Rural Populations and Health Disparities

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Rural Health Seminar

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Populations with Health Disparities

• Racial/ethnic minorities defined by census
• Less privileged socio-economic status
• Underserved rural residents
• Sexual and gender minorities
• A health outcome that is worse in these populations compared to a reference group defines a health disparity
• Social disadvantage that results in part from being subject to discrimination or racism, and being underserved in health care
Race and Socioeconomic Status are Fundamental in Determining Health

- Race/ethnicity predict life expectancy and mortality that are not fully explained
- African Americans have more strokes with the same SBP when compared to Whites
- Poor people smoke and drink more, have higher BMI and have higher rates of most chronic diseases
- Among persons with diabetes, all race/ethnic minorities have less heart disease and more ESRD compared to Whites
Distribution from Metropolitan to Rural
18% population, 65% Counties, 445 frontier counties

- Distribution varies: Blacks and Latinos in the South, Whites in South/Midwest, AI/AN in West/Midwest, Asian, NH/PI and Latinos in West
- Blacks and Latinos have less CRC and breast cancer screenings; Pap screening is similar
- Binge drinking highest in Whites (16.3%)
- Current smoking highest in AI/AN (36.7%)
- Leisure time physical inactivity highest in Blacks (38.2%) and Latinos (35.4%)
- BMI $\geq$30: Blacks 45%, Latinos 36%, AI/AN 39%, Whites 32%
Widening Rural–Urban Disparities in All-Cause Mortality and Mortality from Major Causes of Death in the USA, 1969–2009
## Trends in Suicide Rates by Race and Urbanization

**MMWR, Surveillance Summaries, October 6, 2017, 66: 1-9**

<table>
<thead>
<tr>
<th>Race/Group</th>
<th>2001-03</th>
<th>2013-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>13.7/16.8</td>
<td>17.2/22</td>
</tr>
<tr>
<td>Blacks</td>
<td>6.2/6.2</td>
<td>6.6/6.1</td>
</tr>
<tr>
<td>Asians/PI</td>
<td>6.1/8.3</td>
<td>6.7/9.4</td>
</tr>
<tr>
<td>AI/AN</td>
<td>10.6/20.3</td>
<td>14/29.1</td>
</tr>
<tr>
<td>Latinos</td>
<td>6.4/9.2</td>
<td>6.4/10.2</td>
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</tbody>
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Social Determinants of Health

• Demographics including family background
• Urban or rural residence or geographic region
• Cultural identity, religiosity, spirituality
• Language proficiency, Literacy, numeracy
• Structural determinants: housing, green space, broadband, economic opportunity, transportation, schools, healthy food access, public safety
• PhenX Toolkit on Social Determinants of Health: https://www.phenxtoolkit.org/collections/view/6
# National Institute on Minority Health and Health Disparities Research Framework

<table>
<thead>
<tr>
<th>Domains of Influence (Over the Lifecourse)</th>
<th>Levels of Influence*</th>
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</thead>
<tbody>
<tr>
<td>Biological</td>
<td>Individual</td>
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<tr>
<td>Biological</td>
<td>Caregiver–Child Interaction</td>
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<tr>
<td>Biological</td>
<td>Family Microbiome</td>
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<tr>
<td>Behavioral</td>
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<td>Physical/Built Environment</td>
<td>Individual</td>
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<td>Sociocultural Environment</td>
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<td>Family Microbiome</td>
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<tr>
<td>Health Care System</td>
<td>Individual</td>
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<td>Caregiver–Child Interaction</td>
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<td>Health Care System</td>
<td>Family Microbiome</td>
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<tr>
<td>Health Outcomes</td>
<td>Individual</td>
</tr>
<tr>
<td>Health Outcomes</td>
<td>Caregiver–Child Interaction</td>
</tr>
<tr>
<td>Health Outcomes</td>
<td>Family Microbiome</td>
</tr>
</tbody>
</table>

*Levels of Influence:
- Individual
- Interpersonal
- Community
- Societal

**Domains of Influence**
- Biological
- Behavioral
- Physical/Built Environment
- Sociocultural Environment
- Health Care System

**Health Outcomes**
- Individual Health
- Family/Organizational Health
- Community Health
- Population Health

*Health Disparity Populations: Race/Ethnicity, Low SES, Rural, Sexual/Gender Minority
Other Fundamental Characteristics: Sex/Gender, Disability, Geographic Region
Racism as Research Construct

- **Interpersonal**: Most work done, good measures developed, associations established

- **Structural**: History, culture, institutions, policies and codified practices that perpetuate inequity; imperative to research

- **Internalized**: How discrimination effects individuals who are not aware or sublimate; accept cultural or biological inferiority

- Perceived societal discrimination and

- Second-hand effects of racism
Supplements to Support Rural Health Disparities Multi-Sectoral Research Resource Hubs

- Three supplements awarded to San Diego State University, Tuskegee University, and Morehouse School of Medicine
- Focused on different rural catchment areas: US/Mexico Border, Alabama Black Belt, and southwest Georgia
- Collectively, proposed coalition partners represent health, public health, local government, law enforcement, transportation, agriculture, faith-based, community philanthropic, and academic sectors
- If successful, hubs can serve as a pilot for a larger initiative involving other NIH ICs and Federal partners

Challenges in Rural Communities

• Structural social determinants of health:
  o Transportation options limited – distance
  o Broadband access and cell phone service

• Health care system challenges
  o Fewer clinicians, more transient
  o Quality of care in small hospitals
  o Access to preventive care

• Interpersonal issues: Stigma

• Build on positive features
  o Less air pollution
  o Promote access to healthy food
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