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The Geography of Disability in America: On Rural-Urban Differences in Impairment Rates

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The Geography of Disability in America: On Rural-Urban Differences in Impairment Rates

How do disability rates vary across the United States and between rural and urban areas?

For over a decade, this question could not be answered with current public data. In December 2013, however, the US Census Bureau released the 2008-2012 American Community Survey (ACS) summary data. These data represent the first opportunity since the 2000 Census to answer questions about disability prevalence for the entire nation, and rural and urban geographies. These data can help inform critical disability policy decisions as well as guide future research.

The ACS does not directly measure disability. Rather, it evaluates disability in terms of functional impairment and assumes that a person who reports having at least one of six functional impairments (hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty) has a disability. As such, the ACS data allows us to explore disability, or impairment, for different types of geographies, with the focus here on impairment rates in rural areas versus urban areas.

What is Rural?

There are multiple definitions of rural (Cromartie & Bucholtz, 2008; Enders, Seekins, Brandt 2005). In this report, we use the Office of Management and Budget (OMB, 2013) definition, which classifies metropolitan counties ("urban") and nonmetropolitan counties ("rural"). Nonmetropolitan counties can be further split into two categories: micropolitan and noncore counties.

- Metropolitan counties include at least one urban core of 50,000 or more people. (Nearby, lower population counties with close commuting ties may also be part of a metropolitan area.)
- Micropolitan counties are nonmetropolitan counties with an urban core of 10,000 to 50,000 people.
- Noncore counties are nonmetropolitan counties with an urban core population of less than 10,000.
Nonmetropolitan (noncore and micropolitan) counties are spread across vast stretches of the American landscape. In fact, these counties account for 63% of all US counties and 72% of US landmass\(^1\). The following map shows the distribution of metropolitan, micropolitan and noncore counties across the United States.

\(^1\)By focusing on the OMB designations and county boundaries this number reflects only one way of conceptualizing rural America. The 72% represents the total landmass of all nonmetropolitan counties. However, the numbers are quite different when using the Census Bureau’s definition. The Census defines rural as all populations not within an urban area (areas with populations of 2,500 or more). According to this definition, 97% of the US total landmass is rural. See Enders, Seekins and Brandt (2005) for more information.

Map 1. OMB Metropolitan, Micropolitan and Noncore county designations across the United States.

Overview: Impairment Rates in Metropolitan, Micropolitan, and Noncore Counties

Of over 300 million Americans, roughly 37 million, or 12%, report experiencing at least one type of impairment. In metropolitan counties, 11% of people reported having at least one of the six impairments associated with disability. In contrast, 15% of people living in micropolitan counties and 17% of people living in noncore counties reported at least one impairment. Combined, these “rural” nonmetropolitan counties represented about 15% of the U.S. population but nearly 20% of all people with impairments (Table 1).
Table 1. Counties, general population and population of persons with impairments by county type.

<table>
<thead>
<tr>
<th>County Type</th>
<th>Number</th>
<th>Percent</th>
<th>Number (in mill)</th>
<th>Percent</th>
<th>Number (in mill)</th>
<th>Percent of US</th>
<th>Percent in County</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>3143</td>
<td>100</td>
<td>303.97</td>
<td>100</td>
<td>36.55</td>
<td>100</td>
<td>12.0</td>
</tr>
<tr>
<td>Metropolitan</td>
<td>1167</td>
<td>37.1</td>
<td>259.00</td>
<td>85.2</td>
<td>29.31</td>
<td>80.2</td>
<td>11.3</td>
</tr>
<tr>
<td>Nonmetropolitan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Micropolitan</td>
<td>641</td>
<td>20.4</td>
<td>26.44</td>
<td>8.7</td>
<td>4.02</td>
<td>11.0</td>
<td>15.2</td>
</tr>
<tr>
<td>Noncore</td>
<td>1335</td>
<td>42.5</td>
<td>18.52</td>
<td>6.1</td>
<td>3.22</td>
<td>8.8</td>
<td>17.4</td>
</tr>
</tbody>
</table>

Rates by Impairment Type

Impairment rates are an aggregate of several functional impairments including hearing, vision, cognitive, ambulatory, self-care, and independent living. Chart 1 shows impairment rates for persons aged 18 and older by impairment type for metropolitan, micropolitan and noncore counties. National rates, based on all counties, are shown as well. Average impairment rates are higher for micropolitan areas than metropolitan areas and are highest for noncore counties. The chart clearly illustrates that rural and urban disparities are consistent across impairment type. Additional factsheets on the individual impairment types are forth coming.

Impairment by Age

Disability rates are 4% for people age 17 and under, 10% for people age 18 to 65, and 37% for people age 65 and over. Based on these differences, one might assume disability rates are higher in nonmetropolitan counties because their populations are older. However, Chart 2 illustrates that disability rates in nonmetropolitan counties are higher across all age groups, and that noncore counties experience the highest rates overall. Rural impairment rates are therefore higher than urban rates even when considering age.
Summary and Outlook

Metro-, micro- and noncore differences in impairment rates are evident overall and when separated by impairment type or age. This suggests a systematic relationship between impairment rates and geography highlighting higher rates of disability in rural areas. This data has the potential to inform critical disability policy nationwide by proving that rural is relevant to disability and policies need to reflect this reality. In addition, these results raise questions for further research exploring geographic differences in impairment rates. Are there geographic factors that contribute to higher rates of impairment in rural areas? For instance, do features in the rural environment, such as less accessible sidewalks of business entryways in rural contribute to the rates of people reporting ambulatory difficulties? Likewise, does more limited access to public transportation increase rates of reported independent living impairment in noncore counties? To shed light on the geography of impairment, conditions that vary for metropolitan, micropolitan, and noncore counties need to be examined including employment opportunities, income, poverty, access to services, and migration patterns between rural and urban areas.

References:


Additional Resources:
“Update on the demography of rural disability: part two” (2005)

Map Facts: Disability in Rural America (2014)

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