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Defining Rurality

A Guide for Infant-Toddler Court Teams

National Evaluation of the Infant-Toddler Court Program

Introduction

Approximately 60 million, 1 in 5, Americans live in rural areas (Centers for Disease Control and Prevention, 2024). Accurately defining rural communities is an integral part of comprehensive data collection. When rurality is defined inaccurately or inconsistently, the data quality and access to funding, resources, and health care (Bouchard et al., 2023; Zahnd et al., 2022) can significantly affect these communities. Inaccurate measurement and population counts can impact policy aimed at improving public health through legislative representation and allocated funds (Scally & Burnstein, 2020). These inaccuracies additionally perpetuate a false perception of rural population decline, minimizing the urgency needed for developing and supporting rural-focused programs.

When the number of people living in rural areas is misunderstood or inaccurate, public and private resources and services may not be sufficiently allocated to cover public health needs. For example, if children and youth in rural communities are undercounted, state funding to increase access to nutritious food may be insufficiently allocated. Access to healthy food in rural “food deserts” is a critical strategy to address childhood obesity and chronic illness (Aris et al., 2024). Needs in these rural communities also may not receive sufficient levels of attention due to the public misunderstanding their degree of need (Scally & Burnstein, 2020). The existing data sets and definitions of rurality are imperfect measures but continue to be used to designate communities (e.g., rural, non-rural), biasing policy decision making. This is particularly relevant for the child welfare sector, as research has found rural communities have higher rates of child abuse and neglect (Golden Guzman et al., 2023). Without an accurate understanding of these communities, children and families may miss out on critical resources and services that can prevent maltreatment.

The purpose of this brief is to provide key information to state Infant-Toddler Court Programs and local partners implementing Infant-Toddler Court Teams (ITCTs) and to assist their data and evaluation efforts with rural populations. We will discuss the importance of intentionally defining rural

areas, identify and offer key considerations for widely used definitions of rurality used to designate communities as “rural,” and explain how rurality is defined and measured in large existing child welfare databases. The goal is to support accurate assessment of child and family needs, so services can be made available and accessible. This first installment of a series hopes to increase the understanding and expand on how measurement challenges can impact the health and well-being of infants, toddlers, and families served by ITCTs in rural communities.

The Importance of an Intentional Definition

It is not necessary for all states to use the same definition of rurality. Rather, states may need to use different definitions of rurality depending on the composition of their communities. When defining rurality for a state, the evaluation team must know what they are referencing and be transparent in describing the definition in external publications. It is important to acknowledge who is included and excluded in the definition to ensure these communities are assessed as accurately as possible.

Defining and Measuring Rurality

There are several established definitions of rurality with varying degrees of specificity. Many build upon one another. There are pros and cons to every definition, with some resulting in more accurate assessments of rurality than others. In this brief, we present six of the most frequently used definitions for rurality, including:

- **United States (U.S.) Census Bureau.** Rurality is defined as any territory and population outside of designated urban areas.
- **U.S. Department of Agriculture (USDA) Rural/Urban Continuum Codes.** The USDA measures rurality on a continuum from metro to non-metro. The three designations used for metro counties are based on population, with “1” assigned to the most populous. The six non-metro designations account for adjacency to metro areas and population sizes ranging from 2,500 to 20,000 or more, but not to exceed 250,000. Non-metro counties also have two designations for “unknown-Alaska/Hawaii” and “unknown-not official.”
- **County Health Rankings and Roadmaps.** Rurality is defined as a county with more than 50 percent of its population living in a Census-defined rural area.
- **National Center for Health Statistics.** Rurality is defined through varying levels of population size based on metropolitan statistical areas, including “large central metro,” “large fringe metro,” “medium metro,” “small metro,” “micropolitan,” and “non-core.” Rural communities are those classified as “non-core” and include any population with less than 10,000 people.

- **Office of Management & Budget.** Rurality is defined through a classification of “metropolitan,” “micropolitan,” and “neither.” Metropolitan areas have a core urban area of 50,000 or more residents. Micropolitan areas have an urban core of 10,000 to 50,000 residents. Any county not included in these definitions is considered rural.
- **Health Resources and Service Administration (HRSA).** Rurality is defined through combined use of the United States Census, Office of Management & Budget, and Department of Agriculture Economic Research Services definitions. These are supplemented with the Rural-Urban Commuting Area (RUCA) codes and Road Ruggedness Scale (RRS). RUCA codes further specify rural areas through census tracts that are defined by population density, urbanization, and daily commuting of residents. RRS classifies changes in elevation along census tracts to address accessibility of communities with a scale of 1 (meaning level) to 5 (meaning highly rugged). HRSA identifies a rural population as those within (a) non-metropolitan counties, (b) outlying metropolitan counties that do not contain any population from an urban area of 50,000 people or greater, (c) census tracts containing RUCA codes 4–10 within metropolitan counties, (d) census tracts with a minimum of 400 square miles in area and a maximum of 35 people per square mile with RUCA codes 2–3 within metropolitan counties, and (e) census tracts with RRS5 and RUCA codes 2–3 with a minimum of 20 square miles in an area within metropolitan counties.

U.S. Census Bureau

The U.S. Census Bureau defines rurality for what it is not. The definition of metro versus non-metro does not consider varying levels of rurality, such as a geographically remote rural community compared to a rural area that neighbors suburbs. This definition bases “rural” on proximity to a defined city rather than availability of services and resources. The catchment areas classified as “metro” are also very large, contributing to an unrealistic understanding of resource accessibility. For example, a community can be classified as “metro” under the definition even if reaching the office of a medical specialist requires a 1-hour drive.

USDA Rural/Urban Continuum Codes

The USDA Rural/Urban Continuum Codes provides the most comprehensive, currently used definition of rural. The codes allow for nuances in rurality with population size and adjacency to metro areas. Urban bias is still exhibited by referring to rural areas as “non-metro” and thus keeping them in a comparative position to metropolitan centers. These codes were last updated in 2013 and, considering the urban flight during and following the COVID-19 pandemic (Coven et al., 2023), may need to be revised.

County Health Rankings and Roadmaps

The County Health Rankings and Roadmaps definition is based largely on the Census definition. Under this definition, a county is rural if counted within a Census-defined (metro/non-metro) rural area—meaning more than 50 percent of residents live in Census-defined rural areas. This raises concern for rural community members in the county who are disqualified as rural because of other parts of the county, especially when counties in rural areas can be very large.

National Center for Health Statistics

The National Center for Health Statistics definition is more nuanced than the measurements that divide the population into metro and non-metro. This definition uses six categories to capture a spectrum of urban to rural. While this provides more opportunities for distinction, the six categories largely focus on the different levels of urbanity and still consolidate rurality into one category of "non-core." This is essentially a pseudonym for "rural" or "non-metropolitan" because these communities are outside of an urban core. This does not account for varying levels of rurality or different types of rural communities. For example, a remote rural community in the mountains will experience different geographic barriers than a rural community within 45 minutes of an urban center. By classifying all rural communities as "non-core," this nuance is lost.

Office of Management and Budget

The Office of Management and Budget (OMB) definition considers counties as metro, micro, or outside of metro or micro based on an urban core, or a centralized metropolitan area such as the Greater Atlanta Area. All counties outside of metro or micro are considered rural. This often results in undercounting people, which affects the number of services and resources for which rural counties are eligible and receive.

Health Resources and Service Administration (HRSA)

HRSA uses a combination of the U.S. Census Bureau, OMB, and Department of Agriculture Economic Research Service (ERS) definitions along with Rural-Urban Commuting Area (RUCA) codes and Rural Ruggedness Scales (RRS). RUCA codes and RRS are used to mitigate the limitations of the Census, OMB, and ERS definitions. While this combined definition improves the measurement of rurality, classifications are still lacking for remote communities.

Example Community

These definitions have similar elements but vary in level of specificity and factors considered in designating communities as “rural.” The strongest allows for a broad spectrum of rurality—from communities within a day drive to a city to the remote and geographically bound communities. The variation in definitions allows for some communities to be considered “rural” under one but not under another, which can shift eligibility for programs and resources and create confusion for rural decision making. For example, Montague is a small community in western Michigan with a population of 2,417 people who have minimal number of close, available resources (U.S. Census, 2021). Under the various federal definitions, it is eligible for some rural programs but is considered “metro” by many others because of its proximity to Grand Rapids, despite being a minimum drive of 1-hour from the city (RHIhub, 2025). The wavering designations of rurality by federal definitions could result in this community and many others like it to be excluded from accessing vital resources and programs for which they would otherwise be eligible.

Finding the definition that best fits a community is challenging but could also help to answer pressing questions about child welfare in rural settings. Child welfare data sets measure rurality differently, and by knowing and understanding the underlying definition, local partners implementing ITCTs are better equipped to apply the data and understand their implications for their own communities. State teams supporting ITCTs are better positioned to identify and advocate for resources for sites in rural communities.

How to Measure Rurality in Child Welfare

Individual Child Welfare Data Sets

The National Child Abuse and Neglect Data System (NCANDS) and Adoption and Foster Care Analysis and Reporting Systems (AFCARS) data sets can be used to explore the relationship between child welfare and rurality. Each data set in exhibit 1 includes a variable allowing users to analyze how rurality is related to child welfare metrics including permanency outcomes and maltreatment reporting and substantiation.

Exhibit 1. Child Welfare Data Sets That Measure Rurality

Data set and link	Things to know	Example question and sample report
NCANDS. Child and agency-level information associated with alleged child abuse and neglect. Child file: 2000-2022 Agency file: 2009-2022 NCANDS Strengths and Limitations (2024)	• County data with youth populations under 700 are masked, limiting what can be learned about child welfare involvement in small, highly rural counties. • Rurality is measured via USDA Rural Urban Continuum Code, Version 2013D. • NDACAN offers regular technical assistance to users. • Primary source of national information on abuse and neglected children reported to state child protective service agencies.	Is the percentage of screened-in infants with prenatal substance exposure who have a plan of safe care proportionate between metro, non-metro urban, and rural areas in our state? Child Maltreatment Report 22
AFCARS. Case-level information on all children served by the foster care system and those who have been adopted with title IV-E agency involvement. Foster care file: 2000-2021 Adoption file: 2000-2021 AFCARS Strengths and Limitations (2024)	• County data with youth populations under 700 are masked, limiting what can be learned about child welfare involvement in small, highly rural counties. • Rurality is measured via USDA Rural Urban Continuum Code, Version 2013D. • NDACAN offers regular technical assistance to users. • Annual foster care files are cleaner than 6-month files. • Tribal agency adoption is not legally required to be submitted to this file.	Does the average age of children in the state with a case plan goal of reunification differ significantly between those who reside in rural versus urban areas? AFCARS report 30

Merged Child Welfare Data Sets

Merging data sets generates opportunities to answer additional child welfare-specific questions, but there are limitations. These are described in exhibit 2.

Exhibit 2. Child Welfare Data Sets That Can Be Merged to Explore Rurality

Data sets to link	Opportunities	Limitations
1. Link AFCARS and NCANDS via AFCARDS identifications (IDs).	• Longitudinal explorations • Examining permanency outcomes with more detail	• Geographic information on maltreatment deaths is not always available. • County masking affects small, rural counties and is different in each data set. • Not all states provide AFCARS IDs which affects linking. • State changes to ID encryption can impact child IDs interrupting longitudinal analyses
2. Link AFCARS or NCANDS to U.S. Census (including American Community Survey) via geographic element such as county.	• Census data can provide key contextual information that is not available in AFCARS or NCANDS to explore community socio-demographics and their potential relationship to child welfare such as citizenship, birthplace, marital status, household size, economic status, housing, education, etc.	• County masking affects small, rural counties and is different in each data set. • AFCARS and NCANDS are county level, which limits alternative geographic explorations that are possible with Census data (e.g., ZIP Code, Census track).
3. Link AFCARS IDs to state or county-level agency data through a memo of understanding or other data sharing agreement.	• Agency data can provide critical information at a case or family-level to explore services provided or other detailed information that is not captured in administrative data systems including NCANDS or AFCARS.	• State or county level agencies may not be willing or able to share data in this way.

Relevant Rurality Topics, Data Sets, and Rural Definitions

Exhibit 3 provides ITCTs with ideas for how to explore rurality data relevant to how they operate.

Exhibit 3. Potential Ways ITCTs Can Use Rural Data Sets

Topics of interest	Potential use
How does rurality intersect with poverty?	• Compare rural and non-rural areas. What are implications for ITCT service provision, family needs, community engagement, etc.? • Explore the socioeconomic status of households or families in "rural" counties. • How does socioeconomic status in rural counties compare to non-rural counties?
How to measure the risk of child welfare involvement in rural areas?	• Explore what is the proportion of young children with an alleged abuse or neglect case to all young children in a "rural" county. • How do maltreatment risk patterns differ from non-rural counties?
How to measure substance use disorder (SUD) in rural areas?	• Explore rates of substance use in case plans and access to care. • Does rurality affect the completion of mandated substance use treatment?
How to measure the risk of involvement with child welfare due to SUD in rural areas?	• Explore caregiver risk factors including alcohol and drug use among young children who live in "rural" counties and have an alleged abuse or neglect case. • How do caregiver risk patterns differ from non-rural counties?

Conclusion

Being intentional in choosing a definition of rurality that most accurately represents and counts all people who live in the rural community is important to provide a more accurate snapshot for a state seeking funding and resources. This brief provides different probing questions for using rural definitions and information on child welfare data sets. With an accurate rural definition which includes geographic characteristics of a community, state teams and local ITCT sites can use their data to advocate for appropriate resources and services to meet the needs of children and families.

Considering the role of rurality in child welfare is also important. For example, a new out-of-home placement for a child could alter access to resources when shifting from rural to an urban or suburban setting. The implications of this type of change must be considered when examining the outcomes of rural families and children. It is also important to be clear whether rurality is being

defined by the family of origin, the child's placement, or permanency. Clearly defining these elements allows the data to be used for more accurate and informed decision-making processes.

For further support, state and local partners are encouraged to explore the resources below as tools to help a community determine if it is designated as "rural" under varying definitions and explore different elements of rurality and rural identity. These resources are non-exhaustive.

Hyperlinked Resources for Defining Rurality

The Rural Health Information Hub provides current resources on various definitions of rurality and the implications for people in rural areas.

Rural Health Resources by Topic: Rural definitions - Rural Health Information Hub

The Rural Health Information Hub also has an "Am I Rural?" tool that uses existing definitions of rurality to help community members understand their designation.

Am I Rural? Tool - Rural Health Information Hub

The Rural Identity Scale is a newer measure developed to assess the level of rural identity in the United States (Oser et al., 2022). The measure was developed using Rural/Urban Continuum Codes; items seek to reduce variability in defining rural identity.

The rural identity scale: Development and validation

Finally, HRSA has information on their website about its definition of rurality with updates when the definition changes.

How We Define Rural | HRSA

While there is no perfect definition of rurality, ITCTs can seek the definition that best represents their communities, leading to a more accurate assessment of families. Our hope is this information will equip you to put your state's "best foot forward" in rural data collection.

References

Aris, I. M., Wu, A. J., Lin, P. D., Zhang, M., Farid, H., Hedderson, M. M., Zhu, Y., Ferrara, A., Chehab, R. F., Barrett, E. S., Carnell, S., Camargo, C. A., Chu, S. H., Mirzakhani, H., Kelly, R. S., Comstock, S. S., Strakovsky, R. S., O'Connor, T. G., Ganiban, J. M., ... Oken, E. (2024). Neighborhood food access in early life and trajectories of child body mass index and obesity. *JAMA Pediatrics*, *178*(11), 1172–1182. https://doi.org/10.1001/jamapediatrics.2024.3459

Bouchard, L., Garcia, I., & Warrell, J. (2023). *Urban bias in rural data sets*. National Rural Health Association. https://www.ruralhealth.us/getmedia/46547c8c-8f09-432b-ad85-6321a5131002/NRHA-Policy-Brief-Final-Draft-Urban-Bias-in-Rural-Data-Sets-(1).pdf

Centers for Disease Control and Prevention. (2024). *About rural health*. Centers for Disease Control and Prevention. www.cdc.gov/rural-health/php/about/index.html

Coven, J., Gupta, A., & Yao, I. (2023). JUE insight: Urban flight seeded the COVID-19 pandemic across the United States. *Journal of Urban Economics*, *133*.

Golden Guzman, K., Zhang, L., & Simmel, C. (2023). Examining the roles of rurality and Latine ethnic density on child maltreatment report and substantiation rates among Latine families: A county-level analysis. *Journal of Public Child Welfare*, *18*(2), 309–337. https://doi.org/10.1080/15548732.2023.2193555

Oser, C. B., Strickland J., Batty E. J., Pullen, E., & Staton. M. (2022). The rural identity scale: Development and validation. *Journal of Rural Health*. 2022; 38: 303–310. https://doi.org/10.1111/jrh.12563

RHIhub. (2025). *What is rural?* Rural Health Information Hub. https://www.ruralhealthinfo.org/topics/what-is-rural

Scally, C. P., & Burnstein, E. (2020). Rural communities deserve better. *Urban Institute*. https://www.urban.org/urban-wire/rural-communities-need-better-data#:~:text=Accessing%20better%20data%20on%20rural%20communities%20is%20necessary,research%20Explore%20new%20methods%20of%20increasing%

United States Department of Health and Human Services. (2014). 2013 NCHS urban-rural classification scheme for counties. *Centers for Disease Control and Prevention*. https://stacks.cdc.gov/view/cdc/22467

Zahnd, W. E., Del Vecchio, N., Askelson, N., Eberth, J. M., Vanderpool, R. C., Overholser, L., Madhivanan, P., Hirschey, R., & Edward, J. (2022). Definition and categorization of rural and assessment of realized access to care. *Health Services Research*, *57*(3), 693–702. https://doi.org/10.1111/1475-6773.13951

Authors

Leah Bouchard, Ph.D., James Bell Associates
Kate Golden Guzman, Ph.D.

Submitted to

Kateryna Zoubak, Project Officer
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Prepared by

James Bell Associates
2000 15th Street North, Suite 100
Arlington, VA 22201
(703) 528-3230
www.jbassoc.com

Anne Fromknecht, Project Director

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