Hot Spotting, Cold Spotting, and the Health of the Public: Achieving the Triple Aim in Metro Richmond

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Congressional Co-Chairs: The Honorable Joe Heck, DO; The Honorable Ami Bera, MD
Background: VCU Health System

- Safety-net hospital that is part of an academic medical center
- MCV Hospital
  - 805 acute care beds
  - 84,000 ED visits
- Children’s Hospital
- MCV Physician Group Practice
- Virginia Premier Health Plan
  - 184,000 member Medicaid health plan

VCUHS Patients by Payer FY 2014

- Uninsured 20%
- Medicaid 22%
- Medicare 25%
- Commercial 28%
- Other 5%
- 184,000 member Medicaid health plan
Background: Hot Spotting

• **Hot Spotting**: identifying the geographic areas with the highest concentrations of Emergency Department and hospital utilization and costs

• **Cold spotting***: identifying communities that do not provide the essential opportunities for health: employment, education, grocery stores, safe sidewalks, good air quality, social support

Goals

1. Identify the health care “hot spots” in the Greater Richmond area with the highest utilization and costs and the “cold spots” with the poorest social determinants of health.

2. Understand the demographic, clinical and social profiles of patients in “hot spots” and their patterns of health care utilization compared to the overall VCU Health System patient population.

3. Engage health system and community stakeholders to discuss strategies to decrease overutilization and improve health outcomes.
Most Prevalent Conditions Among Adults in Richmond Public Housing “Hot Spots” Across All Services, FY 2009-13 (n = 2,177)

- Mental Illness: 27%
- Hypertension: 22%
- COPD: 18%
- Asthma: 14%
- Diabetes: 13%
- Substance Use: 9%
- Heart Failure: 4%
- Dermatology: 4%

Note: Includes primary and secondary ICD-9 codes for VCU health system encounters for adults (ages 18 and older, N=2,177) during last 18 months (9/1/2012 – 2/28/2014) in Emergency Department, inpatient, and outpatient (primary care and specialty care) settings. Excludes inpatient discharges for birth/delivery.
Percent of Inpatient Discharges in the Past 18 Months with Primary or Secondary Diagnosis of Substance Abuse and Mental Illness in Public Housing “Hot Spots” compared to all VCUHS Adults

<table>
<thead>
<tr>
<th></th>
<th>All VCUHS adults (N=147,110)</th>
<th>Adults in 8 census block groups (N=3,913)</th>
<th>Adults in public housing &quot;hot spots&quot; (N=2,172)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Substance Abuse</strong></td>
<td>23%</td>
<td>33%</td>
<td>32%</td>
</tr>
<tr>
<td>Secondary diagnosis of substance abuse</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Primary diagnosis of substance abuse</td>
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<td><strong>B. Mental Illness</strong></td>
<td>15%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Secondary diagnosis of mental illness</td>
<td></td>
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<tr>
<td>Primary diagnosis of mental illness</td>
<td>6%</td>
<td>9%</td>
<td>9%</td>
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Note: Excludes discharges for birth/delivery. Mental illness is CCS-MHSA general tool categories 650-659, 662, 670 and mental illness-related codes from category 663. Substance abuse is CCS-MHSA general tool categories 660-661 and substance-related codes from category 663.
State Innovation Model Participants

Effective 3/15

- Test States
- Design States
- States with Active AF4Q Alliances

- American Samoa, Northern Mariana Islands, Puerto Rico
SIM Metro Richmond Behavioral Health Planning Group

- Health systems
- Community mental health providers
- Free clinics and FQHCs
- Housing
- Employment
- Criminal justice

*Graphic: Primary Care Forum*
Conclusions

• Health systems can address the needs of their “super-utilizers” by identifying the “hot spots” where they live, their leading diagnoses, and the social and environmental factors that lead to preventable hospitalizations.

• Mental illness and substance abuse are important drivers of hospitalizations in public housing “hot spots” and for the entire population served by VCUHS.

• Policies enacted at the local, state, and Federal level can markedly improve health outcomes and control costs by addressing the economic and social conditions that drive people to hospitals.

• CMMI SIM awards are supporting local as well as statewide health care innovation.
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