Public Health Landscape in West Virginia:
“A Focus on Protecting the Health and Well-being of Our Residents”

Rahul Gupta, MD, MPH, FACP
Commissioner and State Health Officer
Local Health Officer Summit Opening Remarks
April 8, 2016
U.S. Life Expectancy at Birth – Selected Years

Source: www.healthypeople.gov
Leading Causes of Death in U.S.

“Influencers” of Health

Source: Dahlgren and Whitehead, 1991
Determinants of Health

Source: countyhealthrankings.com
1. Median age 41.3 years
   • 3rd highest in nation based on 2010 census data

2. Medicaid: 510,675* persons or 28% of the population

3. 18% report being disabled
   • Compared to 12% of the U.S. population

*Medicaid data as of (4/25/15)
4. Lowest in nation: Bachelor’s degree or higher (18.9%)*

5. Third lowest in nation: Median household income ($41,253)

6. Tenth highest: Percentage below poverty level (18.5%)

### College Retention Rates, 2010

<table>
<thead>
<tr>
<th>State</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>AK</td>
<td>63.3</td>
</tr>
<tr>
<td>SD</td>
<td>68.2</td>
</tr>
<tr>
<td>WV</td>
<td>68.3</td>
</tr>
<tr>
<td>MT</td>
<td>68.4</td>
</tr>
<tr>
<td>ID</td>
<td>68.5</td>
</tr>
<tr>
<td>OK</td>
<td>69.1</td>
</tr>
<tr>
<td>AR</td>
<td>69.9</td>
</tr>
<tr>
<td>AZ</td>
<td>70.0</td>
</tr>
<tr>
<td>NM</td>
<td>70.5</td>
</tr>
<tr>
<td>KY</td>
<td>71.8</td>
</tr>
<tr>
<td>AL</td>
<td>72.1</td>
</tr>
<tr>
<td>KS</td>
<td>72.7</td>
</tr>
</tbody>
</table>

WV 3rd Lowest Rate 68.3%

CA Highest Rate 84.0%


Source: NCES, IPEDS Fall 2010 Enrollment Retention Rate File
## WV Risk Factor Indicators

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>WV Prevalence</th>
<th>Rank</th>
<th>U.S. Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Smoking</td>
<td>26.7%</td>
<td>1</td>
<td>17.4%</td>
</tr>
<tr>
<td>Smokeless Tobacco Use</td>
<td>8.5%</td>
<td>2</td>
<td>3.6%</td>
</tr>
<tr>
<td>Fair/Poor Health Status</td>
<td>25.8%</td>
<td>1</td>
<td>18.0%</td>
</tr>
<tr>
<td>Lack of Physical Activity</td>
<td>28.7%</td>
<td>4</td>
<td>23.9%</td>
</tr>
</tbody>
</table>

Data Source: WV Health Statistics Center, Behavioral Risk Factor Surveillance System, 2014
## WV Morbidity Indicators

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>WV Prevalence</th>
<th>Rank</th>
<th>U.S. Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis</td>
<td>40.0%</td>
<td>1</td>
<td>25.6%</td>
</tr>
<tr>
<td>Disability</td>
<td>29.1%</td>
<td>1</td>
<td>20.8%</td>
</tr>
<tr>
<td>Cardiovascular Disease</td>
<td>14.1%</td>
<td>1</td>
<td>8.7%</td>
</tr>
<tr>
<td>Obesity</td>
<td>35.7%</td>
<td>2</td>
<td>28.9%</td>
</tr>
<tr>
<td>COPD</td>
<td>13.5%</td>
<td>1</td>
<td>6.6%</td>
</tr>
<tr>
<td>Hypertension (2013)</td>
<td>41.0%</td>
<td>2</td>
<td>32.5%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>14.1%</td>
<td>1</td>
<td>10.5%</td>
</tr>
<tr>
<td>Kidney Disease</td>
<td>3.6%</td>
<td>3</td>
<td>2.8%</td>
</tr>
<tr>
<td>Depression</td>
<td>23.6%</td>
<td>4</td>
<td>17.8%</td>
</tr>
<tr>
<td>Cancer</td>
<td>13.7%</td>
<td>5</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

Data Source: WV Health Statistics Center, Behavioral Risk Factor Surveillance System, 2014

*In 2015, WV ranked 47 (Overall)*
## WV Mortality Indicators

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>WV Rate</th>
<th>Rank</th>
<th>U.S. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accidents</td>
<td>71.7</td>
<td>1</td>
<td>39.4</td>
</tr>
<tr>
<td>Diabetes</td>
<td>34.1</td>
<td>1</td>
<td>21.2</td>
</tr>
<tr>
<td>Drug Overdoses</td>
<td>32.2</td>
<td>1</td>
<td>13.8</td>
</tr>
<tr>
<td>CLRD</td>
<td>64.5</td>
<td>2</td>
<td>42.1</td>
</tr>
<tr>
<td>All Causes</td>
<td>923.8</td>
<td>3</td>
<td>731.9</td>
</tr>
<tr>
<td>Cancer</td>
<td>190.8</td>
<td>3</td>
<td>163.2</td>
</tr>
</tbody>
</table>

Rates are Age-Adjusted per 100,000 Population
Data Source: WV Health Statistics Center, Vital Surveillance System, 2013
State Health Improvement Plan

Priority Focus Areas

- Substance Abuse
  - Behavioral Health
  - West Virginia: 32.2%
  - U.S.: 13.8%
  - Ranked Highest in U.S.

- Tobacco
  - West Virginia: 26.7%
  - U.S.: 17.4%
  - Ranked Highest in U.S.

- Obesity
  - West Virginia: 35.7%
  - U.S.: 28.9%
  - Ranked 2nd Highest in U.S.

Data Source: WV Health Statistics Center, Vital Surveillance System, 2013
Deaths from Drug Overdoses Have Increased Dramatically

US Resident Overdose Deaths by State, 2014

Data Source: CDC Wonder

West Virginia # 1
35.5 Deaths per 100,000
1999 Rate – 4.1
Increase – 766%

US Rate – 14.7
1999 Rate – 6.1
Increase – 141%
State-By-State Drug Overdose Comparison

2014 Four Highest and the Lowest State Resident Overdose Death Rates Compared to 1999

WV in 1999 4.1
WV in 2014 35.5 (Highest In US)

* Rates are age-adjusted to the 2000 US Standard Million

WV rate increased by eight-fold since 1999

Source: CDC Wonder
Drug Overdose Deaths Occurring in West Virginia, 2001-2015

11.4% drug overdose deaths involved heroin

- All Other Overdose Deaths
- Those Involving Heroin

Source - WV Health Statistics Center, Vital Surveillance System
# Selected Drug Overdose Death Information

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Overdoses - All Substances</th>
<th>All Opiate-Related**</th>
<th>Heroin-Related**</th>
<th>Morphine-Related**</th>
<th>Methadone-Related**</th>
<th>Oxycodone-Related**</th>
<th>Hydromorphone-Related**</th>
<th>Oxymorphone-Related</th>
<th>Hydrocodone-Related**</th>
<th>Fentanyl-Related**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>568</td>
<td>495</td>
<td>34</td>
<td>39</td>
<td>83</td>
<td>223</td>
<td>6</td>
<td>77</td>
<td>138</td>
<td>44</td>
</tr>
<tr>
<td>2011</td>
<td>656</td>
<td>573</td>
<td>41</td>
<td>45</td>
<td>61</td>
<td>224</td>
<td>14</td>
<td>182</td>
<td>171</td>
<td>51</td>
</tr>
<tr>
<td>2012</td>
<td>558</td>
<td>472</td>
<td>67</td>
<td>54</td>
<td>65</td>
<td>182</td>
<td>9</td>
<td>72</td>
<td>142</td>
<td>32</td>
</tr>
<tr>
<td>2013</td>
<td>585</td>
<td>494</td>
<td>157</td>
<td>48</td>
<td>55</td>
<td>199</td>
<td>12</td>
<td>32</td>
<td>137</td>
<td>40</td>
</tr>
<tr>
<td>2014*</td>
<td>628</td>
<td>548</td>
<td>165</td>
<td>68</td>
<td>39</td>
<td>199</td>
<td>11</td>
<td>48</td>
<td>133</td>
<td>55</td>
</tr>
<tr>
<td>2015*</td>
<td>529</td>
<td>467</td>
<td>151</td>
<td>50</td>
<td>22</td>
<td>137</td>
<td>6</td>
<td>42</td>
<td>88</td>
<td>131</td>
</tr>
</tbody>
</table>

Source: West Virginia Health Statistics Center, Vital Surveillance System. The figures above are from an analysis completed on December 22, 2015. The information is compiled from causes of death as reported on death certificates certified by the Office of the Chief Medical Examiner.
Tobacco: Adult Daily Smoking Rates

Comparison of Daily Smoking Rates in West Virginia to Select States

- West Virginia’s trend was not consistent with the other five states.
- Five States, minus West Virginia, decreased their daily smoking rates by 2010.
- Kentucky, Ohio, and Tennessee all had daily smoking rates drop to under 20% by 2010.
- Pennsylvania and Virginia experienced even greater results, with their daily smoking rates dropping under 15% by 2010.

Current Smoking Among WV Adults by Education

Prevalence of Current Cigarette Smoking Among West Virginia Adults by Education, 2014

Note: In 2011 there were changes made to the weighting methodology and the sample composition in the Behavioral Risk Factor Surveillance System (BRFSS), therefore the 2011 prevalence data and beyond is not directly comparable to previous years of BRFSS data.

Data Source: West Virginia Health Statistics Center, Behavioral Risk Factor Surveillance System.
Prevalence of Current Cigarette Smoking Among West Virginia Youth

Data Source: West Virginia Division of Tobacco Prevention, West Virginia Youth Tobacco Survey. Graph prepared by the West Virginia Health Statistics Center.
Never-Tobacco Use Among WV Youth

Data Source: West Virginia Division of Tobacco Prevention, West Virginia Youth Tobacco Survey.
Graph prepared by the West Virginia Health Statistics Center.
Obesity Prevalence

Percentage of Obese Adult Population
(3-year average from 2012-14 CDC Behavioral Risk Factor Surveillance System data)

Leanest State
Colorado

Fattest State
Mississippi

21.0
22.1
25
27
29
31
35.1

CalorieLab's
UNITED STATES
OF OBESITY 2015

[Map showing obesity prevalence by state]
Implications for Public Health

Challenges

• Shrinking funds to support traditional approaches
• Population health risk shifting from office to community
• Quality measures move from process-based to outcome-based
• Reimbursement shifts from volume to value
• Expectation to achieve accreditation
• Public health and medical care integration required
• Weaknesses inherent to public health

Opportunities

• Increase in insured population/demand
• Payment for disease management
• Payment for care coordination
• Improve operational efficiencies
• Align stakeholder interests and incentivize them the right way
• Embrace a culture of health by investing in social determinants
• Develop innovative public health system to improve outcomes
• Align with National Prevention Strategy
Population Health Approaches

1. The Goal
   - Improve Quality
   - Reduce Costs
   - Improve Health

2. The Approach
   - Value-Based Care
   - Data Systems and Analytics
   - Traditional Clinical Approaches
   - Innovative Patient-Centered Care in Community
   - Health In All Policies Approach

3. Prerequisite
   - Supportive and enabling public health system
Contact Information

Rahul Gupta, MD, MPH, FACP
Commissioner and State Health Officer
Bureau for Public Health

West Virginia Department of Health and Human Resources
350 Capitol Street, Room 702
Charleston, WV 25301
(304) 558-2971
Rahul.Gupta@wv.gov