National Rural Health Association Policy Brief

Urban bias in rural data sets

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Introduction

It is important to frame rurality accurately to understand community needs and provide adequate care to rural residents. The federal government has varying designations for rurality,[i] which affects health care access and quality.[ii] Many federal datasets suppress information on levels of rurality using a dichotomous metro/non-metro classification (such as The National Longitudinal Study of Adolescent to Adult Health (Add Health) and the Youth Risk Behavior Surveillance System (YRBS). This results in data that inaccurately reflect varying levels of rurality and classifies all non-metro communities homogeneously. Inaccurate representations of rural communities lead to urban bias, resulting in an inequitable distribution of resources and funding.

Analysis

Classifications of 'rural'

One of the most commonly used definitions of rural is from the U.S. Census Bureau, which classifies rural communities as those outside of a metropolitan catchment area based on resource availability within a certain radius (typically a one-hour drive or <60 miles).[iii] Scholars and policy experts have contested this definition because the breadth of these catchment areas fails to consider immediate access to resources. As a result, some communities are labeled as non-rural even though they face similar geographic barriers and resource differences as those classified as "rural."[iv,v]

Federal agencies such as the Office of Management and Budget, the U.S. Department of Agriculture (USDA), and the USDA Economic Research Service have their own definitions of rurality.[vi,vii] Further, federal agencies such as Health Resources and Services Administration (HRSA), Health and Human Services, and Veterans Affairs use a combination[viii,ix] of at least two definitions of rural from the previously mentioned agencies.

These classification types result in data sets that ignore the varying levels of rurality and disparities experienced within diverse rural communities. For example, colonias[x,xi] are rural communities within the U.S.-Mexico border region defined in response to a need for affordable housing by the Housing and Urban Department, yet they are not definitively incorporated in rural definitions and categories. The classifications also exclude or misrepresent frontier[xii,xiii] communities, which have a higher degree of remoteness to goods, services, and health care that negatively affect social determinants of health.

Population size considerations

It has long been documented that rural populations are undercounted in census efforts. Funding allocations to address a wide range of health and health-related resources such as hunger, transportation, and broadband, are often calculated using U.S. Census data, meaning rural communities that have been misclassified and undercounted are often left out.[xiv] For example, rural housing needs are often misrepresented due to a lack of data on households receiving USDA's Rural Rental Assistance or enrolled in programs authorized under the Native American Housing Assistance and Self Determination Act.[xv]

Similar challenges arise when applying scoring methodology to a designated Health Professional Shortage Area (HPSA). HRSA designates geographic areas, population groups within geographic areas, and certain facilities as HPSAs. After a HPSA is designated, it receives a score according to established criteria. Unfortunately, the measures used in the scoring process do not reflect the unique access problems associated with rural locations. This unintentionally biases programs using HPSA scores towards urban areas, like the National Health Service Corps.

Implications for rural populations

Literature shows that many health issues including heart disease, substance use disorders, obesity, and diabetes vary depending on the level of rurality.[xvi] Inaccurate representations of rural people due to varying and limited definitions used to describe rurality may result in an inequitable distribution of resources and funding.[xvii] Varying definitions could mean that certain communities qualify as rural and need more resources under certain definitions, but not others.[xviii] Funding opportunities specifically for rural communities may use existing classifications that have broad definitions of "rural," which may exclude communities that do not classify as rural according to a specific definition.[xix,xx,xxi]

Policy recommendations

1. Support rural data infrastructure

- Data sets provided by state and federal agencies should expand designations for "rural" to include various levels of rurality, such as frontier communities, remote communities, colonias, and reservations.
    - USDA Rural-Urban Continuum Codes should be broadened from "non-metro" to be more inclusive and representative of rural and frontier communities.
    - As much as possible, detailed information should be included in the data sets (such as specific Rural-Urban Continuum Codes, Urban Influence Codes, etc.).
- Encourage the U.S. General Services Administration to include rural variables in the data hosted on data.gov.
- Test standardized measures used in data collection on rural populations to ensure they accurately reflect rural experiences and are appropriate in a rural context.
- Ensure online databases are easily accessible for researchers and the rural public.

2. Ensure equitable allocation of resources using rural definitions

- Establish an office within the Centers for Disease Control and Prevention to address rural health disparities, support rural public health infrastructure, and lead targeted research efforts in collaboration with local stakeholders to avoid underrepresentation of rural populations.
- Address urban bias in research, data, and funding by allocating rural carve-outs in federal programs aimed at improving health care access and social determinants of health such as broadband, transportation, housing, minority populations, and childcare.
- Require demonstration of rural partnerships and distribution of resources to rural communities to fund projects aimed at improving health in rural communities.
    - For example, many grants within the Federal Office of Rural Health Policy require a consortium of partners, 66 percent of which must be in a rural community to ensure resources reach rural populations.

- Ensure that rural areas are eligible for programs by reducing or eliminating population size requirements.
- Add a factor to the HRSA HPSA-scoring process to reflect the rurality of a HPSA's location.

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