

**Testimony for the Record Submitted to:
The United States Senate Committee on Agriculture, Nutrition, & Forestry**

**For the Hearing:
“Rural Quality of Life: Challenges and Opportunities for the Rural Care Economy”**

Tuesday, March 22, 2022 at 10:00am EST
562 Dirksen Senate Office Building

Carrie Henning-Smith, PhD, MPH, MSW

Associate Professor, Division of Health Policy and Management
Deputy Director, University of Minnesota Rural Health Research Center
Associate Director, University of Minnesota Rural Health Program
University of Minnesota School of Public Health

Chairwoman Stabenow, Ranking Member Boozman, and distinguished members of the Committee, thank you for the opportunity to provide testimony in today’s hearing. I’m honored to have this opportunity. I am currently an Associate Professor in the Division of Health Policy and Management at the University of Minnesota School of Public Health, Deputy Director of the University of Minnesota Rural Health Research Center, and Associate Director of the University of Minnesota Rural Health Program.

I have devoted my career to rural health, working to ensure that everyone has the opportunity for good health and quality of life, no matter where they live. Unfortunately, though, for many rural residents today, living in rural areas means fewer opportunities for good health, increased barriers to timely access to affordable and high-quality health care, and more limited access to the basic infrastructure necessary to participate in our current economic and social systems. Altogether, these rural-specific challenges are costing lives and limiting the prosperity of our entire nation.

Rural Health Disparities

Rural residents have worse health and greater risks of mortality than urban residents. On average, residents of large metropolitan areas live 2.5 years longer than residents of rural areas,¹ and that disparity has gotten worse in the past two decades.^{2,3} From 1999-2019, the rural-urban difference in mortality rates tripled.² Compared to urban residents, rural residents have higher death rates from all five leading causes of death: cancer, cardiovascular disease, chronic lower respiratory disease (COPD), stroke, and unintentional injury.^{3,4}

Those grim statistics predate the COVID-19 pandemic, which only made rural health inequities worse. While the very beginning of the pandemic was a distinctly urban phenomenon in the United States, the situation quickly became worse for rural residents.⁵⁻⁷ By September of 2020, the COVID-19 death rate was higher in rural places than in urban places, and it has remained higher for most of the pandemic.^{8,9} According to research from the RUPRI Center for Rural Health Policy Analysis, as of March 15, 2022 the cumulative mortality rate for COVID-19 in rural

America was 370 per 100,000 people, compared with 281 per 100,000 people in urban America.⁸

Access to Health Care in Rural America

There are many reasons that rural residents experience health inequities, including differences in access to the social drivers of health, like housing, transportation, education, and job opportunities. I will return to some of these later in my testimony, however, when talking about rural health, it makes sense to start with a discussion of rural health care.

I'll start by outlining the realities facing rural communities when it comes to accessing health care. Since 2010, 138 rural hospitals have closed their doors.^{10,11} For years, rural health care providers and patients have faced workforce challenges, low patient volumes, and long travel distances to obtain treatment. Unfortunately, these issues have only been exacerbated by the COVID-19 pandemic. Because of this, the Chartis Center for Rural Health also estimates that 453 rural hospitals are currently operating at margins like those that closed throughout the last decade, meaning that they are particularly vulnerable to closure.¹¹

In addition to hospitals, rural areas have also seen a decline in other health care services in recent decades. These include nursing homes,¹²⁻¹⁴ pharmacies,^{15,16} and obstetric units.¹⁷⁻²⁰ Today, fewer than half of all rural counties have a hospital in which you can give birth. Ten percent of rural counties have no nursing home.¹² Between 2003-2018, 1,231 rural pharmacies closed, amounting to 16.1% of all rural pharmacies.¹⁶ From birth to end of life, it is more difficult to access the care you need in rural areas.

There are many causes for the decline in rural health care services. In some cases, it is difficult to afford the necessary overhead costs of keeping the lights on and the staff employed and well-trained in low-volume settings. Reimbursement rates, uncompensated care, and access to health insurance are also large contributors to hospital and health services vulnerability.²¹ There have been fewer hospital and unit closures in states that have expanded Medicaid,^{10,18,21} and we have seen a particularly pernicious loss of services in the southeast.^{10,19} As rural America begins to emerge from the COVID-19 pandemic, addressing these longstanding issues is more urgent and important than ever.

In addition to the issues mentioned above, health care workforce availability is a huge contributor to the challenge of maintaining rural health care services, and is one that has been amplified by the COVID-19 pandemic. Health professional shortage areas (HPSAs) are disproportionately located in rural areas.^{22,23} According to the Bureau of Health Workforce, as of the first quarter of this year (2022), 68.3% of all primary care HPSAs are in completely or partially rural areas, as are 68.5% of all dental HSPAs and 66.4% of all mental health HPSAs.²³ Solutions for this may include training and pipeline programs, as well as financial incentives for providers. However, solutions must also focus on the overall vitality and appeal of rural communities, including strong infrastructure, job opportunities, housing, child care, and educational opportunities.²⁴

Over the last few years, hospitals in rural communities have been tested to their limits. Often, they were providing crisis care in dated facilities. In fact, one in ten Critical Access Hospitals is more than 25 years old.²¹ This means that rural providers are working with an influx of patients in dated buildings, and are often not equipped with the best technology and devices. The United States Department of Agriculture's Community Facilities Programs is a key source of infrastructure funding for rural communities and their health care providers. The program offers direct loans, loan guarantees, and grants to improve essential public services across rural America. Many rural health care providers have taken advantage of this program.

As the Committee continues to consider ways to enhance access to and quality of health care in rural America, Rural Development programs like Community Facilities and the Rural Business-Cooperative Service programs have been essential programs for resources, as well as associated technical assistance and trainings, that should be used as a blueprint. These have been successful. They have improved health care infrastructure and as we prepare for future public health emergencies, these programs should be part of our public health response for rural communities.

Rural Infrastructure and Health

The issue of rural health and quality of life is not limited to health care services, facilities, and providers. Infrastructure policy is health policy. For example, transportation infrastructure poses long-standing and complex challenges in rural areas, including quality of roads and bridges, access to personal vehicles, fuel and vehicle maintenance affordability, and availability of public transportation, especially for people with physical limitations.²⁵ In our work at the University of Minnesota Rural Health Research Center, we found that rural residents who develop a medical condition that makes driving difficult – or dangerous – are less likely than urban residents with similar conditions to give up driving.²⁶ This is likely reflective of fewer available alternatives, and may also be associated with the overall higher rates of motor vehicle fatalities in rural areas.²⁷

To support rural health and quality of life, infrastructure policy also needs to include access to reliable and affordable broadband Internet.^{28–30} At the beginning of the COVID-19 pandemic, both Congress and the executive branch took decisive actions to ensure that health care was continued throughout the pandemic. The result was an unprecedented increase in utilization of telehealth services, which rural communities uniquely benefit from.³¹ As mentioned previously, rural patients often face longer drive times to routine medical visits. The advent of telehealth creates a new option for health care delivery that is essential beyond the duration of the public health emergency. Therefore, I was pleased to see Congress include an extension of these provisions until the end of the year in the recent appropriations package. Ensuring rural providers and their patients can utilize this health care delivery system into the future will only increase patient satisfaction and quality of life.

Despite gains in telehealth, I cannot go ten minutes talking with a provider in a rural community without hearing about the need for sufficient broadband connectivity. Inclusion of \$65 billion in funding for broadband connectivity buildout in the Bipartisan Infrastructure Law was needed, but implementation will be critical. The United States Department of Agriculture has a unique

role in working with partners like the FCC and National Information and Telecommunications Administration (NITA) to ensure that broadband connectivity is built out equitably, particularly in rural communities. While broadband is important to all things rural: farms, commerce, schools, and work, it has special importance for rural health care. Efficient connectivity will allow rural health care providers to have the ability to communicate with other health systems, have sufficient and up-to-date electronic health records, and the ability to provide telehealth services to their patients.

As the Committee works to strengthen rural communities, broadband must be front of mind. Society is increasingly reliant on technology for every facet of life and as an economic driver, which is particularly true with health care. To ensure rural communities are capable of being part of the health care delivery system of the 21st century, effective broadband build out is critical. Such a build out must also be coupled with an emphasis on affordability and equitable access to devices with which to use broadband.

Within-Rural Disparities in Health and Health Care

No discussion of rural health should go without mentioning that rural areas and rural residents are not monolithic.³² One in five rural residents today is Black, Indigenous, or a person of color (BIPOC). Health outcomes for rural BIPOC residents are significantly worse than for rural white residents and for all urban residents.^{33,34} In my research, I've found that rural counties with a majority of Black or Indigenous residents are especially vulnerable to poor health outcomes, with the highest premature death rates of any counties in the country.^{33,34}

Looking at individual-level data, research shows higher premature death rates among communities of color in rural communities compared to their urban counterparts.¹¹ In Georgia, for example, a black individual living in a rural community is 30 percent more likely to die prematurely than their urban counterpart.¹¹ In Mississippi, a black rural resident is 20 percent more likely to die prematurely. The same statistics are prevalent in the Hispanic community.¹¹ In Texas, a Hispanic rural resident is 30 percent more likely to die from premature death than their urban counterpart.¹¹ In Arizona, a Hispanic rural resident is ten percent more likely to die prematurely.¹¹

Further, according to data from the Center for Disease Control and Prevention, rural areas have a pregnancy-related mortality rate of 29.4 per 100,000 live births versus 18.2 in urban areas, but inequities are more severe if you look among rural residents.³⁵ In Georgia for example, rural black women have a 30 percent higher maternal mortality rate than urban black women, and rural white women have a 50 percent higher risk than urban white women. These statistics are devastating.

Despite what we know about these inequities, it can sometimes be difficult to access data with sufficiently detailed measures of rurality, race, ethnicity, and other socio-demographic characteristics with which to illuminate disparities. As we move forward, data availability is critical. The United States Department of Agriculture is a trusted source of research and data collection in our rural communities. Proper data must be collected if we hope to understand the full impact the last several years have had on rural residents. To improve rural health

outcomes we must know the statistics; the United States Department of Agriculture should have a hand in this collection effort.

Rural places are also heterogeneous. Rural land areas cover the vast majority of the country (>90%, depending on the measure used) and the challenges that people have around distance, transportation, connectivity, and climate vary considerably from place to place. Rural Alaska is not rural Georgia is not rural Vermont is not rural Minnesota is not rural New Mexico.... As such, programs and funding for rural areas need to have built-in flexibility to adapt to the particular needs of specific rural places, which will vary by region and demographic composition.

The Role of the United States Department of Agriculture in Rural Health

The United States Department of Agriculture (USDA) has a critical role to play in rural health. Fundamentally, agriculture is the backbone of our country's health. Moreover, the USDA is a trusted resource on rural economic development and rural demographics.^{36,37} At a time when divisiveness is palpable and trusted messengers can be hard to come by, especially in some rural communities, the USDA is in a unique position to support good health among rural residents.

I was honored to consult on the development of the Rural Health Liaison in 2018, and I thank members of this Committee for their leadership in that important work.³⁸ The creation of that position symbolized and strengthened the importance of the USDA in rural health, although the USDA has long been doing work that has improved health and quality of life. For example, the USDA's Cooperative Extension Service has been supporting the health and well-being of rural residents for more than a century.³⁹ Extension agents are trusted sources of information across rural America and represent a solid foundation that could be built on in USDA's rural health work. In addition to its traditional role in nutrition and agricultural education, Extension currently plays a critical role in farmer mental health,⁴⁰ education and outreach, and overall community vitality.

Building on Rural Strengths

Despite the challenges I've laid out in rural health and health care, rural areas also have considerable strengths. Whether because of size or necessity, rural residents and organizations can be incredibly resourceful and innovative.⁴¹ Many rural areas also have particularly strong social capital and social cohesion.⁴² In research I've done, I've found that rural older adults report larger social networks – both more family members and more close friends – than urban older adults.⁴³ This social fabric provides a tapestry on which strong health and health care can be built, given the right support through investment in infrastructure and resources.

The last few years have tested rural residents and rural health care providers. While the challenges facing rural communities are different from those facing their urban counterparts, so are the innovation opportunities. The United States Department of Agriculture plays a significant role in ensuring that rural providers are equipped to provide care in the 21st century. Whether this is through ensuring adequate rural broadband access, accurate data and research, or investment in capital infrastructure, the USDA is a needed ally for rural health. Ultimately, a

strong rural economy starts with good health. Good rural health outcomes cannot be achieved without supporting the vitality of rural communities, including strong, modern infrastructure and a thriving health care system.

Thank you again for the opportunity to testify today. I look forward to any questions you might have.

References

1. Singh GK, Siahpush M. Widening Rural–Urban Disparities in Life Expectancy, U.S., 1969–2009. 2014;1969-2009. doi:10.1016/j.amepre.2013.10.017
2. Cross SH, Califf RM, Warraich HJ. Rural-Urban Disparity in Mortality in the US From 1999 to 2019. *JAMA*. 2021;325(22):2312-2314. doi:10.1001/JAMA.2021.5334
3. Garcia MC, Faul M, Massetti G, et al. Reducing Potentially Excess Deaths from the Five Leading Causes of Death in the Rural United States. *MMWR Surveill Summ*. 2017;66(2):1-7. doi:10.15585/mmwr.ss6602a1
4. Moy E, Garcia MC, Bastian B, et al. Leading Causes of Death in Nonmetropolitan and Metropolitan Areas— United States, 1999–2014. *MMWR Surveill Summ*. 2017;66(1):1-8. doi:10.15585/mmwr.ss6601a1
5. USDA Economic Research Service. Rural death rates from COVID-19 surpassed urban death rates in early September 2020. <https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=100740>. Published March 19, 2021. Accessed March 16, 2022.
6. Weber L. Covid Is Killing Rural Americans at Twice the Rate of Urbanites. *Kaiser Heal News*. September 2021. <https://khn.org/news/article/covid-death-rate-rural-america/>. Accessed March 16, 2022.
7. Marema T. Analysis: Rural Covid-19 Deaths in Four Graphs. *Dly Yonder*. December 2021. <https://dailyyonder.com/analysis-the-rural-death-rate-in-four-charts/2021/12/20/>. Accessed March 16, 2022.
8. Ullrich F, Mueller K. *COVID-19 Cases and Deaths, Metropolitan and Nonmetropolitan Counties Over Time (Update)*. Iowa City, IA; 2022. <http://www.public-health.uiowa.edu/rupri/>. Accessed March 16, 2022.
9. The Daily Yonder. Covid-19 Dashboard for Rural America. The Daily Yonder. <https://dailyyonder.com/covid-19-dashboard-for-rural-america/>. Published March 27, 2021. Accessed April 2, 2021.
10. University of North Carolina Cecil G. Sheps Center for Health Services Research. 138 Rural Hospital Closures: January 2010 - Present. <http://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>.
11. Topchik M, Pinette M, Kein H, Brown T, Balfour B. *Rural Communities at Risk Widening Health Disparities Present New Challenges in Aftermath of Pandemic.*; 2021.
12. Sharma H, Bin Abdul Baten R, Ullrich F, Clinton MacKinney A, Mueller KJ. *Trends in Nursing Home Closures in Nonmetropolitan and Metropolitan Counties in the United States, 2008-2018*. Iowa City, IA; 2021. www.bankohttp://www.public-health.uiowa.edu/rupri/. Accessed March 1, 2021.

13. Healy J. Nursing Homes Are Closing Across Rural America, Scattering Residents - The New York Times. *New York Times*. <https://www.nytimes.com/2019/03/04/us/rural-nursing-homes-closure.html>. Published March 4, 2019. Accessed December 2, 2019.
14. Flinn B. *Nursing Home Closures and Trends: June 2015-June 2019.*; 2020.
15. Weigel P, Ullrich F, Mueller K, Centers RHR& P, RUPRI Center for Rural Health Policy Analysis Department of Health Management and Policy U of IC of PH. Demographic and economic characteristics associated with sole county pharmacy closures, 2006-2010. *Rural Policy Brief*. 2013;(2013 15)(2013 15):1-4.
16. Salako A, Ullrich F, Mueller KJ. *Update: Independently Owned Pharmacy Closures in Rural America, 2003-2018*. Iowa City, IA; 2018. <http://www.public-health.uiowa.edu/ruprihttp://www.public-health.uiowa.edu/rupri/>. Accessed March 16, 2022.
17. Hung P, Kozhimannil KB, Casey MM, Henning-Smith C. *State Variability in Access to Hospital-Based Obstetric Services in Rural U.S. Counties*. Minneapolis, MN, MN; 2017.
18. Hung P, Kozhimannil K, Henning-Smith C, Casey M. *Closure of Hospital Obstetric Services Disproportionately Affects Less-Populated Rural Counties | The University of Minnesota Rural Health Research Center*. Minneapolis, MN; 2017. <http://rhrc.umn.edu/2017/04/closure-of-hospital-ob-services/>. Accessed June 15, 2017.
19. Hung P, Henning-Smith CE, Casey MM, Kozhimannil KB. Access To Obstetric Services In Rural Counties Still Declining, With 9 Percent Losing Services, 2004-14. *Health Aff (Millwood)*. 2017;36(9):1663-1671. doi:10.1377/hlthaff.2017.0338
20. Kozhimannil KB, Interrante JD, Tuttle MKS, Henning-Smith C. Changes in Hospital-Based Obstetric Services in Rural US Counties, 2014-2018. *JAMA*. 2020;324(2):197. doi:10.1001/JAMA.2020.5662
21. Thomas S, Thompson K, Knocke K, Pink G. *Health System Challenges for Critical Access Hospitals: Findings from a National Survey of CAH Executives.*; 2021.
22. Streeter RA, Snyder JE, Kepley H, Stahl AL, Li T, Washko MM. The geographic alignment of primary care Health Professional Shortage Areas with markers for social determinants of health. *PLoS One*. 2020;15(4). doi:10.1371/JOURNAL.PONE.0231443
23. Workforce B of H. *Designated Health Professional Shortage Areas Statistics: First Quarter of Fiscal Year 2022 Designated HPSA Quarterly Summary.*; 2021.
24. Henning-Smith C, Kozhimannil KB. Availability of Child Care in Rural Communities: Implications for Workforce Recruitment and Retention. *J Community Health*. 2016.
25. Henning-Smith C, Evenson A, Corbett A, Kozhimannil K, Moscovice I. *Rural Transportation: Challenges and Opportunities | The University of Minnesota Rural Health Research Center*. Minneapolis, MN; 2018. <https://rhrc.umn.edu/publication/rural-transportation-challenges-and-opportunities/>. Accessed January 28, 2019.
26. Henning-Smith C, Evenson A, Kozhimannil K, Moscovice I. Geographic variation in transportation concerns and adaptations to travel-limiting health conditions in the United States. *J Transp Heal*. November 2017. doi:10.1016/j.jth.2017.11.146
27. Henning-Smith C, Kozhimannil KB. Rural–Urban Differences in Risk Factors for Motor Vehicle Fatalities. *Heal Equity*. 2018. doi:10.1089/heq.2018.0006
28. Kozhimannil KB, Henning-Smith C. Improving Health among Rural Residents in the US. *JAMA - J Am Med Assoc*. 2021;325(11):1033-1034. doi:10.1001/jama.2020.26372

29. Henning-Smith C. Meeting the Social Needs of Older Adults in Rural Areas. *JAMA Heal Forum*. 2020;1(11):e201411. doi:10.1001/jamahealthforum.2020.1411
30. Henning-Smith C. The Unique Impact of COVID-19 on Older Adults in Rural Areas. *J Aging Soc Policy*. June 2020:1-7. doi:10.1080/08959420.2020.1770036
31. Shah A, Skertich NJ, Sullivan GA, et al. The utilization of telehealth during the COVID-19 pandemic: An American pediatric surgical association survey. *J Pediatr Surg*. 2022;16:36. doi:10.1016/J.JPESURG.2022.01.048
32. Kozhimannil KB, Henning-Smith C. Missing Voices In America’s Rural Health Narrative. Health Affairs Blog. <https://www.healthaffairs.org/doi/10.1377/hblog20190409.122546/full/>. Published 2019. Accessed April 25, 2019.
33. Henning-Smith CE, Hernandez AM, Hardeman RR, Ramirez MR, Kozhimannil KB. Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. *Health Aff*. 2019;38(12):2019-2026. doi:10.1377/hlthaff.2019.00847
34. Henning-Smith C, Hernandez A, Ramirez M, Hardeman R, Kozhimannil K. *Dying Too Soon: County-Level Disparities in Premature Death by Rurality, Race, and Ethnicity*. Minneapolis; 2019. <https://rhrc.umn.edu/publication/dying-too-soon-county-level-disparities-in-premature-death-by-rurality-race-and-ethnicity/>. Accessed April 24, 2019.
35. National Advisory Committee on Rural Health and Human Services. *Maternal and Obstetric Care Challenges in Rural America: Policy Brief and Recommendations to the Secretary.*; 2020.
36. Pender J, Hertz T, Cromartie J, Farrigan T. *Rural America at a Glance, 2019 Edition.*; 2019. <https://www.ers.usda.gov/publications/pub-details/?pubid=95340>. Accessed April 20, 2020.
37. Cromartie J. *Rural America at a Glance, 2018 Edition.*; 2018.
38. S.2894 - 115th Congress (2017-2018): Rural Health Liaison Act of 2018 | Congress.gov | Library of Congress. <https://www.congress.gov/bill/115th-congress/senate-bill/2894>. Accessed March 16, 2022.
39. Extension | National Institute of Food and Agriculture. <https://nifa.usda.gov/extension>. Accessed March 16, 2022.
40. Inwood S, Becot F, Bjornestad A, Henning-Smith C, Albert A. Responding to Crisis: Farmer Mental Health Programs in the Extension North Central Region. *J Ext*. 2019;57(6):57-61. <https://joe.org/joe/2019december/rb1.php>. Accessed May 22, 2020.
41. Henning-Smith C, Lahr M, Tanem J. “ They’re not leaving their home; this is where they were born, this is where they will die.”: Key Informant Perspectives From the U.S. Counties With the Greatest Concentration of the Oldest Old. *Res Aging*. 2021. doi:10.1177/01640275211032387
42. Henning-Smith C, Lahr M, MacDougall H, Mulcahy J. *Social Cohesion and Social Engagement among Older Adults Aging in Place: Rural/Urban Differences*. Minneapolis; 2022. <https://rhrc.umn.edu/publication/social-cohesion-and-social-engagement-among-older-adults-aging-in-place-rural-urban-differences/>. Accessed February 14, 2022.
43. Henning-Smith C, Moscovice I, Kozhimannil K. Differences in Social Isolation and Its Relationship to Health by Rurality. *J Rural Heal*. January 2019. doi:10.1111/jrh.12344