CDC’s Growing Interest in Rural Health

Alana Knudson, PhD

NOSORH Regional Meeting
Minneapolis, MN
August 14, 2018
Insights from CDC’s MMWR Series on Rural Health

Diane M. Hall, Ph.D., MSEd.
Lead Health Scientist
NRHA 41st Annual Rural Health Conference

5/9/2018
Office of the Associate Director for Policy (OADP)

- The Office of Health System Collaboration (OHSC)
  - Enhances relationships and activities with key health care partners
  - CDC's 6|18 initiative
  - Clinical system and community health intervention coordination & collaboration

- Program Performance and Evaluation Office (PPEO)
  - Work across CDC to help programs with strategy, priorities, performance improvement, and program evaluation
  - Drive use of data
  - Build evaluation capacity
Office of the Associate Director for Policy (OADP) cont.

- Policy, Research, Analysis, and Development Office (PRADO)
  - Economic and budget impact analyses of high priority interventions
  - Capacity building across CDC
  - Synthesize and translate CDC science for a policy audience
  - CDC’s Health Impact in 5 Years (HI-5) initiative
  - Coordinate CDC’s rural health work
CDC’s *MMWR* Rural Health Series (2017)
Morbidity and Mortality Weekly Reports (MMWR)

- CDC’s primary vehicle for scientific publication of timely, reliable, authoritative, accurate, and objective public health data and recommendations
- Nearly 280K subscribers and was viewed more than 23 million times in 2016.
- Large social media following, with nearly 42,000 followers.
- In 2017, 13 in a year-long Rural Health Series

https://www.cdc.gov/mmwr/index.html
https://www.cdc.gov/mmwr/rural_health_series.html
MMWR Rural Health Series

- Leading Causes of Death (1/13/17)
- Reducing Potentially Excess Deaths (1/13/17)
- Health-related Behaviors (2/3/17)
- Children’s Mental Health (3/17/17)
- Diabetes Self-Management Education (4/28/17)
- Air and Drinking Water Quality (6/23/17)
- Cancer (7/7/17)
- BRCA Genetic Testing (9/8/17)
- Passenger Vehicle Deaths (9/22/17)
- Suicide (10/6/17)
- Illicit Drug Use (10/20/17)
- Occupational Air Quality (11/3/17)
- Racial/ethnic disparities (11/17/17)

https://www.cdc.gov/mmwr/rural_health_series.html
Rural areas experience higher age-adjusted death rates from the five leading causes of death

Percentage of potentially excess deaths among persons aged <80 years for five leading causes of death — National Vital Statistics System, United States, 2014

- Heart Disease
- Cancer
- Unintentional Injury
- Chronic Lower Respiratory Disease
- Stroke

Other Findings

- Disparities between rural and non-rural populations can vary by:
  - Race
  - Region
  - Age
Extending the Reach – Science, Policy, Practice

- Journal editorials
  - NEJM
  - Journal of Rural Health
  - Journal of Health Care for the Poor and Underserved

- CDC policy briefs
- Hill outreach, briefing on Injury reports
- Webinars with FORHP’s RHIhub
Policy Briefs

- Online:
  - Children’s mental health
  - Diabetes
  - Seat belts
  - Opioids

- Coming soon:
  - Suicide
  - Cancer
Other CDC Rural Health Work
Example: Addressing Social Determinants of Health

In fiscal 2017, the High Obesity program supported obesity reduction activities in

- 49 counties across 11 states
- Reaching over 1.9 million residents
- Predominantly rural communities in the South and Midwest
- Awards to land grant institutions and cooperative extension

Auburn University example

- Working in 14 Alabama counties
- Created new walking and biking trails
- Established safe routes to school
Other CDC Activities

- Funding announcements
- Internal work group
- Trainings for CDC staff
- Partnerships
Finding Information on CDC.gov

- CDC Rural Health webpage
  https://www.cdc.gov/ruralhealth/index.html

- POLARIS policy portal
  https://www.cdc.gov/policy/polaris/

- POLARIS rural health page (coming soon!)
  https://www.cdc.gov/policy/polaris/healthtopics/ruralhealth.html
ADPolicy@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
CDC’s Growing Interest – A View from the Walsh Center
Trends in Age-adjusted Mortality Rate by Sex and Rurality, 1999-2015

*Aggregate includes both Metro and Nonmetro. Both rates are inclusive of individuals ages 25-64.

Index for Mortality Rates for Cause Related to the National Mortality Rate among Persons (Males) Age 25 to 64 Years, in HHS Region 5 (IL, IN, MI, MN, OH, WI), by Rural-Urban Status: United States, 2011-2013

Objects above the horizontal line where index=100 indicates mortality rates higher than the national average, below the line are values below the average.
Index for Mortality Rates for Cause Related to the National Mortality Rate among Persons (Females) Age 25 to 64 Years, in HHS Region 5 (IL, IN, MI, MN, OH, WI), by Rural-Urban Status: United States, 2011-2013

Objects above the horizontal line where index=100 indicates mortality rates higher than the national average, below the line are values below the average.
Rural Health Disparities – HHS Region 7, Males 25-64

Index for Mortality Rates for Cause Related to the National Mortality Rate among Persons (Males) Age 25 to 64 Years, in HHS Region 7 (IA, KS, MO, NE), by Rural-Urban Status: United States, 2011-2013

Objects above the horizontal line where index=100 indicates mortality rates higher than the national average, below the line are values below the average.
Index for Mortality Rates for Cause Related to the National Mortality Rate among Persons (Females) Age 25 to 64 Years, in HHS Region 7 (IA, KS, MO, NE), by Rural-Urban Status: United States, 2011-2013

Objects above the horizontal line where index=100 indicates mortality rates higher than the national average, below the line are values below the average.
Health departments cutting staff, service hours with unsure future

By Marwa Eltagouri, Contact Reporter
Chicago Tribune

Health department cuts staff, increases fees
September 1, 2017
By Candy Neal
cneal@dc herald.com

Wyoming Department Of Health Cuts Will Impact Programs And Cost Private Sector Jobs
By Bob Beck
Jun 21, 2016

Health department cuts will cost millions for clinics helping uninsured patients
By Megan Allison
Posted: 3:26 PM, Nov 16, 2017

Nine health department clinics closing in MS
Published: Thursday, January 21st, 2016, 7:14 pm EST
Updated: Friday, January 22nd 2016, 3:52 pm EST
By Quentin Jones, Reporter
Investigate differences between urban and rural health agencies in terms of:

- Funding sources;
- Clinical and population-based service provision; and

Identify opportunities and challenges facing rural public health agencies
## NACCHO Profile Analysis – Small versus Rural

<table>
<thead>
<tr>
<th></th>
<th>Urban n(%)</th>
<th>Large Rural n(%)</th>
<th>Small Rural n(%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50,000</td>
<td>224 (20.2)</td>
<td>205 (18.5)</td>
<td>680 (61.3)</td>
<td>1109</td>
</tr>
<tr>
<td>50,000-99,999</td>
<td>126 (40.9)</td>
<td>136 (44.2)</td>
<td>46 (14.9)</td>
<td>308</td>
</tr>
<tr>
<td>100,000+</td>
<td>438 (85.4)</td>
<td>58 (11.3)</td>
<td>17 (3.3)</td>
<td>513</td>
</tr>
</tbody>
</table>

Data source: Rural-Urban Analysis of 2016 NACCHO Profile Data
### Findings – Revenue Sources

#### Proportion of revenue by rurality

<table>
<thead>
<tr>
<th></th>
<th>Proportion of revenue</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Large Rural</td>
</tr>
<tr>
<td>Local Sources</td>
<td>42.8</td>
<td>25.6</td>
</tr>
<tr>
<td>State Sources</td>
<td>15.7</td>
<td>21.1</td>
</tr>
<tr>
<td>Federal Pass Through</td>
<td>16.1</td>
<td>20.1</td>
</tr>
<tr>
<td>Federal Direct</td>
<td>2.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Medicare/Medicaid</td>
<td>6.0</td>
<td>13.3</td>
</tr>
<tr>
<td>Private Insurance</td>
<td>1.1</td>
<td>2.9</td>
</tr>
<tr>
<td>Patient Personal Fees</td>
<td>1.3</td>
<td>2.7</td>
</tr>
<tr>
<td>Non-clinical Fees &amp; Fines</td>
<td>8.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Private Foundations</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Other</td>
<td>2.8</td>
<td>2.5</td>
</tr>
</tbody>
</table>

- Urban HDs rely more heavily on local sources than large rural and small rural LHDs
- Both large rural and small rural LHDs rely more heavily on state and federal pass through revenue than urban LHDs
- The proportion of funds that came from clinical funding sources, including Medicare/Medicaid, private insurance, and personal patient fees were significantly higher for large and small rural HDs compared to urban LHDs.
Findings – Revenue Sources

Local Health Department Revenues by Degree of Rurality

[Bar chart showing revenue sources for Small Rural, Large Rural, and Urban areas.

Data source: Rural-Urban Analysis of 2016 NACCHO Profile Data]
Findings – Service Provision

Clinical Services

- In terms of services performed by the LHD directly, rural LHDs were more likely to provide immunizations, screenings, treatment of communicable diseases, and maternal and child health services than urban LHDs.

Population-based services

- In terms of services performed by the LHD directly, rural LHDs (both large and small) were more likely to report conducting communicable disease and infectious disease epidemiology and surveillance.

- Urban LHDs were more likely to provide environmental surveillance.
Policy Implications

- Urban communities are served by LHDs with more local revenue and more community capacity to provide the clinical services vital to those who need care. They can focus more on population-based services.
- Many rural LHDs must retain direct care services due to community need.
- Large and small rural LHDs are more vulnerable to changes in state and federal funding.
- Organizations that work to support LHDs need to consider how they can support both rural and urban health departments in pursuing their missions to improve health in their jurisdictions.
Opioids, Opioids, Opioids
Estimated Death Rates for Drug Poisonings By County: 1999 - 2014

Produced by East Tennessee State University College of Public Health using CDC NCHS Data
The Growth of an Epidemic

The Opioid Crisis is Contributing to Lowering U.S. Life Expectancy.

Prescription and illicit opioids killed more than 33,000 Americans in 2015, almost quadruple the number in 2000. The toll of the epidemic is so great that it contributed to the first decline in U.S. life expectancy since 1993.
http://overdosemappingtool.norc.org
Drug Overdose Deaths in Appalachia by Disability Status

http://overdosemappingtool.norc.org

The Walsh Center for Rural Health Analysis

NDRC AT THE UNIVERSITY OF CHICAGO
http://overdosemappingtool.norc.org
County Information and Fact Sheets

Overdose Rate
Deaths per 100k pop, ages 15-64 by county

Timeframe
2006 - 10
2011 - 15

Urban / Rural
All

Zoom

The Walsh Center
for Rural Health Analysis

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## County Information and Fact Sheets

### Logan County, WV

#### Drug Overdose Mortality Rate

<table>
<thead>
<tr>
<th>Drug Overdose Mortality Rate</th>
<th>Deaths per 100k population (Ages 15-64)</th>
</tr>
</thead>
<tbody>
<tr>
<td>89.4</td>
<td>30.6</td>
</tr>
<tr>
<td>20.6</td>
<td>Appalachian Region</td>
</tr>
</tbody>
</table>

#### Socio Demographic

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Logan County</th>
<th>Appalachian Region</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (non-Hispanic)</td>
<td>95.8%</td>
<td>82.5%</td>
<td>62.3%</td>
</tr>
<tr>
<td>African American (non-Hispanic)</td>
<td>2.1%</td>
<td>9.4%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.9%</td>
<td>4.6%</td>
<td>17.1%</td>
</tr>
<tr>
<td>Other</td>
<td>1.1%</td>
<td>5.1%</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Under 15</td>
<td>17.2%</td>
<td>17.9%</td>
<td>19.0%</td>
</tr>
<tr>
<td>15-64</td>
<td>66.5%</td>
<td>65.8%</td>
<td>66.2%</td>
</tr>
<tr>
<td>65+</td>
<td>16.3%</td>
<td>16.3%</td>
<td>14.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>At least High School Diploma</td>
<td>76.4%</td>
<td>85.5%</td>
<td>86.7%</td>
</tr>
<tr>
<td>Bachelor’s Degree or more</td>
<td>8.1%</td>
<td>22.6%</td>
<td>29.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Disability Status</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% Residents with a disability</td>
<td>29.1%</td>
<td>13.5%</td>
<td>12.4%</td>
</tr>
</tbody>
</table>

#### Economic

<table>
<thead>
<tr>
<th>Median Household Income</th>
<th>$36,763</th>
<th>$44,744</th>
<th>$53,889</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Rate</td>
<td>19.7%</td>
<td>17.1%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>10.9%</td>
<td>8.3%</td>
<td>5.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accident-prone Employment</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>2.0%</td>
<td>4.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Mining</td>
<td>15.6%</td>
<td>13.3%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>4.6%</td>
<td>13.0%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Trade, Transportation, &amp; Utilities</td>
<td>21.5%</td>
<td>19.8%</td>
<td>19.1%</td>
</tr>
</tbody>
</table>
Recent CDC Rural Health RFPs

- Exploring the Challenges in Diagnosis and Treatment of Traumatic Brain Injury (TBI) in Rural Areas
- Research Grants for the Primary or Secondary Prevention of Opioid Overdose
Thank You!

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