Addressing the Social Determinants of Health

Jeffrey Brenner, MD
Senior Vice President
Integrated Health and Human Services
myConnections Case

- Homeless member
- Malignant neoplasm
- Open tracheostomy with severe respiratory based complications (malfunction of trach, acute bronchitis, aspiration pneumonia, etc.).
- Admitted to numerous hospitals in Phoenix.
- He has been rejected by area shelters based on his high risk of infection.

- **2016 cost of care** $237,463
- **Admission** 7
- **ER visits** 29
Average ER Visits

- **Homeless Member**: 2016 ER 6.4x more than Average
- **Housing Challenged**: 2016 ER 2.6x more than Average
- **All Other Members Served in 2016**

© 2016 United HealthCare Services, Inc. All rights reserved.
Homeless Member
2016 used the ER
7.3x more than
Average

Housing
Challenged
2016 used the ER
3.8x more than
Average

All Other
Members
Served in 2016

54

Admissions

Hospital
Admissions
Average Paid Cost

- Homeless 5.5x Avg.
- Hardship 2.7x Avg.
myConnections addresses social determinants with the greatest opportunity to improve health outcomes.
Service lines based on key social determinants integrate to deliver the most impact. But separately, each also provides expert, customized assistance.
National Health Spending Per Capita

is 60 times what it was in 1960, consuming one fifth of personal income and 17% of GDP.
From the “American Healthcare Paradox”

Spending on social and health programs, by country (2013)
Percent of GDP

Social service outcomes: U.S. vs. OECD average

<table>
<thead>
<tr>
<th>Outcome metric</th>
<th>U.S.</th>
<th>OECD average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td>78.7 years</td>
<td>80.2 years</td>
</tr>
<tr>
<td>Obesity rates among adults</td>
<td>35.3%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>5.8 per 1,000 live births</td>
<td>3.7 per 1,000 live births</td>
</tr>
<tr>
<td>Drug related death rate</td>
<td>234 per million</td>
<td>90 per million</td>
</tr>
<tr>
<td>Incarceration rate</td>
<td>698 prisoners per 100,000 pop.</td>
<td>147 prisoners per 100,000 pop.</td>
</tr>
</tbody>
</table>

Source: OECD, CDC, CMS
The complexity of the various low-income service programs in the U.S. makes them challenging to navigate and results in poor quality outcomes.

Source: U.S. House of Representatives, Ways and Means Committee
**Hospital Utilization since 1996**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ER Visits</strong></td>
<td>102</td>
</tr>
<tr>
<td><strong>Admissions</strong></td>
<td>54</td>
</tr>
<tr>
<td><strong>Total CT Scans</strong></td>
<td>147</td>
</tr>
<tr>
<td><strong>CT Scan-Head</strong></td>
<td>73</td>
</tr>
</tbody>
</table>
Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH
What are the problems we’re trying to solve?

- Patient
- Hospital #1
- Home Nursing
- Hospital #2
- Sub-Acute Rehab
- Home PT/OT
- Durable Goods
- Meals
- Transport
- Dialysis
- Nephrology
- Transplant
- PCP
- Urology
- Oncology
- Surgery
- Cardiology
- GI
- Pain Mgt
- Ophto
Primary prevention
Secondary prevention
Tertiary prevention
Pareto curve

ER Utilization

System failure

Camden Coalition of Healthcare Providers
Healthcare hotspotting is the strategic use of data to target evidence-based services to complex patients with high utilization.

These patients are experiencing a mismatch between their needs and the services available.
Methodology: To adjust for variation between clients and varied pre & post-move-in periods, we compare hospital visit density. The "density" of hospital visits is the number of inpatient and emergency visits divided by the number of days on which clients were at risk for a hospital visit. While a patient is admitted, they cannot have a second admission, so each length of stay is subtracted from the total days at risk. Patients are at risk of multiple emergency visits on a given day, so these are not subtracted. Empirically prisoners going to the hospital only do so on 1/100 day incarcerated do 99% of jail days are also subtracted from days at risk. This preliminary analysis cannot attribute cause for improvement to the housing first intervention. We have yet to adjust for regression to the mean, housing quality, or other drivers of change.
First Level Solutions

- Engagement
- Navigation
- Coordination
- Accompaniment
Second Level Solutions

- Data analysis
- Health information exchange
- Coalition-building
- Payment/legal reform
- Community engagement
Third Level Solutions

- 7 day pledge campaign
- Primary care office engagement
- Patient incentives
- Daily feeds to offices
Fourth Level Solutions

• Harm reduction
• Motivational interviewing
• COACH
• Trauma-informed care
• PhD Psychologist in house
Fifth Level Solutions

• Core values
• Strategic planning
• Dashboards
• Quality improvement cycles
• Staff training
• Wellness benefits
Extreme responders
## Extreme Complexity

<table>
<thead>
<tr>
<th>Medical</th>
<th>Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Diabetes</td>
<td>• Cocaine</td>
</tr>
<tr>
<td>• Kidney failure</td>
<td>• Heroin</td>
</tr>
<tr>
<td>• Heart failure</td>
<td>• Alcohol</td>
</tr>
<tr>
<td>• Pain syndromes</td>
<td>• Prescription medication</td>
</tr>
<tr>
<td>• Age</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mental Health</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Schizophrenia</td>
<td>• Homeless</td>
</tr>
<tr>
<td>• Borderline personality disorder</td>
<td>• Hungry</td>
</tr>
<tr>
<td>• Bipolar disorder</td>
<td>• Unemployed/disabled</td>
</tr>
<tr>
<td>• Factitious disorder</td>
<td>• Isolated</td>
</tr>
<tr>
<td></td>
<td>• No transportation</td>
</tr>
<tr>
<td></td>
<td>• Criminal record</td>
</tr>
</tbody>
</table>

Camden Coalition of Healthcare Providers
Our Response to Extreme Complexity

<table>
<thead>
<tr>
<th>Medical</th>
<th>Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Inaccessible and overcrowded</td>
<td>• Sobriety and 12 step focused</td>
</tr>
<tr>
<td>• 15 minute visits</td>
<td>• Inaccessible and inpatient oriented</td>
</tr>
<tr>
<td>• Incorrect diagnosis</td>
<td>• Uncomfortable with mental health</td>
</tr>
<tr>
<td>• Unaware of trauma informed care</td>
<td>• Not trauma informed</td>
</tr>
<tr>
<td>• Insufficient training in pain, addiction, and mental health</td>
<td>• Sometimes opposed to medication assisted treatment</td>
</tr>
<tr>
<td>• Inpatient and specialty focused</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mental Health</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Incorrect diagnosis</td>
<td>• Inaccessible</td>
</tr>
<tr>
<td>• Medication focused</td>
<td>• Long wait times</td>
</tr>
<tr>
<td>• Inaccessible</td>
<td>• Complicated</td>
</tr>
<tr>
<td>• Uncomfortable with addiction</td>
<td>• Non existent</td>
</tr>
<tr>
<td>• Not trauma informed</td>
<td>• Late</td>
</tr>
<tr>
<td>• Too hierarchical and disability oriented</td>
<td>• Not evidence based</td>
</tr>
</tbody>
</table>

Camden Coalition of Healthcare Providers
Overlapping Populations

Police Encounters Data
- 31,483 people arrested
- 10 overdosees arrested
- 483 overdose data
- 18,347 patients arrested (58%)
- 228 overdosed patients arrested (47%) (0%) (1%)
- 76 overdosed patients (16%) (0%)

Hospital Data
- 374,279 patients
226 Dual-System High Utilizers
(16+ ED visits & 7+ police encounters over five years).
Save The Date: National Center Conference

Putting Care at the Center

November 15 - 17, 2017

Los Angeles, CA