

VIRGINIA STATE INNOVATION MODEL HEALTH IT PLAN:

FOUNDATION FOR A HEALTHY, CONNECTED COMMUNITY

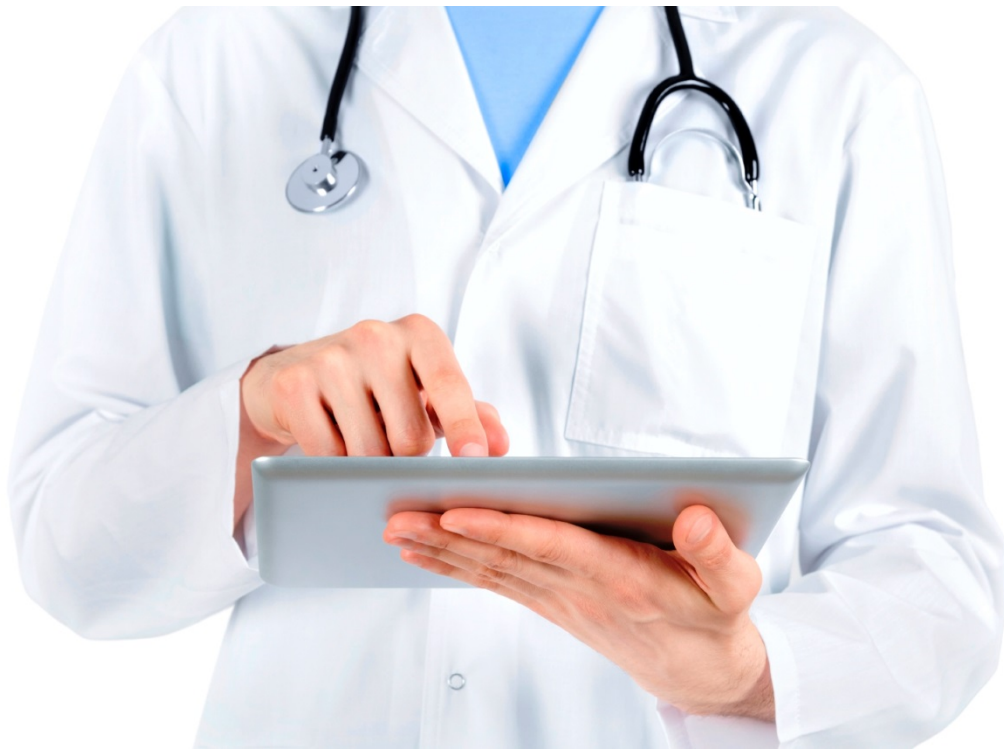


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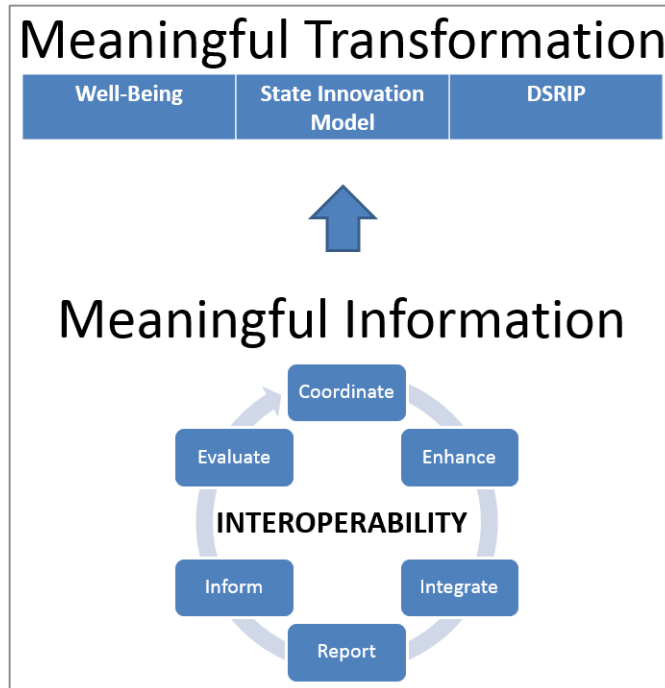
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Stakeholders across the Commonwealth of Virginia are working diligently to leverage health information technology to improve the health and well-being of our citizens. Included on the list of noteworthy initiatives are the All-Payer Claims Database (APCD); the ConnectVirginia statewide health information exchange; advances in the public health IT capabilities with 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 Health. We are as proud of our accomplishments as we are motivated by the work that remains.

Our proposed approach is based on the following considerations:

- Impressive initiatives are underway to help transform healthcare in the Commonwealth of Virginia, driven by payment reforms that include incentives for improvement in outcomes, cost and patient experience.
- Meaningful healthcare transformation must be supported by robust and integrated information systems that strengthen population-level and patient-level interventions.
- There is 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 healthcare realm in the Commonwealth, therefore we must engage this stakeholder group in a more meaningful way.

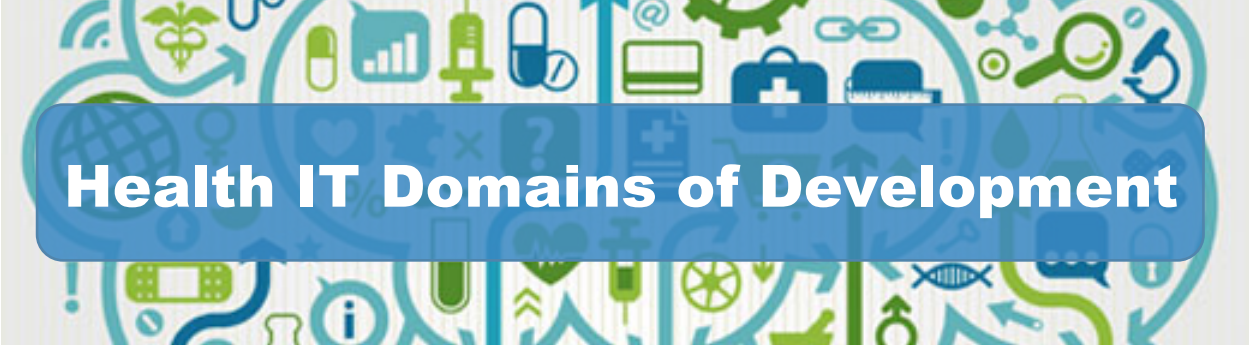


Given these considerations, the major domains of the Virginia Health IT Plan are as follows:

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.

In the sections below, each of the six domains of our proposed health IT plan are 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 – Delivery System Reform Incentive Program – and the public health 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.



Health IT Domains of Development

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.*



In order to determine where Virginia needs to go in the future as far as health IT, it is necessary to assess the current infrastructure and environment. 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. Transformation Step #2 under Virginia's DSRIP strategy identifies the following objectives for VIP data infrastructure, systems, exchanges and analytics¹:

¹ Gore, Suzanne. "Accelerating Delivery System Transformation in Virginia" Presentation at the Accountable Care Community Meeting. September, 2015. Virginia Department of Medical Assistance Services.

- 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
- 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.

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.*



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 clearly 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.

Integrate: *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.

Report: *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 Healthcare Transformation Initiatives. This involves analyzing and integrating into actionable information core measures selected for the following initiatives:

- **Lieutenant Governor’s Roundtable Clinical Quality Measures (CQMs):** Measures under development for adoption by the LG Roundtable, focusing on three initial population health categories: *Strong Start for Children, Rising Risk Adults, and Aging Well*. The Health IT Plan will assist the LG Roundtable in identifying relevant CQMs from the inventory of measures based on the initiative’s particular population and objectives. CQMs will be selected that promote quality and strengthen health IT to support quality improvement and accountability for value.
- **Virginia’s Plan for Well-Being and State Health Assessment Metrics:** Inventory of metrics selected for each of the primary goal areas of the Plan for Well-Being: *Healthy, Connected Communities; Preventive Actions; Strong Start for Children; Quality Healthcare; Well-Being: Physical, Emotional, Aging*. The Health IT Plan will support the Plan for Well-Being teams by conducting data reviews and compiling data to support the metrics.
- **DSRIP Waiver Measures:** Measures focused specifically on the requirements of the DSRIP Waiver, which will target value-added reforms and demonstration Medicaid payment and delivery system transformation. The Health IT Plan will support the DSRIP Waiver strategy by laying the groundwork for the provision of clinical, behavioral, social outcome measures and support ongoing evaluation and performance reporting on key DSRIP metrics. The Health IT Plan also will enable data exchange between the DSRIP partners, as well as build statewide system capacity for business intelligence and data analytics.
- **Clinical Data Aggregation:** EHR-based data elements would enhance population-level analytics and opportunity identification. ConnectVirginia, VDH and VHI will develop and implement a strategy for the integration of claims data and clinical data leveraging capabilities already in place. A sound policy foundation must be established to accomplish this objective.

The Health IT Plan recognizes that building a data-driven decision support system for the Healthcare Transformation 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.

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.*



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 they 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.

Evaluate: *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 Appendix A. 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.

Appendix A: Logic Model

