Rural Public Health: Addressing Rural Inequalities and Health Disparities

NOSORH Annual Meeting
Portland, OR ~ September 1, 2015

Michael Meit, MA, MPH
Alana Knudson, PhD

What is a “Health Disparity”?

- Inequality
- Difference in condition, rank
- Lack of equality as of opportunity, treatment, or status
- Inequity
  - Unfair and unjust
  - Unnecessary and avoidable
Social Determinants of Health

The social determinants can be classified into five domains:

1) Economic stability
   - Poverty, employment, food security, housing stability

2) Education
   - High school graduation, enrollment in higher education, language and literacy, early childhood education and development

3) Social and community context
   - Social cohesion, civic participation, perceptions of discrimination and equity, incarceration/institutionalization

4) Health and health care
   - Access to health care, access to primary care, health literacy

5) Neighborhood and built environment
   - Access to healthy foods, quality of housing, crime and violence, environmental conditions

Social Determinants of Rural Health

- Rural residents tend to be poorer than urban residents
  - Average median household income is $42,628 for rural counties ($52,204 for urban counties) (2013)
  - The average percentage of children living (ages 0-17) living in poverty is 26% in rural counties (21% urban) (2013)

- Rural residents’ educational attainment (2009-2013) - Averaged across counties
  - 16.5% have < high school education (14.7% urban)
  - 36.3% have only a high school diploma (31.9% urban)
  - 17.4% have a Bachelor’s degree or higher (24% urban)

Examination of Trends in Rural and Urban Health: Establishing a Baseline for Health Reform

- CDC published *Health United States, 2001 With Urban and Rural Health Chartbook*
  - No urban/rural data update since 2001

- Purpose of this study:
  - Update of rural health status ten years later to understand trends
  - Provide baseline of rural/urban differences in health status and access to care prior to ACA implementation
Methods

• Replicated analyses conducted in 2001 using most recent data available (2006-2011)
• Used same data source, when possible:
  • National Vital Statistics System
  • Area Resource File (HRSA)
  • U.S. Census Bureau
  • National Health Interview Survey (NCHS)
  • National Hospital Discharge Survey (NCHS)
  • National Survey on Drug Use and Health (SAMHSA)
  • Treatment Episode Data Set (SAMHSA)
• Applied same geographic definitions, although classifications may have changed since 2001:
  • Metropolitan Counties: large central, large fringe, small
  • Nonmetropolitan Counties: with a city ≥ 10,000 population, without a city ≥ 10,000 population

Population: Poverty

Population in poverty by rurality

![Graph showing population in poverty by rurality for years 1997 and 2011.](image)
Mortality: Working-Age Adults

Death rates for all causes among persons 25-64 years of age by rurality

Mortality: Chronic Obstructive Pulmonary Diseases

Death rates for chronic obstructive pulmonary diseases among persons 20 years of age and over by rurality
Mortality: Suicide

Suicide rates among persons 15 years of age and over by rurality

Risk Factors: Adolescent Smoking

Cigarette smoking in the past month among adolescents 12-17 years of age by rurality
Risk Factors: Adult Smoking

Cigarette smoking among persons 18 years of age and older by rurality

Risk Factors: Obesity

Obesity among persons 18 years of age and older by rurality
Disparities in quality of care measures for micropolitan areas by 4 NQS priorities and Access

Key: \( n \) = number of measures
Better = Population received better quality of care than reference group
Same = Population and reference group received about the same quality of care
Worse = Population received worse quality of care than reference group

Disparities in quality of care measures for noncore areas by 4 NQS priorities and Access

Key: \( n \) = number of measures
Better = Population received better quality of care than reference group
Same = Population and reference group received about the same quality of care
Worse = Population received worse quality of care than reference group
Regional Mortality Study

• Purpose: To examine the impact of rurality on mortality and to explore the regional differences in the primary and underlying causes of death.

Methods

• Mortality data pulled from National Vital Statistics System (NVSS)
  • Years 2011-2013
• Data are Grouped by:
  • 2013 NCHS Urban-Rural Classification Scheme for Counties
    • (Large Central, Large Fringe, Small/Medium Metro, Micropolitan, Non-core)
  • HHS Regions
  • Age
  • Gender
  • Cause of Death
    • Top 10 Nation-wide causes of death for each age group
HHS Regions

Mortality Rates by HHS Region and Urban-Rural Status: United States, 2011-2013; Age: 25 to 64; Cause of Death: Suicide; Sex: Male

SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, Multiple Cause of Death.
Regional Differences in Mortality: Females; 25-64; HHS Region 5

Mortality Index: Females; 25 to 64; HHS Region 5: IL, IN, MI, OH, WI

**The line on the radar chart indicates the point at which the Regional and National rates are equal.**

*National rates are the mortality rates for the entire U.S. for the age range, gender, and cause specified, regardless of urban-rural status.*

Appalachian Region

*Map of the Appalachian Region showing rural and urban areas.*
Index for Mortality Rates for Cause Related to the National Mortality Rate among Persons (Males) Age 25 to 64 Years, In Appalachia Region, by Rural-Urban Status: United States, 2011-2013


Delta Region
Rural Resources to Improve Health

- RAC’s Community Health Gateway
  - Conducted on behalf of the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (ORHP)
  - A compilation of evidence-based practices and resources that can strengthen rural health programs
  - New toolkits each year on different topics that target ORHP grantees, future applicants, and rural communities
- Rural Health Models and Innovations Hub
  - [https://www.raconline.org/community/health](https://www.raconline.org/community/health)
Rural Health Examples

• Nebraska Community Addresses Food Desert
  • Cody-Kilgore: Cowboy GRIT Inspires a Community
    • [http://www.cfra.org/blog/2012/10/18/too-tough-go-hungry](http://www.cfra.org/blog/2012/10/18/too-tough-go-hungry)

• North Carolina Community Improves Health
  • Nash Health Care Chaplain Sows Seeds of Healthy Living
    • [https://www.youtube.com/watch?v=r8lhNVMA42k](https://www.youtube.com/watch?v=r8lhNVMA42k)

Michael Meit, MA, MPH
Email: meit-michael@norc.org
Phone: 301-634-9324

Alana Knudson, PhD
Email: knudson-alana@norc.org
Phone: 301-634-9326