Looking Beyond Health Care: The Importance of the Social Determinants of Health for Rural Aging

Carrie Henning-Smith, PhD, MPH, MSW
Associate Professor, University of Minnesota School of Public Health
Deputy Director, University of Minnesota Rural Health Research Center

University of Maine Clinical Geriatrics Colloquium
October 27, 2020
“The social determinants of health (SDH) are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.

These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems.”

- World Health Organization Definition
## Social Determinants of Health

<table>
<thead>
<tr>
<th>Economic Stability</th>
<th>Neighborhood and Physical Environment</th>
<th>Education</th>
<th>Food</th>
<th>Community and Social Context</th>
<th>Health Care System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment, Income Expenses, Debt, Medical bills Support</td>
<td>Housing, Transportation, Safety, Parks, Playgrounds, Walkability, Zip code / geography</td>
<td>Literacy, Language, Early childhood education, Vocational training, Higher education</td>
<td>Hunger, Access to healthy options</td>
<td>Social integration, Support systems, Community engagement, Discrimination, Stress</td>
<td>Health coverage, Provider availability, Provider linguistic and cultural competency, Quality of care</td>
</tr>
</tbody>
</table>

### Health Outcomes
- Mortality
- Morbidity
- Life Expectancy
- Health Care Expenditures
- Health Status
- Functional Limitations

Put Another Way...

- Person in environment
- Socio-ecological model
- Health in all policies

Figure source: Westat; CDC, 2014; WHO, 2014
Exposure over the life course
Cumulative advantage/disadvantage (Dannefer, 2003)
Shape opportunities over the lifespan and living situation and economic position in older ages
Social Determinants of Health and Rural

- Rural residents are: “older, poorer, and sicker”
- Rural areas differ from urban in terms of infrastructure, environment, socio-demographic characteristics, access to resources, etc.
- Important to consider the unique impact of social determinants of health on rural older adults
Rural Socio-Demographic and Economic Characteristics

• Compared to urban, rural residents:
  - Are older (on average)
  - Have lower educational attainment
  - Have lower incomes
  - Have higher unemployment rates
  - Have lower health insurance rates
  - Are more likely to work (or to have worked) in physically demanding jobs

• Each of these is associated with poorer health outcomes
Educational Attainment by Rurality

Source: 2016 Medicare Current Beneficiary Survey (data show all Medicare beneficiaries)
Rural/Urban Differences in Poverty Among Older Adults (65+)

Rural/Urban Differences in Assets and Wealth Among Older Adults (65+)

Race and Ethnicity of Older Adults

Structural Racism and Rural Health

EXHIBIT 2

Sample sociodemographic characteristics of rural counties, by majority racial/ethnic group, 2017

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>All rural counties (N = 1,970)</th>
<th>Non-Hispanic white (n = 1,753)</th>
<th>Non-Hispanic black (n = 66)</th>
<th>Hispanic (n = 68)</th>
<th>AI/AN (n = 25)</th>
<th>None (n = 58)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median household income ($)</td>
<td>44,790</td>
<td>45,605</td>
<td>30,281***</td>
<td>43,166**</td>
<td>39,001***</td>
<td>41,080***</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>5.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population younger than age 18 (%)</td>
<td>22.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female (%)</td>
<td>49.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited access to healthy food (%)</td>
<td>9.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary care physicians per capita</td>
<td>50.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EXHIBIT 3

Predicted county-level years of potential life lost before age 75 per 100,000 people, by majority racial/ethnic group in county, 2012-14

Source: Henning-Smith, Hernandez, Hardeman, Ramirez, Kozhimannil, 2019, Health Affairs
Infrastructure and Physical Environment

• Rural areas differ from urban in terms of:
  - Natural and built environments
  - Population density
  - Access to resources and amenities, such as:
    • Health care
    • Transportation
    • Housing
    • Broadband Internet and cellular connectivity
    • Water and air quality
Access to Health Care - Hospital Closures

Source: University of North Carolina Sheps Center
https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/
Rural Transportation Challenges

- Key rural-specific challenges:
  - Infrastructure (roads, bridges, availability of vehicles);
  - Geography;
  - Funding;
  - Accessibility;
  - Political support and public awareness;
  - Socio-demographics

Homeownership among Older Adults

- Urban:
  - Own: 72.2%
  - Rent: 20.0%
  - Other: 7.8%

- Rural:
  - Own: 80.2%
  - Rent: 13.0%
  - Other: 6.8%

Broadband Access

Source: Federal Communications Commission: https://www.fcc.gov/reports-research/maps/connect2health/#ll=30.826781,-78.658447&z=7&t=broadband&bbm=fixed_access&dmf=none&zlt=county
Compared to urban older adults, rural older adults:

- Are more likely to live alone
- Have larger social networks
- Are more likely to report feeling lonely
Rural-Urban Differences: Living Alone

Rural-Urban Differences: Relationships

Number of Close Relatives

**Non-core different than urban at p<0.001; Source: Henning-Smith et al. (2019)**
Rural-Urban Differences: Relationships

*Micropolitan different than urban at p<0.05;
**Non-core different than urban at p<0.01; Source: Henning-Smith et al. (2019)
Rural-Urban Differences: Loneliness

Feel isolated often/some of the time
- Urban: 29%
- Micropolitan Rural: 27%
- Non-Core Rural: 24%

Feel left out often/some of the time
- Urban: 30%
- Micropolitan Rural: 27%
- Non-Core Rural: 38%

Lack companionship often/some of the time
- Urban: 37%
- Micropolitan Rural: 31%
- Non-Core Rural: 38%

*Different than urban at p<0.05; Source: Henning-Smith et al. (2019)
Why Address Social Determinants?

Health Outcomes
- Length of Life (50%)
- Quality of Life (50%)

Health Factors
- Health Behaviors (30%)
  - Tobacco Use
  - Diet & Exercise
  - Alcohol & Drug Use
  - Sexual Activity
- Clinical Care (20%)
  - Access to Care
  - Quality of Care
- Social & Economic Factors (40%)
  - Education
  - Employment
  - Income
  - Family & Social Support
  - Community Safety
- Physical Environment (10%)
  - Air & Water Quality
  - Housing & Transit

Policies & Programs

Source: RWJF County Health Rankings
https://www.countyhealthrankings.org/resources/county-health-rankings-model
Where to Start?

Source: Rural Health Information Hub, https://www.ruralhealthinfo.org/toolkits/sdoh

Social Determinants of Health in Rural Communities Toolkit

Welcome to the Social Determinants of Health in Rural Communities Toolkit. This toolkit compiles evidence-based and promising models and resources to support organizations.
Thank you!

Carrie Henning-Smith
henn0329@umn.edu
@Carrie_H_S