Beyond the Individual Patient: The Role of Clinical Medicine in Population Health

M. Norman Oliver, MD, MA
State Health Commissioner
Virginia Department of Health
Christine wanted to get clean
Need for decent, affordable housing
Improving Health and Well-Being in Virginia’s Communities

Well-Being

System of Health Care

Strong Start for Children

Preventive Actions

Healthy, Connected Communities

http://www.virginiawellbeing.com
<table>
<thead>
<tr>
<th>Aim 1 HEALTHY, CONNECTED COMMUNITIES</th>
<th>2020 GOAL</th>
<th>2016 Baseline</th>
<th>2017 Update</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of High School Graduates Enrolled in an Institution of Higher Education Within 16 Months After Graduation</td>
<td>75.0%</td>
<td>70.9% (2013)</td>
<td>72.0% (2014)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Cost-Burdened Households (More Than 30% of Monthly Income Spent on Housing Costs)</td>
<td>29.0%</td>
<td>31.4% (2013)</td>
<td>31.6% (2014)</td>
<td>↑</td>
</tr>
<tr>
<td>Economic Opportunity Profile</td>
<td>73.7</td>
<td>70.7 (2013)</td>
<td>75.0 (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Health Planning Districts That Have Established an On-going Collaborative Community Health Planning Process</td>
<td>100.0%</td>
<td>43.0% (2015)</td>
<td>82.8% (2016)</td>
<td>↑</td>
</tr>
<tr>
<td>Aim 2</td>
<td>STRONG START FOR CHILDREN</td>
<td>2020 GOAL</td>
<td>2016 Baseline</td>
<td>2017 Update</td>
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</tr>
<tr>
<td></td>
<td>Pregnancies Per 1,000 Females Ages 15 to 19 Years Old</td>
<td>25.1</td>
<td>27.9 (2013)</td>
<td>24.9 (2014)</td>
</tr>
<tr>
<td></td>
<td>Percent of Children Who Do Not Meet the PALS-K Benchmarks in the Fall of Kindergarten and Require Literacy Interventions</td>
<td>12.2% (14-15)</td>
<td>12.7% (14-15)</td>
<td>13.8% (15-16)</td>
</tr>
<tr>
<td></td>
<td>Percent of Third Graders Who Pass the Standards of Learning Third Grade Reading Assessment</td>
<td>80.0% (14-15)</td>
<td>69.0% (14-15)</td>
<td>75.4% (15-16)</td>
</tr>
<tr>
<td>Aim 3 PREVENTIVE ACTIONS</td>
<td>2020 GOAL</td>
<td>2016 Baseline</td>
<td>2017 Update</td>
<td>Trend</td>
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<td>----------------------------------------------------------------------------------------</td>
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<tr>
<td>Percent of Adults Who Did Not Participate In Any Physical Activity During the Past 30 Days</td>
<td>20.0%</td>
<td>23.5% (2014)</td>
<td>25.1% (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Adults Who Are Overweight or Obese</td>
<td>63.0%</td>
<td>64.7% (2014)</td>
<td>64.1% (2015)</td>
<td>↓</td>
</tr>
<tr>
<td>Percent of Households That Are Food Insecure For Some Part of the Year</td>
<td>10.0%</td>
<td>11.9% (2013)</td>
<td>11.8% (2014)</td>
<td>↓</td>
</tr>
<tr>
<td>Percent of Adults Who Currently Use Tobacco</td>
<td>12.0%</td>
<td>21.9% (2014)</td>
<td>19.4% (2015)</td>
<td>↓</td>
</tr>
<tr>
<td>Percent of Adults Who Receive an Annual Influenza Vaccine</td>
<td>70.0%</td>
<td>48.2% (14-15)</td>
<td>46.0% (15-16)</td>
<td>↓</td>
</tr>
<tr>
<td>Percent of Adolescent Girls (13-17 Years Old) Who Receive Three Doses of HPV Vaccine</td>
<td>80.0%</td>
<td>35.9% (2014)</td>
<td>38.5% (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Adolescent Boys (13-17 Years Old) Who Receive Three Doses of HPV Vaccine</td>
<td>80.0%</td>
<td>22.5% (2014)</td>
<td>25.7% (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Adults Ages 50-75 Years Old Who Receive Colorectal Cancer Screening</td>
<td>85.0%</td>
<td>69.1% (2014)</td>
<td>70.3% (2016)</td>
<td>↑</td>
</tr>
<tr>
<td>Average Years of Disability-Free Life Expectancy</td>
<td>67.3</td>
<td>66.1 (2013)</td>
<td>66.0 (2014)</td>
<td>↓</td>
</tr>
<tr>
<td>Aim 4 SYSTEM OF HEALTH CARE</td>
<td>2020 Goal</td>
<td>2016 Baseline</td>
<td>2017 Update</td>
<td>Trend</td>
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<tr>
<td>Percent of Adults Who Have a Regular Health-care Provider</td>
<td>85.0%</td>
<td>69.3% (2014)</td>
<td>71.1% (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Avoidable Hospital Stays for Ambulatory Care Sensitive Conditions Per 100,000 Persons</td>
<td>1,100</td>
<td>1,294 (2013)</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Avoidable Deaths from Heart Disease, Stroke or Hypertensive Disease Per 100,000 Persons</td>
<td>40.0</td>
<td>49.9 (2013)</td>
<td>49.1 (2014)</td>
<td>↓</td>
</tr>
<tr>
<td>Mental Health and Substance Use Disorder Hospitalizations Per 100,000 Adults</td>
<td>635.1</td>
<td>668.5 (2013)</td>
<td>697.0 (2014)</td>
<td>↑</td>
</tr>
<tr>
<td>Percent of Adults Who Report Having 1+ Days of Poor Health During the Past 30 Days</td>
<td>18.0%</td>
<td>19.5% (2014)</td>
<td>19.0% (2015)</td>
<td>↓</td>
</tr>
<tr>
<td>Percent of Health-care Providers Who Have Implemented a Certified Electronic Health Record</td>
<td>90.0%</td>
<td>70.6% (2014)</td>
<td>73.4% (2015)</td>
<td>↑</td>
</tr>
<tr>
<td>Number of Local Health Districts with EHRs and Connect to Community Providers Through Connect Virginia</td>
<td>35</td>
<td>0 (2015)</td>
<td>0 (2016)</td>
<td>↔</td>
</tr>
<tr>
<td>Percent of Hospitals That Meet the State Goal for Prevention of Hospital-onset Clostridium difficile Infections</td>
<td>100%</td>
<td>38.5% (2013)</td>
<td>43.2% (2015)</td>
<td>↑</td>
</tr>
</tbody>
</table>
Virginia

Rural* Jurisdiction by County

* Data Source: Rural-Urban Commuting Area Codes; https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/ RUCA codes are based on the same theoretical concepts used by the Office of Management and Budget (OMB) to define county-level metropolitan and micropolitan areas.
Virginia

Health Opportunity Index (HOI)
by County / City*

Very Low HOI
Low HOI
Moderate HOI
High HOI
Very High HOI

* Health opportunity Index (HOI) – The HOI is a composite measure comprising 4 components that reflect a broad array of social determinants of health. The 4 components include: 1. Consumer Opportunity Profile 2. Economic Opportunity Profile 3. Wellness Disparity Profile 4. Community Environmental Profile

The HOI was developed to assist the public, businesses, policy makers, communities, healthcare organizations and public health professionals in identifying key social and economic factors (also known as social determinants of health) that affect the health outcomes of the residents of Virginia communities. The set of factors chosen to be included within the HOI was designed to capture the processes by which “opportunities to be healthy” emerge; upon determination of the community HOI score it can suggest where specific interventions may aid in developing a healthy community. Not only does the HOI assist in identifying such areas, it can facilitate a positive attitude toward change within the local community.
Virginia
Health Opportunity Index (HOI)
by County / City* overlaid by Life Expectancy at Birth

- Very Low HOI
- Low HOI
- Moderate HOI
- High HOI
- Very High HOI

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Richmond City
Health Opportunity Index (HOI) *
by Census Tract

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Health Opportunity Index (HOI) *
by Census Tract
Overlaid with Life Expectancy at Birth

Very Low HOI
Low HOI
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Health impact of HOI in localities

RICHMOND, VIRGINIA

Short Distances to Large Gaps in Health

Follow the discussion
#CloseHealthGaps

Life expectancy at birth (years)
Shorter Longer

1 mile

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VCU Center on Society and Health
Factors that Affect Health

- 10% Environmental Factors
- 20% Medical
- 30% Health Behaviors
- 40% Social and Economic Factors

Investment in Health

- 95% Direct Medical Care Services
- 5% Population Health Approaches to Health Improvement

Sources:
http://www.countyhealthrankings.org/sites/default/files/differentPerspectivesForAssigningWeightsToDeterminantsOfHealth.pdf
http://content.healthaffairs.org/content/21/2/78.full
Factors that Affect Health

- Socioeconomic Factors
  - Changing the Context to make individuals’ default decisions healthy
  - Long-lasting Protective Interventions
  - Clinical Interventions
  - Counseling & Education

Examples:
- Eat healthy, be physically active
- Rx for high blood pressure, high cholesterol, diabetes
- Immunizations, brief intervention, cessation treatment, colonoscopy
- Fluoridation, 0g trans fat, iodization, smoke-free laws, tobacco tax
- Poverty, education, housing, inequality
Seeing patients: one-on-one
Wrap-around services
Improving Health and Well-Being in Communities

Community Vision

The Gap

Community’s Needs

- State Govt
- Local Govt
- NGO
- Philanthropy
- Faith Community
- Banks
- Businesses
- Other Private Sector
- Community Members

Community’s Assets

An aligned, connected and focused community that fills the gap by building on the assets.

Neighborhoods
The 5 Conditions of Collective Impact

1. **Common Agenda**
   - Common understanding of the problem
   - Shared vision for change

2. **Shared Measurement**
   - Collecting data and measuring results
   - Focus on performance management
   - Shared accountability

3. **Mutually Reinforcing Activities**
   - Differentiated approaches
   - Coordination through joint plan of action

4. **Continuous Communication**
   - Consistent and open communication
   - Focus on building trust

5. **Backbone Support**
   - Separate organization(s) with staff
   - Resources and skills to convene and coordinate participating organizations
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