This demonstration waiver presents an exceptional opportunity for DMAS to further the goal of bending the cost curve through both expanding managed care's footprint in Virginia and investing in Medicaid providers. This includes improving coordination between providers and preparing them to be paid for the high-value care they provide- not just the volume of patients they see or procedures they do. To achieve transformation, the Department has committed to: **"Think Big, Start Focused, and Scale Fast."**

The plans outlined in the following proposal aims to transform the Virginia Medicaid system by transitioning to a coordinated MLTSS program and incenting high-quality and high-value care through the advancement of value-based purchasing models. The DSRIP program initially focuses on the portion of the Medicaid delivery system that is the most significant cost driver for the program and then scales to include the broader Medicaid population through inclusion of Affiliate Providers. If approved, DMAS will invest in provider infrastructure and supports in order for providers, payers, and the Department to succeed in the shift toward a new model of care and Medicaid payment models.

DMAS is confident in this approach and hopes CMS partners appreciate this waiver application that focuses on high-touch, coordinated care and the proliferation of value-based payment methodologies to sustain the model of care delivery. The two focus areas of this application include MLTSS and DSRIP.

1. **MLTSS:** MLTSS will build on the foundation of Virginia's Medicare-Medicaid enrollee financial alignment demonstration - Commonwealth Coordinated Care (CCC). CCC was Virginia's first opportunity to coordinate care for the high-risk dually eligible population and CCC activities in the areas of systems integration, contract and quality monitoring, outreach, and program



evaluation have been nationally recognized as best practices. Virginia seeks to strengthen this model through including additional populations and operating the program statewide. Virginia seeks authority to mandate the enrollment of eligible individuals into selected managed care plans. These plans will be competitively selected to ensure access to services and high-quality care. The populations enrolled and services included in two home and community-based service (HCBS) waivers will be included in the MLTSS program¹. The MLTSS program will operate under a fully integrated program model across the full continuum of care that includes physical health, behavioral health, community based, and institutional services. MLTSS will operate with very few carved out services. Further, through person-centered care planning, MLTSS health plans will be expected to ensure that members are aware of and can access community based treatment options designed to serve members in the settings of their choice. DMAS seeks to streamline administration of multiple waiver authorities by transitioning the administrative authority of these §1915(c) HCBS waivers. The proposed migration of waiver authority will alter neither eligibility nor services under the included HCBS waivers: [Elderly or Disabled with Consumer Direction \(EDCD\)](#) and [Technology Assisted Waiver \(Tech\)](#).

2. **DSRIP:** A DSRIP Program in Virginia will provide funding to support provider readiness for value-based payments and optimally serve Virginia Medicaid's most complex enrollees through strengthening and better integrating the provider community. In order to achieve this, Virginia's Medicaid providers need to be better equipped to share information and integrate clinically to achieve better care, realize efficiencies, and be prepared for value-based payments. The DSRIP Program includes support for the establishment of groups of high-performing providers known as Virginia Integration Partners (VIPs). VIPs will share and integrate: care, data, processes, and communication. Initially, this will enable the Medicaid program to better offer high-touch, person-centered care for its highest utilizers and highest-risk enrollees. VIPs will partner with our managed care organizations to improve the coordination of care for the Commonwealth's high-cost enrollees and transition to new payment models. VIP partnerships will include medical, behavioral health, and long-term services and support (LTSS) providers, and also include care navigation and supports. Health systems focused on addressing enrollees' complex needs will coordinate the VIPs. Funds to support the establishment of VIPs and initial processes will be obtained through achievement of process and outcome measures. VIPs will achieve ongoing sustainability through transition to alternative payment models. In demonstration year three, DMAS will work with contracted health plans and additional providers to scale the DSRIP Program. This will include launching and supporting the transition of additional providers, known as Affiliate Providers², to alternative payment models for individuals who are not receiving care through a VIP. Payment models will be developed through a collaboration of contracted health plans, providers, and DMAS.

¹ Individuals enrolled in the Intellectual Disability, Developmental Disability, and Day Support waivers will continue to receive their HCBS through Medicaid fee-for-service until the Virginia Department of Behavioral Health and Developmental Services completes the redesign of these waivers. Individuals residing in ICF-ID facilities will be excluded from MLTSS until after the completion of the redesign.

² These providers will not be part of that coordinating entity's VIP, as they do not focus on providing services for a subset of the Medicaid population with the most complex care needs. However, they will leverage the infrastructure developed by the DSRIP Program to be ready for value-based payment arrangements with Medicaid health plans.



Program Description

Virginia is accelerating transformation of its Medicaid delivery system to ensure that high-value care is the norm and even the most medically complex enrollees with significant behavioral, physical, sensory, and developmental disabilities are supported to live safely and thrive in the community. To begin this process, the Virginia Department of Medical Assistance Services (DMAS) is seeking approval of a demonstration project under §1115 of the Social Security Act (Act) to implement two strategic initiatives. Alignment of the following initiatives creates a powerful opportunity to strengthen and integrate Virginia Medicaid's community delivery structure and accelerate a shift toward value-based payment.

1. Medicaid Managed Long-term Services and Supports (MLTSS); and,
2. Delivery System Reform Incentive Payment (DSRIP).

As part of the MLTSS initiative, DMAS seeks to streamline administration of multiple waiver authorities by transitioning the administrative authority of two §1915(c) home and community-based service (HCBS) waivers to a §1115 waiver. Transitioning the authority for these §1915(c) waivers is administrative. This application predominantly focuses on the MLTSS and DSRIP initiatives, therefore the specifics of the §1915(c) authority migrating to §1115 authority will only be referenced in select, applicable sections of this waiver application.

- **MLTSS:** MLTSS will leverage the successes of Virginia's Medicare-Medicaid enrollee financial alignment demonstration-Commonwealth Coordinated Care (CCC). Virginia seeks to strengthen this model, expand it to additional populations, and operate it statewide. Additionally, Virginia seeks authority to mandate enrollment of eligible individuals into competitively selected managed care plans.

DMAS seeks to streamline administration of multiple waiver authorities by transitioning

the administrative authority of these §1915(c) HCBS waivers to a §1115 waiver. The waivers included are the Elderly or Disabled with Consumer Direction (EDCD) and Technology Assisted Waiver (Tech). The proposed migration of waiver authority will alter neither eligibility nor services under these waivers. The populations enrolled and services included in these HCBS waivers will be included in the MLTSS program.

- **DSRIP:** The DSRIP Program will provide funding to support provider readiness for value-based payment and optimal service to Medicaid's most complex enrollees through strengthening and better connecting the provider community. DSRIP includes support for the establishment of groups of high-performing providers known as Virginia Integration Partners (VIPs). VIPs will share and integrate: care, data, processes, and communication. VIPs will partner with DMAS' managed care plans in order to improve the coordination of care and overall health of the Commonwealth's high-cost enrollees. This will enable the Medicaid program to better offer high-touch, person-centered care for its highest utilizers and highest risk enrollees. These partnerships will include medical, behavioral health, and long-term services and support (LTSS) providers, and also include care navigation and supports. Health systems focused on addressing enrollees' complex needs will coordinate the VIPs. Funds to support the establishment of VIPs and initial processes will be obtained through achievement of outcome measures. VIPs will achieve ongoing sustainability through transition to alternative payment models. In demonstration year 3, the DSRIP Program will launch and support the transition of additional providers, known as Affiliate Providers, to alternative payment models for individuals who are not already receiving care through a VIP. Alternative payment models will be developed in collaboration with contracted Medicaid health plans.



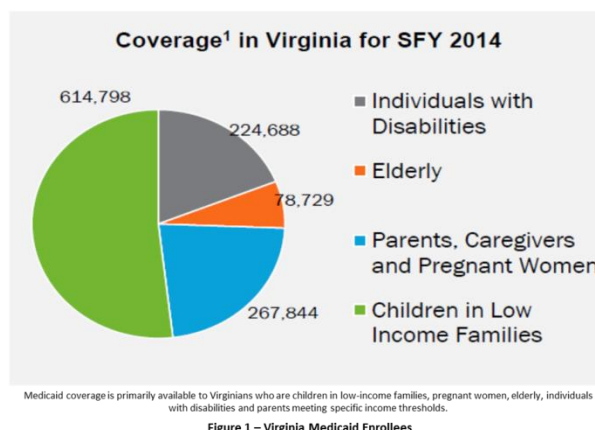
Rationale for the §1115 Demonstration Waiver

Background

The Virginia Medicaid program covers over 1,000,000 individuals as described in Figure 1. Seventy-five percent of enrollees receive care through contracted health plans and twenty-five percent of enrollees receive care through a fee-for-service arrangement. The majority of enrollees in the Virginia Medicaid program are children, pregnant women, and caretaker adults. These enrollees are relatively healthy. Virginia pays an average monthly capitated payment for each enrollee's services (a "per-member, per-month" (PMPM)) of \$234, translating to an annual payment of \$2,808.

Also included in Virginia's Medicaid population are over 200,000 individuals who are included in the Aged, Blind, and Disabled (ABD) coverage group. Out of the 200,000 individuals who are in the ABD group, 80,000 enrollees are in capitated health plans with an average monthly cost around \$1,100 PMPM, an annual payment around \$13,200. This spending amount for ABD enrollees, however, does not include costs for expensive long-term services and supports (LTSS) for this population and it does not include the costs for the subset of ABDs who are also enrolled in Medicare. Approximately 115,000 ABDs are Medicare-Medicaid enrollees where Medicare pays for the vast majority of their medical costs, and Medicaid pays for the majority of their long-term services and supports through fee-for-service.

Long-term Services and Supports (LTSS): A disproportionate share of Virginia's Medicaid spending is allocated toward enrollees who receive LTSS. This population is only 6% of enrollment, yet accounts for 30% of total Medicaid expenditures. The majority of LTSS recipients are also enrolled in Medicare, so the majority of this Medicaid spending is for LTSS and not medical services. In 2014, 56% of Virginia's LTSS expenditures were for



home and community based services (HCBS). Two-thirds of Virginians accessing LTSS, now do so in the community. Virginia, however, still has a significant opportunity to improve its LTSS delivery system. In 2014, Virginia spent close to \$1.1 billion of its \$7.8 billion total Medicaid spend on institutional care (public and private ICF/IDs and nursing homes).

In March 2014, Virginia launched the Commonwealth Coordinated Care (CCC) program. CCC is a Centers for Medicare and Medicaid Services (CMS) Medicare-Medicaid Financial Alignment Demonstration. These demonstrations seek to test models to integrate Medicare and Medicaid services, rules, and payments under one delivery system for individuals who are eligible for both Medicare and Medicaid (dual eligible individuals). CCC operates as a managed care program with three health plans and includes a strong, person-centered service coordination/care management component, integration with an array of provider types for continuity of care, ongoing stakeholder participation, outreach and education, and the ability for innovation to meet the needs of the population.

CCC will operate through December 31, 2017, in five regions of the state (Tidewater, Central Virginia, Northern Virginia, and the Roanoke and Charlottesville areas). At the end of November 2015, there were 67,327 Virginians eligible for CCC. Of those eligible, 29,429 have opted to participate in the voluntary program.



Behavioral Health: Similar to many other states, building the infrastructure to deliver the highest quality behavioral health services in the community continues to be a challenge for Virginia. Behavioral health services that are typically offered to a commercial population are currently offered through Virginia's contracted health plans. Community based behavioral health services, those services that are more typically accessed by the Medicaid population, are administered through a contracted behavioral health services administrator (BHSA) and offered through a variety of public and private providers. In the early 2000's states began a strong effort to strengthen their home and community-based service offerings. Coupled with this move were federal policy shifts that required that Virginia's behavioral health services be opened up to allow private providers the opportunity to administer services. Virginia implemented changes without substantially strengthening state regulatory, policy, and oversight requirements. This resulted in some providers taking advantage of the Medicaid program. Ultimately, Virginia's Medicaid funded behavioral health expenditures increased by 400% over 10 years. In a desire to ensure that individuals were receiving high-quality care, and providers were appropriately qualified, DMAS worked with the legislature and the Department of Behavioral Health and Developmental Services to overhaul licensing qualifications and processes for providers and implemented a pre-screening requirement for select mental health services to ensure a stronger program. Virginia also contracted with a BHSA to administer the community behavioral health services component of the Medicaid program. Virginia is now realizing improved outcomes as a result of the BHSA arrangement. DMAS has realized a decrease in psychiatric inpatient admissions and an increase in follow up care upon discharge. Spending on institutional mental health services has remained relatively steady over the past five years. In 2014, \$136 million was spent on institutional services (state and private psychiatric hospitals and

psychiatric residential treatment facilities) and in contrast spending for community-based mental health was just under \$600 million. Virginia aspires to continue expanding the community-based behavioral health service delivery system and further reduce the costs of institutional psychiatric services.

The Case for a Unified Waiver Approach

Virginia is applying for a §1115 Waiver to operate its MLTSS and DSRIP Programs. Working in tandem, the authority granted through this §1115 Waiver will not only enable Virginia to create a better system of service provision for Medicaid beneficiaries, but also to strengthen the relationships among the providers and support networks that care for them.

Virginia has worked for decades to put policies in place that support community living and community choice for Medicaid beneficiaries. While significant progress has been achieved, opportunities to improve remain. This waiver program will enable providers, community support organizations, and Medicaid managed care organizations (MCOs) the opportunity to better coordinate and integrate member care. DMAS fully anticipates that if granted waiver authority, Virginia will be able to transform the current delivery system, support providers, MCOs, and DMAS in the design and implementation of value-based payment arrangements and drive innovation that yields better Medicaid beneficiary care and bends the Medicaid spending curve.

Managed Long-term Services and Supports (MLTSS) and the Need for Operational Authority

The 2013 *Virginia Acts of Assembly* directed DMAS to work toward the inclusion of all remaining Medicaid populations and services, including long-term care and home and community based waiver services into cost-effective, managed and



coordinated delivery systems.³ The 2015 *Virginia Acts of Assembly*, (Item 301.TTT) again directed DMAS to further advance principles of care management to all geographic areas, populations, and services under programs administered by the Department. These legislative directives demonstrate strong state level support for better integrated and coordinated care. Building off of the successes of the CCC demonstration, DMAS is seeking authority through this §1115 waiver to meet the stated objectives of the Virginia legislature by creating a mandatory managed care program through the selection of qualified Managed Care plans who are also committed to being certified as a Dual Eligible Special Needs Plan (D-SNP) in Virginia. As a result, Virginians can continue leveraging the benefit of coordinating Medicare and Medicaid services for dually eligible beneficiaries.

Throughout this application, MLTSS refers to the delivery of long-term services and supports, including both HCBS and institutional-based services, and behavioral health through capitated Medicaid managed care plans. MLTSS programs provide an opportunity to create a seamless, integrated health services delivery program. Some of the goals of MLTSS include:

- Improved quality of life, satisfaction, and health outcomes for individuals who are enrolled;
- A seamless, one-stop system of services and supports;
- Service coordination that provides assistance in navigating the service environment, timely and effective transfer of information, and tracking of referrals and transitions to identify and overcome barriers;
- Care coordination for individuals with complex needs that integrates the medical

and social models of care, ensures individual choice and rights, and includes individuals and family members in decision making using a person-centered model;

- Support for transitions between service/treatment settings;
- Facilitation of communication among providers to improve the quality and cost effectiveness of care;
- Arrangement of services and supports to maximize opportunities for community living; and,
- System-wide quality improvement and monitoring.

Streamline HCBS Waiver Authority

As previously mentioned, DMAS proposes to transition the authority for two §1915(c) waivers ([Elderly or Disabled with Consumer Direction \(EDCD\)](#) and [Technology Assisted Waiver \(Tech\)](#)).

After much review and discussion of other state's experiences, streamlining the waiver authority for these waivers will simplify and reduce the administrative burden in preparing multiple waiver reports and cost neutrality/effectiveness calculations.

DMAS fully recognizes the requirements of home and community-based services and commits to adhering to all rules, including the Home and Community Based Services settings rule (fully, from day 1) with the transition to the §1115 authority. In accordance with 42 CFR §441.302, Virginia provides all assurances to CMS. Assurances for the EDCD and Tech Waivers include:

- A. Health and Welfare
- B. Financial Accountability
- C. Evaluation of Need
- D. Choice of Alternatives
- E. Average Per Capita Expenditures
- F. Actual Total Expenditures
- G. Institutionalization Absent Waiver
- H. Reporting
- I. Habilitation Services; and,
- J. Services for Individuals with Chronic Mental Illness

³ (Item 307.RRRR.4. - <http://lis.virginia.gov/131/bud/hb1500chap.pdf>).



Additional requirements of the 1915(c) Waivers will be adhered to, as detailed in the 1915(c) applications. Those requirements include:

- A. Service Plan
- B. Inpatients
- C. Room and Board
- D. Access to Services
- E. Free Choice of Provider
- F. FFP Limitation
- G. Fair Hearing
- H. Quality Improvement
- I. Public Input
- J. Notice to Tribal Governments; and,
- K. Limited English Proficient Persons

All requirements are adhered to in the same way with the exception of (I) Public Input. Depending on the targeted waiver population, the stakeholders engaged for public input differs. All details are currently accessible through the approved 1915(c) applications available on the [CMS Demonstrations and Waivers website](#).

Delivery System Reform Incentive Payment (DSRIP) and the Need for Infrastructure

Over the past two decades, the Commonwealth of Virginia has been committed to a vision of community transformation. Together, with federal, state, and community partners, the Commonwealth has work to transform the community by investing a significant amount of time and effort to rebalance the cultural paradigm and funding from institutional living to [One Community](#), where all individuals, regardless of ability, disability, or age, can live full lives. DSRIP will facilitate a final push to establish a system where quality and value are incented, member care is fully integrated, and coordination across the health, behavioral health, substance use, long-term services and supports, and other community support providers is the norm.

Virginia anticipates that implementation of MLTSS will move Virginia closer to more streamlined service delivery and higher quality of care for individuals with complex needs. However, a subset

of Virginia's Medicaid population has needs so extensive that they will be better served when the MLTSS plans work with a partnership of providers (Virginia Integration Partners) that are fully integrated and share a financial incentive to provide optimal coordinated person-centered care. Virginia's DSRIP Program will support the development of these provider partnerships and the transition to payment models that incent the right care and create lasting culture change making [One Community](#) a reality for Virginians.

Virginia's Plan to Test the Demonstration Hypotheses: MLTSS and DSRIP

Through this §1115 Waiver, DMAS will test key hypotheses by supporting Medicaid providers and other partners, MCOs, and the Department; preparing Virginia for a shift away from paying for volume toward paying for better care and higher quality through value-based payments. Each effort below will work in parallel with the others listed, to yield a strong foundation upon which the tenants of quality care for Medicaid beneficiaries and value-based purchasing will be built.

Understanding the significant rigor expected in order to test the described hypotheses, DMAS intends to allocate DSRIP funding for the administration and evaluation oversight of this waiver.

Specifics of the evaluation and oversight process will be outlined in the Special Terms and Conditions document developed between DMAS and CMS. At this time, DMAS anticipates recommending a longitudinal mixed method research design to evaluate the MLTSS and DSRIP Programs. Using this design will allow DMAS to examine the MLTSS and DSRIP Programs from multiple perspectives over time.

DMAS and its designated agents will conduct periodic evaluations using both quantitative and qualitative methods. For DSRIP related activities, a



control group will be identified from the existing Medicaid population that could be eligible for VIP membership but are not included due to lack of access to services due to factors such as regional variance.

The evaluations conducted will be used to improve the program and to assess the program's overall impact on various outcomes including, but not limited to, enrollment patterns, beneficiary access and quality of care experiences, utilization and costs by service type (e.g., inpatient, outpatient, home health, prescription drugs, nursing facility, and home and community based waiver), and program staff and provider experiences.

As such, the evaluations will include surveys, site visits, and analyses of claims and encounter data, focus groups, key informant interviews, observations, waiver assurance results, reporting records and document reviews. DMAS will work with pertinent stakeholders, including enrollees and their families, participating providers and managed care entities to ensure expectations are clear and reporting requirements are agreed upon.

MLTSS Program Design

To obtain federal authority for this program, including the ability to mandate enrollment into the program, DMAS seeks a waiver of select

provisions of §1902(a) as outlined in the required section, "List of Proposed Waiver Authorities and Sections." To implement MLTSS, DMAS will solicit proposals from health plans to enter into fully capitated, risk-based contracts to administer the MLTSS program.

DMAS will test the hypothesis for MLTSS as described in Figure 2 by requiring that selected health plans: (1) employ a multi-disciplinary health care team approach to coordinating and facilitating care using health information technology which provides the necessary information to measure system and member-level outcomes; (2) implement a model of care that consists of health risk assessments, person-centered care planning, interdisciplinary care teams, and care management and ensures smooth transitions to and from hospitals, nursing facilities, and the community; (3) collaborate with community based organizations and other community partners; (4) develop and maintain a provider network that is adequate to meet the needs of the individuals covered within the scope of MLTSS; (5) collaborate with providers to develop innovative, value-based payment arrangements where reimbursement is based on high-quality outcomes; (6) measure and assess quality, outcomes, processes, and costs in partnership with the state and accept joint accountability for system performance; and (7)

Hypothesis for MLTSS	
Requiring a coordinated system of care that focuses on improving access, quality, and efficiency will:	Improve the quality of care and quality of life for Medicaid beneficiaries
	Reduce service gaps with focused attention on individuals with complex needs (such as individuals with disabilities, multiple chronic conditions, and/or serious mental illness)
	Provide coordination between physical health, behavioral health, and LTSS, as well as collaboration with social and community providers
	Facilitate the opportunity to build value based payment strategies where providers are incented and rewarded for providing high-quality care

Figure 2 – MLTSS Hypothesis



provide services and supports that are culturally competent and sensitive to the needs of Virginia's Medicaid population.

Additionally, DMAS will require that selected plans achieve status as a Dual Eligible Special Needs Plan (D-SNP) in the localities in which the plan is selected to provide services. It will be expected that the plans work with DMAS to align, whenever possible and within Medicare rules, the enrollment of the dual eligible members in the same plan for both Medicare and Medicaid services. Selected plans will contract with DSRIP integrated provider partnerships (VIPs), where geographically available, to provide an even greater level of coordinated services to individuals who are most complex or high risk.

Initially, MLTSS will include approximately 50,000 dual eligible members. In addition, approximately 20,000 non-duals who receive long-term services and supports will be enrolled in MLTSS. Individuals currently eligible for CCC (approximately 67,000) will be enrolled in MLTSS upon CCC's end date in December of 2017.

Understanding the complexities of this population, the Department is proposing to utilize strategies reflected in the hypothesis, through an integrated benefit design where services will include primary and acute services, long-term services and supports, and behavioral health (including substance use disorder) services. Care coordination is critical and will be a cornerstone of the program. Health plans will be selected through a competitive procurement process. Finally, the program will be phased in to assure diligence and focused attention on the Medicaid members.

DMAS will utilize data sources including Medicare and Medicaid claims and encounter data. Data specifications will be outlined in contracts between DMAS contracted managed care entities and providers where applicable.

For the Medicaid population in scope for the MLTSS demonstration, DMAS proposes a phased in approach to enrollment that is expected to begin in March 2017 as discussed in later sections of this application. Once enrolled, individuals will be assigned to a health plan at which time initial assessments will be conducted and care plans determined. MLTSS will focus on improving access, quality and efficiency. It is believed that the MLTSS demonstration will reduce service gaps through focused attention on individuals' needs. Ultimately, the Department's goal is to develop a managed care model that is designed to provide individuals with enhanced opportunities to improve their lives by:

- Promoting long-term care options in community settings;
- Promoting community capacity and supports designed to better enable individuals to thrive in the community; and,
- Providing flexible and innovative benefit plans to serve individuals in their setting of choice.

MLTSS will operate under a fully integrated, person-centered model of care (Figure 3) that enables quality, access, efficiency, and value-based payments. DMAS will expect participating health plans to secure a provider network of both

Model of Care Components
Description of the MLTSS Target Populations – including those that will be attributed to the VIP
Measurable Goals
Staff Structure
Training
Provider Network with Specialized Expertise in the MLTSS Population and Use of Clinical Practice Guidelines and Protocols
Assessments
Interdisciplinary Care Team
Individualized Care Plan
Communication Network
Care Management
Transition Programs

Figure 3 – MLTSS Model of Care



traditional Medicaid providers as well as LTSS providers to enable an integrated and coordinated system of care. The model of care for this population is a significant component of the demonstration. LTSS members have unique and often individualized needs. These are frequently combined with and compounded by other health and social issues. For Medicaid beneficiaries who are eligible for both Medicare and Medicaid, there is great value in being able to coordinate the two programs. MLTSS plans will be required to also offer D-SNP enrollment for Medicare-covered services. Once operational, Medicaid beneficiaries will have the option to choose the same plan for their Medicare and Medicaid coverage achieving care coordination across the full continuum of care. The MLTSS program utilizes a robust benefit package. The benefits include Medical, Behavioral Health, Substance Use Disorder, and Long-term Services and Supports. The full detail of benefits can be found in Appendix A.

Considering the vulnerability of this population and the importance of coordination between Medicaid and Medicare, DMAS will take a stringent approach

to the administration of health plan licensure, certification, and accreditation requirements. This strategy as described in Figure 4 will help ensure the highest standard of quality in MCOs. In short, DMAS will require MLTSS MCOs to have appropriate licensure from the Virginia Bureau of Insurance (BOI), Certification of Quality Assurance for Managed Care Health Insurance Plans (MCHIP) Licensees from the Virginia Department of Health, and to obtain health plan accreditation through the National Committee for Quality Assurance (NCQA). MLTSS will require that health plans work with providers to negotiate value-based payment strategies that financially incent high-quality interdisciplinary care in the right setting, accelerate innovation to create value, and control spending. The value-based payment focus of the MLTSS design will be supported by DSRIP projects, which will prepare providers for the transition to alternative payment models. Initial steps will be taken to evaluate readiness, identify infrastructure needs, and give providers support as they modify business practices and protocols. Final steps will then be taken to implement payment strategies that benefit Medicaid members, providers,

Health Plan Licensure, Certification, and Accreditation	
Dual Special Needs Plan (D-SNP)	MLTSS contracted health plans will be required to operate as a dual special needs plan (D-SNP), through the Center for Medicare and Medicaid Services (CMS) for all localities in which the plan intends to operate within two (2) years of being awarded an MLTSS contract.
Virginia State Corporation Commission's Bureau of Insurance (BOI) Licensure	MLTSS contracted health plans will need to be licensed by the Virginia State Corporation Commission's Bureau of Insurance (BOI), as set forth in the Code of Virginia §38.2-4300 through 38.2-4323, 14 VAC5-211-10 et. Seq. prior to MLTSS contract signing (if selected).
Certification of Quality Assurance	MLTSS contracted health plans will need to have in place an approved Certificate of Quality Assurance from the Center for Quality Health Care Services and Consumer Protection, Office of Licensure and Certification, Virginia Department of Health, pursuant to §32.1-137.1 through §32.137.7 Code of Virginia, and 12VAC5-408-10 et. seq. for all region(s) in which the health plan intends to operate prior to MLTSS contract signing (if selected).
National Committee for Quality Assurance (NCQA) Health Plan Accreditation	Each MLTSS contracted health plan selected will be required to obtain NCQA accreditation for its Virginia Medicaid line of business. Plans who are not NCQA accredited would be required to adhere to DMAS' timeline of milestones for achieving NCQA accreditation. Further, all contracted plans would be required to comply with NCQA guidelines at contract signing, based on the most current version of NCQA Standards and Guidelines for the Accreditation of MCOs. Plans would also be required to comply with and participate in comprehensive onsite reviews at dates to be determined by the Department and must attain Interim Accreditation Status from NCQA by the end of the eighteenth (18th) month of operations (onset of delivering care to MLTSS members), and obtain NCQA accreditation status of at least "Accredited" within 36 months of MLTSS start date.

Figure 4 – MLTSS Health Plan Licensure, Certification, Accreditation



participating MCOs and the state. DMAS' MLTSS contract with the MCOs will include requirements that MCOs collaborate with providers to meet expectations and benchmarks for value-based purchasing set by DMAS and CMS through the DSRIP waiver.

DSRIP Program Design

DSRIP is a strategic opportunity for Virginia to partner with the federal government to ready providers for value-based payment and improve care delivery while reducing waste and inefficiency. By facilitating shared learning across Virginia, DSRIP initiatives will create a sustainable and robust community-based delivery system. Virginia will leverage DSRIP funding to transform the current system so that Medicaid providers are financially incented to organize and deliver care in a way that results in healthier person-centered outcomes and experience. As a result, Virginia's rate of Medicaid spending will slow down.

Virginia believes the time is now to partner with CMS to transform the Commonwealth's Medicaid delivery system. Providers in Virginia are responding to CMS transformation of Medicare payments and DMAS seeks to capitalize on this momentum. Through stakeholder engagement and departmental expertise, DMAS has identified the following goals included in Figure 5 for DSRIP.

Throughout this application, DMAS utilizes the terms 'High-utilizer' and 'High Risk.' DMAS defines these as stated below:

High-Utilizer: High-Utilizer is the term used to refer to Medicaid beneficiaries who have significant expenses due to above average use emergency departments and inpatient care (hospital, institutional) which may be prevented by less expensive early interventions, social supports, and primary care.

High-Risk: There are two categories of high risk Medicaid beneficiaries.

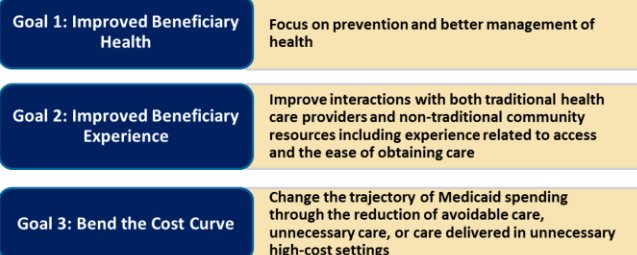


Figure 5 – DSRIP High-level Goals

- Medicaid beneficiaries, who do not engage in the provider community as needed, often do not follow medicine regimens as prescribed, do not follow up with physicians or specialty referrals and often refuse treatment if offered. These individuals often experience an acute episode, that is potentially preventable, and end up in costly inpatient settings. They can also be described as emerging high-utilizers.
- Medicaid beneficiaries who frequently engage the provider community, often unnecessarily, and in high-cost inappropriate places such as the Emergency Department. It is often this subset of high-risk beneficiaries that become high-utilizers



Virginia Integration Partners (VIPs)

The first phase of Virginia's DSRIP proposal will support the creation of high-performing, integrated partnerships known as Virginia Integration Partners. The VIPs will partner with managed care organizations to improve care for the Commonwealth's high-cost enrollees. In coordination with the beneficiaries' managed care plan⁴, VIPs will share and integrate: care, data, processes, and communication and provide high-touch, person-centered care for Medicaid's highest

partner with DMAS' managed care plans in order to strengthen the coordination of care and improve overall health for the Commonwealth's high-cost enrollees. These partnerships will include medical, behavioral health, and long-term services and support providers, and will be anchored by strong care navigation and community supports. Health Systems will coordinate the VIPs. Transformational DSRIP goals will be initially achieved by the VIPs.

These partnerships, as shown in Figure 6, will be established through contractual arrangements

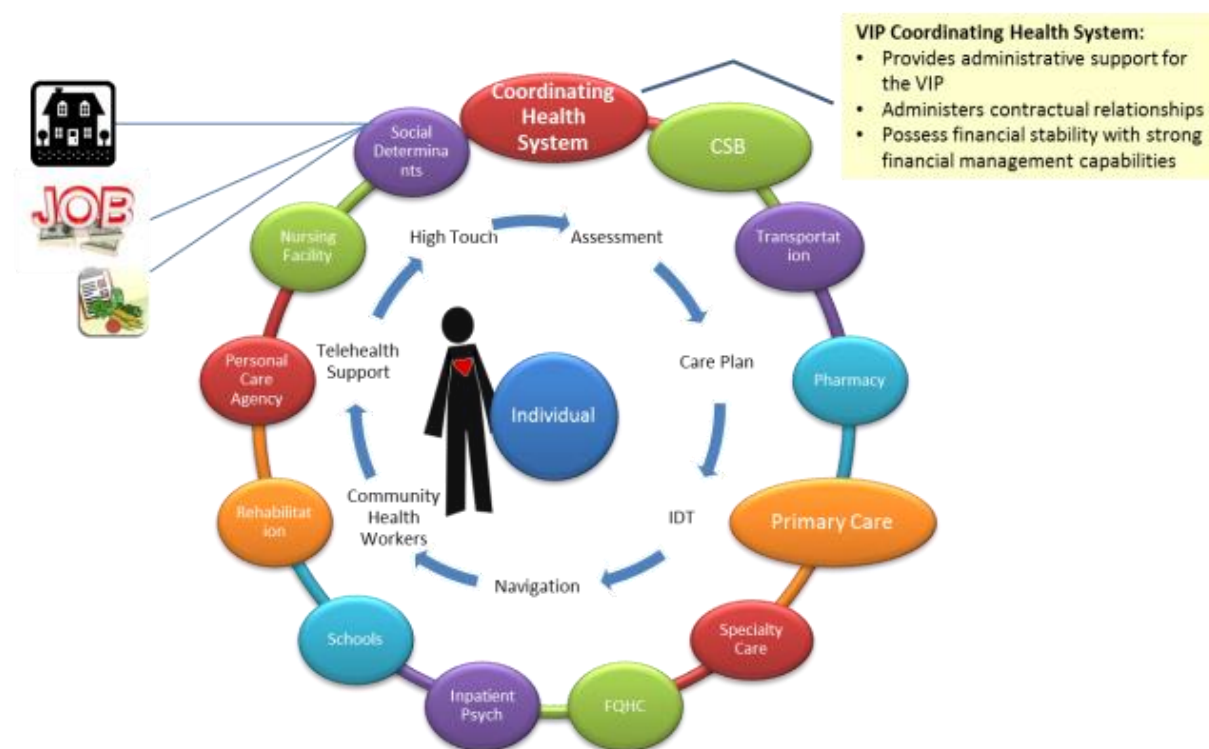


Figure 6 – VIP Partnership Design

utilizers and highest-risk enrollees, as well as emerging high-utilizers (individuals who have the proclivity to become high-utilizers). VIPs will

between high performing public and private providers and include other community supports that are focused on high-touch care coordination. Community supports will essentially be Interdisciplinary Teams (IDTs) inclusive of but not limited to: Health Systems, primary and specialty care providers, Community Services Boards (CSBs), Federally Qualified Health Centers (FQHCs), Area Agencies on Aging (AAA), Centers for Independent Living (CILS), and schools, where appropriate. The partnerships will also include care navigators, community health workers (CHWs), and other

⁴ The Department fully understands the importance around anti-trust issues as it pertains to the participating health organizations/plans. DMAS will work with plans, providers, and other stakeholders to ensure that contracts respect anti-trust principles while expecting cooperation and partnership.



resources in the community who will help connect the VIP beneficiaries to housing, employment, and nutrition supports. This work will be supported through a robust data driven care management system. These entities will work together to integrate the care and services needed to optimally support individuals with the most complex needs.

DSRIP funding (Figure 7) will be used to support the transition of Medicaid payment methodologies to value-based payment and reimbursement. To achieve this, VIPs will be developed based on seven core components:

1. VIPs will be supported to move to value-based payment arrangements;
2. All VIPs will establish a contractual relationship among VIP partners;
3. All VIPs will participate in data integration;
4. VIPs will select projects and outcome targets from the determined project menu to achieve the DSRIP goals;
5. The number of VIPs in Virginia will be determined by available funding, interest level and commitment;
6. Initially, provider partners will maintain individual provider contracts with the MCOs; and,
7. Ultimately, the VIPs will operate in an alternative payment arrangement with the MCOs such as total cost of care or other sustaining alternative.
8. Each VIP will have a single coordinating entity, a health system that serves in this leadership role. The VIP, however, will be a separate entity from the coordinating health system. Understanding the responsibility of coordination is significant. The coordinating entity will have a contract with DMAS for DSRIP funding, and

therefore the entity will be expected to have significant financial management capabilities.

Affiliate Providers

Affiliate Providers will work with the coordinating entity of a VIP to access DSRIP resources. These providers will not be part of that coordinating entity's VIP, but will use DSRIP resources to be positioned to enter into other value-based payment arrangements with Medicaid health plans. These providers will be seeking support for their transition to value-based payment, but are not in the position to take on risk-based payments within the next several years. They will be able to access resources to enhance their data infrastructure and participate in shared learning and educational resources that will enable their transition to value-based payment.

Affiliate Providers will be supported to transition to value-based payment arrangements with health plans and will contribute to the fundamental goal of bending the cost curve.

Think Big, Start Focused, and Scale Fast: Strategy for Implementing Virginia's VIPs and Affiliate Providers

Virginia is committed to "Think Big, Start Focused, and Scale Fast." DSRIP will be implemented through a two pronged approach over the five year period (Figure 8). First, Virginia will facilitate development of VIPs. This prong will be self-sustaining by the end of the demonstration period through transition to a total cost of care payment or similar alternative payment model with the enrollee's health plan.

Second, beginning in year three "Affiliate Providers" can leverage DSRIP data infrastructure

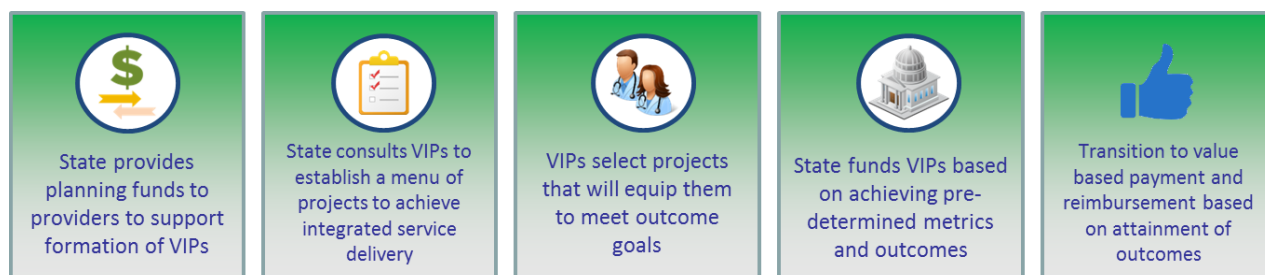


Figure 7 – Proposed VIP Development



and learning resources to enable their transition to value-based payment. Affiliate Providers will contract with health plans to engage in value-based payment strategies such as episodes of care.

DMAS is planning this two pronged approach:

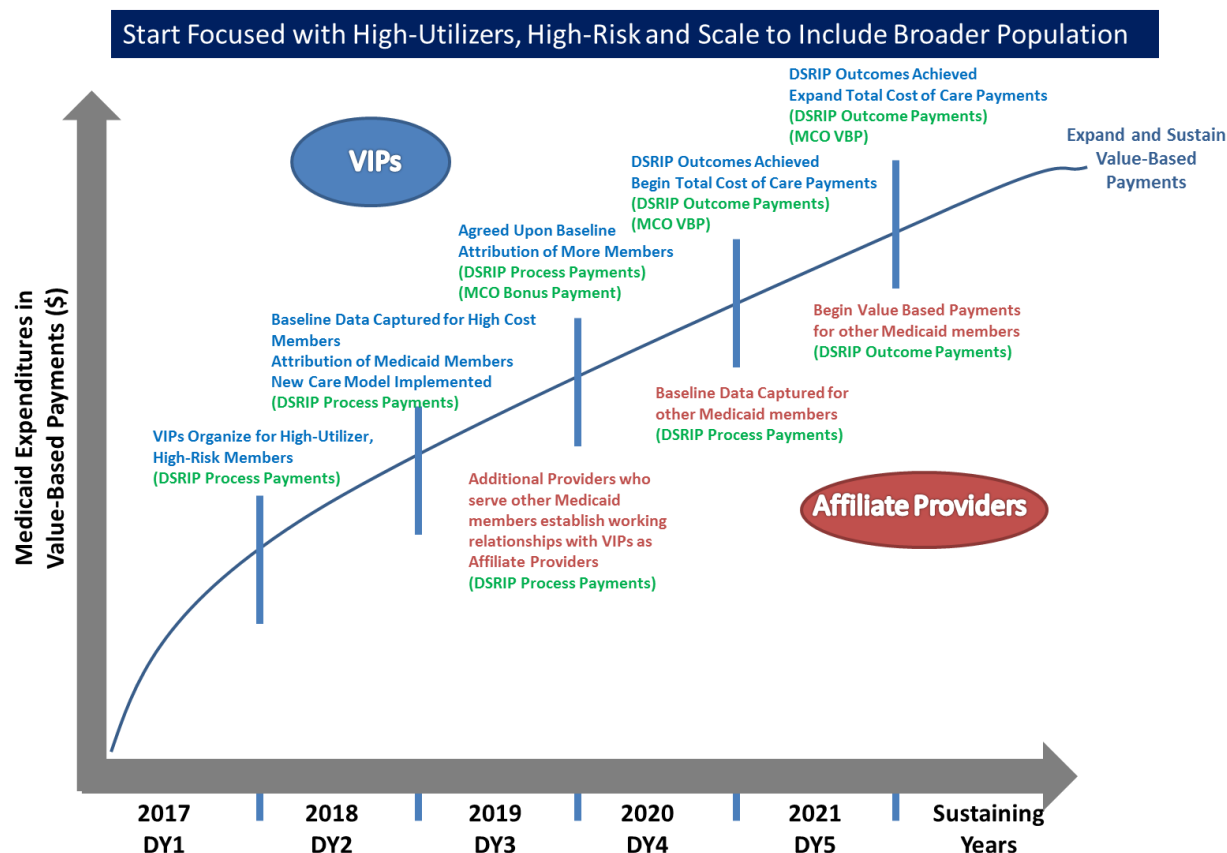
Start focused on the population where the greatest costs and greatest opportunities to improve care exist. **Scale fast** the program to benefit a greater number of enrollees. Roughly 1% of enrollees drive 22% of program costs and 5% of enrollees drive over 50% of costs. Preliminary data indicate that 72% of these enrollees were high cost in the preceding year. This means that they can be identified and supported to receive enhanced care. In addition, 72% of the highest-utilizers had a behavioral health diagnosis. This provides further evidence for Virginia to develop a program that focuses on addressing behavioral health and complex needs first.

The goals of the VIPs align with the goals for MLTSS. A significant portion of the MLTSS

population (Medicare-Medicaid enrollees and individuals accessing LTSS) are high-risk or high-utilizers. Contracted health plans in MLTSS will provide population health services, assessment, and care coordination – the subset of the MLTSS population made up of high-risk, high-utilizers, and emerging high-utilizers will receive even more focused high-touch coordination and navigation through a VIP and managed care organization partnership, where geographically available. The individual will remain enrolled in the MLTSS plan, but receive enhanced care delivery through the VIP and the managed care organization.

Individuals who are high-risk, high-utilizers in the Medallion 3.0 program will also be attributed by their health plan to the VIP, where geographically available. The VIP will work with the Medallion 3.0 health plans to provide enhanced services and coordination for the enrollees. At the end of the five year waiver demonstration period:

- Enrollees will benefit from an enhanced





level of high-touch, person-centered care and navigation across the complex landscape of medical, behavioral health, social, and long-term services and supports.

- The health plan will benefit from having its highest utilizers receive a heightened level of data-driven complex care management and in-person navigation across a focused spectrum of high-performing providers.
- The VIP will benefit from having additional resources to address the often extremely complex needs of the Medicaid population they already serve and support transition to a data-driven, well organized care delivery system.

contracts, metrics, and expectations to ensure successful implementation of VIPs throughout the Commonwealth. Additionally, participating VIPs must put a sustainability plan in place to ensure that contractual arrangements with proven partners (public and private entities) will last when the 5 year DSRIP waiver demonstration ends.

There are many communities throughout Virginia that have already considered a similar concept and some are already participating in similar arrangements through Medicare Accountable Care Organizations (ACOs). While this proposed model will not duplicate what is already in place, DMAS intends to build upon lessons learned and best practices of the ACOs in an aim to build and deploy strong VIPs that are ready to work together to serve Virginia Medicaid's most complex enrollees.

DMAS recognizes that currently providers do not have time to deviate from the traditional fifteen minute patient visit. This makes adequately caring for patients who have complex conditions difficult. DSRIP will help develop care models that incent providers to modify care delivery so that they can appropriately allocate time and resources to each Medicaid beneficiary and develop a plan to care for members and be reimbursed appropriately.

Through the support of DSRIP, the Commonwealth plans to invest in the provider community and intends to ensure that the impact is lasting and meaningful. During the first year of the demonstration, DMAS and its partners will spend a significant amount of time working with participating providers, health plans, and stakeholders to develop a governance structure and refine all necessary policies, protocols,

**Testing the Hypothesis for DSRIP**

To support the proposed DSRIP Program design, DMAS has identified the following hypotheses and potential measures (Figures 9 – 11). Program design is predicated on a number of the hypotheses. As a demonstration waiver, DMAS has the opportunity to test these hypotheses to help

define this program and refine the development of programs in the future.

Goal 1: Improved Beneficiary Health – Focus on prevention and better management of primary behavioral and medical care.		
	Hypothesis	Potential Measures
1	If high-touch coordinated interventions are provided to high-risk and high-utilizers, then quality and health outcomes will improve	Medicaid population rate of all-cause ED visits and inpatient admissions among high-risk beneficiaries (↓)
2	If DSRIP invests in enhanced linkages to social determinants (employment, housing support, etc), then beneficiaries will have improved health outcomes	Medicaid population rate of all-cause ED visits and inpatient admissions among high-risk beneficiaries (↓)

Figure 9 – DSRIP Hypothesis: Improve Beneficiary Health

Goal 2: Improved Beneficiary Experience – Improve Interactions with both traditional health care providers and non-traditional community resources including experience related to access and the ease of obtaining care		
	Hypothesis	Potential Measures
1	If DSRIP invests in integrated bi-directional medical and behavioral primary care, then access to care will improve	Adherence to scheduled appointments (↑) Wait times to access primary care and behavioral health visits such as psychiatry (↓) Outpatient behavioral health encounter in the last 12 months for Medicaid population with behavioral health condition (↑)
2	If DSRIP formalizes processes between medical, behavioral health and LTSS providers, then beneficiaries will have a better experience of care	Patient Satisfaction (↑)
3	If DSRIP invests in formalizing interdisciplinary care and comprehensive care planning and implementation, then beneficiaries will experience better care	Patient Satisfaction (↑)

Figure 10 – DSRIP Hypothesis: Improve Beneficiary Experience



Goal 3: Bend the Cost Curve – Change the trajectory of Medicaid spending through the reduction of preventable care, unnecessary care, or care delivered in avoidable high-cost settings

Hypothesis		Potential Measures
1	If DSRIP supports additional community investments, then care delivered in avoidable high-cost settings will decrease	Number of Medicaid beneficiaries in an institutional setting (↓) Inpatient psychiatric hospital utilization (↓)
2	If DSRIP invests in a high-touch, person-centered system of care, then the trajectory of spending on high-utilizers will decrease	Potentially Preventable ED visits (↓) Potentially Preventable Readmissions (↓) Utilization of High-Cost Settings (↓) Potentially Preventable Admissions (↓)
3	If DSRIP supports expanded use of standard care transitions, then care delivered in avoidable high-cost settings will decrease	Potentially Preventable Readmissions (↓) Utilization of High-Cost Settings (↓) Potentially Preventable Admissions (↓) Potentially Preventable ED Visits (↓)
4	If contracted MCOs optimize the strength of the VIP networks, then the spending on high cost Medicaid beneficiaries will decrease	Total Annualized Per-Beneficiary Medicaid Spending (↓)
5	If payment is based on outcomes as opposed to volume, then a higher performing health system with less waste will result	Rate of increase of Medicaid costs (↓)
6	If DSRIP invests in a robust data platform to facilitate information sharing and communication, then health outcomes will improve, experience of beneficiaries will improve, and the cost curve will bend	Cost Curve (↓) Beneficiary Experience (↑) Provider Experience (↑)

Figure 11 – DSRIP Hypothesis: Bend the Cost Curve

Preliminary DSRIP System Transformation Projects

DSRIP system transformation projects (Figure 12) are focused on the establishment of VIPs, development of the VIP model of care and ensuring that the provider capacity exists to support the care model, and data integration and utilization. The Department will further refine and develop the DSRIP project list during the negotiation and finalization of the Special Terms and Conditions.

The projects described below are representative of the types of projects Virginia seeks to implement.

A.1 and A.2 - Establish VIP delivery partnerships in select geographic regions across the Commonwealth, where there is an adequate volume of MLTSS and Medallion 3.0 enrollees who meet the criteria to support the transformation of the regional delivery system, and establish VIP



A	System Transformation Projects
1	Establish VIP delivery networks in select geographic regions across the Commonwealth
2	Establish VIP model of care and preferred care pathways between VIP providers
3	Identify and address training and workforce development needs – especially for working with individuals with behavioral health needs and developmental disabilities
4	Establish attribution methodology between VIP networks and contracted health plans
5	Establish data pathways between providers in the VIP networks
6	Establish data pathways between VIP networks, contacted health plans, and statewide system
7	Emergency department information system

Figure 12 – Representative System Transformation Projects

model of care and preferred care pathways between VIP providers

The preceding section detailing the “Proposed VIP Development” outlines the establishment of VIP partnerships and care model and addresses System Transformation Projects A.1 and A.2.

A.3 - Identify and address training and workforce development gaps and needs – especially for working with individuals with behavioral health needs, and developmental and physical/sensory disabilities. An additional area of focus will include treating and supporting individuals with substance use disorders. DMAS recognizes that training of Virginia’s workforce and caregivers/peers/health workers is critical for Virginia’s communities to have the breadth of expertise to care for the entire Virginia Medicaid population. DSRIP will support workforce training for health care and support services professionals, including school based providers where appropriate, to help meet this need. Training will be developed so that behavioral health can be more fully integrated with primary care. Additionally, resources will be focused to ensure medical professionals are trained so they

are competent and confident to work with individuals of all ability levels, as appropriate.

Not only will a focus be on training the existing workforce, but there will also be efforts to address workforce capacity gaps to improve care access where needed across the Commonwealth. Virginia envisions expanded investment into disciplines such as: nurse practitioners (including psychiatric NPs), EMS workers, addiction specialist, caregivers, peers (individual and family), behavioral care managers, and community health workers.

DMAS recognizes that schools are often a central point of care for many children with complex needs (diabetes, asthma, behavioral health, etc.) who receive Medicaid. DMAS will seek to use DSRIP funding to develop continuing education models that ensure that school nurses are trained to meet the most demanding needs of these children and are able to more appropriately partner with other community providers when caring for Medicaid members in the school setting.

A.4 – Establish attribution methodology between VIP partnership and contracted health plans



DMAS will work with VIPs and contracted health plans to determine how to best attribute beneficiaries to VIPs; including the consideration of prospective vs. retrospective attribution models. The model chosen will respect the MCO/beneficiary relationship while leveraging the strength of the VIPs to enhance care delivery to the most complex MLTSS and Medallion 3.0 Medicaid enrollees.

A.5 – Establish protocols and supports for Affiliate Providers

DMAS will work with VIP coordinating entities and contracted health plans to identify protocols and expectations for providers seeking to obtain status as an Affiliate Provider. This will include contract terms, process and outcome goals, and expectations for value-based payments.

A.6- Establish data pathways between providers in the VIP partnership and data pathways between VIP partnerships, contacted health plans, and statewide system

A shared technology platform is critical when engaging in a team based care approach and model. Further, shared information facilitates better patient experience, and decreases waste within care development and assessment processes. Relying on claims data to facilitate care is not efficient or sustainable. DSRIP will allow DMAS to work with participating VIP partners, including community providers, to leverage and build upon existing systems and resources and develop an optimal data system that will:

- Establish data-readiness for providers to conduct team-based care;
- Establish data-readiness for providers to be reimbursed for outcomes;
- Develop close to real-time data sharing between Medicaid providers;
- Develop capacity for business intelligence; and,
- Develop capacity for data analytics.

In order to successfully achieve all of the proposed DSRIP strategies, Virginia's Medicaid providers need to be better supported in their ability to capture, report, and analyze their Medicaid member data and information. Virginia will use DSRIP to help VIPs build an integrated clinical, behavioral, social, and support data platform to accelerate provider integration and enable value-based payment models (later explained). Strategic focus areas for information technology and data strategies will be identified during the early phase of DSRIP implementation. DMAS plans to support a needs assessment of the Medicaid provider community as it pertains to needed data support from DMAS. DSRIP Program will enable DMAS to achieve its goals for strengthened data analytics capabilities, beneficiary information exchange, and revised payment structure.

Virginia's proposal aligns succinctly with the recently published [Federal Health I.T. strategic plan](#). Specifically, Federal Health IT Plan Goal 1 (Advance Person-centered and Self-Managed Health) and Goal 2 (Transform health Care Delivery and Community Health) and the associated objectives can be leveraged to support the need for a single statewide support structure that will connect providers, payers, members, and DMAS.

DMAS will use DSRIP funding to design the data requirements that will enable providers to share usable information with each other and payers while tracking Medicaid member outcomes to be utilized for reimbursement strategies of value-based care.

In addition to the data sharing capabilities, DSRIP will be used to connect providers to DMAS' Medicaid Enterprise System (MES) – Care Management Module that will serve as a backbone for sharing relevant data related to Virginia's Medicaid members. Today, if a Medicaid member exercises his or her choice to change MCOs, the care management data is not transferred to the new MCO resulting in a significant duplication of



effort and testing for the member. This is cumbersome and wasteful for the Medicaid agency but, most importantly, time consuming for Medicaid providers and beneficiaries. The proposed connection to DMAS' MES – Care Management Module will provide the transparency and data needed to move Virginia towards value-based payment arrangements within the Medicaid program.

DMAS understands that significant information technology investments have been made by providers across the Commonwealth. DSRIP will afford the opportunity to facilitate connectivity of these individual provider systems, without duplicating, replicating, or making insignificant the investments of providers, to date.

Further, all information technology efforts will build upon key investments previously made in Virginia. Virginia leveraged federal funding available under the Health Information Technology for Economic and Clinical Health (HITECH) Act and the Patient Protection and Affordable Care Act (PPACA) to comply with federal mandates and to align with the Medicaid Information Technology Architecture (MITA) vision. In 2011 the eHHR Program was initiated to transform Virginia's IT infrastructure into an integrated system based upon Service Oriented Architecture (SOA). Implementing SOA technology and the MITA framework has enabled initial steps in the collection, aggregation, and sharing of data among agencies and localities thereby eliminating redundant efforts, streamlining work flows, and ensuring cleaner data for all participating agencies. DSRIP will leverage this work.

The SOA tools are currently being used by Virginia's Eligibility and Enrollment System, and system interfaces with the Federal Data Services Hub and the Medicaid Management Information System.

Federal funding was also used to create Virginia's Electronic Health Records Provider Incentive Program. Additionally, a grant from the Office of

the National Coordinator for Health Information Technology (ONC) was used to establish Virginia's Health Information Exchange (HIE), which will be a key component to achieve the Triple Aim principles of better care, improved health, and lower costs.

In addition to the above stated efforts, DMAS is replacing its existing monolithic mainframe based Medicaid Management Information System (MMIS) and transforming to a modular Medicaid Enterprise System (MES). This future procurement is designed to align Medicaid with CMS's required movement toward complying with Medicaid Information Technology Architecture 3.0 and Seven Standards and Conditions. DMAS is currently in development of Requests for Proposals (RFP) for a Medicaid Enterprise System (MES). Details pertaining to the scale and scope of the procurements will be available upon the release of the RFPs in the first quarter of 2016.

Recognizing the robust expectation and request for providers to capture and report numerous data points, Virginia seeks to develop a statewide set of minimum data standards. Across the healthcare continuum, to include the partnership with the MCOs, there are hundreds of data elements measured and reported by Medicaid providers and MCOs. While these data sets are all valuable in their own catchment, there is significant duplication of effort due to gaps in taxonomy and uniformity in reporting requirements. DMAS proposes using DSRIP support to bring together key partners across Medicaid and the commercial sectors in order to undertake a statewide effort to establish a uniform set of minimum data standards (MDS). Standardization is a cornerstone of meaningful data analysis. Virginia aims to utilize data analytics to improve care and institute value-based payments which reward providers for the delivery of quality care to Medicaid members.

A.7 – Emergency Department Information System

DSRIP investment will flow through the VIP partnership; however, a significant component to



improved care and financial savings is the ability to quickly share information between emergency departments including those outside of the VIP partnership. Virginia seeks to identify a VIP that will lead the implementation of a statewide (or near statewide) electronic health record platform for emergency departments. A shared emergency department information system will reduce medical errors, expedite care, reduce redundant testing, and improve care.

Preliminary DSRIP Financial Incentive

Alignment Projects

DSRIP financial incentive alignment projects (Figure 13) are focused on transitioning the Medicaid system to value-based and alternative payment models. DMAS does not believe that it is responsible to expect the magnitude of change anticipated in the payment structure without supporting Virginia's Medicaid providers through the transition.

Funding to support provider transition to alternative payment models will flow through the VIPs. Providers participating in VIPs will receive support to transition to alternative payment models in two ways: (i) As a streamlined VIP delivery partnership for high risk, high-utilizers with the goal of moving to a self-sustaining global sub-capitation or similar alternative payment arrangement at the end of the five year waiver period; and (ii) as an Affiliate Provider. Affiliate Providers are Medicaid health plan-contracted providers that will receive support to implement additional alternative-payment models. Value-based payment will be incorporated into the MLTSS and Medallion 3.0 contracts over the

demonstration period.

Virginia intends to use DSRIP to develop and test payment methodologies through the VIPs and with VIP providers which are a subset of the Medicaid provider network. Through DSRIP, DMAS will identify strategies with the highest return on investment and likelihood of self-sustainability. At the end of the waiver period, DMAS will work with additional providers and health plans to replicate and scale best practices throughout the provider network.

B.1 – Transition to alternative payment model for the integrated VIP delivery partnership

DSRIP funding will support the development of the integrated VIP partnership and care model for high-risk, high-utilizers. This high-performing partnership of providers will transition over a five year period to a sub-capitation arrangement or other alternative payment arrangement with contracted health plans. VIPs will be designed to meet the complex behavioral, social, and medical needs of this population and will need to invest in supports and services that are not historically paid for by the Medicaid program. Payment models will be developed to reflect this and in a way that best meets enrollees' needs and decreases utilization of expensive avoidable medical services. DMAS is designing its DSRIP VIP program to meet the needs of Virginia's most complex enrollees – those that will be enrolled in MLTSS- but also plans to use its VIP system and alternative payment methods for complex enrollees in its Medallion 3.0 health plans.

To the extent possible, when developing alternative payment models, health plans, VIPs,

B	Financial Incentive Alignment Projects
①	Transition to alternative payment model for the integrated VIP delivery network
②	Transition to alternative payment models with VIP providers for enrollees not attributed to the integrated VIP delivery network

Figure 13 – Representative Financial Incentive Alignment Projects



and DMAS will seek models that: 1) encourage the willing participation of key providers needed to support the population's needs, 2) preserve existing, effective provider relationships to support patient-centered and coordinated care, 3) introduce reimbursement policies that support the integration of clinical services with community social supports; and, 4) provide funding support for interdisciplinary teams that can address the needs of the targeted complex patient populations.

DMAS anticipates that any value-based purchasing methodology will be based on quality and outcome performance measures. Measures will initially be more process oriented. Payments for enrollees attributed to the VIPs will evolve to progressively higher risk, total cost of care models.

B.2 - Transition to alternative payment models with VIP providers for enrollees not attributed to the integrated VIP delivery partnership and Affiliate Providers

Only individuals designated as high-risk (to include emerging high-risk) and high cost will be attributed

to the formal VIP partnership. The majority of enrollees a VIP Medicaid provider sees will be outside of the VIP arrangement, yet still may experience significant episodes of care or have chronic conditions to manage. Further, Affiliate Providers will not be part of the formal VIP but will still be moving to value-based payment. DMAS will leverage DSRIP to work with the VIP providers, Affiliate Providers, and health plans to develop alternative payment arrangements, such as episodes of care and bundled payments, to improve care for these enrollees, for example, a bundled payment for all maternity care and delivery. These payment models will be developed in collaboration with providers and health plans and tied to the clinical improvement projects included in DSRIP.

Preliminary DSRIP Clinical Improvement Project List

The information below contains highlights of select DSRIP Clinical Improvement projects (Figure 14). The projects listed will be formalized, and related measures established, during the Special Terms

C	Clinical Improvement Projects
1	Bi-directional, integrated primary care (behavioral health and medical)
2	Expanded points of access and hours to primary care
3	Emergency department diversion
4	Enrollee engagement incentives
5	Home visit and mobile care
6	Expanded focus on social determinants of health: supportive housing, employment supports, and nutrition
7	Care transitions (e.g., Naylor and Coleman models)
8	REACH and Health Support Networks for individuals with developmental disabilities
9	Expanded telehealth
10	Condition-focused initiative (up to 2 per VIP, developed in collaboration with health plan, e.g., healthy pregnancy or diabetes care)

Figure 14 – Representative Clinical Improvement Projects



and Conditions development process. DMAS will do this in consultation with VIP coordinating entities, providers interested in partnering with a VIP, contracted health plans, SIM workgroups, self-advocates, and CMS.

C.1- Bi-directional, integrated behavioral health and primary care (High-touch coordinated interventions),

Team-based, integrated behavioral health and primary care aims to increase interdisciplinary care teams (including public and private providers) so that holistic, person-centered care becomes the standard practice for Medicaid enrollees. Additionally, there will be a focus on integrating primary behavioral health and medical care so that behavioral health is a natural extension of primary care and primary care is a natural extension of behavioral health. This will be a bidirectional approach, understanding that individuals will initiate care where they are most comfortable, be it a center or practice whose main focus is behavioral health or physical health.

DMAS recognizes that in many practices, the availability of a clinical social worker, or other expert such as a psychiatric nurse practitioner, integrated into the care practice, will dramatically enhance the ability of the practice to follow up and wrap behavioral health and social supports around individuals in need of behavioral health care. Behavioral health practices will greatly benefit from the infusion of primary care practitioners into their practice model. This team based approach will facilitate a stronger, bidirectional care model no matter where Medicaid beneficiaries choose to access care.

This high touch approach to care recognizes the importance of face to face interactions with by providers in the community. Depending on the expressed needs of the Medicaid beneficiary, high touch support could be either a social worker or other social support professional, or a medical professional. The flexibility of the VIP partnership

will allow for the person-centered planning approach to determine what the best fit is for the individual, facilitating positive interactions and appropriate engagement of the Medicaid provider community. It is expected that, where appropriate, beneficiaries will be engaged in their health care and the VIP providers and participating MCOs will work together to determine the best engagement strategies and incentives to ensure beneficiaries are actively engaged in their health and health outcomes.

Formalized processes between medical health, behavioral health, and LTSS providers will translate into beneficiaries being able to access better care, which translates into a better experience of care, yielding better health outcomes for Virginia's Medicaid beneficiaries.

C.2- Expanded hours and access to primary medical and behavioral health care

The care model proposed through DSRIP recognizes the importance of access to care especially for individuals supported by family caregivers and those with behavioral health needs. There is strong evidence that expanding access to primary medical and behavioral health care will ultimately reduce the overreliance on emergency department use and preempt acute episodes that result in hospitalization. DMAS will likely require VIPs to provide extended office hours. The Department understands the need to support providers in the development of extended hours, due to overhead costs, and staff turnover risk, and will encourage VIP providers to work together to determine the best model to ensure equity in time spent and cost incurred as a result of this project.

DMAS also recognizes the latest Substance Abuse and Mental Health Services Administration (SAMHSA) work with states in the development of Certified Community Behavioral Health Centers (CCBHCs). As a planning grantee, the Commonwealth is actively working to develop the certification process with selected partners and



identify payment strategies for this model. DMAS will partner with the Virginia Department of Behavioral Health and Developmental Services (DBHDS) in its development and certification of CCBHCs as a viable service delivery model within the Medicaid delivery system. DMAS will work with DBHDS and key stakeholders to determine the best avenue in which DSRIP can support this effort to ensure timely, consistent access to behavioral health services in the community.

C.3- Emergency Department Diversion

Throughout Virginia, individuals often rely on emergency departments (ED) to receive non-emergency care. This occurrence is often compounded by individuals who experience Serious Mental Illness (SMI) and other behavioral health conditions. This reality is often the result of a lack of access to primary and behavioral health care. Additionally, there are individuals who are high-utilizers of inpatient hospital care. DMAS proposes to utilize DSRIP funding to support the VIPs' implementation of protocols that increase access to patient navigation tools, strengthen hospital coordination efforts, and extend office hours through partnering primary care practices. This could also include working with local Fire and Rescue and Emergency Medical Technicians to develop innovative ways to build upon their skill sets.

C.4- Enrollee Engagement Incentives

Virginia supports the concept of patient engagement, or in this domain beneficiary engagement, yielding better health outcomes and more efficient use of the health system. DMAS recognizes that strategies developed in this domain must be effective, not only for the motivation of engagement but also for the entity responsible for tracking engagement. Tracking minimal copayments or other penalties previously explored with Medicaid populations often yields significant administrative burden with little to no ultimate behavior change. To that end, DMAS will work with

VIPs to identify incentives to motivate Medicaid beneficiaries to engage the health care system in more appropriate ways.

C.5- Home Visit and Mobile Care

DMAS, along with sister state agencies and community partners, has been working diligently over the past decade to strengthen the connection of individuals who live in the community to the providers and support services that care for them. In many communities this connection is best served by a mobile care team and there is a need to further support and multiply the number of mobile care teams throughout the Commonwealth. Through DSRIP, Virginia intends to increase access to primary and behavioral health care in all geographic regions by increasing mobile clinics and/or providers. Another targeted approach will be to increase access to primary and behavioral health care to adults and children with limited mobility, or who are otherwise difficult to reach, through home visits. DMAS will look to the VIPs to put their resources on wheels and engage and provide care throughout Virginia's communities.

DMAS is aware of the current use of community health workers and believe a resource such as this could help ease the constraints on providers who would need to dedicate staff and time to a mobile unit. DMAS will work with the VIP partnerships to establish standards and protocols that meet both the expectation of federal partners and feasibility of the provider community.

C.6- Expanded Focus on Social Determinants of Health: Supportive Housing, Employment Supports, and Nutrition

DMAS acknowledges that there are social determinants that directly influence the overall health and wellbeing of Medicaid beneficiaries. To that end, housing, workforce/employment, and nutrition projects will be developed through VIPs, utilizing partnerships with managed care plans and community and regional resources.



Supportive Housing: The Department believes that housing is healthcare. While Medicaid is not allowed to pay for housing, Virginia desires a clear statewide process for identifying and disseminating appropriate and available safe housing options for Medicaid enrollees. DMAS is committed to working with statewide experts and partners to ensure Virginia's policies are appropriate and person-centered. Through DSRIP, Virginia intends on identifying a preferred solution, to make this information available to providers, care managers, and the individuals who are in need of housing, or better housing options.

Expanded Employment Supports: In addition to housing, employment is desired by many Medicaid beneficiaries and considered to be an important piece of meaningful community living. DMAS intends to build off of the existing Medicaid Works program and use DSRIP to enable investment in the development of partnerships with representatives from the business community as well as workforce training experts such as the Virginia Disability, Aging, and Rehabilitation Services (DARS) agency, in order to make sure that the Commonwealth has an established process for recruiting and connecting Medicaid members to employers committed to employing individuals with Serious and Persistent Mental Illness (SPMI) and other varying abilities.

In October, 2015, Virginia received a \$4.3 million federal grant from the U.S. Department of Education to help nearly 500 Virginians with disabilities gain new skills and credentials to seek employment in competitive, high-demand, high-quality occupations. The five-year grant will allow (DARS) and the Department for the Blind and Vision Impaired (DBVI) to develop and implement a demonstration project to enhance Virginia's existing regional career pathways systems to serve individuals with disabilities. This may overlap with demonstration beneficiaries; however, lessons learned and strategies developed will translate well into the objectives of this DSRIP strategy. Mirroring

the process for housing, DSRIP funding will also be used to make developed employment strategies and information available to providers, care managers, individuals, and family members.

Nutrition: The Medicaid beneficiaries included in the demonstration often have co-occurring and often times co-morbid conditions. Without specific guidance and follow-up from trusted sources, these beneficiaries often fall back into poor eating, exercise, and lifestyle habits. Through DSRIP, VIPs will work to develop the best nutritional support options for members who would benefit from closer monitoring, and more frequent nutritional support. DMAS, like CMS, acknowledges that promoting healthy behaviors can reduce the occurrence of chronic conditions. Through DSRIP, Virginia intends on strengthening the focus of nutritional supports and will work with VIPs, managed care plans, and community resources to develop specific support models for use in this demonstration.

C.7- Care Transitions and Diversions from Institutional Care

Institutional care is valuable to the Medicaid program for individuals who are truly in need of highly monitored, comprehensive care in a residential facility. Virginia, however, is not unlike other states in the country where there is a legacy and history of institutional bias. Despite decades of efforts to strengthen the community options for individuals who have a level of care need that formerly would have triggered institutional care, care transitions often default to relying on institutions as a hospital discharge alternative.

In addition, transitions from an institution back into the community are often difficult to manage and Medicaid members are at risk of confusion about care plans and the arrangement of home services, leading to readmission to the institution.

DSRIP will be used to facilitate better relationships and communications between community partners



supporting Medicaid members in the community. Virginia will seek to implement best practices and principles such as, but not limited to, the [Coleman Model](#) or the [Transitional Care \(Naylor\) Model](#) to increase success when transitioning Medicaid members between care settings (e.g. hospital discharge, nursing facility to home/community, Psychiatric Residential Treatment Facility (PRTF) or Institute for Mental Disease (IMD) to home/community). DMAS will also work with partners to determine the value of remote patient monitoring, where appropriate, in order to support individuals who are transitioning. Protocols will be refined and pathways will be developed to ensure that home and community based services and supports are easy to both establish and maintain. DMAS will work with VIPs and other community partners to develop these processes.

C.8- Expanded REACH

REACH is a program to support adults with intellectual and/or developmental disabilities, as well as a mental health condition or challenging behavior that is negatively affecting their quality of life. REACH programs, offered across Virginia provide consultation, mobile support, and therapeutic home services to individuals ages 18 and above with documented evidence of an intellectual or developmental disability and mental health or behavioral needs. REACH emphasizes the prevention of crises before they occur. This prevention is done through early identification of individuals in need of service, development of crisis response plans, trainings, and technical assistance. REACH programs are under development in these regions for children.

C.9- Telehealth

Virginia is one of the leading states in the country when it comes to utilization of telehealth as a mode of Medicaid care delivery. While we celebrate the successes of this accomplishment, there are significant opportunities to strengthen the use of telehealth in order to better support

Virginia's Medicaid members and the providers that care for them. Through DSRIP, Virginia seeks to strengthen home monitoring for chronic condition management, long-term services and supports, and intends to deploy resources and tools to aid in crisis prevention and beneficiary safety. Telehealth has the ability to make preventive health screenings more timely and accessible, both incredibly valuable when focusing on sustaining health and wellness. With the extended focus towards integration of care, telehealth has the ability to enhance access to providers, especially for behavioral health treatment. Further, Virginia seeks to expand the ability of providers to consult with expert and specialty care providers.

DMAS recognizes that DMAS needs to work with CMS to ensure flexibility around payment for telemedicine, and telehealth services. The Department will work with CMS to develop appropriate flexibilities that will be reflected the negotiated Special Terms and Conditions document.

C.10- Condition-focused Initiative (up to 2 per VIP developed in collaboration with health plan, e.g., healthy pregnancy or diabetes care)

As described previously, at its core the VIP model relies on a high-touch, person-centered system of care. As exemplified in the project highlights, DSRIP intends to invest in this high-touch model, supporting the provider community in its efforts to expand existing care models, and strengthen the existing care transition efforts. This care approach will translate into more engaged Medicaid beneficiaries and more accountable providers.

Unified Waiver Approach

DMAS is proposing to utilize this opportunity to retool the Medicaid program in order to better integrate care provided to Medicaid members while substantiating a data system that will ultimately support the successful movement to value-based payment models. While the MLTSS



and DSRIP efforts are unique in some project components, the opportunity to combine these efforts will result in a strong, robust, Medicaid delivery system. Integrating the efforts of all Medicaid providers, the MCOs that facilitate payment of services, and the Department will allow for better care delivery and better member experience for Virginia's Medicaid beneficiaries. DMAS begins these strategic efforts with the member's health and wellness at the forefront of all decision making.



Other Required Application Elements by Centers for Medicare and Medicaid Services

Describe where the demonstration will operate.

MLTSS: The MLTSS effort will be statewide, though the rollout will be phased in by geographic region. The regional approach will ensure that the participating health plans, along with DMAS, have the appropriate resources needed to in order to achieve a successful implementation and most importantly a safe implementation for the Medicaid members. Figure 15 below highlights the timeline and regional implementation approach.

§1915(c) Home and Community Based Services Waivers: The proposed migration of the Elderly or Disabled with Consumer Direction (EDCD) and Technology Assisted Waiver (Tech) waiver authorities to a §1115 waiver will alter neither eligibility nor services under these existing three waivers. Additionally, the waivers will operate statewide, as they do under the §1915(c) authority.

DSRIP: The implementation of the DSRIP demonstration will be in a number of geographic areas around the state. Affiliated Providers will

likely be based in the same geographic area as the VIP; however, Affiliated Providers may also be used to expand the geographic reach of Virginia's DSRIP. The Department will negotiate specifics of this strategy in the agreed upon Special Terms and Conditions and use these standards to finalize arrangements with VIP provider partnerships. To date, DMAS has issued a request for non-binding letters of interest to all Virginia health systems. So far nine health systems have expressed interest in engaging as a VIP coordinating entity. DMAS will continue to engage interested health systems as the Special Terms and Conditions are developed.

Demonstration Eligibility

Demonstration eligibility will not affect or modify other components of Virginia's current Medicaid and CHIP programs outside of eligibility, benefits, cost sharing or delivery systems. Eligibility for individuals who qualify for the program demonstrations will not be altered from eligibility determination processes and protocols that currently exist. Additionally, there are no proposed enrollment limits. Individuals who receive improved care through a DSRIP initiative include a subset of those currently enrolled or eligible for MLTSS and Medallion 3.0. The chart identifying populations whose eligibility will be affected can be

MLTSS Implementation Phases

Year	Date	Regions	Total Population*
2017	March 1, 2017	Tidewater	8,000
	May 1, 2017	Central	11,000
	July 1, 2017	Charlottesville/Western	13,000
	September 1, 2017	Roanoke/Alleghany	4,500
	September 1, 2017	Southwest	12,500
	November 1, 2017	Northern/Winchester	13,500
2018	Starting in January 2018	CCC Demonstration (Transition plan is to be determined with CMS)	67,000
Total		All Regions	129,500

Source – VAMMIS Data; *Approximate totals based upon MLTSS targeted population as of June 2015

Figure 15 – MLTSS Rollout



found in Appendix B.

Provide the projected number of individuals who would be eligible for the Demonstration, and indicate if the projections are based on current state programs

MLTSS: The projected number of individuals eligible for the MLTSS portion of the demonstration is 129,500. These projections are based on current state enrollment of both state plan and six 1915(c) waivers. Broadly, the populations included in the MLTSS demonstration are shown in Figure 16.

§1915(c) Home and Community Based Services

Waivers: The projected number of individuals eligible based on waiver enrollment as of December 31, 2015 for the following waivers total 33,392 individuals:

- Technology Assisted
 - Enrolled: 282
- Elderly or Disabled with Consumer Direction
 - Enrolled: 33,110

also be included in an alternative payment methodology through DSRIP. The number of individuals impacted will vary depending on the number of VIP partnerships and their geographic availability, the finalized VIP partnership attribution model outlined in the Special Terms and Conditions, and the alternative payment models developed with VIP providers and health plans outside of the formal VIP partnership.

To the extent long-term services and supports are furnished (either in institutions or the community); describe how the Demonstration will address post-eligibility treatment of income, if applicable. In addition, indicate whether the Demonstration will utilize spousal impoverishment rules under section 1924, or will utilize regular post-eligibility rules under 42 CFR 435.735 (209b State).

Virginia utilizes the spousal impoverishment rules under section 1924 for married institutionalized individuals who receive home and community

based care services and have a spouse residing in the community (outside of a nursing facility). If in a nursing facility, there is only one basic difference, realized in the deduction explanation below.

From the individual's gross income, deductions are made in the following order: 1) HCBS: personal maintenance⁵

(165% of SSI by state option), Institution: Personal

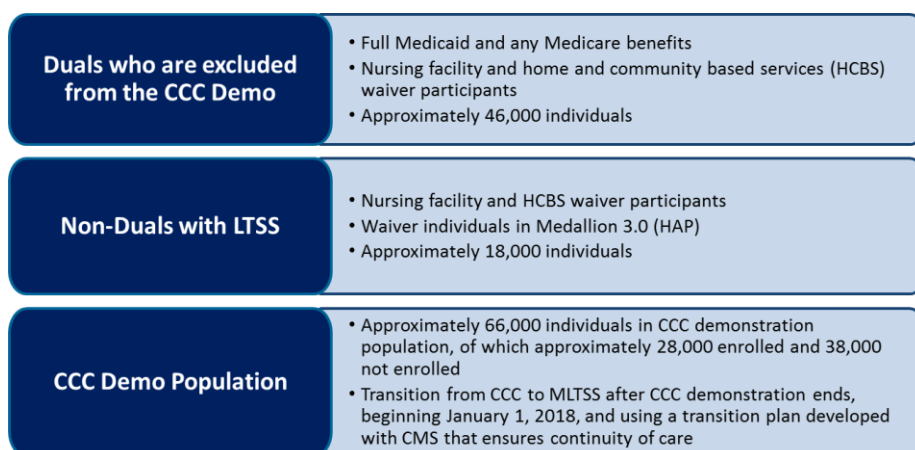


Figure 16 – MLTSS Rollout

DSRIP: DSRIP Program will include a subset of both the MLTSS population and the Medallion 3.0 population. This subset will include high risk, high-utilizers who will be attributed by the health plans to the VIP partnership. This population will make up an estimated 1-5% of Medicaid enrollees. Individuals who experience a chronic condition or episodic care event and receive care from a provider who participates in a VIP partnership may

⁵ The personal maintenance deduction may also include a guardian fee (actual fee up to 5% of income) if there is a guardian who charges a fee and a special earnings deduction depending on the number of hours of employment per week. The total personal maintenance deduction cannot exceed 300% of SSI.



needs allowance \$40 (higher the federally minimum of \$30 at state option). If the stay in the facility is expected to be less than 6 months, there can also be a final deduction for a home maintenance allowance. 2) community spouse monthly income allowance, 3) dependent family member's allowance if the dependent lives with the community spouse, and 4) non-covered medical expenses. The remainder after all allowable deductions is the individual's contribution to his cost of care (patient pay) and Medicaid pays the balance, up to the Medicaid rate for the authorized services.

If there is no community spouse, then from the individual's gross income, deductions are made in the following order: 1) personal maintenance* (165% of SSI by state option), 2) dependent family member's allowance, and 3) non-covered medical expenses. The remainder after all allowable deductions is the individual's contribution to his cost of care (patient pay) and Medicaid pays the balance, up to the Medicaid rate for the authorized services.



Demonstration Benefits and Cost Sharing Requirements

Indicate whether the benefits provided under the Demonstration differ from those provided under the Medicaid and/or CHIP State plan:

MLTSS:

Yes ☒ No (if no, please skip questions 3 – 7)

DSRIP:

Yes ☒ No (if no, please skip questions 3 – 7)

§1915(c) Home and Community Based Services Waivers:

Yes ☒ No (if no, please skip questions 3 – 7)

While differing from the Medicaid/CHIP state plan, benefits will not be altered as currently available under the existing 1915 (c) authority. While the answer reflects the divergence from the state plan, all details for questions 3-7 are currently accessible through the approved 1915(c) applications available on the [CMS Demonstrations and Waivers website](#).

Indicate whether the cost sharing requirements under the Demonstration differ from those provided under the Medicaid and/or CHIP State plan:

MLTSS:

Yes ☒ No (if no, please skip questions 8 - 10)

MLTSS enrolled individuals will be exempt from cost sharing other than for the patient pay towards long term services and supports. This does not differ from the process under the Medicaid State Plan.

DSRIP:

Yes ☒ No (if no, please skip questions 8-10)

The DSRIP portion of this demonstration will exercise the opportunity to explore and subsequently implement a patient engagement strategy that requires Medicaid members to be active in their health care. DMAS will work with VIP partnerships and MCO partners to determine the best incentive strategies to encourage positive member engagement.

§1915(c) Home and Community Based Services Waivers:

Cost sharing requirements for this portion of the demonstration will not alter from those currently recognized under existing 1915(c) authority.

Yes ☒ No (if no, please skip questions 8-10)



Delivery System and Payment Rates for Services

Indicate whether the delivery system used to provide benefits to Demonstration participants will differ from the Medicaid and/or CHIP State plan:

MLTSS: The delivery system used to provide benefits to the Demonstration participants in the MLTSS portion of the waiver will transition the majority of remaining fee-for-service services into a mandatory managed care environment. A detailed explanation of the proposed delivery system is identified in earlier sections of this document. As described, DMAS anticipates that the proposal will drive increases in quality, and access to care while driving down total cost of care. Most importantly, it is expected that this demonstration, will positively improve the health status of those participating.

DSRIP: The delivery system used to provide benefits to the Demonstration participants in the DSRIP portion of the waiver is described in detail in earlier sections of this document. As described, DMAS anticipates that the proposal will drive increases in quality, and access to care while driving down total cost of care. Most importantly, it is expected that this demonstration, will positively improve the health status of those participating.

§1915(c) Home and Community Based Services Waivers: The operational authority sought through the migration of administrative authority from an existing 1915(c) to 1115 waiver authority does not alter how benefits are provided to these traditional 1915(c) waiver beneficiaries.

Describe the delivery system reform that will occur as a result of the Demonstration. Specifically include information on the proposed Demonstration's expected impact on quality, access, cost of care and potential to improve health status of the populations covered by the

Demonstration. Also include information on which populations and geographic areas will be affected by the reforms.

The program description section of this application describes in full all answers to the above question.

Indicate the delivery system that will be used in the Demonstration

Managed Care Organization –As described in the opening section of the application, 75 percent of the Medicaid program enrollees receive care through contracted health plans. MLTSS (including the three HCBS waivers discussed in this application), will require an additional 129,500 individuals be covered through mandatory managed care organizations. The DSRIP demonstration, will utilize the MLTSS managed care plans, as well as the existing Medallion 3.0 managed care plans.

Other: DSRIP will not only leverage the existing managed care plans, but it will also create Virginia Integration Partners (VIP) as fully described in this application. VIPs will contract with managed care plans as a part of the Commonwealth's managed care delivery system.

If multiple delivery systems are used, please include a table that depicts the delivery system that will be utilized in the Demonstration for each eligibility group that participates in the Demonstration. Please also include the appropriate authority if the Demonstration will use a delivery system (or is currently seeking one) that is currently authorized under the State plan, section 1915(a) option, section 1915(b), or section 1932 option)

All eligible individuals will have access to MLTSS managed care plans. For DSRIP, the only variance in the delivery system accessible for beneficiaries will be the result of regional availability of VIPs, which has not yet been determined. DMAS will work with CMS during the negotiation phase to determine, if needed, where there will be a variance in the access to a VIP. Delivery System specifics, as it



pertains to VIPs, will be included in the agreed upon Special Terms and Conditions document.

If the Demonstration will utilize a managed care delivery system:

- a) Indicate whether enrollment be voluntary or mandatory. If mandatory, is the state proposing to exempt and/or exclude populations (if additional space is needed, please supplement your answer with a Word attachment)?***

MLTSS: Enrollment into the demonstration will be mandatory, as reflected in the application and in the requested waiver section of the document.

DSRIP: Enrollment will be mandatory by virtue of the authority granted through this waiver for MLTSS, or through existing 1932 authority for the existing Medallion 3.0 program.

- b) Indicate whether managed care will be statewide, or will operate in specific areas of the state (if additional space is needed, please supplement your answer with a Word attachment);***

Managed Care will be statewide, as described in previous sections of the document.

- c) Indicate whether there will be a phased-in rollout of managed care (if managed care is not currently in operation or in specific geographic areas of the state. If additional space is needed, please supplement your answer with a Word attachment);***

MLTSS: Managed Care will have a phased in roll out as depicted in Figure 15.

DSRIP: Managed Care will have a phased in roll out for MLTSS related beneficiaries. Medallion 3.0 currently operates in all regions of the state.

- d) Describe how will the state assure choice of MCOs, access to care and provider network adequacy (if additional space is needed, please supplement your answer with a Word attachment); and***

MLTSS: DMAS anticipates at least two MCOs will operate in each region, providing the assurance of choice. DMAS will require MLTSS MCOs to have appropriate networks as well as

licensure and certifications from the Virginia Bureau of Insurance (BOI) and the Virginia Department of Health, and MCOs will be required to obtain National Committee for Quality Assurance (NCQA) accreditation.

- e) Describe how the managed care providers will be selected/procured***

MLTSS: For the MLTSS portion of the demonstration, Managed Care Organizations (MCOs) will be selected through a competitive procurement process. The Request for Proposal will be released in spring of 2016 with an anticipated rollout of the demonstration, upon CMS demonstration approval, beginning in January of 2017.

DSRIP: The DSRIP demonstration will utilize the MLTSS procured plans as well as those currently participating as Medallion 3.0 MCOs. MCOs will have a role in the DSRIP demonstration as partners in the integrated care partnerships (Virginia Integration Partners).

Indicate whether any services will not be included under the proposed delivery system and the rationale for the exclusion (if additional space is needed, please supplement your answer with a Word attachment);

Not Applicable

If the Demonstration will provide personal care and/or long-term services and supports, please indicate whether self-direction opportunities are available under the Demonstration. If yes, please describe the opportunities that will be available, and also provide additional information with respect to the person-centered services in the Demonstration and any financial management services that will be provided under the Demonstration (if additional space is needed, please supplement your answer with a Word attachment).

The Demonstration will continue the long history in the Commonwealth of provision of opportunities



for individuals to self-direct their respite, companion and personal care services. The Commonwealth utilizes a Fiscal/Employer Agent and currently supports 16,000 individuals who self-direct and 22,000 attendants who are employed by those individuals. The Demonstration will include this model of self-direction.

order to determine if the VIP was successful in securing any supplemental payment.

If fee-for-service payment will be made for any services, specify any deviation from State plan provider payment rates.

Any fee-for-service payment will be made according to existing state plan provider payment rates.

If payment is being made through managed care entities on a capitated basis, specify the methodology for setting capitation rates and any deviations from the payment and contracting requirements under 42 CFR Part 438.

Capitation rates for managed care (MLTSS) will be consistent with payment and contracting requirements under 42 CFR Part 438. Since most of the population to be included in MLTSS is currently in FFS, DMAS will use FFS data to calculate PMPM costs from a two year base period, adjust for any policy and program changes between the base period and the rate year and trend to the rate year. DMAS will include adjustments for managed care and administrative costs. If encounter data is available, DMAS will use encounter data.

If quality based supplemental payments are being made to any providers or class of providers, please describe the methodologies, including quality markers that will be measured and the data that will be collected.

The VIP model will allow for value-based payments to be rendered. DMAS intends to work with the VIPs and health plans in tandem with CMS to determine the best methodologies to deploy in order to realize quality based payments. DMAS anticipates the methodology being agreed to and provided to CMS as outlines in the Special Terms and Conditions document. Quality indicators will be identified, measured, and data collected in



Implementation of Demonstration

Describe the implementation schedule. If implementation is a phase-in approach, please specify the phases, including starting and completion dates by major component/milestone

The MLTSS, 1915(c) to 1115 Waiver Authority, and DSRIP proposals will all adhere to a 5 year timeline, beginning January 2017 and ending December 2021 (Figure 17). The MLTSS and 1915(c) to 1115 Waiver Authority will recognize the need to be renewed and specifics regarding renewal will be agreed upon by DMAS and CMS in the STCs. DMAS anticipates the DSRIP portion of the waiver to not be renewed after the 5 year demonstration.

MLTSS: The MLTSS implementation schedule can be found in Figure 15, MLTSS Implementation Phases.

DSRIP: The anticipated DSRIP implementation schedule can be found in Figure 17.

Describe how potential Demonstration participants will be notified/enrolled into the Demonstration

MLTSS: Enrollment in MLTSS will be mandatory for eligible individuals. The Department shall have sole authority and responsibility for the enrollment of individuals into the MLTSS program and for excluding members from MLTSS. There shall be no retroactive enrollment in MLTSS. Upon determination of eligibility the individual will be assigned to a participating MLTSS MCO using intelligent assignment methodology. The intelligent assignment method will seek to preserve existing MCO-beneficiary relationships as well as provider-beneficiary relationships in which the provider is the main source of Medicaid services for the beneficiary during the previous year. Approximately 30 days prior to the MCO enrollment effective date, enrollees will be sent information regarding the MLTSS program. This

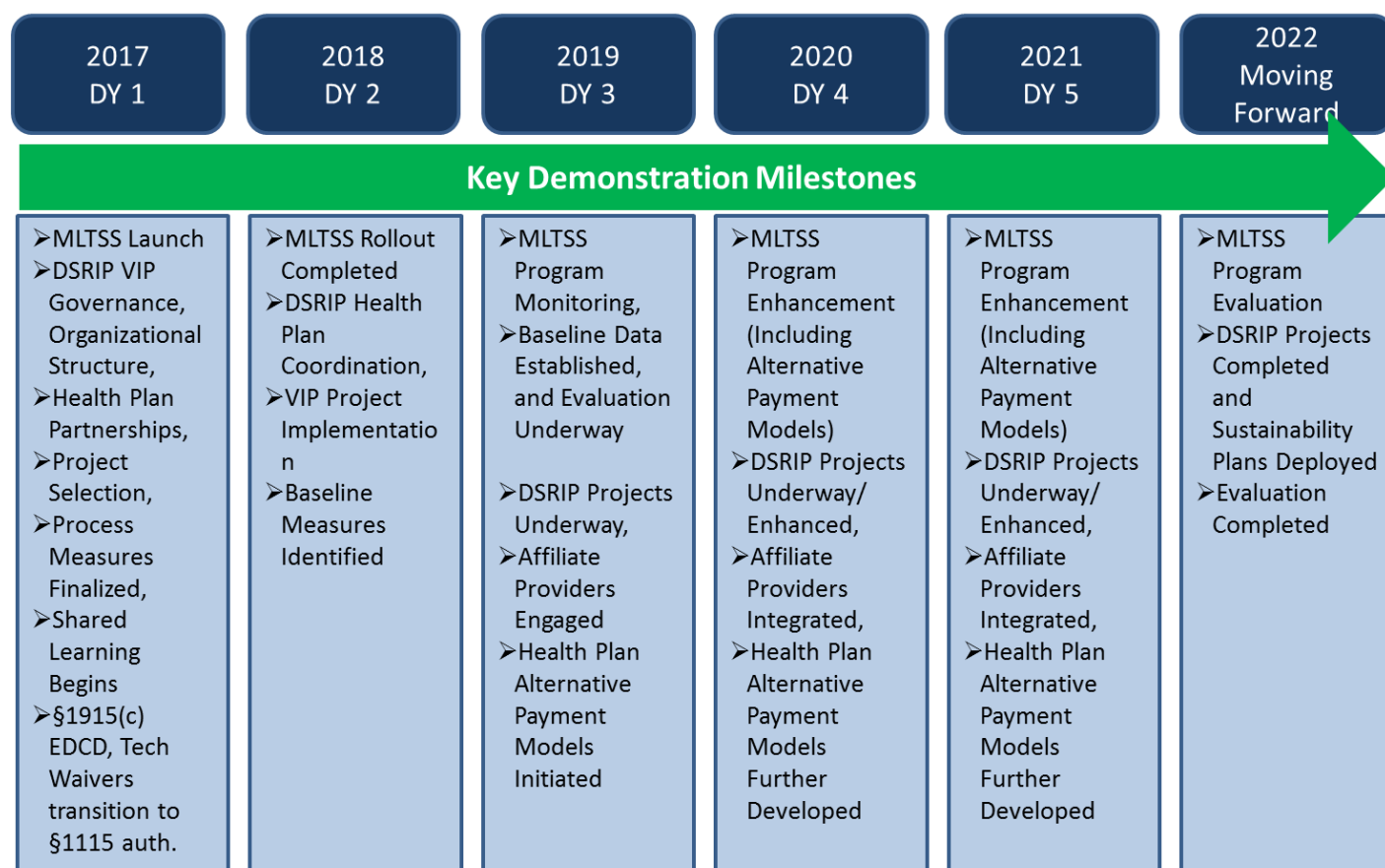


Figure 17 – Demonstration Timeline



information will include the enrollee's default MCO assignment, an MCO comparison chart, information regarding the enrollee's right to choose between at least 2 plans in that region, and information about the Department's enrollment broker, including how to contact the enrollment broker for choice counseling, plan selection and additional information about the MLTSS program. Individuals will also be sent a confirmation letter that confirms their managed care plan assignment and clearly explains their right to change from one MCO to another within the first 90 days of enrollment without cause. Prior to the initial date of enrollment, the enrollee's MCO will notify the member of his or her enrollment in health plan through a letter submitted simultaneously with the member handbook, provider directory, member identification card and information on how to contact the member's care manager (e.g., a telephone number, e-mail address).

DSRIP: DMAS will work closely with VIPs and selected MCOs to determine the protocol and process for notifying Medicaid beneficiaries of their opportunity to participate with the VIP. It will be important for members to understand that they remain enrolled with their MCO and will benefit further from participating in the VIP structure. The notification will include all pertinent contacts and information to ensure that beneficiaries and necessary caregivers are aware of the VIP opportunity and have the appropriate contact information to ensure seamless integration with their existing care.

If applicable, describe how the state will contract with managed care organizations to provide Demonstration benefits, including whether the state needs to conduct a procurement action

MLTSS: As explained, DMAS is currently in development of a Request for Proposal (RFP) for Managed Long-term Services and Supports (MLTSS) managed care plans. Details pertaining to the scale and scope of the procurement will be available upon the release of the RFP in spring of 2016. DMAS will make the RFP available to CMS upon its release. DMAS anticipates awarding this procurement and securing contracts with the chosen plans well in advance of January 2017.

DSRIP: In addition to the MLTSS explanation above, DMAS currently contracts with six managed care organizations for Medallion 3.0, DMAS will leverage these contracts for DSRIP related involvement.



Demonstration Financing and Budget Neutrality

Virginia recognizes that Section 1115 waivers are generally approved for a 5-year period and must be budget neutral to the federal government—meaning that, over the course of the waiver, federal Medicaid expenditures will not be greater than they would have been without the waiver. To build its DSRIP investment pool, Virginia is proposing to leverage a portion of savings accrued to the federal government as a result of state strategies previously employed to constrain the rate of Medicaid spending. Through providing managed care choices for a percentage of Virginia Medicaid enrollees through Medallion 3.0, and rebalancing the long-term care system from institutional to community based settings, Virginia has achieved savings of \$4.2 billion from 2004 through 2014.

The Medallion 3.0 savings assumes that managed care has saved at least 5% from what would have been spent under FFS. Savings from Long-term Services and Supports (LTSS) have been achieved via a rebalancing of care toward more community based settings. Between 2004 and 2014, the percent of individuals receiving LTSS through home and community based services rather than institutions, have shifted from 39 percent to 62 percent at an average annual savings per unduplicated beneficiary of \$9,467 in 2014.

The MLTSS initiative will continue the rebalancing of care toward more community based setting. Virginia expects the percent of individuals receiving LTSS through home and community based services to increase to 76% by 2022. From 2018 through 2022, Virginia will achieve an additional \$5.5 billion in savings through MLTSS. These achievable savings will also result in better care for members through managed care.

Virginia proposes a total investment of \$1 billion over five years to support delivery system reforms that will transform Medicaid to a value-based payer with the goal of achieving better care at lower cost for Medicaid individuals. Initial efforts will be focused on preparing providers to more effectively serve the high risk, high-utilizers and subsequent high cost populations. These beneficiaries represent 20% of the Medicaid enrollment but 80% of the cost. Virginia expects to see additional tangible and sustainable savings in Medallion 3.0 and MLTSS during the latter part of the five-year DSRIP waiver.

Financing of the Non-Federal Share for DSRIP

To access federal funding for delivery system transformation, Virginia recognizes the responsibility to fund the non-federal share, meaning it must match any federal investment with an equal state or local share. This is significant because it determines the amount of funding the Commonwealth can receive to finance transformational activities.

In order to satisfy this requirement, Virginia is proposing to leverage designated state health programs (DSHPs) and intergovernmental transfers (IGTs). Virginia understands that for all funding sources, the dollars leveraged for the non-federal share cannot already be used for federal claiming. DMAS has identified eligible DSHPs and IGTs to support the DSRIP effort. DMAS will work with CMS and financing partners to ensure attestation of DSHP funds and IGT processes and protocols are agreed to and have as minimal administrative burden as possible.

The demonstration financing and budget neutrality forms can be found in Appendix C.



List of Proposed Waivers and Expenditure Authorities

Provide a list of proposed waivers and expenditure authorities; and describe why the state is requesting the waiver or expenditure authority, and how it will be used.

Title XIX Waivers

MLTSS:

- **Statewideness – Section 1902(a)(1):** To enable the State to operate the Demonstration on a less-than-statewide basis. Rationale for Authority: To enable Virginia to use a phased approach to implement the MLTSS model statewide. The Commonwealth anticipates that MLTSS will roll out, regionally, as described in the body of the waiver application.
- **Reasonable Promptness – Section 1902(a)(8):** To enable the State to limit enrollment Rationale for Authority: DMAS will seek the use of an enrollment broker and to allow changes within period of time, e.g., during initial and open enrollment, and during specified exceptions identified by the state in accordance with federal requirements.
- **Amount, Duration and Scope of Services – Section 1902(a)(10)(B):** To enable the State to provide benefit packages to Demonstration populations that differ from the State plan benefit package. Rationale for Authority: The proposal seeks to waive the state plan benefit package for the described populations
- **Rate-Setting/Payment Methodologies – Section 1902(a)(13) and (a)(30)** Rationale for Authority: to permit the State to implement a value-based purchasing strategy based on the use of withholds and incentives.
- **Comparability – Section 1902(a)(17)** Rationale for Authority: To permit the Commonwealth to exclude from the Demonstration:
Beneficiaries in the following categories:
limited coverage groups, Medallion 3.0, FAMIS, ICF-ID and MH Facilities, Veterans

Nursing Facilities, Residential Treatment Level C, Medicaid Works, PACE, Certain Out of State Placements, Hospice and ESRD.

- **Freedom of Choice – Section 1902(a)(23)(A):** To enable the State to mandatorily enroll Demonstration participants to receive benefits through certain providers and MCOs. Rationale for Authority: to enable the State to mandate enrollment of certain beneficiaries in the Demonstration Populations in risk-based contracted health plans. Beneficiaries will retain the right to choose between MCOs.
- Virginia seeks CMS guidance to determine which, if any additional waivers of State Plan requirements under the authority of section 1115(a)(1) of the Social Security Act are necessary to enable the state to carry out the demonstration.

Title XIX Waivers

DSRIP:

- **Statewideness – Section 1902(a)(1):** To enable the State to operate the Demonstration on a less-than-statewide basis. Rationale for Authority: To enable Virginia to pilot DSRIP strategies in certain areas of the state.

Amount, Duration and Scope of Services – Section 1902(a)(10)(B): Rationale for Authority: To enable the state to offer cost-effective alternative benefit packages to different populations or regions of the state under the demonstration.

- **Rate-Setting/Payment Methodologies – Section 1902(a)(13) and (a)(30)** Rationale for Authority: to permit the State to implement a value-based purchasing strategy that may be based on the use of withholds and incentives.
- **Comparability – Section 1902(a)(17)** Rationale for Authority: To permit the Commonwealth to allow VIPs to target transformation projects in different regions and to different sub-populations.



- Freedom of Choice – Section 1902(a)(23)(A): To enable the State to mandatorily enroll Demonstration participants to receive benefits through certain providers. Rationale for Authority: to enable the State to mandate enrollment of certain beneficiaries in the Demonstration Populations in risk-based contracted health plans. Beneficiaries will retain the right to choose between MCOs.
- Limit payment to providers 42 CFR §438.60. Rationale for Authority: to allow direct payments to managed care providers or supportive housing and supported employment services.
- Utilization Review Requirement of Hospital or SNF §1903. Rationale for Authority: to allow for reimbursement for specific managed care plan, provider, behavioral health organization and system payments that support performance, quality, system alignment and whole-person care coordination to the extent not otherwise allowed. This may include fee-for-service and managed care-based incentive payments, and expenditures that support value-based payment evolution.
- DMAS anticipates the need to waive elements of §1903 as it pertains to the design of the DSRIP program. DMAS will work with CMS to ensure the appropriate provisions are waived to ensure:
 - The State may receive federal matching dollars for specified designated state health programs to allow the State to fund the non-federal share of payments and transition payments.
 - The State may receive federal matching dollars for payments made under the Demonstration to allow the State to make payments to IDNs for achieving specific milestones and metrics for specific projects undertaken to support the Demonstration vision.
 - The State may receive federal matching dollars for transition

payments to providers to allow the State to strengthen and to support providers to enable them to participate in delivery system reform.

- Virginia seeks CMS guidance to determine which, if any additional waivers of State plan requirements under the authority of section 1115(a)(1) of the Social Security Act are necessary to enable the state to carry out the demonstration.

§1915(c) Home and Community Based Services Waivers: The waiver descriptions for the waivers currently operating under §1915(c) authority describe the specific waiver authorities requested. As this 1115 application seeks to grant administrative simplification only, there are no modifications to what can be found here: http://www.medicaid.gov/medicaid-chip-program-information/by-topics/waivers/waivers_faceted.html

(Search 1915(c) Virginia, Approved, Application)



Public Notice

The Department has a strong history of working with stakeholders. The public notice and public facing process of this demonstration waiver has required a significant amount of dedicated staff time and effort. To that end, stakeholders shall be able to attest to the incorporation of ideas, suggestions, and concepts. Due to the complex nature of this waiver, the initial public facing strategies were targeted based on demonstration concept, though all elements provided for in 42 CFR 431.408 have been addressed.

Appendix D contains all the documents from the public notice process.

Start and end dates of the state's public comment period:

MLTSS: General Approach Proposal: May 18th – June 16, 2015

Model of Care: September 1 – September 30, 2015

DSRIP: September 11 – October 19, 2015

Unified Waiver (MLTSS, DSRIP, §1915(c) waiver authority): December 1 – 31, 2015

Comments received by the state during the 30 day public comment period and a summary of the state's responses to submitted comments, and whether or how the state incorporated them into the final application.

A summary of comments received and DMAS' responses can be viewed in Appendix D.

Certification that the state convened at least 2 public hearings, of which one hearing included teleconferencing and/or web capability, 20 days prior to submitting the application to CMS

MLTSS:

General Approach Proposal: May 18th – June 16, 2015

http://www.dmas.virginia.gov/Content_atchs/ltc/MLTSS%20Public%20Comment%20AMENDED%20052615.pdf

Discussion of Proposal: June 2, 2015:

http://www.dmas.virginia.gov/Content_atchs/ltc/Notice%20announcing%20all%20plans%20meeting%20final.pdf

DSRIP:

September 11, 2015 <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23344>

1:00 PM to 3:00 PM (EDT)

Meeting location: VCU - Community Memorial Hospital, 125 Buena Vista Circle, South Hill, VA 23970

September 14, 2015

1:00 PM to 3:00 PM (EDT)

Meeting location: Southwest Higher Education Center, One Partnership Cir, Abingdon, VA 24210



September 16, 2015

1:00 PM to 3:00 PM (EDT)

Meeting location: Mary Washington Hospital - John F. Fick Conference Center, 1301 Sam Perry Blvd, Fredericksburg, VA 22401

September 25, 2015 <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23396>

1:00 PM to 3:00 PM (EDT)

Meeting location: 920 Corporate Lane, Chesapeake, VA 23320

September 29, 2015 <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23397>

10:00 AM to 12:00 PM (EDT)

Meeting location: Kaiser Permanente Center for Total Health, 700 2nd Street Northeast, Washington, DC 20002

October 15, 2015 <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23571>

Webinar: Provider Organization Models for Integrated Care Delivery – Models for Other States
DSRIP Focus Groups

Community Capacity <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23522>

Wednesday, October 7, 2015

10:00am - 4:00pm (EDT)

Meeting location: 3831 Westerre Parkway, Henrico, VA 23233

Virginia Integration Partners (VIPs) <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23523>

Thursday, October 22, 2015

10:00am - 4:00pm (EDT)

Meeting location: 3831 Westerre Parkway, Henrico, VA 23233

Data Integration and Infrastructure <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23524>

Friday, November 6, 2015

10:00am - 1:00pm (EDT)

Meeting location: Perimeter Center, 9960 Mayland Drive, Suite 201, Board Room 1, Henrico, VA 23233

MLTSS + DSRIP:

November 18, 2015: <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23693> (phone call capability)

Unified Waiver (MLTSS, DSRIP, §1915(c) waiver authority):

December 1, 2015: <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23735> (phone call capability)

December 2, 2015: <http://townhall.virginia.gov/L/ViewMeeting.cfm?MeetingID=23736>

Certification that the state used an electronic mailing list or similar mechanism to notify the public. (If not an electronic mailing list, please describe the mechanism that was used.



1)	Virginia Town Hall – State Administrative Register – web links intermittent throughout the explanations above
2)	<p>DMAS webpage – highly visible off of main page: MLTSS: State webpage with all related information: http://www.dmas.virginia.gov/Content_pgs/mltss-home.aspx</p> <p>DSRIP: State webpage with all related information: http://www.dmas.virginia.gov/Content_pgs/dsrip.aspx</p>
3)	Agency Electronic Mailing: Distribution to Network Providers 3,700 and approximately 290 Stakeholders and additional contacts
4)	Distribution by Virginia Center for Health Innovation – SIM lead and strong supporting partner

1115 Waiver concept continues to be developed through extensive stakeholder engagement with a broad public audience

Engagement Meeting	Stakeholders Engaged							
	All Public	Health Systems	Health Plans	Medicaid Service Providers (including Behavioral Health Providers)	Community Based Organizations	Community Advocates	Board for Medical Assistance Services (BMAS)	State Agencies (VDH, DBHDS, DARS, DHP, VBPB, DPB)
SIM Workgroups		✓	✓		✓		✓	✓
Public Roadshow (5 across the state)	✓	✓	✓	✓	✓	✓	✓	
MLTSS and DSRIP Website, Email Communications, and Request for Written Public Comments	✓	✓	✓	✓	✓	✓	✓	✓
One-off Meetings		✓	✓	✓	✓	✓	✓	✓
Focus Groups	✓	✓	✓	✓	✓	✓	✓	✓
Value Based Purchasing Request for Information	✓		✓					

Over 500 people have been engaged through the process to date



Demonstration Administration

The contact information for DMAS' point of contact for the Demonstration application is below:

Name and Title: Seon Rockwell, Senior Programs Advisor, Administration

Virginia Department of Medical Assistance Services

Telephone Number: (804) 298-3851

Email Address: seon.rockwell@dmass.virginia.gov



Application Appendix Documents

- A. MLTSS Covered Services
- B. MLTSS and Medallion 3.0 Eligibility Chart(s)
- C. Budget Neutrality and Financing Forms
- D. Public Comment Aggregated Themes and DMAS Summary Responses



Appendix A – MLTSS Covered Services

The MLTSS health plans shall provide benefits as defined in the future released Request for Proposal (RFP) within at least equal amount, duration, and scope as available under the State Plan for Medical Assistance Services, and as further defined in the Virginia Administrative Code, Title 12 VAC 30-50, and the appropriate DMAS Provider Program Manuals. The chart below describes the full range of services that are available to MLTSS enrolled individuals. The “MLTSS Contract Covered” column explains whether or not the service is covered under the MLTSS contract. Services that are not covered under the State Plan would need to be covered when medically necessary for children under age 21, in accordance with Federal EPSDT guidelines. There are a few services that are carved-out of the MLTSS contract that will continue to be covered for MLTSS members under fee-for-service.

SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Abortions, induced	12 VAC 30-50-100 and 12 VAC 30-50-40	Yes; limited to those cases where there would be substantial danger to life of mother	Yes; limited to those cases where there would be substantial danger to life of mother	The Contractor shall provide coverage for abortion in limited cases where there would be a substantial danger to life of the mother as referenced in Public Law 111-8, as written at the time of the execution of this contract, shall be reviewed to ensure compliance with State and federal law. The Contractor shall be responsible for payment of abortion services meeting state and federal requirements under the fee-for-service program.
Behavioral Health	See Part 2 of this Attachment			
Chiropractic Services	12 VAC 30-50-140	No	No	This service is not a Medicaid covered service. The Contractor is not required to cover this service except as medically necessary in accordance with EPSDT criteria.
Christian Science Sanatoria	12 VAC 30-50-300	Yes	No	Individuals will be excluded from MLTSS participation upon entry into a Christian Science Sanatoria. Services will be covered through the DMAS fee-for-service program in accordance with 12 VAC 30-50-300.
Clinic Services	12 VAC 30-50-180	Yes	Yes	The Contractor shall cover all clinic services which are defined as preventative, diagnostic, therapeutic, rehabilitative, or palliative services, including renal dialysis clinic visits.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Colorectal Cancer Screening	12 VAC 30-50-220	Yes	Yes	The Contractor shall cover colorectal cancer screening in accordance with the most recently published recommendations established by the American Cancer Society, for the ages, family histories and frequencies referenced in such recommendations.
Court Ordered Services	Code of Virginia Section 37.1-67.4	Yes	Yes	The Contractor shall cover all medically necessary court ordered services included as a part of this Contract.
Dental Services	12 VAC 30-50-190	Yes	Yes for certain circumstances.	Under MLTSS, DMAS' contracted dental benefits administrator (DBA) will continue to cover routine dental services for children under 21 and for adult pregnant women, so these services will be carved out of MLTSS. However, the Contractor shall be responsible for transportation and medication related to covered dental services. Specifically, the Contractor shall cover CPT codes billed by an MD as a result of an accident, and CPT and "non-CDT" procedure codes billed for medically necessary procedures of the mouth for adults and children. The Contractor shall also cover medically necessary anesthesia and hospitalization services for its members when determined to be medically necessary by the DMAS Dental Benefits Administrator.
Early and Periodic Screening, Diagnosis and Treatment (EPSDT)	12 VAC 30-50-130	Yes	Yes	The Contractor shall cover EPSDT screenings according to the American Academy of Pediatrics periodicity schedule, diagnostic services as well as any and all services identified as necessary to correct, maintain or ameliorate any identified defects or conditions. The Contractor shall screen and assess all children; cover immunizations; educate providers regarding reimbursement of immunizations and to work with the Department to achieve its goal related to increased immunization rates.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Early Intervention Services	20U.S.C. § 1471 34 C.F.R. § 303.12 Code of Virginia § 2.2-5300 12 VAC 30-50-131 12 VAC 30-50-415	Yes	Yes	<p>The Contractor is required to provide coverage for Early Intervention services as defined by 12 VAC 30-50-131 and 12 VAC 30-50-415 within the Department's coverage criteria and guidelines. Early Intervention billing codes and coverage criteria are described in the Department's Early Intervention Program Manual, on the DMAS website at https://www.virginiamedicaid.dmas.virginia.gov/wps/portal.</p> <p>The Contractor shall also cover other medically necessary rehabilitative and developmental therapies, when medically necessary, including for EI enrolled children where appropriate.</p>
Emergency Services	12 VAC 30-50-110 12 VAC 30-50- 12 VAC 30-50-300 12 VAC 30-120-395	Yes	Yes	The Contractor shall cover all emergency services without service authorization. The Contractor shall also cover services needed to ascertain whether an emergency exists. The Contractor shall not restrict a member's choice of provider for emergency services.
Post Stabilization Care following Emergency Services	42 C.F.R. § 422.100(b)(1)(iv)	Yes	Yes	The Contractor shall cover post-stabilization services subsequent to an emergency that a treating physician views as medically necessary AFTER an emergency condition has been stabilized.
Experimental and Investigational Procedures	12 VAC 30-50-140	No	No	Experimental and investigational procedures as defined in the MLTSS Contract are not Medicaid covered. See Section 1, Definitions.
Family Planning Services	12 VAC 30-50-130	Yes	Yes	The Contractor shall cover all family planning services and supplies for members of child-bearing age which delay or prevent pregnancy, including drugs, supplies and devices. The Contractor shall not restrict a member's choice of provider or method for family planning services or supplies, and the Contractor shall cover all family planning services and supplies provided to its members by network providers and by out-of-network providers.
HIV Testing and Treatment Counseling	Code of Virginia Section 54.1-2403.01	Yes	Yes	The Contractor shall comply with the State requirements governing HIV testing and treatment counseling for pregnant women.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Home Health Services	12 VAC 30-50-160; and 12 VAC 30-10-220; Additional information can be found in the Home Health provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	Yes	The Contractor shall cover home health services, including nursing services, rehabilitation therapies, and home health aide services. At least 32 home health aide visits shall be allowed. Skilled home health visits are limited based upon medical necessity. The Contractor shall manage conditions, where medically necessary and regardless of whether the need is long or short-term, including in instances where the member cannot perform the services; where there is no responsible party willing and able to perform the services, and where the service cannot be performed in the PCP office/outpatient clinic, etc. The Contractor may cover these services under home health or may choose to manage the related conditions using another safe and effective treatment option.
Hospice Services	See Part 3 (LTSS) of this Attachment.			
Immunizations	12 VAC 30-50-130	Yes	Yes	The Contractor shall cover immunizations. The Contractor shall educate providers regarding reimbursement of immunizations and to work with the Department to achieve its goal related to increased immunization rates.
Inpatient Hospital Services	12 VAC 30-50-100 12 VAC 30-50-105 12 VAC 30-80-115 12 VAC 30-50-220 12 VAC 30-50-225 12 VAC 30-60-20 12 VAC 30-60-120 Chapter 709 of the 1998 Virginia Acts of Assembly § 32.1-325(A)	Yes	Yes	The Contractor shall cover inpatient stays in general acute care and rehabilitation hospitals for all members; shall comply with maternity length of stay requirements; shall comply with radical or modified radical mastectomy, total or partial mastectomy length of stay requirements; and shall cover an early discharge follow-up visit in maternity cases where the member is discharged earlier than 48 hours after the day of delivery.
Laboratory and X-ray Services	12 VAC 30-50-120	Yes	Yes	The Contractor shall cover all laboratory and x-ray services directed and performed within the scope of the license of the practitioner.
Lead Investigations	12 VAC 30-50-227	Yes	Yes	The Contractor shall cover environmental investigations by local health departments and shall be limited to no more than two visits per residence.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Mammograms	12 VAC 30-50-220	Yes	Yes	Contractor shall cover low-dose screening mammograms for determining presence of occult breast cancer.
Medical Supplies and Equipment	12 VAC 30-50-165; 12 VAC 30-60-75; and 12 VAC 30-80-30 Additional information can be found in the DME and Supplies provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	Yes	The Contractor shall cover medical supplies and equipment at least to the extent covered by DMAS. The Contractor shall cover nutritional supplements and supplies. The Contractor shall cover specially manufactured DME equipment that was prior authorized by the Contractor per requirements specified in the DME supplies manual. The Contractor's benefits shall be limited based upon medical necessity.
Mental Health Services	See Part 2 of this Attachment			
Certified Nurse-Midwife Services	12 VAC 30-50-260	Yes	Yes	The Contractor shall cover certified nurse-midwife services as allowed under State licensure requirements and Federal law.
Organ Transplantation	12 VAC 30-50-540 through 12 VAC 30-50-580, and 12 VAC 30-10-280 12 VAC 30-50-100G 12 VAC 30-50-105K	Yes	Yes	The Contractor shall cover organ transplants for children and adults in accordance with 12 VAC 30-50-540 through 12 VAC 30-50-580. For the purposes of organ transplantation, all similarly situated individuals will be treated alike. Transplant services for kidneys, corneas, hearts, lungs, and livers (from living or cadaver donors) shall be covered for all eligible persons. High dose chemotherapy and bone marrow/stem cell transplantation shall be covered for all eligible persons with a diagnosis of lymphoma, breast cancer, leukemia, or myeloma when medically necessary. Contractor shall cover necessary procurement/donor related services. Transplant services for medically necessary transplantation procedures that are determined to not be experimental or investigational, as experimental is defined in the MLTSS contract, shall be covered for children (under 21 years of age) per EPSDT guidelines.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Outpatient Hospital Services	12 VAC 30-50-110 -	Yes	Yes	The Contractor shall cover preventive, diagnostic, therapeutic, rehabilitative or palliative outpatient services rendered by hospitals, rural health clinics, or federally qualified health centers. The Contractor shall cover limited oral surgery as defined under Medicare.
Pap Smears	12 VAC 30-50-220	Yes	Yes	Contractor shall cover annual pap smears.
Physical Therapy, Occupational Therapy, Speech Pathology and Audiology Services	12 VAC 30-50-200 and 12 VAC 30-50-225 12 VAC 30-60-150	Yes	Yes	The Contractor shall cover physical therapy, occupational therapy, and speech pathology and Audiology services that are provided as an inpatient, outpatient hospital service, outpatient rehabilitation agencies, or home health service. The Contractor's benefits shall include coverage for acute and non-acute conditions and shall be limited based upon medical necessity.
Physician Services	12 VAC 30-50-140 12 VAC 30-50-130	Yes	Yes	The Contractor shall cover all symptomatic visits to physicians or physician extenders and routine physicals for children up to age twenty-one under EPSDT.
Podiatry	12 VAC 30-50-150	Yes	Yes	The Contractor shall cover podiatry services including diagnostic, medical or surgical treatment of disease, injury, or defects of the human foot.
Pregnancy-Related Services	12 VAC 30-50-510 12 VAC 30-50-410 12 VAC 30-50-280 12 VAC 30-50-290	Yes	Yes	The Contractor shall cover case management services for its high risk pregnant women and children (up to age two). The Contractor shall provide to qualified members expanded prenatal care services, including patient education; nutritional assessment, counseling and follow-up; homemaker services; and blood glucose meters. The Contractor shall cover pregnancy-related and post-partum services for sixty (60) days after pregnancy ends for the Contractor's enrolled members.
Prescription Drugs	12 VAC 30-50-210	Yes	Yes	The Contractor shall cover prescription drugs, including those prescribed by a provider during a physician visit or other visit covered by a third party payer including Mental Health visits.

**SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS**

Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Private Duty Nursing (PDN)	https://www.virginiamedicaid.dmas.virginia.gov/wps/portal 42 C.F.R. § 441.50 1905(a) of Social Security Act	Not a State Plan covered benefit for Adults. Coverage is available for children under age 21 under EPSDT. Coverage is also available for PDN under the Technology Assisted Waiver.	Not a State Plan covered benefit for Adults. Coverage is available for children under age 21 under EPSDT. Coverage is also available for PDN under the Technology Assisted Waiver.	The Contractor shall cover medically necessary private duty nursing services for children under age 21 consistent with the Department's criteria described in the EPSDT Nursing Supplement, available on the DMAS website at: https://www.virginiamedicaid.dmas.virginia.gov/wps/portal (Also see Technology Assisted Waiver in Section 3 of this Attachment)
Prostate Specific Antigen (PSA) and digital rectal exams	12 VAC 30-50-220	Yes	Yes	The Contractor shall cover screening Prostate Specific Antigen (PSA) and the related digital rectal exams (DRE) for the screening of male members for prostate cancer.
Prosthetics/Orthotics	12 VAC 30-50-210 12 VAC 30-60-120	Yes	Yes	The Contractor shall cover prosthetics (arms and legs and their supportive attachments, breasts, eye prostheses) to the extent that they are covered under Medicaid. The Contractor is required to cover medically necessary orthotics for children under age 21 and for adults and children when recommended as part of an approved intensive rehabilitation program as described in 12 VAC 30-60-120.
Prostheses, Breast	12 VAC 30-50-210	Yes	Yes	The Contractor shall cover breast prostheses following medically necessary removal of a breast for any medical reason.
Reconstructive Breast Surgery	12 VAC 30-50-140	Yes	Yes	The Contractor shall cover reconstructive breast surgery.



SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
School-Health Services	12 VAC 30-50-130	Yes	No	The Contractor is not required to cover school health services. School health services that meet the Department’s criteria will continue to be covered as a carve-out service through the DMAS fee-for-service system. School-health services are defined under the DMAS school-health services regulations and Local Education Agency school provider manual. The Contractor shall cover EPSDT screenings for the general Medicaid student population. The Contractor shall not deny medically necessary outpatient or home setting therapies based on the fact that the child is also receiving therapies in a school.
Skilled Nursing Facility Care	See Part 3 (LTSS) of this Attachment			
Substance Use Disorder Treatment	See Part 2 of this Attachment			

**SUMMARY OF COVERED SERVICES - PART 1 – MEDICAL BENEFITS**

Service	State Plan Reference or Other Relevant Reference	Medicaid Covered	MLTSS Contract Covered	Highlights Regarding Contractor Responsibilities
Transportation	12 VAC 30-50-530 12 VAC 30-50-300	Yes	Yes	The Contractor shall provide urgent and emergency transportation as well as non-emergency transportation to all Medicaid covered services, including those Medicaid services covered by Medicare or another third party payer and to services provided by subcontractors. These modes shall include, but shall not be limited to, non-emergency air travel, non-emergency ground ambulance, stretcher vans, wheelchair vans, common user bus (intra-city and inter-city), volunteer/registered drivers, and taxicabs. The Contractor shall cover air travel for critical needs. The Contractor shall cover travel expenses determined to be necessary to secure medical examinations and treatment as set forth in § CFR 440.170(a). The Contractor shall cover transportation to all Medicaid covered services, even if those Medicaid covered services are reimbursed by an out-of-network payer or are carved-out services. The Contractor shall cover transportation to and from Medicaid covered community mental health and rehabilitation services. ID, DD, and DS Wavier members shall receive acute and primary medical services via the Contractor and shall receive waiver services and related medical transportation to waiver services via the fee-for-service program. The Contractor must provide door-to-door transportation when indicated for waiver services transportation.
Vision Services	12 VAC 30-50-210	Yes	Yes	The Contractor shall cover vision services including diagnostic examination and optometric treatment procedures and services by ophthalmologists, optometrists and opticians. The Contractor shall also cover eyeglasses for children under age 21. The Contractor's benefit limit for routine refractions shall not be less than once every twenty-four (24) months.
Waiver Services (Home and Community Based)	See Part 3 (LTSS) of this Attachment			

SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES



Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
INPATIENT BEHAVIORAL HEALTH AND SUBSTANCE ABUSE DISORDER TREATMENT SERVICES				
Coverage must comply with Federal Mental Health Parity law. (See the CMS State Official Letter, dated January 16, 2013; SHO # 13-001)				
Inpatient Mental Health Services Rendered in a Freestanding Psychiatric Hospital (state or private)	12 VAC 30-50-230 12 VAC 30-50-250	Yes	Yes	The Contractor shall cover medically necessary inpatient psychiatric hospital stays in free standing psychiatric hospitals for covered members over age sixty-four (64) or under age twenty-one (21). The Contractor may authorize admission to a freestanding psychiatric hospital as an enhanced service to Medicaid members between the ages of 21 and 64.
Inpatient Mental Health Services Rendered in a Psychiatric Unit of a General Acute Care Hospital	12 VAC 30-50-100	Yes	Yes	The Contractor shall provide coverage for medically necessary inpatient psychiatric care rendered in a psychiatric unit of a general acute care hospital for all members, regardless of age. Coverage must comply with Federal Mental Health Parity law.
Inpatient Substance Use Disorder Treatment for Children	12 VAC 30-50-130 42CFR § 441; Section 1905(r) of the Social Security Act	Yes – Children	Yes – Children	The Contractor shall provide coverage for medically necessary inpatient substance use disorder treatment services in accordance with Federally mandated Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) criteria for members under age twenty-one (21).
Temporary Detention Orders (TDOs) and Emergency Custody Orders (ECO)	42 C.F.R. § 441.150 and Code of Virginia § 16.1-340 and 340.1 and §§ 37.2-808 through 810.	Yes	Yes	The Contractor shall provide coverage for TDO and ECO services in accordance with the regulatory guidelines at: Code of Virginia § 16.1-340 and 340.1 and §§ 37.2-808 through 810.
RESIDENTIAL TREATMENT SERVICES FOR CHILDREN				
Residential Treatment Facility Services (RTF) for children under age 21 years – Level A, B & C	12 VAC 30-130-850 to 890 12 VAC 30-60-61 and 12 VAC 30-50-130 And emergency regulations for IMD cases (Level C and freestanding psych) are defined at http://townhall.virginia.gov/L/ViewStage.cfm?stageid=6572	Yes	No	**DMAS authorization into a RTF level C program will result in disenrollment of the member from MLTSS. The RTF provider must contact the DMAS BHSA for authorization. Level A & B placements are group homes and members remain enrolled with the Contractor, and members enrolled in Level C are exempted from MLTSS participation. The Contractor must work closely with the Department's BHSA to ensure against unnecessary institutional placement; i.e., including where treatment in a community level of care is a timely and safe and effective treatment alternative.
OUTPATIENT BEHAVIORAL HEALTH SERVICES AND SUBSTANCE USE DISORDER SERVICES				
Electroconvulsive Therapy	12 VAC 30-50-140, 12 VAC 30-50-150 and 12 VAC 30-50-180	Yes	Yes	The Contractor shall cover medically necessary outpatient individual, family, and group mental health and substance abuse treatment services. Coverage must comply with Federal Mental Health Parity law.

**SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES**

Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
Pharmacological Management	12 VAC 30-50-140, 12 VAC 30-50-150 and 12 VAC 30-50-180	Yes	Yes	The Contractor shall cover medically necessary pharmacological management, including for behavioral health and substance abuse treatment services.
Psychiatric Diagnostic Exam	12 VAC 30-50-180 12 VAC 30-50-140	Yes	Yes	The Contractor shall cover medically necessary outpatient individual, family, and group mental health and substance abuse treatment services. Coverage must comply with Federal Mental Health Parity law.
Psychological/ Neuropsychological Testing	12 VAC 30-50-140, 12 VAC 30-50-150 and 12 VAC 30-50-180	Yes	Yes	The Contractor shall cover medically necessary outpatient individual, family, and group mental health and substance abuse treatment services. Coverage must comply with Federal Mental Health Parity law.
Psychotherapy (Individual, Family, and Group)	12 VAC 30-50-140, 12 VAC 30-50-150 and 12 VAC 30-50-180	Yes	Yes	The Contractor shall cover medically necessary outpatient individual, family, and group mental health and substance abuse treatment services. Coverage must comply with Federal Mental Health Parity law.
Substance Use Disorder Treatment Services (traditional outpatient SUD treatment services)	12 VAC 30-50-140, 12 VAC 30-50-150 and 12 VAC 30-50-180	Yes	Yes	The Contractor shall cover substance assessment and evaluation and outpatient services for substance abuse treatment. Coverage must comply with Federal Mental Health Parity law.

COMMUNITY BASED BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER SERVICES

The Contractor shall contract with the Department's BHSA for the provision of non-traditional or community behavioral health and substance abuse treatment services within the Department's established coverage criteria and guidelines until such time that the DMAS BHSA contract expires (anticipated to be no later than November 30, 2018). Once the DMAS contract with the BHSA expires, the Contractor shall continue to be responsible for the full scope of community behavioral health and substance abuse treatment services, whereby the Contractor may manage these services in-house or through the Contractor's contracted behavioral health services administrator. Additional information on behavioral health services is available on the Department's [BHSA website](#).

Behavioral Therapy Services under EPSDT	12 VAC 30-50-130; 12 VAC 30-50-150; 12 VAC 30-60-61; 12 VAC 30-80-97; 12 VAC 30-130-2000	Yes	Yes	The Contractor is required to provide coverage for Behavioral Therapy (BT) Services as defined by 12 VAC 30-50-130, 12 VAC 30-130-2000, and the DMAS EPSDT Behavioral Therapy Provider Manual available at https://www.virginiamedicaid.dmas.virginia.gov/wps/myportal . The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Community Intellectual	12 VAC 30-50-440	Yes	No	The Contractor shall provide information and referrals as



SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
Disability Case Management				appropriate to assist members in accessing these services through the individual's local community services boards. These services will continue to be covered through the DMAS fee-for-service program.
Crisis Intervention Services	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12VAC 30-60-61 12VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Crisis Stabilization Services	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12VAC 30-60-61 12VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Day Treatment/Partial Hospitalization	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12VAC 30-60-61 12VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Day Treatment/Partial Hospitalization Assessment	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12VAC 30-60-61 12VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Intensive Community Treatment Assessment	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Intensive Community Treatment Services	12 VAC 30-50-130 12 VAC 30-50-226	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage



SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
	12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143			criteria and guidelines.
Intensive In-Home Assessment	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Intensive In-Home Services (IIH) for Children/Adolescents	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Mental Health Case Management	12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Mental Health Skill-building Assessment	12 VAC 30-50-226 ER 12 VAC 30-60-143ER	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Mental Health Skill-building Services	12 VAC 30-50-226 ER 12 VAC 30-60-143ER	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Psychosocial Rehabilitation Assessment	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Psychosocial Rehabilitation Services	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.



SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
	12 VAC 30-60-143			
Residential Services (Community-Based) for Children and Adolescents under 21 (Level A)	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143 12 VAC 130-850-890 12 VAC 30-50-130	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Therapeutic Behavioral Services (Level B)	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143 12 VAC 130-850-890 12 VAC 30-50-130	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Therapeutic Day Treatment Assessment	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Therapeutic Day Treatment (TDT) for Children and Adolescents	12 VAC 30-50-130 12 VAC 30-50-226 12 VAC 30-50-420 through 12 VAC 30-50-430 12 VAC 30-60-61 12 VAC 30-60-143	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Treatment Foster Care (TFC) Case Management (CM) for children under age 21 years.	12 VAC 30-60-170 12 VAC 30-50-480 12 VAC 30-130-900 to 950 12 VAC 30-80-111	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
COMMUNITY BASED SUBSTANCE USE DISORDER SERVICES				
Opioid Treatment	12 VAC 30-60-180 12 VAC 30-50-228	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage



SUMMARY OF COVERED SERVICES - PART 2 – BEHAVIORAL HEALTH AND SUBSTANCE USE DISORDER TREATMENT SERVICES				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
				criteria and guidelines.
Substance Abuse Case Management	12 VAC 30-60-185 12 VAC 30-50-431	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Substance Abuse Crisis Intervention	12 VAC 30-60-180 12 VAC 30-50-228	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Substance Abuse Day Treatment	12 VAC 30-60-180 12 VAC 30-50-228	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Substance Abuse Day Treatment for Pregnant Women	12 VAC 30-50-510 12 VAC 30-60-147	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Substance Abuse Intensive Outpatient Services	12 VAC 30-60-180 12 VAC 30-50-228	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.
Substance Abuse Residential Treatment Facility Services (RTF) for children under age 21 years	12 VAC 30-130-850 to 890 12 VAC 30-60-61 and 12 VAC 30-50-130 And emergency regulations for IMD cases (Level C and freestanding psych) are defined at http://townhall.virginia.gov/L/ViewStage.cfm?stageid=6572	Yes	No	**DMAS authorization into a RTF program will result in disenrollment of the member from MLTSS. The RTF provider must contact the DMAS BHSA for authorization. Level C refers to RTF. Level A & B settings remain enrolled with the Contractor, and members enrolled in Level C are exempted from MLTSS participation.
Substance Abuse Residential Treatment for Pregnant Women	12 VAC 30-50-510 12 VAC 30-60-147	Yes	Yes	The Contractor shall contract with the Department's BHSA for the provision of this service within DMAS established coverage criteria and guidelines.

SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes



SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
Alzheimer's Assisted Living Waiver (AAL)	12 VAC 30-120-1600 through 12 VAC 30-120-1680 Additional information can be found in the AAL waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	No	AAL Waiver services will be excluded from the MLTSS Contract and will be covered under the DMAS fee-for-service program in accordance with DMAS established coverage criteria and guidelines. (See the AAL Provider Manual for additional information). AAL Waiver services require service authorization through the appropriate DMAS contractor. Through person-centered care planning, the Contractor shall ensure that members are aware of other community based treatment options available through the Contractor designed to serve members in the settings of their choice
Day Support (DS) Waiver	12 VAC 30-120-1500 through 12 VAC 30-12-01550 Additional information can be found in the DS waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	No	DS Waiver services include: day support, supported employment and pre-vocational services for individuals with intellectual disabilities. Individuals on the DS Waiver will continue to receive their waiver services, including transportation to the DS Waiver services, through Medicaid fee-for-service. =.
Developmental Disabilities (DD) Waiver	12 VAC 30-120-700 through 12 VAC 30-120-790 Additional information can be found in the DD waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	No	DD Waiver services include: therapeutic consultation, day support, environmental modifications, crisis stabilization in-home residential, family caregiver training, personal emergency response systems (with or without medication monitoring), supported employment, pre-vocational services, companion services, skilled nursing, respite care, personal care, assistive technology and transition services. Both agency directed and consumer directed services are a service delivery method for personal care, companion, and respite care services. Transition services and transition coordination are covered for those individuals seeking services in the community after transition from a qualified institution. Transition may be associated with the Money Follows the Person program. Support coordination services are also covered as a state plan option in association with the provision of DD waiver services. Individuals on the DD Waiver will continue to receive their waiver services, including transportation to the DD Waiver services, through Medicaid fee-for-service.
Elderly or Disabled with Consumer Directed Services (EDCD) Waiver	12 VAC 30-120-900 through 12 VAC 30-120-995	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing these services. The Contractor shall cover personal care, respite care, adult day health care, personal

**SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS**

Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
	Additional Information can be found in the EDCD waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov			emergency response systems, transition services and transition coordination. The Contractor shall cover both agency directed and consumer directed services as a service delivery model for personal care and respite care services. Personal emergency response systems may include medication monitoring as well. Transition services and transition coordination are covered for those individuals seeking services in the community after transition from a qualified institution. When transition is associated with the Money Follows the Person program, transition services and transition coordination are carved out. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for waiver services (if appropriate). The contractor shall cover transportation services for the EDCD waiver.
Hospice Services	12 VAC 30-50-270; and 12 VAC 30-60-130 Additional information can be found in the Hospice provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing services. The Contractor shall cover all services associated with the provision of hospice services.
Intellectual Disabilities (ID) Waiver	12 VAC 30-120-1000 through 12 VAC 30-120-1090 Additional information can be found in the ID waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	No	ID Waiver services include: therapeutic consultation, congregate residential, day support, environmental modifications, crisis stabilization in-home residential, personal emergency response systems (with or without medication monitoring), supported employment, pre-vocational services, companion services, skilled nursing, respite care, personal care, assistive technology and transition services. Both agency directed and consumer directed services are a service delivery method for personal care, companion, and respite care services. Transition services and transition coordination are covered for those individuals seeking services in the community after transition from a qualified institution. Transition may be associated with the Money Follows the Person program. Case management services are also covered as a state plan option in association with the provision of ID waiver services. Individuals on the ID Waiver will continue to receive their waiver services,



SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
				including transportation to the ID Waiver services, through Medicaid fee-for-service.
Long Stay Hospital – State Plan Only Service	<p>12 VAC 30-60-30; 12 VAC 30-130-100 through 12 VAC 30-130-130</p> <p>Additional information can be found in the Nursing Facility provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov</p>	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing services. The Contractor shall cover all services associated with the provision of long stay hospital services for adults. Long Stay Hospital services are a state plan only service which covers individuals requiring mechanical ventilation, individuals with communicable diseases requiring universal or respiratory precautions, individuals requiring ongoing intravenous medication or nutrition administration, and individuals requiring comprehensive rehabilitative therapy services. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for long stay hospital services. The Contractor shall cover transportation services for long stay hospital services.
Nursing Facility	<p>12 VAC 30-90-305 through 12 VAC 30-90-320 for RUGS reimbursement</p> <p>Additional information can be found in the Nursing Facility provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov</p>	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing services. The Contractor shall cover all services associated with the provision of nursing facility level of care. The Contractor shall use the existing reimbursement system for payment of nursing facility level of care which is based on the RUGs payment methodology. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for nursing facility services. Transition services and transition coordination are covered for those individuals seeking services in the community under the Money Follows the Person program. The Contractor shall cover transportation services for nursing facility residents.
Money Follows the Person	<p>12 VAC 30-120-2000; 12 VAC 30-120-935; 12 VAC 30-120-935; and 12 VAC 30-120-2010</p> <p>Additional information can be found in the Waiver provider manuals (as Appendix E)</p>	Yes	No	Individuals enrolled in MFP who are transitioning out of an MLTSS-included institution and who qualify for, and enroll into upon discharge, the DD, EDCD, ID, or Tech Waiver will be enrolled in MLTSS for their non-waiver services (e.g., institutional, acute, behavioral health, pharmacy, and non-LTSS waiver transportation services). Their MFP and LTSS waiver services, including transportation to waiver services, will be paid through Medicaid fee-for-service as "carved out" services.

**SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS**

Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
	available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov			MFP demonstration services include: transition coordination up to two months prior to and 12 months following discharge from an institution (only for individuals who are enrolled in MFP and transition to the EDCD Waiver); assistive technology for individuals who are enrolled in the MFP and the EDCD Waiver, for up to 12 months after discharge from an institution; environmental modifications for individuals who are enrolled in MFP and the EDCD Waiver, for up to 12 months after discharge from an institution; and transition services up to nine months, two of which can be prior to discharge from an institution.
Out of State NF Placements	42 CFR § 431.52 12 VAC 30-10-120 12 VAC 30-60-21 12 VAC 30-70-420 12 VAC 30-90-10	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing services. The Contractor shall cover all services associated with the provision of out of state placements if services cannot be provided in the Commonwealth of Virginia. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for out of state placements. The Contractor shall cover all services in the negotiated rate for out of state NF placements to include such services as medical, behavioral, pharmacy, transportation, and any other services which are provided as part of the Contractor for placement.
Specialized Care – State Plan Only Service	12 VAC 30-60-40; 12 VAC 30-60-320 (ADULTS) 12 VAC 30-60-340 (CHILDREN) Additional information can be found in the Nursing Facility provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing services. The Contractor shall cover all services associated with the provision of specialized care services for adults. Specialized care services are a state plan only service which covers complex trach and ventilator dependent nursing facility residents at a higher reimbursement rate. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for specialized care services. Transition services and transition coordination are covered for those individuals seeking services in the community under the Money Follows the Person program. The Contractor shall cover transportation services for specialized care residents.
Technology Assisted (Tech) Waiver	12 VAC 30-120-1700 through 12 VAC 30-120-1770	Yes	Yes	The Contractor shall provide information and referrals as appropriate to assist members in accessing these services. The Contractor shall



SUMMARY OF COVERED SERVICES - PART 3 – LONG-TERM SERVICES AND SUPPORTS				
Service	State Plan Reference or Other Relevant Reference	Medicaid Covered (see notes section)	MLTSS Contract Covered	Notes
	Additional information can be found in the Tech waiver provider manual available on the DMAS web portal at: www.virginiamedicaid.dmas.virginia.gov			cover skilled private duty nursing, skilled respite, personal care services (for adults only), environmental modifications, assistive technology, and transition services. Private duty nursing services and respite care services can be provided as either individual or congregate services. The Contractor shall make provisions for the collection and distribution of the individual member's monthly patient pay for waiver services (if appropriate). The Contractor shall cover transportation services for the Tech waiver.



Appendix B – MLTSS and Medallion 3.0 Eligibility Chart(s)

MLTSS List of Medicaid Eligibility Groups

Mandatory Categorically Needy

Eligibility Group Name	Social Security Act and CFR	Income Level
Low Income Families	1931	3 locality group ⁶
Transitional Medical Assistance	408(a)(11)(A) 1931(c)(2) 1925 1902(a)(52)	First six months no new test; 6-12 months, 185% fpl
Extended Medicaid due to Child or Spousal Support Collections	408(a)(11)(B) 42 CFR 435.115 1931(c)(1)	No new income test must meet extended rules
Children with Title IV-E Adoption Assistance, Foster Care – <i>if individual is a dual or receiving a HCBS waiver service</i>	1902(a)(10)(A)(i)(I) 473(b)(3) 42 CFR 435.145	No income test
Qualified Pregnant Women and Children	42 CFR 435.116 - old 1902(a)(10)(A)(i)(III) 1905(n)	143% fpl
Mandatory Poverty Level Related Pregnant Women	1902(a)(10)(A)(i)(IV) 1902(I)(1)(A)	143% fpl
Mandatory Poverty Level Related Infants	1902(a)(10)(A)(i)(IV) 1902(I)(1)(B)	143% fpl
Mandatory Poverty Level Related Children Aged 1-5	1902(a)(10)(A)(i)(VI) 1902(I)(1)(C)	143% fpl
Mandatory Poverty Level Related Children Aged 6-18	1902(a)(10)(A)(i)(VII) 1902(I)(1)(D)	143% fpl
Deemed Newborns	1902(e)(4) 42 CFR 435.117	No income test
Aged, Blind and Disabled Individuals in 209(b) States	1902(f) 42 CFR 435.121	SSI limit—approx. 74% fpl
Individuals Receiving Mandatory State Supplements	42 CFR 435.130	No income test
Blind or Disabled Individuals Eligible in 1973	42 CFR 435.133	Currently, None
Individuals Who Lost Eligibility for SSI/SSP Due to an Increase in OASDI Benefits in 1972	42 CFR 435.134	Less than current SSI or F&C limit
Individuals Who Would be Eligible for SSI/SSP but for OASDI COLA increases since April, 1977	1939(a)(5)(E) 42 CFR 435.135 Section 503 of P.L. 94-566	Current SSI or AG limits

⁶ DMAS will provide explanation for CMS if needed during the Special Terms and Conditions negotiation.

**Optional Categorically Needy**

Eligibility Group Name	Social Security Act and CFR	Income Level
Individuals Eligible for Cash except for Institutionalization	1902(a)(10)(A)(ii)(IV) 42 CFR 435.211 1905(a)	300% SSI, about 250% fpl
Individuals Receiving Home and Community Based Services under Institutional Rules	42 CFR 435.217 1902(a)(10)(A)(ii)(VI)	300% SSI, about 250% fpl
Individuals Receiving Hospice Care ⁷	1902(a)(10)(A)(ii)(VII) 1905(o)	300% SSI, about 250% fpl
Optional State Supplement Recipients - 209(b) States, and SSI Criteria States without 1616 Agreements	42 CFR 435.234 1902(a)(10)(A)(ii)(XI)	AG recipients, no income test
Qualified Disabled Children under 19	1902(e)(3)	SSI—74% fpl
Institutionalized Individuals Eligible under a Special Income Level	42 CFR 435.236 1902(a)(10)(A)(ii)(V) 1905(a)	300% SSI, about 250% fpl
Poverty Level Aged or Disabled	1902(a)(10)(A)(ii)(X) 1902(m)(1)	80% FPL
Individuals Eligible for Home and Community-Based Services	1902(a)(10)(A)(ii)(XXII) 1915(i)	300% SSI, about 250% fpl
Individuals Eligible for Home and Community-Based Services - Special Income Level	1902(a)(10)(A)(ii)(XXII) 1915(i)	300% SSI, about 250% SSI

Medically Needy

n/a

⁷ Individuals will remain enrolled in MLTSS if MLTSS enrolled at the time hospice is determined to be needed and individual is subsequently enrolled into hospice. Those in hospice, already, will not be enrolled into demonstration



Appendix C – Budget Neutrality and Financing Forms

Budget Neutrality Spreadsheet:



Budget
Neutrality.xlsx

Financing Form:



Financing Form.docx



Appendix D – Public Comment Aggregated Themes and DMAS Summary Responses

The development of this 1115 waiver application has been an evolution, engaging stakeholders at each point of the process. DMAS recognizes that the unified waiver approach, merging MLTSS and DSRIP together, is significant; however, the opportunity is greater. To that end, each component of the application was given unique attention, resulting in 3 key public comment opportunities, all meeting the CMS requirements. The final public comment exercise merged the previous efforts and included many suggestions and elements of feedback, as acknowledged by many stakeholders in the third public comment solicitation responses. As reflected in the requested documentation, DMAS extended public comment requests in writing, in person, and via teleconference and WebEx. In addition to these formal public comment solicitations, there have been significant efforts to engage stakeholders in meetings and brain storming sessions, all in attempt to ensure the Departments efforts are strategic, comprehensive, and innovative. DMAS fully intends to maintain engagement of stakeholders both at large, and in targeted groups as the Department further refines and develops program specifics. DMAS will also look to form an advisory coalition to ensure ongoing engagement over the course of the 5 year demonstration.

1. MLTSS:
 - General Approach Proposal: [May 18 – June 16, 2015 Public Comment Document](#)
 - Model of Care: [September 1 – September 30, 2015 Public Comment Document](#)
2. DSRIP:
 - Concept Paper: [September 11 – October 19, 2015 Public Comment Document](#)
3. Unified Waiver (MLTSS, DSRIP, §1915(c) waiver authority):
 - Waiver: [December 4, 2015 – January 6, 2016 Public Comment Document](#)

Unified Waiver (MLTSS, DSRIP, §1915(c) waiver authority):

Public Comment Themes and Departmental Response

Period 12/04/15—1/06/16

The comments are organized to reflect themes that surfaced across the range of public comments received, with headers indicating the represented perspective.

Note: no comments were received regarding the administrative transition of the §1915(c) waivers to the §1115 authority.



Stakeholder Group	Comment Theme	DMAS Response
Overall Approach		
Advocates	The combination of the Medicaid Managed Long-Term Services and Supports (MLTSS) initiative with the Delivery System Reform Incentive Payment (DSRIP) Program is ingenious and creates exciting synergies to transform Virginia's Medicaid program.	DMAS appreciates the recognition that the combination of these two initiatives allows Virginia to further transform the Virginia Medicaid program.
Health Plans	Expression that it is positive to see the focus on beneficiaries with high utilization as a key objective of the proposed DSRIP Program and is embedded in the approach in MLTSS as well.	DMAS appreciates the acknowledgement that leveraged together, DSRIP and MLTSS offers a significant opportunity to strengthen and improve the Medicaid delivery system, resulting in better health and experience for Medicaid beneficiaries, and better supported providers, facilitating stronger relationships between members, providers, community partners, the state, and MCOs.
	Acknowledgment that the MLTSS hypothesis includes reducing service gaps and providing coordination between physical and behavioral health, and LTSS is a key opportunity.	
	Acknowledgment that DSRIP and MLTSS have the opportunity to be leveraged together to both improve care in the short-term and to make systematic improvements in the longer term, thereby helping lock in the gains of both quality of care and cost effectiveness.	
	Affirmation that as currently proposed, the waiver design represents a shift in the right direction towards improved communication, accountability, and value.	DMAS appreciates the recognition of a thoughtful approach and proposal.
Providers	...the waiver program is designed to, "enable providers,	DMAS agrees that aligning DSRIP and MLTSS is a



Stakeholder Group	Comment Theme	DMAS Response
	community support services, and Medicaid managed care plans (MCOs) the opportunity to better coordinate and integrate member care. Taken together, alignment of the programs and providing care coordination opportunities among providers, community support services and MCOs promotes a strong infrastructure likely to strengthen and integrate Virginia's Medicaid community delivery structure and accelerate value-based payment structures.	significant opportunity to strength the Medicaid delivery structure and accelerate value-based payment methods. DMAS looks forwarding to working together to identify opportunities to infuse stronger relationships with community partners as part of the VIP structure in providing care to Medicaid beneficiaries.
	Pleased to see the references to workforce development especially for working with individuals with behavioral health needs and developmental and physical/sensory disabilities and the variety of clinical improvement projects (C1-10) many of which address critical needs in the ID/D community.	DMAS recognizes the significant opportunity enabled through DSRIP to focus on workforce development, particularly as it pertains to strengthening community based options for individuals with disabilities. DMAS intends to work with community based providers and stakeholders to further develop this training framework and model.
Concerns Regarding Overall Approach		
Advocates	Concerns expressed regarding the waiver amount, duration, and scope	This waiver strategy is common in allowing states to 'waive' the requirement that all Medicaid services must be provided in the same amount duration and scope. This is the authority granted that allows for different waiver populations to receive the targeted services needed, while not requiring the state to make them available for the general Medicaid population.
Health Plans	Suggests applying DSRIP to the MLTSS program is premature.	DMAS understands the nuances and complexities of providing care and coverage to the MLTSS populations; however, coordinating the DSRIP and MLTSS opportunities allows for providers to be



Stakeholder Group	Comment Theme	DMAS Response
		supported in a way that traditional Medicaid funds cannot support them. DMAS is confident in this approach and anticipates that supporting providers to be able to move towards a value-based payment model will ultimately render a more financially sustainable Medicaid program.
MLTSS Specific Comments		
Advocates	<p>Ensure that changes are person-centered and family-centered and allow individuals to live as independently as possible and to exercise control over their own care arrangements.</p> <p>Encourage the State to require MCO contracts to have more involvement and training regarding relationships with family caregivers</p> <p>Enrollment into Managed Care needs to ensure continuity with current providers</p> <p>DMAS should employ a robust MCO readiness criteria for participating plans and then take a hands on management approach in overseeing the managed care contracts</p> <p>Reinvestment of savings should be a priority. The key investment would be back into community-based settings</p>	The Department appreciates this perspective and has included language to emphasize the importance of family caregivers in the care planning of individuals enrolled in the program. Additionally, DMAS values the relationships with MCOs and will look to selected plans to be accountable for creating strong provider networks and relationships with beneficiaries. Additional standards of accountability and transparency will be incorporated into the MCO/DMAS contractual agreement.
Health Plans	Encourages use of any auto-assignment preference based on D-SNP affiliation with the full operationalization of the D-SNP provision	This policy decision has not been finalized and program staff will be considering all options prior to making the decision regarding auto-assignment.
	Requests MCOs owned by health systems do not receive preferential treatment in rates or membership by contracting with their own health plan	This policy decision has not been finalized and program staff will be considering all options prior to setting the final policy.
	Supports the provision of a fully integrated benefit	DMAS appreciates the support and acknowledges



Stakeholder Group	Comment Theme	DMAS Response
	through the MLTSS program.	that fully integrated care is the best care model for Medicaid beneficiaries.
	Supports the proposed requirement of MCOs to be certified as D-SNP plans in the same locality	DMAS understands that there is significant benefit in providing the continuity of coverage between Medicaid and Medicare. This proposed requirement is intended to support this understanding.
	Requests consideration of enrollment process which auto-assigns dual eligible members with Medicaid MCOs already providing members with medical benefits through a MA program in instances where the MA plan also participates in the MLTSS program.	DMAS has not set this policy decision though agrees that continuity between Medicare and Medicaid is valuable.
	Recommends the use of standardized quality metrics applicable to the LTSS population	DMAS agrees that standardization is critical in being able to support multiple plans and provider types who capture and report multiple data elements to multiple systems. DMAS will work with all parties to identify the best existing tools and other needed measures for quality reporting purposes.
	We do not feel that the Department's experience with the CCC program justifies the need to create an additional administrative layer for managing 'high-risk' members. If the goal is to bring greater budget predictability and highest-quality care to our most complex and vulnerable members by including them into Managed Care arrangements, we do not believe the current 1115 draft waiver has laid out the most effective way of meeting these goals.	DMAS believes the opportunity provided through the §1115 innovation waiver allows the Department to test new models of care delivery for Virginia's high-risk Medicaid beneficiaries. DMAS values managed care and will use the opportunity provided through a §1115 waiver to modify 'business as usual' with the goal of creating a more efficient, high-touch, care delivery model for its Medicaid members.
Providers	Concern regarding increased audits and other administrative processes as a result of MLTSS and the potential inclusion of more than 3 MLTSS health plans.	DMAS respects this concern and is considering how best to maintain accountability among providers and plans, while acknowledging the cumbersome nature of audits and reporting. DMAS intends to consider the needs and resource capacity of partners when



Stakeholder Group	Comment Theme	DMAS Response
		determining the policy for these business practices.
	Suggest planning an abundance of provider training early in 2016 with the MCOs and DMAS as was completed with the CCC rollout. Establish provider advisory groups early in 2016 to get input on how to have a successful MLTSS rollout	DMAS agrees that having provider trainings with all parties is necessary in order to ensure a successful rollout of the MLTSS demonstration. DMAS intends on engaging partners early and often.
	Concern expressed regarding the exclusion of the IDD waiver population	The application explains, “individuals enrolled in the Intellectual Disability, Developmental Disability, and Day Support waivers will continue to receive their HCBS through Medicaid fee-for-service until the Department of Behavioral Health and Developmental Services completes the redesign of these waivers. Individuals residing in ICF-ID facilities will be excluded from MLTSS until after the completion of the redesign.”
	Suggestion that DMAS require any MLTSS MCO to undergo claims testing with providers prior to the system “go live”	DMAS appreciates this suggestion and will take strong consideration in encouraging a testing environment for future program development.
	The case management process under the CCC program was not effective in providing services to individuals in the long-term care setting. The MLTSS program needs to clearly define the role of the case managers. While case management may benefit individuals in the community setting to identify and obtain services, case management is not needed during the time the person is in a long-term	DMAS appreciates the spirit of this comment and agrees that roles need to be clearly defined between providers, including long-term care facility providers, and health plans. DMAS will work with all partners to consider roles and responsibilities so that Medicaid beneficiaries can be best supported no matter the setting they choose to receive care.



Stakeholder Group	Comment Theme	DMAS Response
	care facility.	
	Where opportunities exist to mandate uniformity of processes between insurance carriers this should be included in the contracts between the state and insurance carriers to maximize the success of the program.	DMAS agrees that where possible, uniformity of processes and procedures is ideal. DMAS will work with providers and MCOs to identify any possible streamlining of documentation while respecting the proprietary nature of some MCO processes.
	Any measurements of performance on the part of the insurance carriers built into the program need to be carefully constructed to insure they truly measure compliance with the contract between the state and the carriers.	Checks and balances is an important part of any program and DMAS intends to create a contract that provides flexibility to providers and MCOs while requiring accountability in order to ensure program success.
	Concerns expressed regarding the potential increased administrative burdens on home care agencies that implementation of MLTSS will cause. This concern is particularly worrisome because of the Centers for Medicare and Medicaid Services (“CMS”) requirement that at least two managed care organizations (“MCO”) be contracted within each region and DMAS’ stated goal of contracting with at least three MCOs in each region. DMAS and/or its MCO contractors’ data requests should be uniform and should utilize the same format for submission. This will reduce the administrative burden on home care agencies by permitting them to submit the same data in the same manner regardless of the MCOs they contract.	DMAS agrees that in order to address administrative burdens, where possible, uniformity of processes and procedures is ideal. DMAS will work with providers and MCOs to identify any possible streamlining of documentation while respecting the proprietary nature of some MCO processes.



Stakeholder Group	Comment Theme	DMAS Response
Health Plan/VIP Relationship		
Advocates	Encourages DMAS to allow VIPs, Affiliate Providers, and health systems to operate independent of MCOs (especially capitated, risk-based MCOs).	As a managed care state, it is important to maintain the continuity of coverage through the procured MLTSS and existing Medallion 3.0 managed care plans. MCOs and VIPs will work in partnership.
Health Plans	Encourages DMAS to consider allowing managed care organizations to serve as the coordinating entity for the VIPs	The DSRIP demonstration is an opportunity to support providers in a way that is not traditionally allowed through Medicaid funds. To this end, DMAS intends on maintaining the VIP model with the health systems serving as the coordinating entity. There will be contractual expectations that VIPs and MCOs work together.
	VIPs should be seen as an extension and partner with the MCOs, that together improve the current state. VIPs should not be thought of as a replacement for the MCO.	DMAS agrees that the VIPs and MCOs should have a strong partner relationship, bringing shared value to each partner and better health to the Medicaid beneficiary. DMAS has at no time considered VIPs as a vehicle to replacing MCOs.
	We do not support the formation of Virginia Integrated Partnerships as it is structured in the current draft as this seems to promote fragmentation and duplication, as opposed to reducing it.	The proposed formation of VIPs is a vehicle to bring together various providers, creating synergy between care and care coordination and infusing a comprehensive technology platform in order to share data for better continuity of health provider, community supports, and health plan information.
Payment Reform		
Health Plans	Requests flexibility in development of proposed alternate payment models and value based-purchasing	DMAS supports this idea and intends to work with all parties to create the expectations and milestones to be met, while allowing flexibility in model design.
	Suggests value-based purchasing incentives should be required but allowed to develop as the LTSS network	DMAS has full intention for the movement to value-based purchasing to be an evolution. There will be



Stakeholder Group	Comment Theme	DMAS Response
	migrates to managed care.	expectations and milestones to advance the system towards value based purchasing but there is not an expectation that this will be a “turn key” process.
	It is mentioned that alternative payment models will be implemented through the VIPs in tandem with the MCOs. If this is to be done with a specific population, such as MLTSS, we do not recommend prescribing specific VBP models in the first seven years of implementations, particularly those that involve the provider’s capability to share risk. There may be some pockets of PCPs/other providers that are capable of and have the critical mass necessary to engage in these models, but we feel strongly against the Department dictating any one model in its contract with MCOs, as this may ultimately present unintentional consequences the member.	DMAS has explained that the movement towards value-based purchasing models is considered to be an evolution. The approach to implementing MLTSS and DSRIP in tandem is to support the provider community in order to ensure that the providers, MCOs, and the department are all ready to participate in value-based purchasing arrangements in future years. DMAS expects milestones to be met in working towards value-based purchasing arrangements which will result in the delivery of high quality care for Medicaid beneficiaries.
Providers	It will be important to develop alternative payment models that 1) encourage the willing participation of all providers needed to support the population’s needs, 2) preserve existing, effective provider relationships to support patient-centered and coordinated care, 3) introduce reimbursement policies that support the integration of clinical services with community social supports, and 4) provide funding support for interdisciplinary teams that can address the needs of the targeted complex patient populations.	DMAS appreciates the thoughtful nature of this response and the suggested tenants on which to develop the initial framework around alternative or value-based payment strategies. DMAS has included these elements in the waiver application and is committed to working with all stakeholders to develop the best solution towards a system that rewards and drives further quality care for Medicaid members.
	Concerns regarding base methodology for value-based payment/alternative payment models	DMAS recognizes the differentiation among provider reimbursement and understands that value-based reimbursement strategies may vary depending upon the provider. DMAS will work to ensure that there is



Stakeholder Group	Comment Theme	DMAS Response
		no unnecessary harm to providers, while moving towards a more value-based and accountable system of care.
High Risk/High Utilizer		
Health Plans	Currently, MCOs employ sophisticated risk-stratification tools to identify their 'high-risk' populations, for which they subsequently allocate internal resources to better manage these individuals. How will 'super-utilizer' populations be defined and identified in this proposal?	General definitions for high-risk and high-utilizer are outlined in the proposal. DMAS has requested information from health plans regarding their ideas and existing methodologies used to identify high-risk/high-utilizer beneficiaries. DMAS will work with all appropriate stakeholders to ensure the definition meets the stated intent of the proposal, while being appropriate for the health plan and provider communities.
Providers	We encourage DMAS to promote the inclusion of maternal child health home visiting programs as affiliates / community partners in the DSRIP application. While pregnant women and young children are generally not considered to be Medicaid cost drivers, specific high risk and high utilizer subpopulations such as pregnant women with gestational diabetes, preterm / low birth weight infants and young children with special health care needs would certainly fall within this definition as expensive to serve populations.	DMAS appreciates this perspective and will consider this recommendation as it further develops the DSRIP program.
	It is suggested that the population in the waiver be expanded to include the "emerging high utilization population" to mitigate the inappropriate utilization and	DMAS agrees and has added to the application, a definition and expectation that an 'emerging high-utilization population' be included in the VIP



Stakeholder Group	Comment Theme	DMAS Response
	engage with the population prior to the expenditure of significant costs.	catchment. Emerging high-utilization population shall be defined as beneficiaries that have the proclivity to become high utilizers. VIPs will work in collaboration with the Managed Care Plans to develop predictive models to identify factors for high utilization and introduce preventive strategies with community partners.
Data and Technology		
Health Plans	Suggests MCOs be allowed to retain their technology platforms and proprietary processes while still facilitating simple data exchange through a central system	DMAS intends to invest in technology to support the data sharing goals and acknowledges the significant investment of both plans and providers, alike.
	Process flows and technology are equally important	DMAS agrees and works diligently to ensure that both information technology staff and general program and policy staff work in tandem to ensure the technology is driven by the business processes.
	How would this system integrate with the HIE/APCD and other tools/HIT systems that are currently in use with the health plans and hospital systems?	The waiver document states: “DSRIP will allow DMAS to work with participating VIP partners to leverage and build upon existing systems and resources and develop an optimal data system.” DMAS understands the significant investments made to date and plans to leverage existing systems and resources for health plans and hospital systems as well.
Providers	DMAS encouraged to consider a successful but sizeable expectation around data integration	DMAS understands the ideal of “full data integration” is significant. The Department will work with stakeholders to identify and prioritize an



Stakeholder Group	Comment Theme	DMAS Response
		optimal data integration plan in order to be successful across providers, to include community based providers, health plans, and DMAS. DMAS responded in the waiver application with the removal of “full” therefore emphasizing the importance of data integration, without unachievable expectations.
Evaluation/Metrics		
Providers	In order to truly evaluate the effectiveness of the alignment of these strategic initiatives, we encourage DMAS to develop quality measurements of the healthcare provided at the beginning of the program	DMAS agrees that quality measurements need to be identified and monitored as soon as possible in order to gain insight into the benefit of the aligned MLTSS and DSRIP initiatives. DMAS will work consider the proposed quality measurements in determining the best metrics to monitor and report. Further, DMAS appreciates the suggested elements for inclusion into the RFP design for selecting MLTSS health plans and further DSRIP design.
	DMAS encouraged to include process measures	The Department recognizes this distinction and will incorporate such measures during the negotiation of Special Terms and Conditions between the department and CMS. The addition of metrics to this expectation has been included in the application.
Future Stakeholder Involvement		
Health Plans	Notes that a threshold issue experienced and overcome in other markets is engaging providers (acute and LTSS), consumer advocates, regulators, and other key	DMAS appreciates this perspective and agrees that it is essential that all stakeholders work together to design and implement a beneficiary centered care



Stakeholder Group	Comment Theme	DMAS Response
	stakeholders early in the process.	system that rewards improving quality, balances HCBS, and keeps the member in their setting of choice.
Providers	Requests for DMAS to engage the provider community in the further development of DSRIP related specifics	DMAS appreciates the recognition that staff has aimed to put together a thoughtful program framework to support providers, at varying levels of practice capacity, in order to create a stronger Medicaid delivery system. DMAS will incorporate and include provider representatives as more targeted program details are identified.
Suggestions/Comments Regarding Services or Provider Groups		
Advocates	Coverage should be provided for routine oral health care and follow up procedures, prescriptions, following an emergency procedure. Oral health should be included in care models and data sharing information	The Department agrees that oral health is a valuable component to overall health of Medicaid beneficiaries. DMAS also understands that there is a marked association between oral disease and systemic illness. From the onset, DMAS shared that this waiver application process would not be able to add services or benefits apart from what is currently covered under Medicaid. Oral health services will be covered only in the scope of which they are covered under the current Medicaid program. To that end, in a desire to capture and share more than claims related data, DMAS will consider the benefit and policy behind capturing and sharing oral health data information.
	Community Health Workers (CHWs) are aligned to support the outreach, education, and navigation proposals included in the waiver application.	The Department appreciates these thoughtful comments and as discussed in conversation, will look forward to working out potential details and partnership options with CHWs in their support of



Stakeholder Group	Comment Theme	DMAS Response
	<p>CHWs can also help facilitate diversion from Emergency Departments and help link beneficiaries to housing and employment resources</p> <p>CHWs have developed workforce training criteria and would be able to modify the criteria for participation with VIPs</p>	DSRIP efforts.
Health Plans	Encourages DMAS to consider including dental providers in the VIP partnerships, regardless of coverage as there are safety net and charity dental providers available.	DMAS appreciates this acknowledgement and agrees that oral health is a valuable component to overall health of Medicaid beneficiaries. Where geographically available, DMAS will encourage VIPs to identify and partner with willing dental providers, further supporting a fully integrated care model.
	In this structure, do MCOs have the autonomy to choose who they contract with in the VIP?	As currently proposed, MCOs would have the choice between VIPs if more than one existed in the region in which the MCO participated; however, the VIP is considered to be one entity and therefore the MCO would not be able to select individual providers to provide VIP related services to high-utilizers. Individual providers within a VIP may be chosen to participate in the MLTSS network for beneficiaries not assigned to a VIP.
	Will members be required to change their providers during the attribution process? If so, how will continuity of care be mitigated?	Details regarding the attribution of high-risk/super utilizer members have not been finalized. The Department intends on doing an initial analysis of member providers to determine if there is continuity of providers currently serving this population. DMAS will work with providers and MCOs to help identify the best method of attribution. Further, continuity of care will in no way be mitigated, rather policies



Stakeholder Group	Comment Theme	DMAS Response
		will be set to ensure continuity of care is in place for members at all times.
Providers	As DMAS begins to develop DSRIP related focused initiatives, we respectfully request that the services currently provided through CHIP and other validated MCH home visiting programs be considered and included.	DMAS appreciates the work already accomplished by CHIP of Virginia and their related partners and will consider this request and encourage CHIPs continued engagement in this process as it evolves.
	Appreciation that the DSRIP component of the waiver addresses this issue of behavioral health workforce capacity and recognizes the value of investing in the training of more Psych NPs, in particular.	DMAS believes fully in the integration of physical and behavioral health care and appreciates the opportunity, afforded through DSRIP to potentially invest in training more practitioners. DMAS will work with engaged partners to further develop this strategy.
	Encouraged to incorporate and leverage the work of Area Agencies on Aging across the Commonwealth	DMAS appreciates the relationship with local Area Agencies on Aging and will rely on AAAs to advise and support the Department in developing models that leverage existing work and best practices already under way throughout the Commonwealth.
General Questions/Comments		
Providers	DMAS encouraged to exercise and request maxim flexibility when considering programs for optimal transformation	DMAS agrees that there are many project opportunities that have not been described, yet could render significant transformations in the Medicaid delivery system. DMAS is open to many options, including those not yet defined, in order to strengthen Virginia's Medicaid program.



Stakeholder Group	Comment Theme	DMAS Response
	Concerning the VIP geographic regions, there is an expressed concern that there needs to be a definition around 'geographic regions.'	DMAS agrees that more clarity is valuable and has included in the application clarification of geographic regions, described as suggested: 'where there is an adequate volume of MLTSS and Medallion 3.0 enrollees who meet the criteria to support the transformation of the regional delivery system.'
	Clarification is needed regarding how the VIP will interact with the nursing center residents who are Medicaid beneficiaries, the managed care entity and the providers.	DMAS acknowledges that this relationship is not yet detailed and will include nursing facilities in the creation of this model as it interfaces with nursing facility residents.

Appendix E:

Virginia's Completed Operational Plan for SIM Design

A. PROJECT MANAGEMENT *Budget: \$462,287.00*

Figure 1: Governance



Successful development of a Virginia Health Innovation Plan was a top priority for Governor Terry McAuliffe and his administration. His Governor's office leadership team included: the Governor, the Lt. Governor, the Secretary and Deputy Secretaries of Health and Human Resources, the Commissioner of the Virginia Department of Health, the Commissioner of the Department of Behavioral Health and Developmental Services, the Commissioner of the Department of Aging and Rehabilitative Services; the Director of the Department of Medical Assistance Services; and the Director of the Department of Human Resource Management. Secretary of Health and Human Resources William A. Hazel, MD will serve as the Chair of VHIP, and will be the liaison between the Governor's Office Leadership Team and the Virginia Center for Health Innovation (VCHI) Board of Directors, where he serves as immediate past Chair and a member of the Executive Committee.

The VCHI Board of Directors provided project management for SIM Design and served as a convener of all stakeholders. It managed all subcontractors and ensured all deliverables were provided on time and in a satisfactory manner.

Key Personnelⁱ

Gov. Terry McAuliffe; Lt. Gov. Ralph Northam, MD; William A. Hazel, Jr., MD, *Virginia Secretary of Health and Human Resources*; Beth Bortz, *President & CEO of VCHI*; Nancy Agee, *Chair of VCHI and CEO of the Carilion Clinic*; and Cindi B. Jones, *Director of the Department of Medical Assistance Services* | Suzannah Stora, *VCHI Sustainability Director*; Elizabeth Brady, *VCHI Logistics Coordinator*

Key Partners

Commonwealth of Virginia and the Virginia Center for Health Innovation

Milestones, Deliverables and Completion Datesⁱⁱ

- Governor's Press Release to announce partnership with CMS for VHIP 2015; advertise new positions - **Completed Dec 2014 - Jan 2015**
- Sign Model Design Cooperative Agreement; hire new staff; set up additional offices - **Completed Jan 2016**
- Finalize contractor/consultant contracts; confirm workgroup appointments; finalize a comprehensive work plan with defined deliverables for all initiatives and secure approval from workgroup chairs, the VCHI BOD; and the Governor's Office Leadership Team - **Completed Feb - March 2015**
- Complete *VHIP Sustainability Plan*, which will identify action steps needed to secure all necessary implementation resources - **Completed March 2016**
- Complete quarterly programmatic and financial reports to CMS - **Completed April 30, 2015; Completed July 30, 2015; Completed Oct 30, 2015; April 30, 2016**
- Submit final plan to CMS. This will include the final outline for *A Plan for Improving Population Health*, a completed *Health Information Technology Plan*, and the *VHIP Sustainability Plan* - **Completed June 1, 2016**

B: POPULATION HEALTH PLANNING & DESIGN Budget: \$93,777.00

Key Personnel

Stephen Horan, PhD, *Founding President of Community Health Solutions*; Commissioner Marissa Levine, MD, *Commissioner of Virginia Department of Health*;

Michael Lundberg, *Executive Director of Virginia Health Information*, Len Nichols, PhD, *Health Economist at George Mason University*

Key Partners

Community Health Solutions, Virginia Department of Health, Virginia Health Information, George Mason University

Milestones, Deliverables, and Completion Dates

- Implement Population Health Improvement Portal (PHIP) to support Model Design – **Completed Feb 2015**.
- Expand and enhance PHIP – **Completed Feb 2015 – Jan 2016**
- Identify key data sources for the Population Health Improvement Portal (PHIP) – **Completed April 2015**
- Complete draft of close-to-final outline of Plan to Improve Population Health – **Completed Aug 2015**
- Finalize close-to-final outline of Plan to Improve Population Health – **Completed July 2015**
- Secure leadership approval of close-to-final outline of Plan to Improve Population Health – **Completed Dec 2015**

C. ACCOUNTABLE CARE COMMUNITY DESIGN *Budget: \$1,089,750.50*

Key Personnel

See all personnel listed under C1-C4

Key New Position

Ashley Edwards, *Accountable Care Community Manager*

Key Partners

See all partners listed under C1-C4

Milestones, Deliverables, and Completion Dates

- Select 5 communities to serve as pilot Accountable Care Communities (ACC) – **Completed March 2015**
- Hold initial ACC development meetings with community leadership – **Completed April 2015**
- Finalize ACC members – **Completed July 2015**

- Finalize ACC coordinating structures – **Completed Jan 2015**
- Complete design of a primary care transformation package of supports- **Completed March 2016**
- Complete assessment of value-based payment models for ACC use – **Pending DSRIP Waiver approval**
- Begin development of Regional Transformation Plans for 5 ACCs, with objective that all plans tie to the statewide Plan for Population Health Improvement and HIT Plan – **Plans have been discussed, but execution is pending future funding**

C1. Integrated Care

Key Personnel

Patrick Finnerty, *PWF Consulting*; Katherine Neuhausen, MD, *Director of Delivery System Transformation for the Virginia Commonwealth University Office of Health Innovation*; David Coe, *Executive Director of the Colonial Behavioral Health*; Sarah B. Holland, *Executive Director of the Virginia Oral Health Coalition*; R. Neal Graham, *CEO of the Virginia Community Healthcare Association*; Commissioner Debra Ferguson, MD, *Commissioner of the Virginia Department of Behavioral Health and Development Services*; Christopher Bailey, *Senior Vice President of the Virginia Hospital and Healthcare Association*, Brenden Rivenbark, *VCHI Integrated Care Program Manager*

Key Partners

Virginia Commonwealth University; Virginia Association of Community Service Boards, Virginia Oral Health Coalition, Virginia Community Healthcare Association; Virginia Dept. of Medical Assistance Services, Virginia Hospital and Healthcare Association

Milestones, Deliverables, and Completion Dates

- Behavioral Health, Oral, and Complex Care Working groups develop project portfolio for ACCs and DSRIP consideration – **Completed July 2015**
- Finalize metrics and data and economic analysis plans for each of the proposed models – **Completed Dec 2015**
- Refine project portfolio as necessary per CMS advice – **Completed Dec 2015**

C2. Care Transitions

Key Personnel

Kathy Vesley-Massey, *President and CEO of Bay Aging*; Commissioner James Rothrock, *Commissioner of the Virginia Department for Aging and Rehabilitative Services*; Eric A. Coleman, MD, *Professor of Medicine and Head of the Division of Health Care Policy and Research at the University of Colorado*; Carla M. Thomas, *Director of Care Integration for the Virginia Health Quality Center*; Christopher Bailey, *Senior Vice President of the Virginia Hospital and Healthcare Association*; Kyle Allen, DO, *Vice President for Clinical Integration and Medical Director of Geriatric Medicine and Lifelong Health at Riverside Health System*

Key Partners

Eastern Virginia Care Transitions Partnership, Virginia Department of Aging and Rehabilitative Services, Virginia Health Quality Center, Virginia Hospital and Healthcare Association, Virginia Association of Area Agencies on Aging

Milestones, Deliverables, and Completion Dates

- Confirm the status of AAA/hospital partnerships in selected ACCs, ensuring appropriate contracts, security/privacy systems, target population projections, saving calculations, staff training for coaching and for accurate reporting, and legal agreements are in place – **Completed July 2015**
- Review hospital RCAs to ensure volume and MS DRS ratings in ACCs – **Completed Aug 2015**
- Establish a plan to have regular, timely Chronic Disease Self-Management (CDSM) trainings available to all community-based care transitions program (CCPT) enrollees (and others with chronic illnesses in the region) – **Completed Dec 2015**
- Complete analyses of each hospital's MFFS admissions, RCA projections for target population referral, readmission reduction, and projection of Medicare savings – **Completed Dec 2015**
- Finalize 3 year plan for statewide expansion of CTI, which includes a sustainability plan compendium including current success of EVCTP project in contracting with MCOs, ACOs and other payers and with targets for securing on-going funding for all AAA/hospital partnerships. It should also include a preliminary assessment of EVCTP pilot enhancements – **Completed Dec 2015**

C3. Telemedicine & Remote Patient Monitoring

Key Personnel

Karen Rheuban, MD, *Senior Associate Dean for External Affairs and Continuing Medical Education and Director of the Center for Telehealth at the University of Virginia*; Katherine Wibberly, PhD, *Director of the Med-Atlantic Telehealth Resource Center*; R. Neal Graham, *CEO of the Virginia Community Healthcare Association*; Commissioner Marissa Levine, *Commissioner of Virginia Department of Health*; Cindi B. Jones, *Director of the Department of Medical Assistance Services*; Len Nichols, PhD, *Health Economist at George Mason University*

Key Partners

University of Virginia Center for Telehealth; Virginia Telehealth Network; Virginia Community Healthcare Association; Virginia Department of Health; George Mason University

Milestones and Completion Dates

- Work with the ACCs and FQHCs on the selection of sites for high risk OB and chronic disease remote patient monitoring pilot expansions – **Completed Jan 2016**
- Prepare financial analysis of potential cost savings of proposed expansions in remote patient monitoring in selected target sites– **To be completed in June 2016 with funding from the Virginia General Assembly. Data was not secured in time for SIM Design.**
- Develop a proposed bundled payment model for high risk OB and for chronic disease remote patient monitoring – **To be completed in June 2016 with funding from the Virginia General Assembly. Data was not secured in time for SIM Design.**

C4. Innovation Waivers

Key Personnel

Patrick Finnerty, *PIF Consulting*; Katherine Neuhausen, MD, *Director of Delivery System Transformation for the Virginia Commonwealth University Office of Health Innovation*; Cindi B. Jones, *Director of the Department of Medical Assistance Services*; Scott Crawford, *Deputy Director for Finance at the Department of Medical Assistance Services*; William Lessard, *Director of Provider Reimbursement with the Department of Medical Assistance Services*; Andrew Hackbarth, *Assistant Policy Researcher at the RAND Corporation*; Deborah Bachrach, *Partner at Manatt*; Sandra Hunt, *Principal at PricewaterhouseCoopers*

Key New Position

Molly E. Huffstetler, *Innovation Waiver Program Manager*

Key Partners

Virginia Department of Medical Assistance Services, Virginia hospitals, community service boards, federally qualified health centers, free clinics, dental providers, and primary care and psychiatry practices affiliated with academic medical centers

Milestones, Deliverables, and Completion Dates

- Activate Internal DSRIP Waiver Working Group - **Completed Feb 2015**
- Convene DSRIP Community Stakeholder Group - **Completed June 2015**
- Develop DSRIP structure and strategy for financing non-federal share; review DSRIP project portfolio with Integrated Care Workgroups - **Completed Aug 2015**
- Submit DSRIP concept paper to CMS - **Completed Aug 2015**
- Submit DSRIP waiver request to CMS - **Completed January 2016**
- Develop a measurement strategy to provide actionable, intermediate feedback to stakeholders (including Virginia Program leadership, ACC leadership, and federal program officers) over the course of the work - **Pending DSRIP Waiver negotiations with CMS**

D. WORKFORCE ENRICHMENT

Budget: \$287,072.00

Key Personnel

Alan Dow, MD, *Assistant Vice President of Health Sciences for Interprofessional Education and Collaborative Care at Virginia Commonwealth University*; Michael Royster, MD, *Vice President for the Institute for Public Health Innovation*; Joann Richardson, PhD, *Associate Professor at Virginia Commonwealth University*

Key Partners

Virginia Commonwealth University, Institute for Public Health Innovation

Milestones, Deliverables, and Completion Dates

- Leveraging other grant funds, hold a statewide forum to increase awareness regarding the potential value and impact of community health workers in supporting health systems and the Virginia Department of Medical Assistance Services (DMAS) to achieve the Triple Aim, while promoting health equity in communities across Virginia. - **Completed April 2015**

- Strengthen stakeholder engagement by expanding representation on the Virginia Community Health Worker Advisory Group to include additional community health workers, legislators, health system & health insurance leaders, community college representatives, and experts in state health workforce policy and Medicaid financing – **Completed April 2015**
- Define a scope of practice for Community Health workers and have it approved by the Virginia community Health Worker Advisory Group – **Completed June 2015**
- Pilot online Learning Transformation course modules – **To be Completed July 2016. Was Pending Course Approval, which has been secured**
- Submit care coordination and community health educator certificate programs to State Council of Higher Education for Virginia for approval; finalize community health worker training module and core competencies; prepare report on community health worker payment reform viability – **Completed Jan 2016**
- Recommend a credentialing process for community health workers. Complete the recommendation (**Nov 2015**) with an objective of securing final approval from the Virginia Community Health Worker Advisory Group – **Completed April 2016.**
- Work with the Virginia Department of Medical Assistance Services, private insurers, health systems, and others to secure a sustainable long-term funding mechanism for community health worker services. This may include a Medicaid State Plan Amendment or a Medicaid Waiver – **Pending DSRIP Waiver negotiations with CMS**

E. CHOOSING WISELY AND VALUE-BASED INSURANCE DESIGN *BUDGET: \$162,500.00*

Key Personnel

Beth A. Bortz, *President & CEO of VCHI*; A. Mark Fendrick, MD, *Professor at the University of Michigan*; Sara R. Wilson, *Director of the Virginia Department of Human Resource Management*; Michael Lundberg, *Executive Director of Virginia Health Department*

Key Partners

Virginia Department of Human Resource Management, Center for Value Based Insurance Design, Milliman; Medical Society of Virginia, Virginia Health Information

Milestones and Completion Dates

- Use Milliman's Waste Calculator application on Virginia's state employee health plan data (**Jan 2016**) and on the APCD data **Completed (Aug 2015)** to establish a baseline and determine which Choosing Wisely identified tests and procedures should be targeted to improve the value of care chosen in Virginia and advance the concept of clinical nuance – **July 2016**
- Design an educational campaign to be piloted with state employees around the targeted Choosing Wisely test and procedures – **June-August 2016**
- Continue to improve the Commonwealth of Virginia's (COVA) Diabetes Management Pilot Program, which incorporates value-based benefit design, and create a similar program for at least one other chronic condition – **Completed April 2016**
- Using knowledge obtained from the Waste Calculator and other sources of COVA data, recommend changes to one of COVA's benefit designs so that it incentivizes consumers to be engaged in and responsible for their own care, increases the emphasis on effectively managing chronic conditions and arming patients with more information to live healthier lifestyles; and couples benefit design changes with innovative payment reforms that focus more on patient-centered health care – **To be completed September 2016. Work is dependent on data analysis that was not completed until April 2016 due to delays in securing necessary data use agreements.**

F. QUALITY, PAYMENT, AND HIT ALIGNMENT *Budget: \$84,659.69*

Key Personnel

Secretary William A. Hazel, Jr., MD, *Virginia Secretary of Health and Human Resources*; Lt. Governor Ralph Northam; Cindi B. Jones, *Director of the Department of Medical Assistance Services*; Stephen Horan, PhD, *Founding President of Community Health Solutions*; Andrew Hackbarth, *Assistant Policy Researcher at the RAND Corporation*; Michael Lundberg, *Executive Director of Virginia Health Information*; Michael Matthews, *President of ConnectVirginia HIE*; Cheryl Roberts, *Deputy Director of Programs for the Department of Medical Assistance Services*; Beth Bortz, *President & CEO of VCHI*; Len Nichols, PhD, *Health Economist at George Mason University*

Key Partners

Office of the Lt. Governor; Community Health Solutions, Virginia Health Information, ConnectVirginia HIE; Virginia Association of Health Plans and members; Medical Society of Virginia; Virginia Academy of Family Physicians; American College of

Physicians, VA; Virginia Department of Medical Assistance Services; George Mason University

Milestones, Deliverables, and Completion Dates

- Lt. Gov. convenes new Quality, Payment, and HIT Roundtable (QPHR) and establishes monthly meeting schedule- **Completed April 2015**
- Present information on the standardized, statewide quality, health, and cost related performance measures selected by other states to the Lt. Governor's Quality, Payment Reform, and HIT Roundtable - **Completed April and May 2015**
- QHPR finalizes a statewide plan to align quality measures across all payers in Virginia - **Completed Aug 2015**
- QHRP reviews and approves an HIT Plan for the Commonwealth of Virginia that includes a health information exchange strategy that ACCs can use to accomplish local health information exchange in Model Testing- **Completed Dec 2015**
- Virginia health plans and DMAS report on their proposed efforts to align payment incentives with the aligned quality measures - **Pending results of DSRIP Waiver negotiations**

G. MONITORING AND EVALUATION

Budget: \$503,523.74

Key Personnel

Len Nichols, PhD, *Health Economist at George Mason University*; Sandra Hunt, *Principal at PricewaterhouseCoopers*; Michael Lundberg, *Executive Director of Virginia Health Information*; Stephen Horan PhD, *Founding President of Community Health Solutions*

Key Partners

George Mason University, PWC; Virginia Health Information; Community Health Solutions

Milestones and Completion Dates

- Establish which metrics to use for each analysis - **Ongoing and to be refined as implementation funds become available and funder requirements become known.**

- Establish appropriate testing strategy for each metric – *Ongoing and to be refined as implementation funds become available and funder requirements become known.*
- Establish data collection methodology from participants and control groups – *Ongoing and to be refined as implementation funds become available and funder requirements become known.*

SUSTAINABILITY

Given the uncertainty of SIM Round III funding, Virginia has been working throughout the year to develop strategies for sustainability. They are as follows:

- **Delivery System Reform Incentive Payment (DSRIP)** - The Virginia DSRIP team, led by the Virginia Department of Medical Assistant Services has submitted a DSRIP waiver request for approval (\$1B). The focus of DSRIP is to transform Medicaid so that it moves from paying for services to paying for outcomes.
- **Commonwealth of Virginia** – VCHI requested funding from the state to support the advancement of collaborative initiatives emerging from the Virginia Health Innovation Plan on behalf of the Commonwealth of Virginia. Funding was secured to continue the Care Transitions work, the DSRIP work, and for the preparation of a Round 3 proposal, should that opportunity present itself.
- **Private Funders** – VCHI submitted proposals to multiple private foundations, which included the Clinton Foundation and Kresge Foundation, as well as put together a proposed partnership with the regional organizations making up the Virginia Consortium for Health Philanthropy. These requests would help support initiatives of the ACCs that do not focus on the Medicaid population and would not be included in DSRIP. Regrettably, these proposals were not approved, as potential funders erroneously assumed that VCHI could secure funding for its Accountable Care Communities through CMS’ recently announced Accountable Health Communities grant opportunity. Despite the similarities in the names, the two approaches are not related and CMS funding cannot be used to support our envisioned work.

ⁱ Please note that additional information on the qualifications of all key personnel is included as a PDF attachment “Virginia SIM Key Personnel Bios”.

ⁱⁱ Beginning March 2015, an expanded Operational Plan will be available on the Virginia Center for Health Innovation’s Smart Sheet Portal.