MEETING THE HEALTH NEEDS OF RURAL AMERICA

A Report of the Aspen Health Strategy Group

Foreword by Kathleen Sebelius and William Frist

Edited by Alan R. Weil

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The mission of the **Aspen Health Strategy Group (AHSG)**, an initiative of the Health, Medicine & Society Program at the Aspen Institute, is to promote improvements in policy and practice by providing leadership on complex health issues. AHSG brings together senior leaders representing a mix of influential sectors, including health, business, philanthropy, and technology, to tackle a single health issue annually through year-long, in-depth study. Co-chairs are Kathleen Sebelius, 21st US Secretary of Health and Human Services and 44th Governor of the State of Kansas, and William Frist, former US Senate Majority Leader and US Senator from the State of Tennessee.

The topic of AHSG's tenth annual report is meeting the health needs of rural America. The compilation opens with a consensus report based on the group's in-depth learning process, followed by a set of background papers. Taken together, these materials describe the many factors contributing to poorer health outcomes for Americans living in rural areas than those in urban settings, and offer ideas to address these growing health disparities.

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February 2026

It is my great pleasure to introduce the tenth annual report of the Aspen Health Strategy Group (AHSG).

Meeting the Health Needs of Rural America is the product of in-depth research and thoughtful conversation among a high-level set of leaders concerned about the growing health gap between the 50 million Americans who live in rural areas and those who do not. A sense of urgency dominates this report, which labels the poorer health and shorter lives of rural Americans "a moral failing and a crisis that cannot be ignored." At the same time, the report offers hope by presenting five big ideas to address these health disparities.

We are honored to house the Aspen Health Strategy Group within the Aspen Institute's Health, Medicine & Society Program. Members include representatives of health systems, the business sector, nonprofit organizations, philanthropies, and universities. Their cross-sector expertise, combined with a laser-like focus on a single pressing issue every year and a commitment to turning ideas into action, has made AHSG uniquely influential. Since its launch in 2015, the group has also explored end-of-life care, the opioid crisis, chronic disease, antimicrobial resistance, maternal mortality, the health harms of incarceration, data privacy, firearms injury, and the mental health crisis among young people.

Kathleen Sebelius, former US Secretary of Health and Human Services and former governor of Kansas, and William Frist, a physician and former US Senate Majority Leader, serve as AHSG co-chairs. They are long-time partners of the Aspen Institute, and I am personally grateful for their service, and for the gift of time that all AHSG members dedicate to this work. I also offer my thanks to the many readers who share this report across their own networks, helping to spread ideas for change.

At a time of so much divisiveness in our national discussion, the Aspen Institute's core commitment to rigorous non-partisanship and respect for evidence is rightly a

point of pride. AHSG honors those principles by bringing together diverse thinkers and doers who share a common belief that cost-effective strategies for confronting the nation's most vexing health challenges are within reach. The AHSG model inspires hope and merits replication.

Daniel Porterfield
President and CEO
Aspen Institute

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Foreword

Members of the Aspen Health Strategy Group (AHSG) convened in Aspen, Colorado in June 2025 to take a deep dive into rural health. We were honored to chair their annual meeting, where leaders across differing sectors gather together to engage in thoughtful, open-minded dialogue and identify actionable strategies for change.

Americans living in rural areas have shorter lifespans and higher levels of chronic disease and disability than those in urban settings. While many factors contribute to this crisis, the rural population is disproportionately older and more reliant on government healthcare programs, and provider shortages and hospital closures in their regions are reducing access to badly needed services.

This report highlights key themes from the vigorous AHSG discussions and details five big ideas to improve the health of rural populations in the United States, which are summarized as follows:

- Let rural communities lead
- Update payment systems for rural healthcare
- Build rural economic development around health and healthcare
- Invest in prevention and population health
- Modernize rural infrastructure

Reaching consensus on these ideas required in-depth understanding of complex, interrelated issues and candid exchanges with colleagues who brought very different expertise and experiences to the table.

Prior to the convening, we circulated three commissioned background papers, ensuring that all AHSG members began the discussions with a baseline of shared knowledge about rural demographics, the nature of disparities, the drivers of inequity, and the importance of community hospitals and other health infrastructure in rural regions. Those papers, which are included in this report, were authored by Carrie Henning-Smith, co-director of the University of Minnesota Rural Health Research Center; Mark Holmes, distinguished chair of public policy at the University of North Carolina Gillings School of Global Public Health; Shannon Monnat, director of the Center for Policy Research at Syracuse University; and Tim Slack, professor of sociology at Louisiana State University.

All of these subject matter experts also attended the meeting, presented synopses of their papers, and answered questions.

The convening also included on-the-ground perspectives from three leaders working in rural health systems and hospitals around the country. We were joined by Regina M. Benjamin, former US Surgeon General and founder and CEO of BayouClinic in Bayou, La Batre, Alabama; Christine Neuhoff, senior vice president and chief legal officer of St. Lukes Health System in Boise, Idaho; and Kevin Stansbury, CEO of Lincoln Health, in Hugo, Colorado. Sarah Jane Tribble, chief rural health correspondent for KFF Health News moderated their stage-setting conversation. Our understanding of how Americans view rural health was also enriched by survey data presented by Mollyann Brodie, who heads KFF's Public Opinion and Survey Research Program.

As we dove into the vigorous, full-group discussions that are at the heart of our work, we were ably guided by Alan Weil, who has moderated every convening since AHSG's inception a decade ago. Alan is senior vice president of public policy at AARP and directs AARP's Public Policy Institute. It is difficult to imagine publishing this report without his remarkable ability to listen, ask questions, challenge assumptions, and extract themes and big ideas from the robust conversations.

Our most sincere thanks to all these contributors, and especially to the generous support of our funders. The Robert Wood Johnson Foundation and Laurie M. Tisch Illumination Fund remain committed to our work, as they have been since AHSG was launched. This year, The Leona M. and Harry B. Helmsley Charitable Trust also stepped forward with funding. We owe each of them our deepest gratitude. The Aspen Health Strategy Group could not meet its commitment to improving the health and wellbeing of all Americans without them.

Kathleen Sebelius
AHSG Co-Chair

William Frist
AHSG Co-Chair

ASPEN HEALTH STRATEGY GROUP REPORT

Five Big Ideas on Meeting the Health Needs of Rural America

Part 1

"There is nothing inherent in rural life that yields poor health. In fact, the health gap between rural and urban America is only a few decades old and for much of our nation's history rural populations were healthier than their urban counterparts. Just as policy choices led to the current rural mortality penalty, different choices can eliminate it."

– THE ASPEN HEALTH STRATEGY GROUP

Five Big Ideas on Meeting the Health Needs of Rural America

Introduction

Rural Americans on average live shorter, less healthy lives than their urban and suburban counterparts. This represents a moral failure, diminishing more than 50 million peoples' opportunity for health and wellbeing. The so-called rural mortality penalty emerged only four decades ago. Its relative recency provides reason to believe it can be reversed. It is long past time for the nation to eliminate the growing health gap between rural and non-rural America. For this reason, the Aspen Health Strategy Group selected rural health as its topic for 2025.

The multisectoral group of leaders met and discussed the topic with the assistance of subject matter experts to inform the discussion. What emerged was an understanding that rural economic and human health are intertwined. Stronger economies help people live healthy lives and generate resources to meet health needs. Healthier people are more able to contribute to economic productivity. A rural health agenda is also a rural economic agenda.

As with all topics the Aspen Health Strategy Group has tackled, our focus is on the health sector. Broader strategies to encourage rural economic development are outside of our scope. Yet there is much that the health sector can do – from providing the leadership necessary to create solutions that meet local needs to scrutinizing how current healthcare resources are allocated with an eye to improving health outcomes. Our report is a call to action for leaders inside and outside healthcare to address this national imperative.

The group emerged with five big ideas to better meet the health needs of rural America. We call for the nation to let rural communities lead, align payment with health needs, build economic development around healthcare, invest in prevention and population health, and modernize the rural infrastructure.

The Aspen Health Strategy Group's goal is to promote improvements in health policy and practice by providing leadership, ideas, and direction on important and complex health issues. Cochaired by Kathleen Sebelius, former US Secretary of Health and Human Services and former governor of Kansas, and William Frist, a physician and former US Senate Majority Leader, the group comprises 19 senior leaders across sectors, including health, business, media, and technology.[1] This report captures the conversations of the group on rural health, but no specific section or statement in the report should be considered to represent the opinion of any individual group member or their organization.

Background

Our work builds on three papers written by subject matter experts in advance of our meeting, which are published in conjunction with this report.[2] We benefited from a presentation by Mollyann Brodie of KFF on public opinion regarding rural health. We were also guided by the experiences shared by Regina Benjamin, Christine Neuhoff, and Kevin Stansbury in a conversation led by Sarah Jane Tribble.

In "Rural Health in the United States," Carrie Henning-Smith examines the factors driving rural health inequities in the United States. She begins by noting that *rurality* has no single definition, with different measures used by different federal agencies. While the precise count depends on which definition is used, more than 50 million Americans live in rural America.

1 More information about the Aspen Health Strategy Group can be found at http://www.aspeninstitute.org/aspen-health-strategy-group.

2 Unless noted otherwise, the data in this report come from the background papers prepared by subject matter experts and published in conjunction with this report.

Henning-Smith details significant disparities between rural and urban health outcomes, including higher mortality rates, a higher prevalence of chronic conditions, greater rates of disability, and increased incidence of infectious diseases in rural areas. These inequities are attributed to two main factors: social factors that lead to poorer health outcomes and barriers to receiving needed healthcare services. Barriers to care include issues with "affordability, availability of services and facilities, and workforce shortages." The availability of facilities, including hospitals, pharmacies, and nursing homes, as well as health professionals has declined over the past two decades. Specialty services, most notably maternity care, can be particularly difficult to obtain in rural areas. More than two-thirds of federally designated health professional shortage areas are found in rural areas. In 2024, rural residents were significantly more likely to report problems affording their medical bills and were more likely to carry medical debt when compared to urban residents.

According to Henning-Smith, social drivers of health "contribute significantly more to health than healthcare access alone." Rural inequities encompass a range of issues, including poorer housing quality, limited access to healthy foods, difficulty accessing childcare, and an inadequate transportation and technology infrastructure. Many of these inequities tie back to education and income, with overall educational attainment lower in rural areas and poverty rates among all ages higher in rural America. In addition, rural employees are less likely to enjoy workplace benefits such as paid sick leave, remote work options, and employee assistance programs.

Henning-Smith argues that rural "inequities in health … can be addressed only through a multifaceted, intentional response." Components of such a response would include modifying payment policy for rural providers, bolstering the rural healthcare workforce, investing in infrastructure, increasing migration to rural areas, and performing ongoing rural health research.

In "Sustaining the Rural Hospital: Potential Policy Approaches," Mark Holmes identifies rural hospitals as crucial hubs of community well-being and economic development now under threat due to financial hardships. He notes that "nearly half (47 percent) of rural hospitals [have] a

negative operating margin, compared to 36 percent of urban hospitals." A total of 230 rural hospitals have closed their doors since 2005. Several factors contribute to rural hospital closures, including population decline, a shift to outpatient care, and financial pressures due to low payment rates. Holmes adds that rural hospitals are often disadvantaged by the shift to value-based payment models that generally depend on having a large volume of patients.

Congress has made various attempts to reverse the cycle of rural hospital closures. After the Medicare prospective payment system of 1983 led to rural hospital closures due to their higher per-unit costs, the federal government created designations such as critical access hospitals, which receive a cost-based reimbursement. More recently, the rural emergency hospitals designation, created in 2023, offers rural hospitals an option to transition to an emergency department–only model, supported by sizeable annual payments. A wide variety of designations applies to various rural hospitals to meet particular needs.

Rural hospital closures have effects on local health services, leading to longer emergency medical services runs and increased rates of preventable hospital admissions. Economic and sociodemographic effects, including decreases in local per capita income, employment, and population, are also associated with rural hospital closures. According to Holmes, rural hospital closures may make it harder for a community to attract potential residents and hinder health-promoting efforts, such as community-driven public health initiatives.

Holmes offers an array of short- and long-term strategies for improving the viability of rural hospitals. These strategies range from expanding existing federal programs designed to support rural hospital finances to addressing underlying barriers to financial success such as inadequate information technology systems. Holmes concludes: "The successful policy strategy will likely be a blend of immediate, incremental approaches combined with long-term, sustained, more innovative designs."

Shannon M. Monnat and Tim Slack highlight the heterogeneity of rural America in "Population Health in Rural America: Changes, Challenges, and Opportunities." Rural mortality rates are higher than urban rates "across nearly every cause of death and in all age groups."

But trends among rural working-age adults (age 25–64) are especially concerning. In recent years, mortality rates have increased in this group, with numerous causes of death implicated. Nonmetro Black and American Indian or Alaska Native residents have significantly higher mortality rates than other racial and ethnic groups. However, the growth in nonmetro mortality rates over the past 20 years was largely experienced by White and Black populations. There is also a demographic shift underway in rural America, with the authors noting that "all of the population growth in rural America over the last two decades was the result of growth in non-White populations – Hispanic populations in particular."

Examining demographic shifts, Monnat and Slack note that as young people leave rural communities, they do not just reduce the youth population; they also take with them the potential for new families to form. In-migration of affluent retirees to certain rural communities is beneficial in some respects due to the resources they bring but can exacerbate challenges such as access to affordable housing.

Rural areas also lag their urban counterparts in educational attainment, with the gap in bachelor's degree holders widening from 11 percentage points in 2000 to 15 percentage points in 2021. This educational divide is particularly important, since holding a bachelor's degree is associated with longer life expectancy. Although the disparity between rural and urban poverty rates has lessened in recent decades, "areas of the country where poverty is chronically high (i.e., over 20 percent of the population in poverty for the last 40 years) are largely rural." The rural mortality rate is highest in these critically impoverished areas.

Monnat and Slack note the intertwined and fluid nature of rural and urban areas and, while acknowledging significant disparities, also note that many rural areas are "healthy, successful, and thriving." They call for a response that focuses on upstream policy interventions that will yield better health.

Framing the Issue

Five themes emerged during the group's discussion that helped guide the development of this year's big ideas. The themes are as follows: America needs rural America to be healthy, today's poorer rural health can be reversed, America's healthcare financing

model was not designed for rural America, rural America needs a community-centered approach to health improvement, and states and communities focused on health can lead the way to better results.

- **America needs rural America to be healthy**

  The lives of the more than 50 million Americans living in rural areas have inherent value, making actions to improve their health a moral imperative in the national interest. The rural mortality penalty – early onset of chronic disease and disability and high rates of premature death – can and should be eliminated.

  The entire nation would benefit in myriad ways from having a healthier rural America. All Americans depend on rural areas for food production; natural resources, including energy production; recreation; mobility; and more. These national assets depend on the health of the people living among them. America's national security relies on the contributions of rural Americans, who have the highest rates of service in the nation's armed forces.

  A strong American economy depends on a healthy rural America. Harnessing the economic potential of rural residents – a growing opportunity in an era when advances in technology have enabled connection from almost any location – can be a source of economic growth for the entire nation. By contrast, poor health among rural residents represents a missed opportunity for economic strength that burdens all Americans.

  American democracy is strengthened by a healthy rural America. Health and political engagement are associated, with causation flowing in both directions. Good health and strong civic institutions go hand in hand to support democratic values.

- **Today's poorer rural health can be reversed**

  Nothing inherent in rural life yields poor health. In fact, the health gap between rural and urban America is only a few decades old, and for much of our nation's

history, rural populations were healthier than their urban counterparts. Just as policy choices led to the current rural mortality penalty, different choices can eliminate it.

Experts tie the emergence of the rural mortality penalty to a large and rapid decline in economic opportunity in rural areas, leading to job losses and business closures across many sectors. Diminished opportunity led to out-migration by those seeking a better life, leaving fewer resources available to invest in the people and institutions that remained. Larger institutions, including businesses, philanthropies, and governments, largely turned their attention elsewhere. At the same time that increased poverty and financial hardship yielded poorer health, access to medical services, including hospitals, doctors, and pharmacies, declined.

The forces behind each of these trends are complex. They include trade policies and labor policies that yielded job losses and reduced job opportunities, particularly for people without a college degree. There is no single or simple way to reverse recent trends, but awareness of their origins provides guideposts for action.

Strategies to improve rural health must begin with an understanding of the relationship between economic health and human health. Poverty is a well-established cause of poor health, and the counties with the most persistent poverty are mostly rural. As the cost of healthcare has grown, less-resourced communities have become less able to support the infrastructure needed to make healthcare services accessible. Poverty is also negatively associated with healthy behaviors as people with fewer resources have less access to healthy foods and recreational opportunities and are more likely to experience stress, which is damaging itself and can lead to unhealthy coping behaviors, such as tobacco, alcohol, or other harmful substance use.

Reversing recent trends requires addressing rural health and rural economic loss as interrelated phenomena. Market forces must be harnessed to improve rural health, but markets alone, left to themselves, will not solve the health problems that exist in rural America.

- **America's healthcare financing model was not designed for rural America**

  How we pay and what we pay for in the American healthcare system place particular burdens on rural America.

  Even as medical care has experienced tremendous innovations that improve health, the cost of those services has skyrocketed. Public programs and private insurers pay for healthcare using approaches based primarily on delivery models as they exist in urban and suburban areas.

  For example, almost one third of American healthcare spending goes to hospitals. Typical hospital payment methods, dominated by Medicare but followed largely by private payers, are built on the cost structure of a midsize or large urban or suburban hospital. But many of a hospital's fixed costs cannot be borne as readily in a small rural hospital. Waves of rural hospital closures have yielded periodic development of payment models designed around the particular needs of rural hospitals. As important as these models have been and continue to be, as explained in more detail by Holmes, they have not altered the underlying forces that make rural hospital finances so precarious.

  The past few decades have seen the emergence of myriad alternative payment models often under the moniker of value-based payment. Underlying many of these models are assumptions about excess capacity and pricing competition based on the structure of larger markets. Many are also built on the premise that providers should take financial risk associated with the health outcomes of the populations they serve, which depends on having a larger patient volume than most rural hospitals have. In a well-meaning effort to pursue better value in healthcare, new payment models can bake in disadvantage for rural providers.

  Medicare plays an outsize role in rural America. As enrollees have moved increasingly into Medicare Advantage plans, rural provider rates increasingly have been set through price negotiations with insurers rather than administered

prices in traditional Medicare. The small scale of most rural providers makes them price takers up against large, national insurance carriers, leading some analysts to conclude that Medicare Advantage is detrimental to rural hospitals' financial health.

Medicaid also plays a dominant role in providing coverage to people living in rural America. Medicaid covers most births and is the primary payer for long-term care services and mental health and substance use disorder services. Since provider rates vary significantly across states and managed care plans, it is difficult to generalize regarding the adequacy of those rates, although they generally fall below commercial rates and are often below Medicare rates as well. Notably, states with larger rural populations are less likely to have expanded Medicaid under the Affordable Care Act than more urban states, leaving a larger share of the population without coverage and leaving providers with more uncompensated care. Studies have shown that rural hospital closures are less likely in states that expanded Medicaid.

What doesn't get paid for may be as important for rural health as what does. Spending on public health, including health promotion and disease prevention, falls far short of what is needed everywhere, but particularly in rural America where the burden of preventable disease is greatest.

It is well understood that social factors (sometimes called determinants) are primary drivers of health. Rural America faces particular barriers in assuring that positive social factors are in place. Higher rates of poverty and disability, lower educational attainment, long travel distances, poor transit infrastructure, and substandard housing burden the health of the people living in rural areas. Underinvestment in food assistance, affordable housing, accessible childcare, and other social services undermines health as well. No amount of spending on healthcare services can offset the health effects of this underinvestment.

- **Rural America needs a community-centered approach to health improvement**

  Health starts in the community and is maintained in part through effective healthcare services, most of which are delivered locally.

  The heterogeneity across rural communities cries out for community-based approaches to health improvement. Community-guided solutions attend to what community members themselves consider most important. They draw on institutional and human resources to build from strengths and overcome barriers. They take advantage of assets that are notable in much of rural America: close relationships, traditions of cooperation, and tighter professional networks.

  Community-centered approaches are needed to address a recurring challenge highlighted in our discussions: While both social factors and healthcare services are critical to health in rural areas, most rural communities lack the resources to fully support both.

  Some financing models established for federal and state programs, or by national insurers or employers, are unable to navigate the nuance needed to maximize health in the community. With a more substantial burden due to poorer health and a smaller resource base due to lower incomes, creativity, balance, and trust are needed to achieve optimal outcomes.

  This often plays out in the context of the rural hospital. The rural hospital is an anchor for the community – providing essential services; operating as a hub to meet a broad range of needs, including long-term care, mental health, social services, and public health; and more. Its existence is often seen as essential for retaining economic vitality and attracting new residents. Yet the focus of funding streams toward the hospital can make it difficult to reallocate resources when they might be needed elsewhere. These are tensions that cannot be resolved

through federal policy – they must be addressed where the people most affected have a voice.

The complex role of the rural hospital is emblematic of a larger problem: The entire healthcare ecosystem is built around providers and payment streams, most of which are fee for service. Every actor in the system, whether a community health center, pharmacy, or individual clinician, focuses on retaining the volume of services necessary to keep their doors open – a task that is increasingly difficult. Left out of the equation is the patient living in the community faced with social needs and chronic conditions. The shortcomings of the American healthcare system are felt most acutely in rural America where the burden of chronic disease is greatest and where the healthcare system struggles to keep up with the acute needs of its patients.

The mismatch between resources and needs is highlighted in the area of behavioral health. Mental health and substance use treatment needs consistently arise as a top concern when community members are asked to identify community priorities. Yet the health system's long-standing practice of ignoring or deprioritizing behavioral health relative to physical health yields consistent underinvestment in this priority area.

Given the varied needs of communities and the resources available to them to meet those needs, the route to better rural health must run through the communities themselves.

- **States and communities focused on health can lead the way to better results**

  Even as aggregate statistics reveal a rural mortality penalty, some rural areas and populations are thriving. These success stories provide evidence that can be used to improve rural health more broadly.

  Before exploring avenues for improvement, it is important to note that the apparent size of the rural-urban health gap is exaggerated because rural areas that grow enough in population are reclassified as urban, and these places tend to have better health than rural areas where the population is declining. Experts indicate that as much as one-quarter of the rural-urban health gap is attributable to this statistical phenomenon.

The defining feature of rural success stories is community engagement around improving outcomes based on assessing community needs and developing creative approaches to meet those needs. While preserving healthcare services is a critical component of these stories, the underlying health needs of the population are the driver.

A compilation of rural success stories is beyond the scope of this report. We heard from experts that some successes are initiated locally, some are regional, and some are led by the state. In some instances, planning efforts are led by a local or regional hospital or health system. Sometimes plans emerge when a community is under threat of losing its hospital. Some efforts are closely tied to regional economic plans, while other efforts focus more narrowly on health. Our experts pointed us to the Rural Health Information Hub (www.ruralhealthinfo.org) as an essential resource.

The range of planning approaches reflects the range of circumstances communities find themselves in and reinforces the importance of community-centered planning. Just as there is no single formula for rural health improvement, there is no single formula for planning to achieve that improvement.

Even as we highlight the possibilities for improvement, it is essential to point out that the rural mortality penalty is not borne evenly. Black Americans in the Southeastern United States, American Indians mostly living in the West, and residents of Appalachia of all races experience the worst health and highest rates of premature mortality. These communities have faced decades of disinvestment that cannot be easily reversed. It is not enough to ask these communities to plan their way to better health – they will require new, targeted investments to experience improvement.

In addition, power structures within communities can perpetuate disparities. Major public and private institutions play an outsize role in determining how resources are allocated, and if they are not responsive to the needs of everyone

in the community, those disparities will remain in place. Community-centered approaches must engage the entire community, and particular effort may be required to gain the insights of people who have a history of being excluded.

Just as states can support rural health improvement, their policies can also harm rural health. States' policies related to tobacco taxes, alcohol taxes and availability, firearm access, school meals and physical education, Medicaid expansion, environmental protection, and more have implications for population health. The higher burden of chronic disease in rural America amplifies the effects of some of these policies in rural communities.

Five Big Ideas to Improve Rural Health

Our nation must reduce the disparities in health between rural and urban America. The Aspen Health Strategy Group offers five big ideas for doing so. We recommend that the nation let rural communities lead, update payment systems for rural healthcare, build economic development around healthcare, invest in prevention and population health, and modernize the rural infrastructure.

1. Let Rural Communities Lead

Communities themselves know best what they need to achieve optimal health. Broad community engagement is essential for setting meaningful priorities, garnering resources to address unmet needs, holding leaders accountable for progress, and celebrating improvements as they occur.

Some communities have the necessary infrastructure to conduct needs assessments and determine the best pathway to meet those needs. Others will require external assistance, which can come from state and regional organizations. External facilitation may help assure that all members of the community have a seat at the table as plans are developed and executed.

We offer these action steps to support community leadership:

- Where possible, local governments or regional planning entities should initiate a planning process designed to identify the most pressing health needs of the

community and develop plans to address those needs. These plans should be robust – drawing on extensive community input and providing clear guidance regarding steps that need to be taken by relevant actors with specific expected outcomes.

- Governors, through state offices of rural health or special rural health–focused task forces or commissions, should support these efforts or initiate them where local capacity does not exist. States can provide financial resources, data and analysis, and leadership.
- Local and regional philanthropies should step in when other sources of leadership do not emerge. Philanthropy can use its convening power to initiate conversations and processes and philanthropy can fund various aspects of the planning process including participation by community members.
- States should be prepared to make policy changes to meet the needs of local communities. These changes may include modifications to Medicaid payment policies, how health insurance and providers are regulated, how public health funds are allocated, and more. These changes may also include providing state action immunity from antitrust laws in instances in which cooperative approaches are more likely to yield positive results than competitive markets will.

- The federal government should be prepared to make policy changes to meet the needs of local communities. These changes could include modifying reimbursement policies to reorient resources to activities that are most likely

to improve the health of rural communities. Depending on what changes are needed, they may be made through granting waivers, modifying regulations, and amending statutes.

- Private insurers, including those with a large national presence, should participate in local planning processes. Private insurers should be prepared to consider modifications in payment policies that are designed to meet community needs. State insurance regulation may be needed to bring these plans to the table.

2. Update Payment Systems for Rural Healthcare

The patchwork of supplemental payments to support rural health are built primarily around inpatient hospital services and, to a lesser extent, rural health centers. These supports have been critical for avoiding loss of services and must be maintained, including the following:

- Given the lasting negative economic and health effects when a rural hospital closes, and given how difficult it is to reopen one once it has closed, Congress should sustain and expand the current system of rural hospital designations combined with targeted financial support until a more durable system is in place.

- At the time of our meeting, the "One Big Beautiful Bill Act" was being debated. The cuts to Medicaid included in that bill, which has since been signed into law, are alarming and threaten the stability of rural hospitals and other rural providers. Congress must closely monitor the effects of these cuts and be prepared to act if the predicted harms come to pass.

- The Rural Health Transformation Program, which was included in the final One Big Beautiful Bill Act, had not yet been proposed at the time of our meeting. While its scale does not fully offset the effects of the cuts, and the distribution of funds to rural providers remains unknown, states and the administration should use the program funds to support the types of transformation recommended in this report.

- States that have not expanded Medicaid should do so. In addition to the direct health benefits for the millions of rural Americans who would gain coverage, Medicaid provides critical financial support to rural hospitals and other rural providers.
- The federal government should commit stable, adequate funding for the Indian Health Service, which provides essential support to many rural communities.

Preserving existing funding streams is not enough. Now is the time to design a better system – a payment system that meets the needs of rural America. Examples of actions that would yield such a system include the following:

- Congress should update the special payment models applied to rural hospitals – simplifying options, aligning models with current needs, focusing resources on the hospitals most disadvantaged by traditional payment methods, and assuring that rural hospitals that need special payments are eligible for them.
- With rapid growth in Medicare Advantage, particularly in rural areas, the Centers for Medicare & Medicaid Services should increase its oversight of payment policies and practices among Medicare Advantage plans to assure that they are not disadvantaging rural providers.

- The Center for Medicare and Medicaid Innovation should scrutinize existing risk models to enable participation of rural providers. Areas for exploration include designing mechanisms for lower volume providers to take on realistic levels of risk and compensating rural hospitals for the access and continuity they provide even as referrals and patient preferences push more rural residents to urban and suburban hospitals.
- The Center for Medicare and Medicaid Innovation should continue to support and evaluate comprehensive alternative payment models focused on rural areas that are designed to move away from volume-driven payment. The Centers for Medicare & Medicaid Services should continue to evaluate the Pennsylvania Rural Health Model, seek out other opportunities for experimentation, and apply the lessons of these models as they emerge.
- All payers should examine the steps they can take to support a robust primary care workforce, which is essential for everyone but of particular importance in rural America given the elevated incidence of chronic conditions. Similarly, all

payers should consider how to support addressing the social conditions that have yielded poor health outcomes for so many people in rural America.

3. Build Rural Economic Development Around Health and Healthcare

The intertwined nature of health and economic development offers a positive path forward for rural America. While a full rural economic development agenda is beyond the scope of this report, there are specific opportunities related to the health sector, including the following:

- Rural economic development should include a focus on training rural residents for the full spectrum of healthcare professions and certifications.
- Rural health facilities should maximize their participation in professional training programs based on the evidence that people who train in rural areas are most likely to practice in rural areas.
- Rural education systems – from K–12 through undergraduate and graduate education – should expand their focus on mentorship and training programs to identify rural residents who are strong candidates for working in the health sector, especially in rural communities.

- States should explore increasing the presence of medical, nursing, pharmacy, and other health professional schools in rural areas.
- States should expand the scope of practice for nurses, pharmacists, and dental hygienists to the full level of their professional competence. Expanded scope opens doors for enhanced training opportunities, alleviates workforce shortages, and unlocks additional access points to care in rural America.
- Economic development within the health sector should be viewed as a platform to build out sectors that support the healthcare economy. These sectors include education, childcare, trades, and more.

4. Invest in Prevention and Population Health

The path to better rural health depends on preventing illness and reducing rates of preventable disability at least as much as it depends on access to healthcare services.

Community planning and new payment models should lead to a reorientation of resources toward prevention and population health, including the following:

- In assessing their needs, rural communities should begin with data and analysis of the disease burden of their population. With this information, they should identify goals and actions designed to address the most pressing health needs within their communities.

- Even as communities seek to preserve their local hospitals, they must consider the full range of health services that are required to meet population health needs. The hospital can serve as a hub for a broad range of services, including long-term care, mental health, and more, but the hospital may not be the most efficient place to locate all of these services.

- Communities should assess their needs for public health functions, long-term care services, mental health and substance use disorder services, oral health services, emergency medical services, and other needs that are poorly met by the current health financing system and allocate resources to these needs.

- As communities assess their health needs, they should look upstream to factors that are leading to poor health and guide their investments accordingly. This may include advocating for state laws that are health promoting, such as improved school nutrition and activity standards, higher tobacco taxes, greater enforcement of restrictions on alcohol purchases, and reduced ready access to firearms by those at high risk of suicide.

5. Modernize Rural Infrastructure

All the improvements discussed in this report depend on a robust rural infrastructure. Infrastructure comes in many forms. Particular investments are needed in the following areas:

- Many rural hospitals need significant upgrades to their physical plants. The largest federal investment in rural hospitals occurred through the Hill-Burton Act, which is now 80 years old. Physical upgrades tend to be deferred when finances are tight, which most rural hospitals have experienced over an extended period. A new national commitment to rural healthcare infrastructure is needed.

- Information technology upgrades are also needed in rural hospitals and other healthcare facilities. Health information technology, including interoperability, is critical for care continuity as patients often spread their care between a local rural hospital and an urban or suburban hospital. Technology can also be the platform on which specialist consultations occur.
- Rural internet service is essential for economic development but also increasingly for effective patient care with the growing use of remote patient monitoring and virtual care platforms. Telehealth, an evidence-based modality for many types of care, is possible only if patients and providers have broadband Internet service.
- An adequate transportation infrastructure is essential to health improvement. Transportation provides access to jobs but is also needed to get patients to their healthcare providers.

- Housing is a well-established social determinant of health. Poor-quality housing leads to health harms, including lead and mold exposure. Housing instability and loss of housing are tied to increased morbidity and mortality. The high cost of housing can make it difficult for families to afford other basic needs, including healthy foods.
- Half of the rural mortality penalty is attributable to the lower educational attainment of rural populations. Education and income, which are associated, are foundational elements of health improvement. Steps that increase levels of education in rural America will yield better health.
- The causes of the rural mortality penalty, and the types of interventions with the most potential to eliminate it, are not fully understood. A robust infrastructure of data on rural America and a research enterprise to analyze those data are needed to close the health gap between rural and non-rural America.

Moving Forward

The poorer health and shorter lives of many Americans who live in rural areas is a moral failing and a crisis that cannot be ignored. Health sector leadership is needed to respond to this crisis. The Aspen Health Strategy Group, with its multisector membership, sets forth these ideas to motivate improvements in policy and practice. We call on the health sector, governors and state legislators, the Trump administration, and Congress to embrace these big ideas and lead the nation to better health.

BACKGROUND PAPERS

Rural Health in the United States

Carrie Henning-Smith, Ph.D., M.P.H., M.S.W.

Population Health in Rural America: Changes, Challenges, and Opportunities

Shannon Monnat, Ph.D. and Tim Slack, Ph.D.

Part 2

Sustaining the Rural Hospital: Potential Policy Approaches

Mark Holmes, Ph.D.

"Rural residents experience inequities in health outcomes due to a combination of healthcare access barriers and social drivers of health that disfavor rural communities. These inequities are complex and longstanding, but they are not distributed equally across rural areas or within rural populations. They also are not static, since rural places continuously evolve."

– CARRIE HENNING-SMITH, Ph.D., M.P.H., M.S.W.

Rural Health in the United States

Carrie Henning-Smith, Ph.D., M.P.H., M.S.W.

Introduction

Rural residents experience inequities in health relative to their urban counterparts. These inequities have been present for several decades and have grown over time. Many reasons exist for rural-urban differences and disparities in health, including barriers to healthcare access in rural areas, differences in demographic composition, and differences in social and structural drivers of health. This overview describes these inequities, explores the healthcare and contextual factors that contribute to them, and offers potential strategies to address them.

While it is important to understand and address negative health indicators in rural areas, rural America also has many assets, including strong communities and social connections, natural resources and beauty, agricultural and energy production, innovation, resourcefulness, and more. In addition, any discussion of rural America must acknowledge the tremendous diversity across rural areas. This diversity exists across demography (e.g., race, ethnicity, nativity, gender, sexual orientation, and age) and geography (e.g., state, region, topography, and degree of remoteness).

Defining Rurality

There is no single definition of *rurality*. Researchers and policymakers have developed a variety of definitions that rely on different metrics, including population density, population size, adjacency to metropolitan areas, degree of remoteness,

and commuting patterns. The designation *rural* may be applied to a county, zip code, census tract, or other geographic unit. Different agencies within the federal government, including the Office of Management and Budget, the National Center for Health Statistics, the US Department of Agriculture (USDA), the Census Bureau, and the Health Resources & Services Administration's Federal Office of Rural Health Policy, have developed and employed different measures of rurality to serve different purposes.

This variety of definitions can cause confusion, particularly when demographic and health statistics are reported (Bennett et al., 2019). For example, it is impossible to state definitively what percentage of the population is rural, since estimates vary by up to 5 percentage points (amounting to millions of people) depending on the measure being used.

While deciding on a single measure of rurality is beyond the scope of this paper, discussions of rurality should be grounded in a clear and transparent understanding of which measure is being used and why it was chosen. Particularly relevant for rural health and healthcare providers is the Federal Office of Rural Health Policy's definition, which determines eligibility for many rural-specific grant opportunities and funding provisions. The office uses a relatively expansive definition of rurality, encompassing definitions from several other agencies, allowing broad eligibility criteria for their programs (Health Resources & Services Administration, n.d.-a).

Rural Health Outcomes and Inequities

Rural health outcomes differ from urban outcomes along a number of dimensions.

Mortality

Arguably the most extreme measure of rural-urban health disparities is the difference in mortality rates. This difference, sometimes called the *rural mortality penalty* (Cossman et al., 2010; James, 2014), emerged in the early 1980s and has widened in recent decades. Today, rural residents are more likely than urban residents to die from each of the five leading causes of death (Garcia et al., 2024).

The COVID-19 pandemic exacerbated these inequities, with the virus having a disproportionate impact on mortality and health in rural areas (Jones et al., 2023; Mueller et al., 2021; Paglino et al., 2023).

The burden of rural mortality is not equally felt. The highest rates of premature death occur in rural counties with majority Black or Indigenous residents and among rural residents living in the South (Henning-Smith, Hernandez, Hardeman, et al., 2019; Henning-Smith, Hernandez, Ramirez, et al., 2019). Rural mortality rates are higher than urban rates across nearly all age and demographic groups, with particularly large inequities in maternal mortality, again with some of the highest rates among rural Black and Indigenous birthing people (Harrington et al., 2023; Interrante et al., 2022; Kozhimannil et al., 2019).

Chronic Conditions

Rural residents have higher rates of nearly all chronic conditions as compared to urban residents (US Centers for Disease Control and Prevention, 2024). This includes higher rates of cardiovascular disease (including hypertension, heart disease, and high cholesterol), diabetes, chronic obstructive pulmonary disease, and arthritis (National Center for Health Statistics, 2017). Rural residents also report higher rates of comorbid chronic conditions than urban residents, with nearly 23 percent reporting two or three chronic conditions compared to 18.9 percent of urban residents (Shaw et al., 2016). The only area in which rural-urban disparities in chronic conditions are reversed is asthma, whose rates tend to be slightly higher among urban residents (National Center for Health Statistics, 2017).

Disability

Rates of disability are higher among rural residents than urban residents (Crankshaw, 2023). This is true for the population as a whole and within specific age groups. For example, an

analysis of the 2021–2022 National Health Interview Survey found that rural children ages 2–17 had higher rates of disability than urban children (14.3 percent vs. 10.6 percent) (Boswell and Crouch, 2024). Among adults age 65 and older, 39.0 percent of rural residents have a disability compared with 34.7 percent of urban residents; rural older adults are also more likely to have two or more disabilities (20.8 percent vs. 18.9 percent) (Tuttle et al., 2020). Rural-urban disparities in disability rates exist nationally and are most pronounced in the South, where the rate is 16.2 percent for rural residents and 13.0 percent for urban residents (Crankshaw, 2023).

Behavioral Health

Rural residents also experience disparities in mental health and substance use disorders. For example, rural residents have higher rates of mortality from suicide than urban residents; rural suicide rates are higher and have been increasing more rapidly than urban suicide rates in recent years (Pettrone and Curtin, 2020; Steelesmith et al., 2019). Between 2000 and 2018, rural suicide rates increased by 48 percent, compared with a 34 percent increase in urban rates (Pettrone and Curtin, 2020).

Research on rural-urban differences in mental health outcomes is surprisingly scant and offers mixed results. In one study, rural residents reported higher rates of depression and anxiety than urban residents, with rates particularly high among marginalized populations, including lesbian, gay, bisexual, transgender, queer, and questioning rural residents (Henning-Smith, Sarkin, et al., 2022). In another study using a meta-analysis approach, most, but not all, studies indicated higher rates of depression among urban older adults than rural older adults (Purtle et al., 2019).

Research on substance use is similarly mixed. A 2022 report from the US Centers for Disease Control and Prevention found that rural-urban differences in drug overdose death rates varied by gender, race, state, and drug type (Spencer et al., 2022). For example, data from the Substance Abuse and Mental Health Services Administration's 2023 National Survey of Drug Use and Health show that rural residents age 12 and older have slightly lower rates of illicit drug use overall (22.4 percent compared to 25.3 percent in large metropolitan counties) but slightly higher rates of opioid misuse

(3.5 percent vs. 3.1 percent) and methamphetamine use (1.5 percent vs. 0.8 percent) (Substance Abuse and Mental Health Services Administration, 2024).

Infectious Disease

Historically, rural areas held an advantage in susceptibility to infectious disease (Alirol et al., 2011). However, that advantage has eroded over time, with rural areas now experiencing high rates of infection and disease burden from many communicable diseases (Sullivan et al., 2021; Ziller and Milkowski, 2020). The most recent – and arguably starkest – example of this is the COVID-19 pandemic, during which rural areas initially experienced slower rates of infection but quickly caught up and surpassed urban areas in infection rates (The Daily Yonder, n.d.). The disease burden from COVID-19 was higher in rural areas than urban areas, as indicated by higher rates of hospitalization, severe disease, and death (Dobis and McGranahan, 2021; Jones et al., 2023).

Many reasons exist for disparities in COVID-19 mortality, including rural-urban differences in infrastructure and healthcare access and slower uptake of vaccines among rural residents (Henning-Smith, 2020; Henning-Smith, Tuttle, and Kozhimannil, 2021; Paglino et al., 2023; Ranscombe, 2020; Rivera-Hernandez et al., 2021). Other infectious diseases, including HIV and hepatitis C, show similar rural disparities, partly fueled by injection drug use and limited preventive care (Sullivan et al., 2021; Ziller and Milkowski, 2020).

Access to Healthcare in Rural Areas

Rural residents experience health inequities for two primary reasons: access to care and social drivers of health. This section focuses on the former, and the next section focuses on the latter. Rural residents experience multiple barriers to accessing care, including those related to affordability, availability of services and facilities, and workforce shortages.

Affordability

Rural residents have higher rates of being uninsured than urban residents. They also have higher rates of enrollment in public insurance programs such as Medicaid and Medicare (MacDougall et al., 2024), with nearly one-quarter of rural residents enrolled in Medicaid (Howren and Hansen, 2025). While Medicaid helps to temper uninsurance rates in rural areas, lower reimbursement rates sometimes prove challenging for rural facilities and providers (Kaufman et al., 2016), potentially creating additional barriers to access for Medicaid enrollees. The One Big Beautiful Bill Act, which was signed into law on July 4, 2025, includes more than $900 billion in cuts to federal spending on Medicaid over the next 10 years (Howren and Hansen, 2025). Those cuts may further exacerbate rural residents' ability to access insurance and rural facilities' ability to access reimbursement.

Since the inception of the Health Insurance Marketplace as part of the Affordable Care Act, the rural share of enrollment in its plans has remained steady; approximately 18 percent of marketplace enrollees are rural residents (proportionate to the US population) (KFF, 2025). However, some states in the South (especially Alabama, Georgia, Louisiana, Mississippi, and Oklahoma) have seen increases in the percentage of rural residents enrolled in the marketplace over the past decade (KFF, 2025). Rural residents have fewer choices for marketplace plans compared to urban residents; in 2021, rural counties had an average of 2.5 participating insurers and urban counties had 3.1 (Turrini et al., 2021). In 2025, the US Congress fiercely debated whether to allow tax credit subsidies for marketplace plan enrollment to expire; doing so would significantly increase the cost of premiums for individuals and households, which may disproportionately impact rural residents (Altman, 2025).

Regardless of insurance status, rural and urban residents alike report barriers to affording healthcare. In a 2024 study using the National Health Interview Survey,

more than 43 percent of all adults reported being worried about being able to afford healthcare (Jacobson et al., 2024). In that same study, rural residents were significantly more likely to report problems paying their medical bills (12.2 percent vs. 10.0 percent) and inability to pay their medical bills (8.3 percent vs. 6.0 percent). Difficulty paying medical bills can then lead to medical

debt, which, in turn, can have deleterious impacts on one's credit score, access to additional healthcare, and ability to pay for other necessities (Kluender et al., 2021; Markowitz, 2019; The Commonwealth Fund, n.d.).

In the aggregate, rural counties have higher rates of medical debt and higher amounts of medical debt owed than urban counties (Swendener et al., 2024). Rates are highest for rural counties in the South and for rural counties with a high concentration of Black, Indigenous, and other people of color. In a nationally representative survey of Medicare beneficiaries, rural beneficiaries were more likely to have medical debt in collections than their similarly insured urban counterparts (Henning-Smith, Lahr, and Hernandez, 2020). In interviews, rural hospital administrators have noted the challenges that medical debt poses for their patients, the health of their communities, and the viability of their hospitals (Tuttle et al., 2024).

Availability of Facilities and Services

Rural residents access healthcare in a changing landscape of facility and service availability. A notable decline has occurred across service types in facilities and units in recent decades, leaving many rural residents needing to travel farther to receive care.

Perhaps the most visible of all rural facilities are rural hospitals. Over the past two decades, more than 100 rural hospitals have closed and nearly 90 have converted to a different type of facility without inpatient care (Cecil G. Sheps Center for Health Services Research, n.d.). In addition to hospital closures, rural communities have experienced disproportionate facility and service line closures in recent years. For example, while urban counties experienced an overall increase of 15.1 percent in retail pharmacies between 2001 and 2023, rural communities saw a decline of 9.8 percent in noncore rural counties and 4.4 percent in micropolitan rural counties (Lazaro et al., 2022).

Rural communities have been grappling with losses of obstetric units and maternal health services in recent years. As of 2022, fewer than half (47.6 percent) of all rural

hospitals provided obstetric services compared with 64.3 percent of urban hospitals. This represents a significant decline from 56.9 percent in 2010 among rural hospitals and 70.3 percent among urban hospitals (Kozhimannil et al., 2025). More than half of all rural counties have no hospital with an obstetric unit (Kozhimannil et al., 2020).

At the other end of the lifespan, rural areas have also experienced disproportionate declines in the availability of long-term services and supports in recent years. This is of particular concern given the older age structure and higher rates of disability and functional limitations among the rural population. Between 2008 and 2018, 400 rural counties experienced a nursing home closure, compared to 368 urban counties (Sharma et al., 2021). As of 2018, more than 10 percent of all rural counties had no nursing home, compared with 3.7 percent of urban counties (Sharma et al., 2021). Rural residents experience particular barriers to accessing nursing home care, including limited availability of care for people with complex needs (e.g., behavioral health needs, bariatric care) and difficulty finding care close to home (Henning-Smith, Casey, et al., 2017; Henning-Smith, Kozhimannil, Casey, and Prasad, 2018; Henning-Smith, Kozhimannil, and Prasad, 2017).

Facility and unit closures are associated with a variety of negative outcomes. Closure of obstetric units is associated with increased rates of giving birth outside of the hospital or in a hospital without an obstetric unit (likely in an emergency room) (Kozhimannil et al., 2018), and hospital closures are associated with increased risk of poor infant outcomes, including low birthweight (Durrance et al., 2024). These impacts are felt most acutely in the least populous and most remote rural counties.

More broadly, rural hospital closures lead to longer drive times and associated barriers to accessing care for rural residents in the communities where they close as well as negative economic impacts for the community (Malone et al., 2022; McCarthy et al., 2021). However, even the impacts of rural hospital closures are somewhat mixed and vary by hospital type, degree of rurality, and region of the country; again, the South seems to be especially negatively affected (Malone et al., 2022; McCarthy et al., 2021; Mills et al., 2024; Mullens et al., 2024). When a nursing

home closes in a rural community, those rural residents need to travel farther to the next nearest facility than urban residents do when experiencing a similar closure (Sharma et al., 2024).

Workforce Shortages

Rural areas have longstanding shortages across all levels and types of healthcare workforce. These are exacerbated by having an older age structure with greater service needs combined with outmigration of some younger and working-age adults, leaving a smaller labor force (Lichter and Johnson, 2025). These shortages are somewhat attenuated in places that have seen an influx of immigration (Douaiher et al., 2018).

The vast majority (more than two-thirds) of health professional shortage areas are found in rural areas (Bureau of Health Workforce, 2023). Rural areas are also disproportionately designated as medically underserved. Access to appropriate, affordable specialty care is particularly challenging in rural areas (Cyr et al., 2019; Lahr et al., 2019).

Considerable research has been conducted to identify rural health workforce shortage gaps and identify what motivates rural providers to choose to practice in rural areas. The most compelling factor – by far – in someone choosing to practice in rural areas is having grown up in a rural area (Fritsma et al., 2023; Henning-Smith, Fritsma, et al., 2024). This may seem self-evident, but it provides strategic guidance on where to focus efforts to grow the rural workforce.

Efforts to Address Access to Care

Considerable effort has been put into improving access to care in rural areas. Federal policy provides funding to rural facilities, including critical access hospitals (established in 1997) and rural health clinics (established in 1977). This funding has been essential to maintaining access to care in communities that might have lost it without the payment policies that support those programs (Fannin and Nedelea, 2013; Ortiz and Wan, 2012). More recently, the introduction of the Medicare rural emergency hospital designation (established in 2021 and first implemented in 2023) allows rural hospitals to close inpatient services while maintaining outpatient and emergency care (Schaefer et al., 2023). (Rural hospital financing is discussed in more detail in the companion paper by Mark Holmes.)

Telehealth has long been viewed as a strategy to improve access to care in rural areas because traditional brick-and-mortar healthcare is insufficient to meet the needs of underserved and widely dispersed rural populations (Kozhimannil and Henning-Smith, 2021). However, providing telehealth requires investing capital in technological equipment, training providers and patients on how to meaningfully engage with technology, and overcoming hurdles related to reimbursement and licensing requirements (Kozhimannil and Henning-Smith, 2021; Shaver, 2022). Given these challenges, telehealth was relatively uncommon before 2020; one study found that it accounted for 0.3 percent of all encounters from 36 million privately insured individuals in 2019 (Shaver, 2022). Growth in the use of telehealth, including through flexibility in payment policy, was a particular focus during the COVID-19 pandemic. Some of the more generous reimbursement policies have been rolled back after the end of the public health emergency (Health Resources & Services Administration, n.d.-b; Kwon et al., 2024; Thomas et al., 2023).

Even with generous reimbursement policies, however, telehealth does not guarantee equitable access to care (Porteny et al., 2025). Providing high-quality care through

telehealth requires additional capital and technological investments in rural communities, since rural residents are less likely than their urban counterparts to have access to broadband Internet and technological devices.

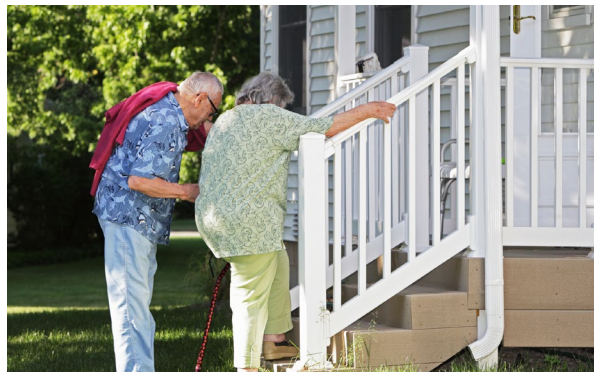
Social Drivers of Health in Rural Areas

A second factor affecting health outcomes in rural areas and rural-urban disparities is social drivers of health. In fact, these drivers contribute significantly more to health than healthcare access alone, and all of them present unique challenges and opportunities in rural areas.

Housing

Rural residents are more likely than urban residents to own their own homes. This may be indicative of a rural advantage, in which rural residents have more stable housing and fewer housing costs. Indeed, rural residents tend to live in the same home for longer than urban residents (Henning-Smith, Tuttle, Swendener, et al., 2023) and have lower rates of housing cost burden (Swendener, Rydberg, et al., 2023). Among renters, rural residents are more likely to use governmental assistance for housing costs (Henning-Smith, Swendener, et al., 2024), consistent with a general pattern of rural residents having greater reliance on public programs (Farrigan et al., 2024).

However, rural residents also experience issues with housing quality and accessibility at higher rates than urban residents. For example, according to data from the American Housing Survey, rural residents are more likely to have broken windows and utility interruptions than urban residents; they are also twice as likely to have rodents and other pests in their homes (Yam et al., 2024). Rural residents are more likely than urban residents to have inadequate plumbing and kitchen facilities, and among rural residents, rates are particularly high for people with disabilities and for people who identify as American Indian or Alaska Native (Swendener, Pick, et al., 2023). Rural older adults aging in place are more likely to live in single-family homes with stairs at the entrance; they are also more likely to report having unmet needs for help



getting around inside and outside of their home (Henning-Smith, Lahr, Mulcahy, et al., 2023).

Food Access

Despite being home to most agricultural and food production in the US, rural areas often lack access to affordable, accessible, and nutritious food. According to the USDA, 15.4 percent of rural residents are food insecure, a similar percentage as those living in large urban areas (15.9 percent) and significantly higher than those living in suburban areas (11.7 percent) (Rabbitt et al., 2024). Rural households have the highest rates of "very low food security" (6.2 percent vs. the national average of 5.1 percent); this measure assesses whether any household member reduces their food intake or changes their eating habits because of a lack of food (Rabbitt et al., 2024).

The overall number of grocery stores has been declining in the US for decades. In rural areas especially, grocery stores have sometimes been replaced by stores with convenient but less nutritious offerings, such as dollar stores (Feng et al., 2023). Rural residents also encounter transportation barriers to accessing food (Bowen et al., 2022; Byker Shanks et al., 2017; Piaskoski et al., 2020). Access to safe food storage capacity, such as refrigerator and freezer space, can be an issue for lower-income rural households that need to obtain large amounts of food at one time (Henning-Smith, Tuttle, Tanem, et al., 2022). Once again, these issues are not equally felt by all rural residents, with rates of food insecurity particularly troubling in the South and among rural residents who are American Indian (Bowen et al., 2022; Jernigan et al., 2017; Pindus and Hafford, 2019).

Poverty, Income, and Unemployment

Income inequality between rural and urban areas is a long-standing issue, with rural residents having lower earnings and less disposable income than their urban counterparts (Hardy et al., 2025). According to a 2024 report from the USDA Economic Research Service, residents of nonmetropolitan (rural) counties have higher rates of poverty than residents

of metropolitan (urban) counties (13.6 percent vs. 10.7 percent) overall and within each age group (Farrigan et al., 2024). Nearly 21 percent of rural children younger than age five live in poverty, compared with 16.5 percent of urban children (Farrigan et al., 2024). More rural residents fall into the category of "working poor" than urban residents, and rural areas have higher dependency ratios (i.e., the ratio of the number of working-age people to children and older adults) and lower labor force participation, driven largely by the higher percentage of older adults (Farrigan et al., 2024).

Rural residents are also less likely to have access to a variety of workplace and employment benefits. This includes less access to paid sick leave among full-time workers, with 69.8 percent of rural full-time employees having sick leave compared to 76.4 percent of their urban counterparts (Henning-Smith, Dill, et al., 2022). Rural residents are also less likely to have access to employee assistance programs, remote work options, and paid leave to focus on caregiving responsibilities (Henning-Smith and Lahr, 2018). Given the higher dependency ratios, poorer health outcomes, and greater amount of time required to access healthcare, all of these may exacerbate rural-urban disparities in health outcomes.

Education and Childcare

Rural residents have lower rates of educational attainment than urban residents (Johnson and Lichter, 2019; Lichter and Johnson, 2025; Sun and Monnat, 2022). The reasons for this are multifaceted but include fewer educational opportunities, especially for higher education, in rural areas, combined with outmigration of rural residents for education and employment opportunities (Lichter and Johnson, 2025). Additionally, differences in employment patterns and education needed for various occupations contribute to overall rural-urban differences in educational attainment (Schmitt-Wilson et al., 2018).

Childcare availability, quality, and affordability are all challenging in many rural places. While metropolitan counties have seen a growth in private childcare availability in recent years, nonmetropolitan counties have seen a decline (Farrigan et al., 2024). Challenges accessing childcare in rural areas may have far-reaching impacts on the workforce, including the healthcare

workforce shortages discussed above (Henning-Smith and Kozhimannil, 2016; MacDougall et al., 2025). Indeed, nearly 15 percent of rural workers cite a lack of childcare as the reason for needing to work part time rather than full time (Farrigan et al., 2024).

Access to childcare and high-quality educational opportunities should be understood within the larger context of rural children's well-being. A 2020 study found that rural children were more likely to have experienced adverse childhood experiences than their urban peers, although that difference was no longer significant after adjusting for rural-urban differences in poverty rates and other sociodemographic characteristics (Crouch et al., 2020).

Transportation and Infrastructure

Perhaps the most vexing social driver of health in rural areas is transportation. Rural places, by definition, are less densely populated and cover much larger areas. As such, rural people typically need to travel farther to access services, employment, and social connection and often do so with more limited public infrastructure. Transportation infrastructure can also be challenging in rural areas, where there are millions of miles of unpaved roads and bridges of various ages and quality (Henning-Smith, Evenson, Corbett, et al., 2017).

While many rural communities are served by public transportation, these services tend to be limited in their offerings. For example, they are often fixed route services providing transportation during limited hours (e.g., weekday daytime hours), which may be insufficient to meet people's needs. As a result, rural residents are more likely than urban residents to rely on private transportation, which requires access to a vehicle and money for fuel, registration, insurance, and maintenance (Henning-Smith, Evenson,

Corbett, et al., 2017). If a person develops a health condition that makes driving difficult or dangerous, rural residents are less likely than urban residents to give up driving – likely because few other options are available (Henning-Smith, Evenson, Kozhimannil, and Moscovice, 2018). Rural residents also have higher rates of motor vehicle fatalities than urban residents (Henning-Smith and Kozhimannil, 2018), contributing to the rural-urban mortality inequity.

A weak technology infrastructure creates additional challenges in rural areas. Rural areas lag behind urban areas when it comes to technological infrastructure and access to broadband Internet (Jones et al., 2023; Whitacre et al., 2017). As commerce, employment, education, and healthcare have moved increasingly online, especially in the wake of the COVID-19 pandemic, this presents ongoing challenges for rural residents wanting to engage in various spheres of society. Addressing rural health requires investment in rural infrastructure, especially modernizing rural broadband and technological connectivity (Kozhimannil and Henning-Smith, 2021). The 2021 Infrastructure Investment and Jobs Act (also known as the Bipartisan Infrastructure Law) made critical investments in rural infrastructure and broadband access but has not yet gone far enough to address the digital divide for all rural communities (Etim, 2025).

Recommendations

Rural residents experience inequities in health outcomes due to a combination of healthcare access barriers and social drivers of health that disfavor rural communities. These inequities are complex and longstanding, but they are not distributed equally across rural areas or within rural populations. They also are not static, since rural places continuously evolve.

To address rural health inequities, policy attention and investment are needed across a range of strategies. Strategies to address rural health should include action in the following areas:

Insurance and Payment Policy

Rural residents are less likely to be insured than urban residents and more likely to be publicly insured. Policies to increase access to insurance and to bolster reimbursement rates for public programs, especially Medicaid, would help to improve rural residents' access to care as well as rural facilities' financial status, which translates into better access.

Given the relatively high reliance of rural residents on public insurance, innovation from the Centers for Medicare & Medicaid Services is particularly important. One example of such innovation is the Pennsylvania Rural Health Model, which was implemented in 2019 as a multipayer global budget demonstration intended to bolster population health outcomes and hospital financial vitality. Evidence on its effectiveness thus far is mixed in terms of both quality and hospital financial impacts, suggesting that additional innovation is needed (Bourne et al., 2024; Pai and Park, 2025).

Workforce Recruitment and Retention

Strengthening the workforce should start with investments in rural K–12 education, including exposure to health careers (Fritsma et al., 2023). Equally important is ensuring opportunities for rural residents and those with rural backgrounds to engage in healthcare careers, including supporting community colleges and vocational training programs, expanding undergraduate and graduate medical education into rural areas, and expanding access to residency and internship opportunities.

The Rural Medical Training Collaborative (formerly known as the Rural Training Track Collaborative) is a consortium of rural family medicine residency and training programs. Data from the collaborative show a positive association between rural residency and rural practice (Patterson et al., 2024). Investments in this area should also include expansion of access to childcare, financial incentives for providers to practice in rural areas, and workplace benefits. Additional salient factors for rural provider recruitment include sharing the appeal of rural practice, such as autonomy in one's role, and having a broad

scope of practice, strong relationships with patients, and rural diversity (Fritsma et al., 2023; Henning-Smith, Fritsma, et al., 2024; MacDougall et al., 2025).

Infrastructure

Direct investment in rural public and private infrastructure is necessary to ensure that rural residents have equitable opportunities to engage in economic and civic opportunities. Such investments should focus on broadband and technological connectivity, transportation (both public and private), and housing quality.

Policymakers and providers should consider targeted investments in telehealth capacity and also consider what services might be provided via landline telephone or home visiting. Mobile units offer another example of care that meets rural residents where they are; however, mobile units are generally not designed to provide ongoing care, especially on short notice (Gizaw et al., 2022). As such, they may be part of the solution but are insufficient on their own.

Targeted Investments in Specific Groups

Ongoing rural vitality requires migration into rural communities, including international immigration. As such, immigration policy is rural health policy. Further, rural areas have an older age structure than urban areas, and some rural places have become retirement destinations. Framing retirement destinations as an opportunity to build on engagement from older adults and investing in aging services and age-friendly communities will also bolster rural health.

Continued Funding for Rural Health Research

Understanding and addressing rural health inequities requires research specifically focused on rural people and places. The Federal Office of Rural Health Policy has funded

Rural Health Research Centers at academic and research institutions across the country for nearly 30 years, providing a robust evidence base for rural health policy. While much federal funding for health research is currently tenuous, sustained investments in research, such as that conducted at the research centers, is necessary to identify underlying risk factors and to examine areas of resilience in rural places so that progress can be made on the issues discussed in this paper.

The rural United States is home to tens of millions of people and is the source of much of our country's food, energy, recreation, leisure, and natural beauty. Yet rural people experience deep inequities in health, which can be addressed only through a multifaceted, intentional response.

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"Increasing shares of rural adults are dying in their prime working-age years, and those who make it past working age are living more of their older adult years in poor health, in chronic pain, and with disability than in the past. These trends have troubling implications for an already strained rural healthcare system, workforce, and tax base, which complicate the ability to provide critical supports to the large and growing rural older adult population."

– SHANNON MONNAT, Ph.D. and TIM SLACK, Ph.D.

Population Health in Rural America: Changes, Challenges, and Opportunities

Shannon M. Monnat, Ph.D. and Tim Slack, Ph.D.

Introduction

The rural US is sick, poor, and losing population – or is it? This familiar narrative of "left behind" rural people and places tells only one part of the story of rural America, the most pessimistic one. Rural areas, on average, are home to disproportionate shares of poorer and sicker people, and rural-urban gaps in many health and well-being outcomes are large and growing. But it is also true that some rural places are healthy, successful, and thriving and have experienced improvements in mortality in recent decades. Indeed, rural America is far from monolithic. There is not one rural America but many.

This paper takes stock of the prevailing demographic, health, and mortality trends in rural America, heterogeneity in those trends across different rural populations and places, and the main causes for rural America's troubling health and mortality profile. It also identifies opportunities for addressing the trends and makes specific policy recommendations. This paper draws heavily on material presented in the authors' recent book, *Rural and Small-Town America: Context, Composition, and Complexities* (Slack and Monnat, 2024), and a recent article published in the journal *Public Policy & Aging Report* (Monnat, 2025).

As people who have lived and traveled throughout the United States can attest, America's landscape cannot be neatly divided between rural and urban. Even though *rural* and *urban* are more accurately understood as two ends of a continuum, and both terms mask tremendous heterogeneity within them, this paper uses a rural-urban dichotomy as a helpful shorthand. In this paper the terms *rural* and *urban* typically denote nonmetropolitan (nonmetro) and metropolitan (metro) counties

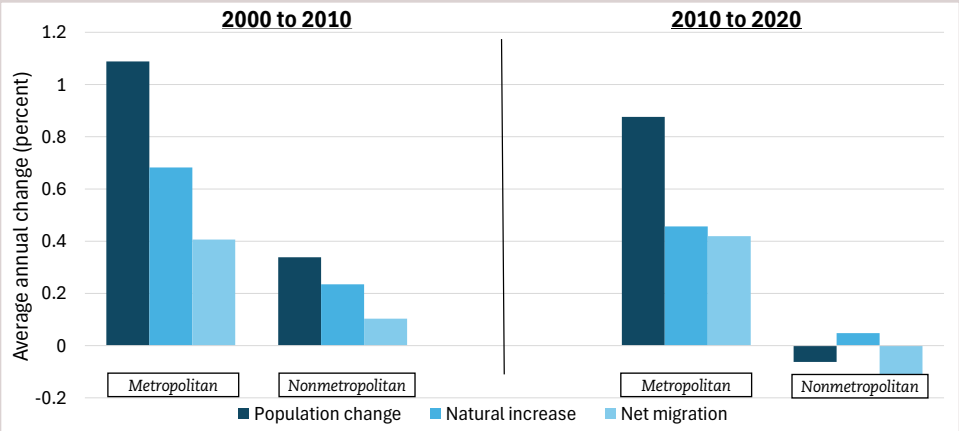
based on the US Office of Management and Budget's delineation of metro areas (Economic Research Service, 2025).

Rural Population Trends

While the contemporary United States is mainly an urban society, the population of rural America remains substantial. In 2020, roughly 14 to 20 percent of the US population lived in rural areas, accounting for between 46 and 66 million people (Sanders, 2025). As such, understanding the changing demography of rural America is critical to understanding population health overall. This section describes the US rural population, including recent changes in population size and composition.

During the first decade of the 2000s, metro (urban) counties experienced more natural increase (births minus deaths) and more net in-migration (moves in minus moves out) than nonmetro (rural) counties (Johnson, 2022b) (figure 1). While less than in metro areas, the nonmetro population grew during that decade due to more births than deaths and more people moving in than out.

Figure 1. Population Change in Metropolitan and Nonmetropolitan Counties, 2000-2020



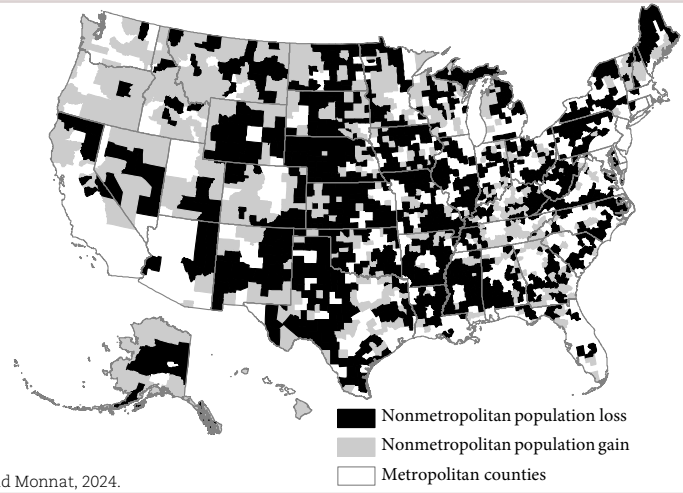
Source: Slack and Monnat, 2024, adapted from Johnson, 2022b.

The decade of 2010–2020 was a different story. For the first time in US history, nonmetro counties experienced net population loss due to a diminishing number of births that barely exceeded a rising number of deaths and more people moving out than in. By the decade's end, the total population of nonmetro America had decreased by 0.6 percent, while the total population in metro America had increased

by 8.8 percent. While it has been common for nonmetro population growth to lag that of metro areas, a decadal loss in the total nonmetro population was unprecedented, and it reflects the grim toll that the COVID-19 pandemic took on rural America (Johnson, 2024).

Roughly two-thirds of nonmetro counties lost population between 2010 and 2020 (figure 2). Population loss was common in the farming region of the heartland, the postindustrial Midwest, and much of the Deep South and Appalachia. These depopulating rural areas face shrinking tax bases, making it harder to support essential infrastructure and services.

Figure 2. Population Change in Nonmetro Counties, 2010-2020



Source: Slack and Monnat, 2024.

While rural depopulation was the dominant trend in the 2010s, it was not a universal one. About one-third of nonmetro counties experienced population gains in the 2010s. Nonmetro gains were concentrated in the West as well as parts of the Southeast and New England. Growth was often related to the pull of in-migrants to areas with high natural amenities (e.g., mountains, lakes, and forests). Growing communities face different challenges than population-loss communities. Although they have more stable tax bases, growing communities must deal with housing affordability challenges and increased pressure on natural resources, infrastructure, and services.

Positive net migration in recent years (since 2021) stemmed further rural population loss and even resulted in a small increase in the overall rural population size (Davis

et al., 2023). But the adverse effects of COVID-19 lingered. For example, between 2020 and 2021, more deaths than births occurred in 80 percent of nonmetro counties (Johnson, 2022a). Given the aging of the population and declining health and longevity among working-age adults in rural America (discussed below), future population growth will depend on retaining current residents and attracting newcomers.

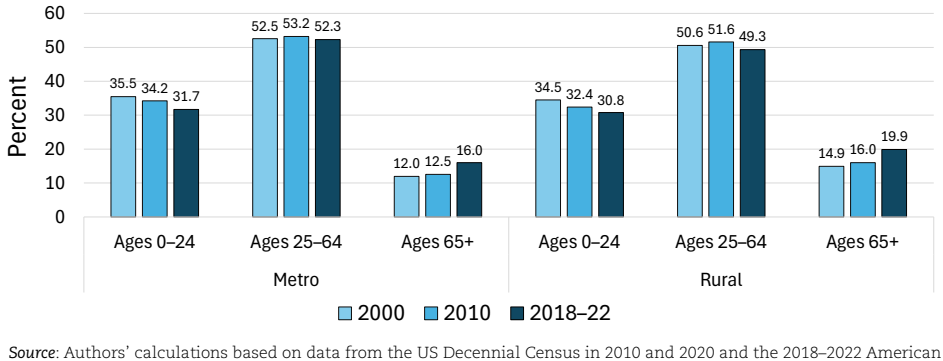
Who Lives in Rural America?

The demographic portrait of rural America today looks much different than it did only a couple of decades ago. This section describes four noteworthy trends that have implications for health and longevity: population aging, increasing racial and ethnic diversity, lagging educational attainment, and a small narrowing of the rural-urban poverty gap.

The Rural Population Is Aging

The US population is aging overall, but population aging is more pronounced in rural areas than in urban areas. In 2022, 20 percent of nonmetro residents were age 65 and older, up from 15 percent in 2000. The comparable numbers in metro areas were 16 percent in 2022, up from 12 percent in 2000 (figure 3). Aging nonmetro counties tend to fall into one of two categories: (a) regions facing chronic population loss or (b) recreation and retirement destinations with high natural amenities (Cromartie, 2018; Johnson and Winkler, 2015).

Figure 3. Population Age Distribution in Metropolitan and Nonmetropolitan Counties, 2000, 2010, 2018–2022



Source: Authors' calculations based on data from the US Decennial Census in 2010 and 2020 and the 2018–2022 American Community Survey (US Census Bureau, 2025a, 2025b).
Notes: Metropolitan status is based on the US Office of Management and Budget metropolitan area designations. Counties are held constant to the 2010 classification.

In areas facing chronic depopulation, population aging is typically driven by high out-migration among younger adults and older people aging in place. This dynamic increases population aging not only by younger people leaving and older people staying but also by young adults taking their reproductive potential with them when they move away and start families elsewhere. In these communities, a growing share of older adults increases the demand on an already strained healthcare system. In addition, access to aging care, transportation, retail, and other vital services is often limited.

In recreation and retirement areas with high natural amenities, population aging is driven by the in-migration of often affluent retirees whose arrival shifts the age distribution upward. Although retirement and amenity in-migration can have positive economic and social impacts, it may also lead to affordable housing shortages, increased demand for limited medical and other services, and underinvestment in the needs of children and families (e.g., schools, childcare).

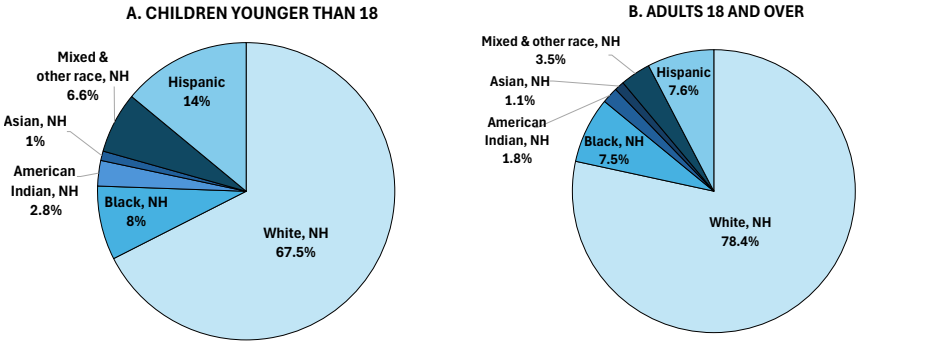
Increasing Rural Racial and Ethnic Diversity

While racial and ethnic diversity is more pronounced in urban areas than in rural areas, the rural population is nonetheless trending toward increased racial and ethnic diversity. In fact, all of the population growth in rural America over the last two decades was the result of growth in non-White populations – Hispanic populations in particular (Lichter and Johnson, 2025). As of 2020, non-White people comprised one in four rural residents, with Hispanic people representing 9 percent, Black people 7.7 percent, American Indian or Alaska Native people 2 percent, and Asian people 1 percent.

The racial and ethnic profile of rural children is even more diverse, portending an increasingly diverse future for rural America.

As of 2020, nearly one in three rural children were non-White, with 14 percent being Hispanic (figure 4). The rise in rural non-White populations is due to both natural increase and immigration. Today, immigrants account for 3.9 percent of the rural population, with most recent rural immigrants originating from Mexico and Central America.

Figure 4. Nonmetropolitan Population Size and Percentage of People Younger than Age 18 and People Age 18 and Older by Race and Hispanic Origin, 2020



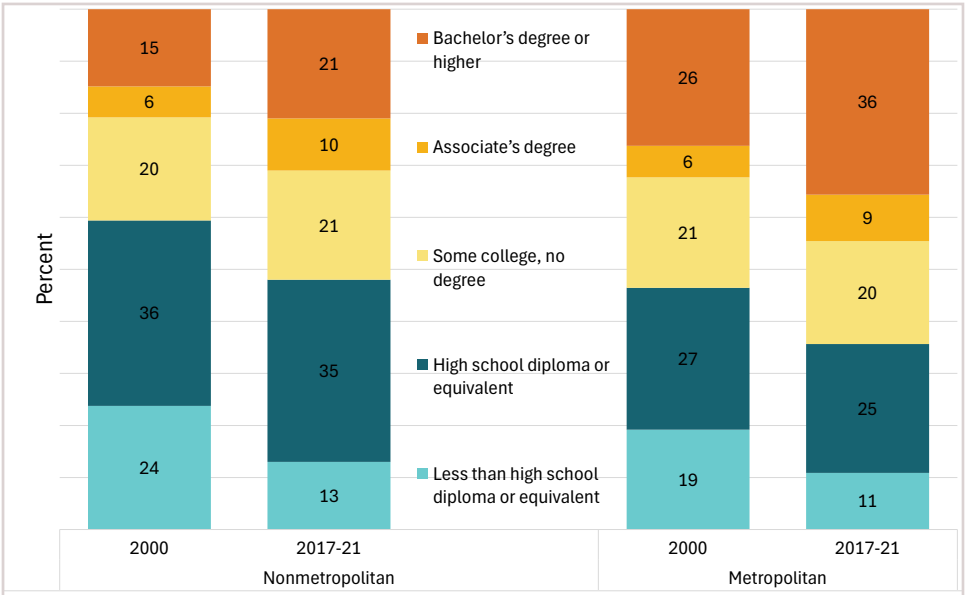
Source: Authors' calculations based on data from US Census Bureau, 2025a.
Note: Based on 1,976 nonmetro counties as defined by the 2010 US Office of Management and Budget metropolitan area designations. Hispanic includes Hispanic people of any race. American Indian includes Alaska Native people. Asian includes Pacific Islander people. Totals do not add to 100 percent due to rounding. NH = non-Hispanic.

Despite increasing racial and ethnic diversity being the dominant trend, it is again important to note the heterogeneity across rural America. Among the most striking features of rural racial and ethnic composition is the regional concentration of non-White groups. Black people are by far the most regionally concentrated, with close to 90 percent of all rural Black people residing in the South (mostly in Alabama, Georgia, Louisiana, and Mississippi). Rural American Indian and Alaska Native people are less regionally concentrated, but just over half live in five states (Alaska, Arizona, New Mexico, North Carolina, and Oklahoma), with one in three living on reservations or tribal lands. Majority rural Hispanic counties are clustered along the US-Mexico border in Arizona, California, New Mexico, and Texas, although the rural places with the fastest growing Hispanic populations are nontraditional regions outside the Southwest. In many cases Hispanic and other immigrant populations have provided a "demographic lifeline" to otherwise depopulating (mostly White) rural communities (Lichter and Johnson, 2020). The increasing racial and ethnic diversity of rural America is an important consideration for policymakers given persistent racial and ethnic disparities in health and longevity (discussed below).

Educational Attainment Lags in Rural America

A long-term trend in the US population has been a steady increase in educational attainment. Rural America has been no exception, although the population of rural America continues to have lower education levels than urban America. In 2000, 26 percent of metro adults age 25 and older had a bachelor's degree or higher compared to just 15 percent of nonmetro adults (figure 5). By 2021, these shares had increased to 36 percent of metro adults and 21 percent of nonmetro adults. The net result was that although there were improvements in both metro and nonmetro areas, nonmetro improvements were smaller. A 15 percentage point difference remains in the share of the population with a bachelor's degree. The distinction of a bachelor's degree is important given the increasing gap in life expectancy between adults with and without this degree (Case and Deaton, 2020). Some of the rural education disadvantage is rooted in higher academic achievers leaving their hometowns to pursue educational and professional job opportunities in urban areas – a phenomenon referred to as *brain drain* (Carr and Kefalas, 2009; Li, 2022).

Figure 5. Educational Attainment in Metropolitan and Nonmetropolitan Counties, 2000 and 2017-2021



Source: Authors' calculations based on data from Sanders, 2023.
Note: Restricted to adults age 25 and older. Totals do not add to 100 percent due to rounding.

Poverty Is Higher in Rural America

Nonmetro poverty rates have been higher than metro rates for as long as poverty has been measured (i.e., since the 1960s). Over time, that gap has narrowed, falling from an average difference of 4.5 percentage points in the 1980s to 3.1 percentage points in the 2010s. As of 2022, the nonmetro poverty rate was 15.5 percent compared to a metro rate of 12.1 percent (Farrigan, 2024). Areas of the country where poverty is chronically high (i.e., over 20 percent of the population in poverty for the last 40 years) are largely rural. Persistent poverty afflicts 15.2 percent of nonmetro counties compared to 4.5 percent of metro counties. Persistently poor counties are concentrated in Central Appalachia, the Black Belt and Mississippi Delta, the Rio Grande Valley, and American Indian country (Slack and Monnat, 2024) – places where mortality rates are also highest.

A Caveat – Decennial Metro Status Reclassification

When it comes to understanding rural population change, one caveat must be underscored – the issue of reclassification. Rural (nonmetro) and urban (metro) status is not fixed. Instead, places shift between rural and urban statuses as populations increase and decrease. After the 2020 Census, 72 nonmetro counties (and 2.3 million people) switched to metro due to population growth and/or increased commuting, while 52 metro counties (and 2.1 million people) switched to nonmetro due to population loss and/or decreased commuting (Sanders, 2025).

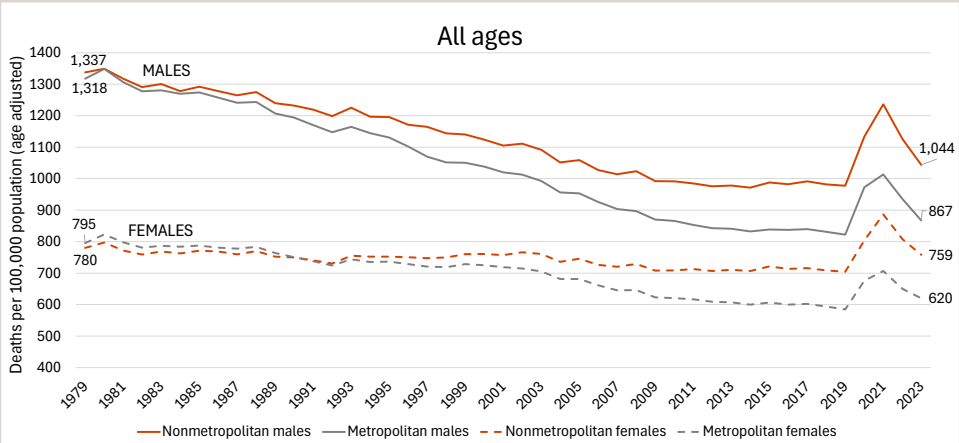
The fact that rural places are reclassified as urban once their population grows past a particular threshold is not purely a statistical point. A common misunderstanding is that all rural areas are characterized by population loss and economic decline. In fact, many rural communities are vibrant and growing. But if that growth is sustained, at a certain point they will be reclassified as urban. The process of "selecting into" urban means the places and populations defined as rural represent a moving target from decade to decade. They are also likely to be disproportionately disadvantaged

over time on various indicators (including health) compared to urban and urbanizing comparison groups. For example, one study found that decadal reclassification accounted for more than 25 percent of the rural mortality disadvantage between 1970 and 2018 (Brooks et al., 2020).

Trends in Rural Health and Longevity

Rural Americans are dying too young. The rural mortality penalty – higher death rates in rural than in urban areas – is wide, persistent, and growing. The rural penalty emerged in the 1980s for men and the 1990s for women, with especially large increases in the gap beginning in the mid-2000s (figure 6). As of 2023, the most recent year for which data are available, the age-adjusted nonmetro male mortality rate was 20.4 percent higher than the metro male rate, and the nonmetro female rate was 22.3 percent higher than the metro female rate.

Figure 6. Mortality Rates (All Ages) for Nonmetropolitan and Metropolitan Men and Women, 1979–2023



Source: Authors' calculations based on data from US Centers for Disease Control and Prevention, 2024.

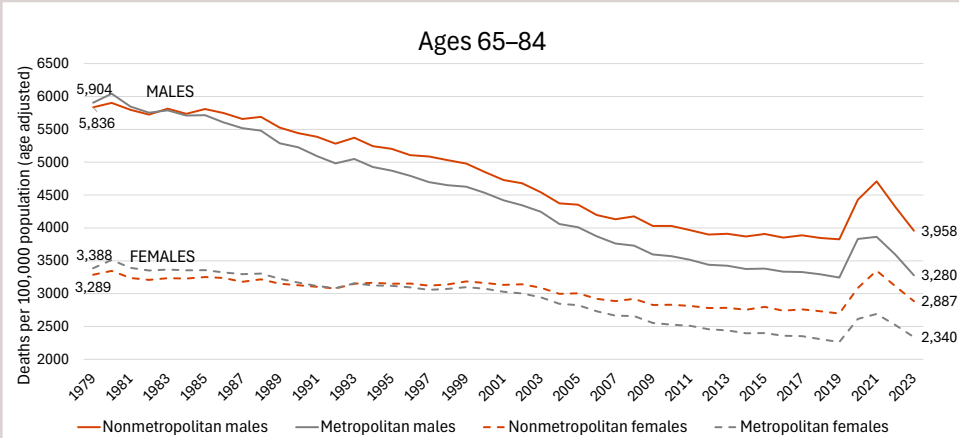
The increase in the rural penalty over the last four decades was driven by larger declines in metro than nonmetro mortality throughout the 1980s, 1990s, and 2000s, followed by nonmetro stagnation in the 2010s. The 2010s was a troubling decade for US mortality trends. Even before the onset of the COVID-19 pandemic in 2020, the United States was performing poorly relative to both its own trends in prior decades and trends in other high-income countries (National Academies of Sciences, Engineering, and Medicine [NASEM], 2021). Then the pandemic hit, and mortality rates surged in US metro and nonmetro areas alike. However, increases were larger

in nonmetro areas, mostly due to lower rates of vaccination and less uptake of preventive behaviors (Jones et al., 2023). COVID-19 was so devastating for rural America that it wiped out 30 years of improvements in mortality among nonmetro men. Nonmetro female mortality rates were higher during the pandemic than they had been at any point in the previous four decades. In both metro and nonmetro counties, mortality rates remained higher in 2023 than before the pandemic hit, and nonmetro rates are coming down more slowly than metro rates.

Mortality Rates Decline for Older Adults, Increase for Working-Age Adults

The rural mortality penalty exists in all age groups, but the specific trends driving the gap differ across age groups. While there is a widening rural penalty among older adults (figure 7), that gap is driven by larger improvements in metro counties than in nonmetro counties over time. Before the pandemic, older age (age 65–84) mortality rates were declining in both metro and nonmetro counties, although the declines began slowing in nonmetro areas in the early 2010s. But overall, the story for older adults has been one of improvements in mortality rates in rural and urban areas alike.

Figure 7. Mortality Rates (Age 65-84) for Nonmetropolitan and Metropolitan Men and Women, 1979-2023

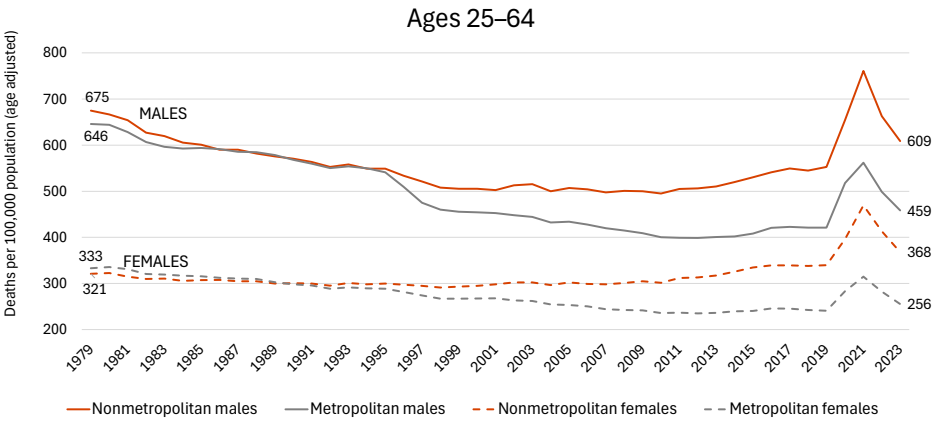


Source: Authors' calculations based on data from US Centers for Disease Control and Prevention, 2024.

Conversely, mortality rates are increasing among rural working-age adults (age 25–64). Rural working-age adults are dying at alarming rates – rates that are higher now than they were decades ago (figure 8). Whereas metro working-age mortality rates declined among both males and females over time, nonmetro rates have been

increasing since the early 2010s. Nonmetro working-age women now live fewer years than they did in 1979. The average nonmetro 25-year-old can expect to live 2.5 fewer years than their metro peer (Abrams et al., 2021).

Figure 8. Mortality Rates (Age 25–64) for Nonmetropolitan and Metropolitan Men and Women, 1979–2023



Source: Authors' calculations based on data from US Centers for Disease Control and Prevention, 2024.

Which Causes of Death Contribute to Higher Rural Mortality Rates?

Across nearly every cause of death and in all age groups, rural mortality rates are higher than urban rates. Rural residents have higher mortality rates from cancers and heart diseases – the leading causes of death in the United States. Additionally, they have higher rates of infectious diseases (COVID-19, influenza), respiratory diseases, stroke, diabetes, kidney disease, chronic liver disease and cirrhosis, suicide, transport accidents, and infant and maternal mortality (Slack and Monnat, 2024). Since 1990, death rates for most causes have either declined less in rural areas (e.g., cancers, heart disease) or increased more (e.g., suicide, alcohol-induced diseases, respiratory diseases) (NASEM, 2021). Although fatal drug overdose rates are slightly higher in urban than in rural areas, the counties

with the highest rates are in the heart of rural Appalachia – downtrodden places with a long history of economic decline and substance misuse, multiple adverse health outcomes, and high rates of premature mortality in general (Monnat, 2023).

Another way of measuring the burden of disease is to look at quality-adjusted life expectancy. Quality of life can suffer due to challenges with mobility, self-care, daily activities, pain, and poor mental health. Here, too, rural residents fare worse than their urban counterparts, and the gap has increased over time. While quality-adjusted life expectancy increased over the past decade for urban adults, it has not budged for rural adults (Chapel et al., 2024).

Many diseases contribute to the rural quality-adjusted life expectancy disadvantage. Rural adults report worse self-rated health; have higher rates of heart disease, diabetes, stroke, cancer, obesity, functional limitations, disability, injury, pain, cognitive decline, and Alzheimer's disease and related dementias; and have worse oral health and mental health (Anderson et al., 2015; Befort et al., 2012; Glauber, 2022; Harp and Borders, 2019; Lawrence et al., 2017; Rahman et al., 2021; Rhubart and Monnat, 2022; Sun et al., 2024; von Reichert and Berry, 2019; Zhao et al., 2019). Nearly 15 percent of rural adults age 18–64 report a disability compared to 10 percent of urban adults in this age group (Monnat, 2025).

The upshot of these trends is that increasing shares of rural adults are dying in their prime working-age years, and those who make it past working age are living more of their older adult years in poor health, in chronic pain, and with disability than in the past (Chapel et al., 2024; Sun et al., 2024). These trends have troubling implications for an already strained rural healthcare system, workforce, and tax base, which complicate the ability to provide critical supports to the large and growing rural older adult population.

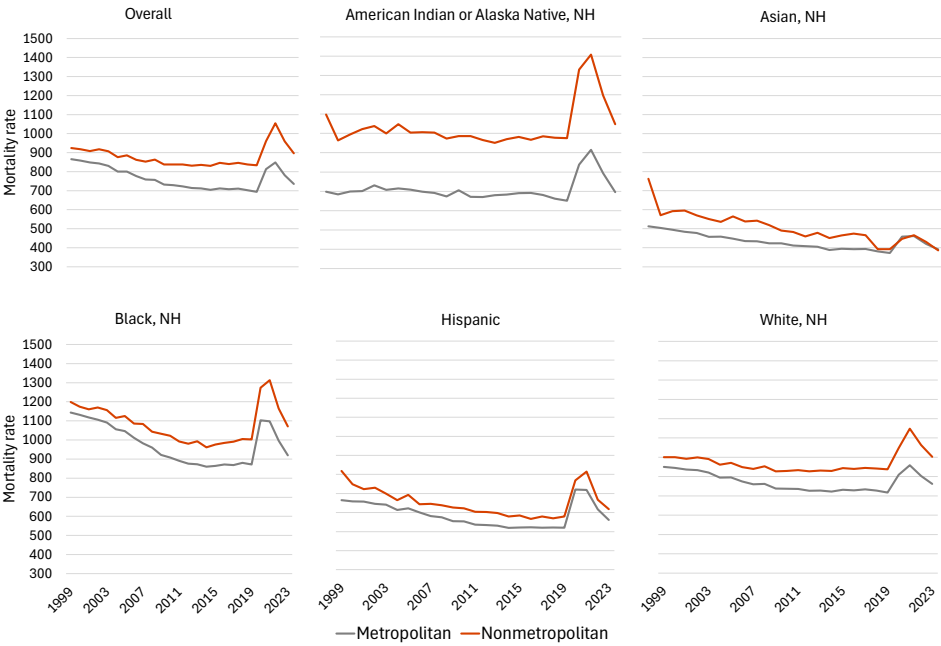
Geographic and Population Heterogeneity

Average indicators obscure important variation across different rural groups and places. The rural health and mortality penalties vary dramatically by race and ethnicity and region.

Racial and Ethnic Variation

Nonmetro mortality rates are higher than metro rates for all racial and ethnic groups except Asian people (figure 9). This section highlights four other noteworthy considerations.

Figure 9. Mortality Rates (All Ages) by Metropolitan Status and Race and Ethnicity, 1999–2023



Source: Authors' calculations based on data from US Centers for Disease Control and Prevention, 2024.
Note: NH = non-Hispanic

First, nonmetro Black and American Indian or Alaska Native residents have much higher mortality rates than nonmetro White, Hispanic, and Asian residents. As of 2023, nonmetro age-adjusted mortality rates were 1,071 per 100,000 population among Black people, 1,048 among American Indian or Alaska Native people, 903 among White people, 618 among Hispanic people, and 386 among Asian people. Given their relatively disadvantaged socioeconomic status and low rates of insurance coverage, it might be surprising to see relatively low mortality rates for Hispanic people. This is referred to as the Hispanic paradox or immigrant paradox (Markides and Coreil, 1986). Not only is it the case that healthier individuals are more likely than less healthy individuals to migrate (selection bias), but it is also believed that cultural

factors among immigrants, such as better health habits and stronger social support networks, contribute to lower rates of chronic disease and higher life expectancy. However, the Hispanic mortality advantage disappears by the third generation of residence in the United States. And recent research suggests that the Hispanic advantage is likely to disappear altogether in the coming years due to increases in childhood obesity in origin countries such as Mexico and increases in harmful environmental exposures (air and water pollution, exposure to extreme heat) in the US neighborhoods and workplaces where large concentrations of Hispanic people live and work (Nicole, 2023).

Second, the rural mortality penalty is largest in the American Indian or Alaska Native population. As of 2023, nonmetro American Indian or Alaska Native populations had a mortality rate that was 50 percent higher than that for metro American Indian or Alaska Native populations. The nonmetro-metro gaps for the other groups were 18.4 percent for White, 16.5 percent for Black, and 10.1 percent for Hispanic populations. Mortality rates are similar (and low) for metro and nonmetro Asian populations.

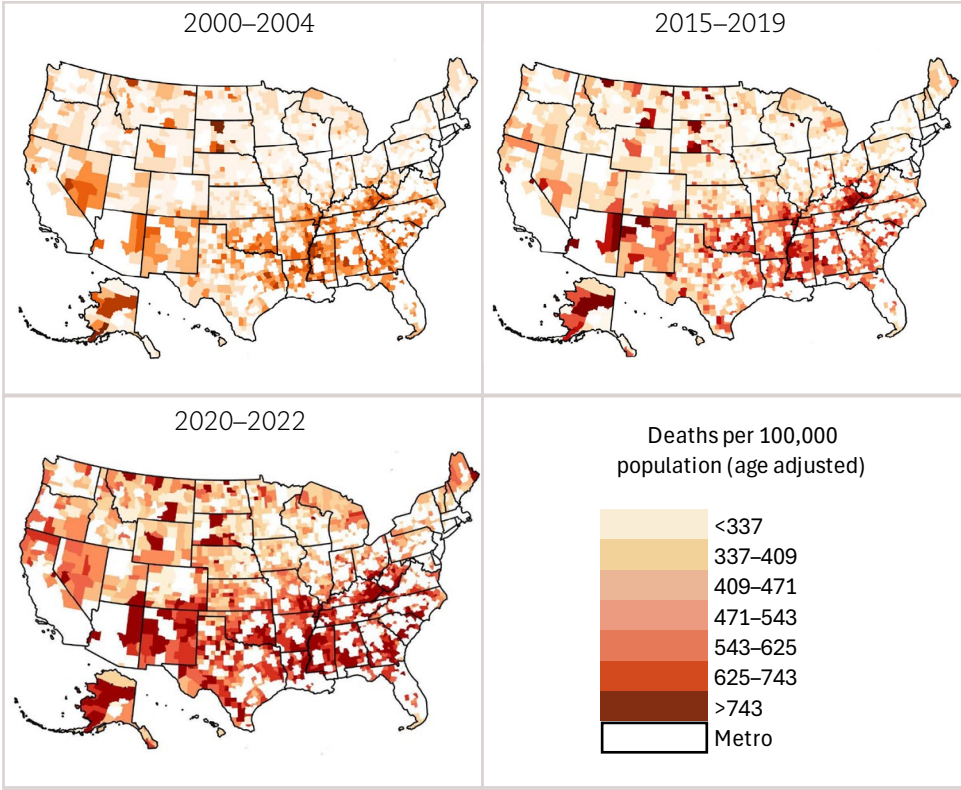
Third, mortality rates for nonmetro Black, Hispanic, and Asian people declined dramatically throughout the 2000s. This followed prior decades of decline in the 1980s and 1990s (NASEM, 2021). Much of this progress was due to declines in cardiovascular disease and cancer mortality. These improvements effectively eliminated the rural mortality penalty among Hispanic and Asian people. However, progress among nonmetro Black people reversed in the mid-2010s, as mortality rates began rising. The COVID-19 pandemic then wiped out all of the remaining gains that had been made in the 2000s.

Fourth, the growth in the rural mortality penalty over the past two decades was driven by the rural White and Black populations. It is in those two groups that progress has not kept pace with their metro counterparts.

Regional Variation

Health and mortality outcomes are worse in some rural places than others. In fact, some nonmetro counties have among the highest mortality rates in the country, while others have among the lowest. Figure 10 shows mortality rates for adults age 25 to 64 in nonmetro counties over three time periods. Mortality rates are highest and have increased the most since 2000 in Central Appalachia, parts of the South, and territories with large shares of American Indian residents in the upper Plains and Oklahoma. These places have long experienced higher mortality rates than the rest of the country, a reality that points to the role of long-term structural disadvantages across many generations, including high poverty and low educational attainment (Cosby et al., 2019; Cossman et al, 2007; James and Cossman, 2017; James et al., 2018; Murray et al., 2006).

Figure 10. Mortality Rates Among Adults Age 25–64 in Nonmetropolitan Counties



Source: Authors' calculations based on data from the National Center for Health Statistics, National Vital Statistics System, restricted mortality records (US Centers for Disease Control and Prevention, 2025).
Map Creation and Analysis Credit: Xue Zhang of The Pennsylvania State University.

Some parts of rural America are doing well. Before the COVID-19 pandemic, several rural regions were experiencing mortality declines, including parts of the mid-Atlantic, Mountain West, and Pacific regions (Elo et al., 2019; Monnat, 2020; NASEM, 2021). In addition, rural counties characterized by larger shares of employment in recreation (i.e., high amenity areas) and farming have lower mortality rates than counties with economies more reliant on mining and other extractive industries (Monnat, 2020). The recreation county advantage is partly due to relatively healthy in-movers.

Race and region also interact to produce marked variability. Whereas there is a rural mortality penalty for White and American Indian or Alaska Native people in all regions, the rural penalty is observed for Black people only in the South (where 90 percent of rural Black residents live) and observed for Hispanic people only in the South and West. Although only 10 percent of rural Black people live outside the South, those who live in the rural Midwest, Northeast, and West have lower mortality rates than their urban counterparts in those regions (Rhubart and Santos, 2023). These patterns demonstrate that the rural mortality penalty increased over time, and so have disparities among rural places.

What Explains the Rural Health and Longevity Disadvantage?

Despite some variation, the dominant trend in rural America, particularly since 2010, is one of declining health and longevity and an increasing divergence from urban America. The causes of worse health and higher mortality rates in rural areas cross many dimensions and levels. Factors affecting health operate throughout the life course from gestation to death at the individual, family, neighborhood, work, and policy levels. In the interest of space, this paper focuses only on those factors research shows are the largest contributors to the major causes of death in the US and for which rural residents are disadvantaged: tobacco and alcohol use, obesity, low educational attainment, and limited access to healthcare.

Tobacco and Alcohol Use Are Higher in Rural Areas

Tobacco use is the largest single cause of premature death in the United States. In fact, smoking-related mortality explains as much as 60 percent of the US South's mortality disadvantage compared with other US regions (Fenelon and Preston, 2012). Smoking significantly increases the risk of heart disease, stroke, and cancer – all of which are much higher among rural adults than among urban adults. Rural areas have higher smoking rates compared to urban areas, and the gap has increased over time (Doogan et al., 2017). In 2020, current smoking prevalence was 14.4 percent in urban areas but 19.2 percent in rural areas (Parker et al., 2022), with much higher rates of smoking-attributable mortality in the South and Appalachia than in other parts of the US (Fenelon and Preston, 2012).

Alcohol is another major risk factor for heart disease, several cancers, and organ diseases. Rates of heavy and binge drinking, alcohol-use disorders, and drunk driving are higher in rural areas than in urban areas, and alcohol use begins at earlier ages in rural areas (Borders and Booth, 2007; Gale et al., 2012; Lambert et al., 2008). Rural adolescents also report higher access to both tobacco and alcohol than their urban peers (Warren et al., 2015). Whereas alcohol-related death rates were comparable between metro and nonmetro residents in 2006, by 2019, nonmetro residents had alcohol-related mortality rates that were 3 percentage points higher than rates in large metro areas (National Center for Drug Abuse Statistics, n.d.). However, there is substantial within-rural variation. Some of the highest rates of alcohol-related mortality in the country are found in rural parts of the northern Great Plains, Mountain West, Southwest, northern California, Southern Oregon, and Alaska, whereas some of the lowest rates are observed in rural parts of the Gulf Coast, the Mississippi Delta, eastern Missouri, and Pennsylvania (Zhang and Monnat, 2024) – places where state alcohol regulations tend to be stricter.

Obesity Rates Are Higher in Rural Areas

Obesity is a significant risk factor for cardiovascular disease, cancer, metabolic diseases (such as diabetes), inflammation, pain, and disabilities. The prevalence of

obesity is estimated to be more than six times higher in rural than urban areas (Okobi et al., 2021), and obesity rates are highest in the parts of the US with the highest mortality rates – Appalachia and the South. Obesity rates among rural children are especially concerning, with the average rural child having about 26 percent greater odds of being obese compared to the average urban child (Johnson and Johnson, 2015). Childhood obesity has implications for chronic diseases, disability, and premature death later in life. A key contributing factor to higher rural rates of obesity is dietary habits. Rural residents are more likely to be food insecure (which increases the likelihood of unhealthy food purchases) and to consume more sugar, particularly in the form of sugar-sweetened beverages (Sharkey et al., 2011; Yuhas et al., 2020). Sugar-sweetened beverage consumption is especially high among younger rural adults with low income and education (Sharkey et al., 2011).

Educational Attainment Is Lower in Rural Areas

Education, particularly possessing a bachelor's degree, has become an increasingly important determinant of health and longevity in the United States (Case and Deaton, 2020; Olshansky et al., 2012). Higher education confers economic, social, and lifestyle advantages that manifest as a "personal firewall" that protects health, even in the face of external and unpredictable threats, such as pandemics, recessions, and natural disasters (Montez and Bisesti, 2024). Education directly benefits health through the adoption of healthier lifestyles, better ability to cope with stress, and better chronic disease management. Education also indirectly benefits health through access to more privileged social positions, better-paying jobs, and higher incomes (Olshansky et al., 2012). Lower educational attainment in rural areas contributes strongly to the rural health and mortality disadvantage. It is estimated that if rural education levels matched urban ones, the rural-urban gap in Quality Adjusted Life Expectancy would be nearly halved (Chapel et al., 2024).

Rural Healthcare Access Is Limited and Declining

Rural adults are less likely to be insured, less likely to use healthcare, and more likely to delay seeking care than urban residents (Caldwell et al., 2016). Rural areas have insufficient and declining healthcare infrastructure. This includes not only primary care but also preventive and emergency care, dental care, pharmacies, mental health and substance use treatment services, aging and disability services, and sexual and reproductive health services (Brown et al. 2019; Burrows et al., 2012; Capriotti et al., 2020; Pendergrast and Rhubart, 2022). Rural residents travel more than twice the distance for healthcare, on average, as urban residents (Akinlotan et al., 2021). Rural hospitals have closed at alarming rates over the past decade due to rising operational costs, demand for more costly and intensive care from older and sicker patients, and higher shares of uninsured and underinsured patients (Kaufman et al., 2016). Operating margins among rural hospitals improved during the COVID-19 pandemic due to government relief funds, but those funds have dried up, and the lingering effects of the pandemic, such as labor shortages and inflation (Levinson et al., 2023), along with impending Medicaid cuts, mean even more hospitals are at risk of closure.

The COVID-19 pandemic revealed how much access to healthcare and public health resources matters. Improvements in medical care and medical technologies over time have helped reduce deaths from certain causes, such as cardiovascular disease and screenable cancers. Nonetheless, lack of access to medical care accounts for only 5 to 15 percent of premature mortality (Woolf, 2019).

Rural Americans Disproportionately Reside in States with Health-Harming Policies

Social and economic policies are critical to health because they shape opportunities and incentives for individuals to make healthy choices (Montez et al., 2020). Policies are "the causes of the causes of the causes of geographical inequalities in health" (Bambra et al., 2019, pp. 37–38). Not only are US policies in the areas of housing, income support, labor protections, firearms, and the environment (to name a few) less health promoting than in other high-income countries (all of which have longer life expectancy than the United States), but they also vary dramatically across states (Montez et al., 2020).

Although national and local policies are important, state policies are becoming increasingly important drivers of health due to the increasing decentralization of policymaking from the federal to the state level as well as the increasing use of state preemption – in which states prohibit cities and counties from enacting certain policies (Montez et al., 2020). US state policy environments have become more polarized over the last two decades. While some states have enacted policies that improve health – such as Medicaid expansion under the Affordable Care Act, excise taxes on tobacco and alcohol, paid sick leave mandates, firearm restrictions, and more, other states have moved in the opposite direction. States that have become more aggressive on enacting these health-improving policies experienced larger reductions in morality among working-age adults over the last two decades than states that have moved in the other direction with their policies (Montez et al., 2022).

This is relevant to the rural mortality penalty because policies tend to be more health harming, and are becoming increasingly so, in more rural states. For example, in predominantly rural states, tobacco taxes are lower and youth have less exposure to antitobacco messages (American Lung Association, 2015). States with larger shares of rural residents have also been less likely to expand Medicaid than states with larger shares of urban residents, resulting in higher rates of uninsurance among rural residents (Rhubart and Engle, 2017). Ultimately, the increasing polarization of state policy contexts means that a growing share of rural Americans is living in policy contexts that have been demonstrated to be health harming rather than health promoting.

What Can Be Done to Improve Health and Longevity in Rural America?

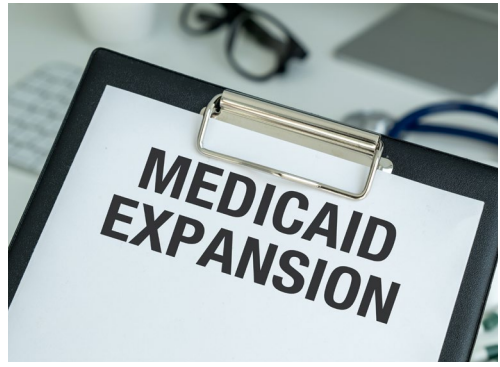
A parable that is often invoked among population health scholars is the story of a physician trying to explain the dilemmas of the US health system:

> *"There I am standing by the shore of a swiftly flowing river and I hear the cry of a drowning man. So I jump into the river, put my arms around him, pull him to shore and apply artificial respiration. Just when he begins to breathe, there is another cry for help. So I jump into the river, reach him, pull him to shore, apply artificial respiration, and then just as he begins to breathe, another cry for help. So back in the river again, reaching, pulling, applying, breathing and then another yell. Again and again, without end, goes the sequence. You know, I am so busy jumping in, pulling them to shore, applying artificial respiration, that I have no time to see who the hell is upstream pushing them all in."*
>
> —Irving K. Zola, medical sociologist (McKinlay, 2019)

Far too often, the healthcare system is the main target for improving health in the United States. While healthcare is certainly important, as the parable above makes clear, progress will occur only if the nation moves its focus upstream to think about how policy environments influence health. Given the main explanations for the rural mortality penalty summarized in the prior section, this section provides some specific policy recommendations to address the troubling trends.

Healthcare is Necessary but Not Sufficient

Healthcare policies, particularly Medicaid and the Affordable Care Act, have been critical to sustaining rural hospitals and other facilities. Fewer rural hospitals have closed in states that expanded Medicaid. Uninsured rates among rural adults age 18–64 dropped significantly after the Affordable Care Act's passage, from 23.8 percent in 2010 to 12.6 percent in 2023 (Turrini et al., 2024). Uninsured rates among rural residents are much higher in the 11 states that have not expanded Medicaid. These states are predominantly in the South, where mortality, chronic disease, and disability rates are the highest. Looming Medicaid cuts imposed by the 2025 One Big Beautiful Bill Act are likely to have disproportionately detrimental effects in rural areas because they will jeopardize the financial stability of rural hospitals and healthcare providers, which are more reliant on Medicaid than their urban counterparts (Mills and Bennet, 2025). Federal Medicaid cuts are also likely to result in widening disparities between states by increasing the financial strain on states with fewer resources, higher poverty rates, and more complex health needs among their populations. Given the contemporary trend of rural hospital closures, it is also critical for the federal government to adequately fund other types of healthcare facilities, including rural emergency hospitals, critical access hospitals, federally qualified health centers, and rural health clinics, each of which receives special reimbursement rates that enhance viability.



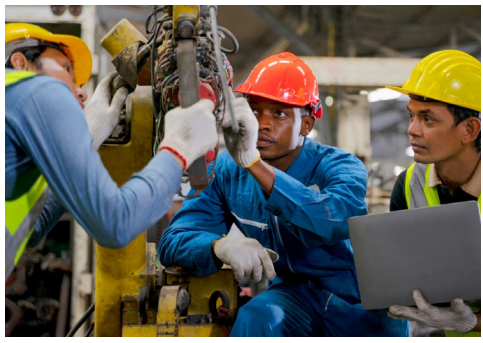
New medical innovations introduced over the past half century (e.g., statins, better cancer screening and treatments, antiretroviral therapy, the human genome project) contributed to significant declines in mortality in rural and urban areas alike. Many of these technological and pharmaceutical advancements were seeded by research funded by the National Institutes of Health. For this and other reasons, recent cuts

to the National Institutes of Health and proposed additional cuts are concerning and are likely to have dire population health consequences. Beyond ensuring continued strong investments in the National Institutes of Health, the recent emergence of GLP-1 medications provides a new opportunity to reduce obesity, diabetes, and other chronic health conditions that disproportionately afflict rural Americans. Medicaid coverage of GLP-1s could have an outsized positive impact on rural America. While the upfront price is high, these drugs are poised to save money in the long term by reducing healthcare costs, which are much higher among people with obesity than those without (Biener et al., 2018; Raebel et al., 2004). Artificial intelligence has also begun to play an important role in diagnostics and treatment planning. Ensuring equitable artificial intelligence access in rural hospitals should be a top priority.

Yet, despite decades of efforts to increase rural healthcare access, the rural mortality penalty continues to grow. Healthcare's modest effect on premature mortality (5 to 15 percent) (Kaplan and Milstein, 2019; Woolf, 2019) is astonishing considering the $4.1 trillion in annual healthcare spending ($12,530 per person), accounting for nearly 20 percent of the gross domestic product (US Centers for Medicare and Medicaid Services, 2022). To be sure, equitable access to quality healthcare is a moral imperative. However, increasing access on its own is unlikely to improve rural population health in the aggregate. For this, the solutions will be found upstream.

Expand Educational Opportunities

Given the key role that a bachelor's degree plays in health and longevity, it is critical to ensure that rural youth have access to quality primary education, are prepared for college, and have employment opportunities in rural areas to return to after college. However, for various reasons, not everyone can or should attend college. Therefore, policies that promote



vocational training are also critical. The US needs more tradespeople, especially as population aging has reduced the workforce in many trades. Rural America is home to a critical mass of talented people with the aptitude and interest to excel in high-skill trades that come with livable wages and from which workers derive meaning and purpose. Federal investments in vocational programs and support for trade-related entrepreneurship – such as through more robust investments in career and technical education programs and community colleges – and stronger coordination between trade programs and telecommunications, semiconductor, and renewable energy industries could stimulate economic development and population growth and improve health in rural America.

High-quality educational opportunities in early childhood are also critical for health and well-being across the life course. Numerous studies, many using experimental designs, show that early childhood education programs, such as Head Start and similar preschool programs that target low-income children, not only improve high school graduation rates and other educational outcomes but also improve childhood health in ways that are likely to carry through the life course to reduce premature death in adulthood (Campbell et al., 2014; Cannon et al., 2018; Currie, 2001; Muennig et al., 2011; Muennig, 2015; Palfrey et al., 2005). Moreover, Head Start more than pays for itself in cost savings to the government in the form of reductions in the need for special education and grade repetition and long-term reductions in crime, teenage pregnancy, and public health insurance costs (Currie, 2001; Palfrey et al., 2005; Reynolds et al., 2001). Fortunately, rural areas do not currently have a shortage of Head Start programs. About 46 percent of all funded Head Start slots are in rural congressional districts compared to 32 percent in suburban and 22 percent in urban districts (Peeks and Schneder, 2025). Head Start may be more important in rural communities because rural areas often depend heavily on it for licensed childcare and other support services (Morrissey et al., 2022). Therefore, cuts to Head Start in the One Big Beautiful Bill Act are concerning. Not only should Head Start not be cut, but given its demonstrated positive effects on future educational, health, and social outcomes and related cost savings, the federal government should invest more.

Address the Commercial Determinants of Health

Cardiometabolic diseases and cancers are the two largest killers in the United States. They explain a large share of the rural morality penalty, and they are largely preventable. Policies that address the commercial determinants of health (private-sector products that harm health, such as tobacco, alcohol, sugar, seed oils, and processed food additives) could go a long way to reducing cardiometabolic diseases and cancers as well as respiratory, organ, and autoimmune diseases. Given the increasing divergence in policies across states, the federal government has a vital role to play in limiting these "manufacturers of illness" (McKinlay, 2019). Policies to reduce smoking and alcohol consumption could include higher excise taxes, restrictions on advertising, and stronger regulations on where tobacco and alcohol can be sold. Policies to reduce harmful food consumption could include regulations on chemical food additives and seed oils, restrictions on advertising sugary products and on the amounts of sugar that can be added to food, and elimination of government subsidies for sugar and seed oil production, most of which go to large-scale corporate multinational operations rather than small rural family farmers.

Invest in High-Quality Data and Research Infrastructure

The robust evidence cited in this paper relies heavily on high-quality data produced and made available by a variety of US federal agencies, including the Census Bureau, Department of Agriculture, Office of Management and Budget, Centers for Disease Control and Prevention, and others. In 2025, the federal government deleted websites and data resources, cut funding to agencies critical to the nation's health, fired experts or pushed them to resign, and eliminated the grants of scientists conducting research on rural America. In a time of declining health and longevity in rural America, the nation needs more access to, more funding for, and more expert analyses of high-quality government data, not less.

Conclusion

Despite their differences, rural and urban people and places are more socially and economically integrated and interdependent today than ever before. As such, healthy and prosperous rural communities are critical for sustaining a healthy and prosperous United States.

As the rural population ages and working-age adults face worsening health and die too young, rural communities are losing the workforce, tax base, and family and social connections needed to support the physical and social infrastructure and services critical for residents of all ages. While some rural areas are thriving (including those that have attracted affluent retirees and those that have experienced robust immigration), many are struggling, highlighting the need for policies that acknowledge not only differences between urban and rural areas but also between different types of rural communities (Jensen et al., 2020; Rhubart et al., 2021).

These challenges demand urgent policy attention. While ensuring access to high-quality healthcare is a moral imperative, it is insufficient on its own to improve rural health. Instead, policymakers must look upstream toward solutions that can tackle the structural drivers of health that are prematurely killing too many rural Americans.

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"A town looking to entice immigration of affluent, newly retired residents who value healthcare, a school board hiring new teachers, and a community development effort to recruit a large manufacturer will all face larger challenges in a rural community without a hospital than with one."

– MARK HOLMES, Ph.D.

Sustaining the Rural Hospital: Potential Policy Approaches

Mark Holmes, Ph.D.

Introduction

Rural hospitals are critical elements of a strong rural America. Not only do they serve as the nexus of the healthcare system for rural communities, but they also play important roles in economic and community development. Rural hospitals have long been more financially challenged than their urban counterparts, but that gap has increased over the last decade. In 2023, nearly half (47 percent) of rural hospitals had a negative operating margin, compared to 36 percent of urban hospitals. Since 2005, 230 rural communities have lost access to hospital-based care – an average of about one hospital per month (Cecil G. Sheps Center for Health Services Research, 2014).

Even though they are only one part of the rural healthcare system, rural hospitals are the most visible part. Their loss has spillover effects on other drivers of rural health and well-being, which helps explain why rural hospital closures garner media and policy attention. This paper explores the financial pressure rural hospitals are under and the consequences of rural hospital closures and offers policy options to reverse current harmful trends.

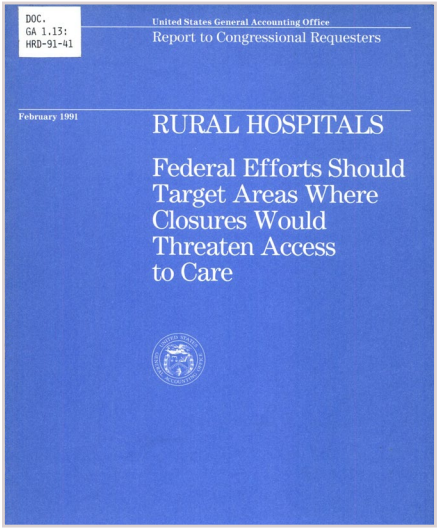
Rural Hospital Financing

How and how much rural hospitals are paid is central to their existence. This section provides an overview of rural hospital financing and describes the sources of financial pressure rural hospitals currently face.

Financing Overview

Like most providers in the US healthcare system, hospital revenue comes from a variety of sources: private insurance plans, public payers such as Medicare and Medicaid, and other sources such as self-pay and workers' compensation plans. Despite representing only about one-quarter of hospital revenue for patient care, Medicare is the primary policy tool available to and used by the federal government to support hospitals and influence their behavior.

One-third of American healthcare expenditures is associated with the nation's nearly 5,000 short-stay acute care hospitals (Centers for Medicare & Medicaid Services, n.d.). While roughly half of these hospitals are located in rural areas, they account for only 13 percent of hospital expenditures. As a result, Medicare hospital payment policy is generally set with larger hospitals in mind. Policy may treat rural hospitals as if they are simply small urban hospitals, even though the effects of the policy may be different in rural areas. For example, when the Medicare prospective payment system (PPS) was launched in 1983, rates were calculated based on costs for a benchmark large urban academic hospital. This had disastrous effects. Small hospitals facing higher per-unit costs due to low economies of scale quickly discovered that they were not financially viable, and rural hospitals closed across the country (Hart et al., 1990).



These closures captured the attention of the public and Congress, and the General Accounting Office produced annual reports on the number of closures (US General Accounting Office, 1991). Congress responded by developing new payment methods for rural hospitals. Despite these new methods, in the late 1990s, another

wave of closures occurred, which led to the creation of the critical access hospital (CAH). A third wave of closures in the 2010s helped bring about the designation of the rural emergency hospital (REH). This reflects a general pattern: every 15 years a surge of rural hospital closures captures Congress's attention. Congress develops a new payment option for rural hospitals. The new payment policy averts closures for a time, but its efficacy fades and the cycle begins anew.

A full accounting of the reasons for the limited success of these interventions is beyond the scope of this paper. In brief, many of the new payment methods addressed individual challenges to rural hospital finances: isolation from other hospitals (1989), a large dependence on Medicare (1989), or low volume (1997, 2005, 2022), for example. While these challenges are real, and some hospitals' finances can be improved by addressing one factor, rural hospitals face multiple challenges (discussed below), and policies focused on one are insufficient (Lane et al., 2018; US General Accounting Office, 1991).

Approaches to Rural Hospital Financing

The varying interventions have led to an assortment of hospital designations tailored to specific characteristics of a rural hospital or the community it serves. Some of these are temporary but repeatedly extended (e.g., Medicare-dependent hospital), while others are codified in statute (e.g., CAH).

A brief summary of the specific payment provisions for most of these hospital types is available elsewhere (Holmes et al., 2013; Medicare Payment Advisory Commission, 2021; Saving Rural Hospitals, n.d.-b). A short, incomplete summary of the major designations follows, roughly in order of their number:

- CAHs have fewer than 25 beds and are relatively isolated (or, before 2006, designated by the state's governor) with relatively short admissions. Recognizing the financial instability associated with low volume, these hospitals receive

cost-based reimbursement designed to recover the reported costs of caring for (traditional) Medicare beneficiaries.

- Sole community hospitals are more than 25 to 35 miles from another hospital and have fewer than 50 beds. These hospitals receive the larger of the traditional Medicare PPS rate or a hospital-specific rate based on historical cost trends, an increase in disproportionate share hospital payments, and protection against large volume declines outside of the hospital's control.

- Medicare-dependent hospitals have no more than 100 beds, and more than 60 percent of inpatient days or discharges are for Medicare beneficiaries. These hospitals receive the PPS payment plus an adjustment for the additional costs of caring for Medicare beneficiaries, an increase in disproportionate share hospital payments, and protection against large volume declines outside of the hospital's control.

- Some rural hospitals are paid under the traditional Medicare PPS, which is the dominant system for acute care hospitals in the United States.

- Rural referral centers are large (typically 275 beds or more) and admit a large number of rural Medicare beneficiaries. These hospitals are paid using the same methods as urban hospitals: the PPS adjusted by the wage index and disproportionate share hospital payments. An additional payment is made to reflect the higher complexity of care at referral centers, which may face cost structures more resembling large urban medical centers than typical rural hospitals.

Other less common designations include Indian Health Service hospitals, which are either directly operated by the Indian Health Service or are operated by a tribe; essential access community hospitals, which were launched in 1993 and informed the CAH model; and low-volume hospitals, which are distant from other hospitals and have total annual admissions of 3,800 or less.

Figure 1 shows the number of hospitals of each type in 2024, categorized by the Federal Office of Rural Health Policy definition of rurality (Cecil G. Sheps Center for Health Services Research, n.d.; Health Resources & Services Administration, 2025). A broader range of designations exists in rural communities than in urban communities. The two most common types of hospitals in

urban areas (PPSs and rural referral centers) comprise 93 percent of urban hospitals, but the two most common types in rural areas (CAHs and PPSs) comprise 71 percent. This proliferation of payment models recognizes the heterogeneity of rural hospitals and the challenges they face but adds complexity and uncertainty to Medicare rural hospital payment policy as these provisions can change or expire, making long-term planning difficult.

Figure 1. Rural and Urban Hospitals by Designation, 2024

Designation	Rural hospitals	Urban hospitals	Total hospitals
Critical access hospital	1,319	52	1,371
Essential access community hospital or rural referral center	2	0	2
Indian Health Service hospital	22	5	27
Medicare-dependent hospital	119	16	135
Medicare-dependent hospital or rural referral center	21	9	30
Prospective payment system	277	1,493	1,770
Rural emergency hospital	19	1	20
Rural referral center	85	605	690
Sole community hospital	256	22	278
Sole community hospital or rural referral center	120	43	163
Total	2,240	2,246	4,486

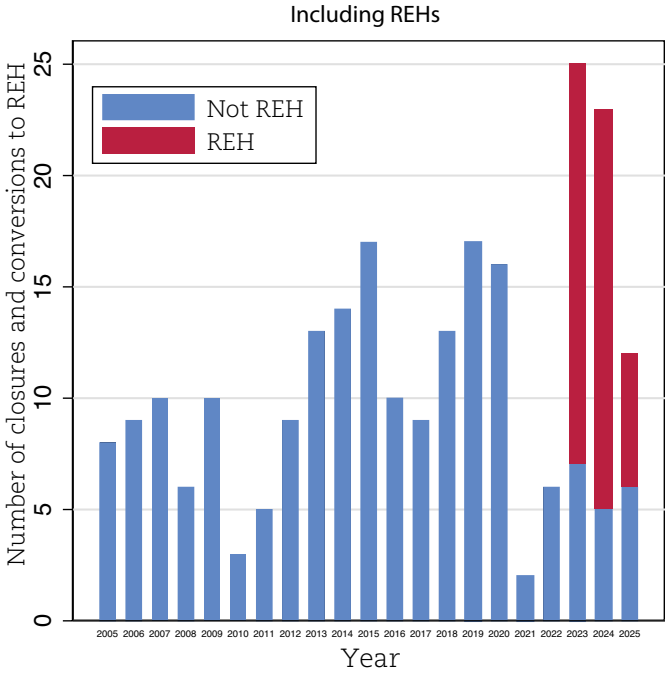
Source: Author's analysis of data from: Cecil G. Sheps Center for Health Services Research, n.d.

Drivers of Poor Finances and Closures

Perhaps the most visible indicator of the financial challenges rural hospitals face is the rate of closures, which has received a high level of attention from mainstream media and policymakers alike. Figure 2 shows the trend in rural hospital closures from 2005 to 2025. The waves of closures are evident from these data, including a notable increase in the latter half of the 2010s. Although 2020 has a number identical to 2019, 10 of the 17 closures in 2020 occurred in the first four months. The Coronavirus Aid, Relief, and Economic Security Act funds were instrumental in supporting rural

hospitals during the COVID-19 pandemic, and the early trend in 2020 suggests that if those funds had not been available, the number of closures would have substantially exceeded the previous high number.

Figure 2. Rural Hospital Closures



Source: Author's analysis of data from Cecil G. Sheps Center for Health Services Research, 2014, 2023.
Note: REH is rural emergency hospital.

Counting hospital closures is useful, but it provides an incomplete picture of the financial dynamics underlying these events. Roughly half of closed hospitals converted to some other type of healthcare provider, such as a long-term care facility or outpatient clinic. However, the remainder are out of the healthcare business altogether – converted to condominiums or car washes or completely abandoned.

Hospitals that have not closed may be struggling in other ways, such as lacking the financial resources needed to address depreciating infrastructure or to modernize buildings and equipment, resulting in cuts to critical healthcare services the community needs. These headwinds often compound each other in a reinforcing

cycle: The surgeon asks for updated equipment, which the hospital cannot afford, so the surgeon leaves the hospital, decreasing local availability of surgical services and its corresponding revenue, leading to greater financial pressure on the hospital.

It is also not obvious whether to include conversions to REH status in the count of closures. This is a relatively new hospital type, created in 2023, that provides hospitals facing closure the option to convert to a facility with an emergency department but no inpatient care. It brings with it a facility payment of nearly $3 million annually to help support its viability. While the inpatient services are lost, the emergency department services are critical for rural communities. Because of the ambiguous effects of these closures, Figure 2 presents closure counts including and excluding conversions to REH status.

Rural hospital financial challenges have many causes. Some are specific to rural areas, while others are a consequence of broader trends in the healthcare system.

Population Declines

Much of rural America has lost population, particularly in the 2010s (Cushing, 2021). Population loss has been widespread across the South, Appalachia, Great Plains, New Mexico and Western Texas, and parts of the Mountain West. Notable exceptions include rural population increases in Eastern Tennessee, parts of New England, the Upper Midwest (e.g., the fracking fields of western North Dakota), Texas, and the Mountain West. A decreasing population base presents challenges for rural hospitals, especially those that were built years earlier for larger populations that were likely to seek care locally. A cursory inspection suggests that states with financially stronger rural hospitals tend to be those with less population decline.

Utilization

Even with a constant population, hospitals are seeing declines in the amount of inpatient business they provide. The number of hospital admissions per capita has

fallen by about 15 percent over the past two decades, from a high of 12,806 in 2004 to 10,791 in 2019 (Agency for Healthcare Research and Quality, n.d.). Those declines are disproportionately experienced by rural hospitals (Malone, Kirk, and Reiter, 2021), largely due to an increasing tendency of rural residents to receive inpatient care from urban hospitals (Friedman and Holmes, 2022). Fundamentally, this can be viewed as a consequence of arguably the chief challenge facing rural providers – because of lower volume, nearly every element of necessary infrastructure has higher per-capita costs in rural areas than in urban areas (Probst et al., 2019).

Payer Mix

Rural hospitals tend to be more dependent on public payers (Medicare and Medicaid) than urban hospitals, which have a larger share of private-pay patients (American Medical Association, 2024). In general, public program payment rates are considerably lower than what private insurance pays. However, the picture is more complex when it comes to rural hospitals.

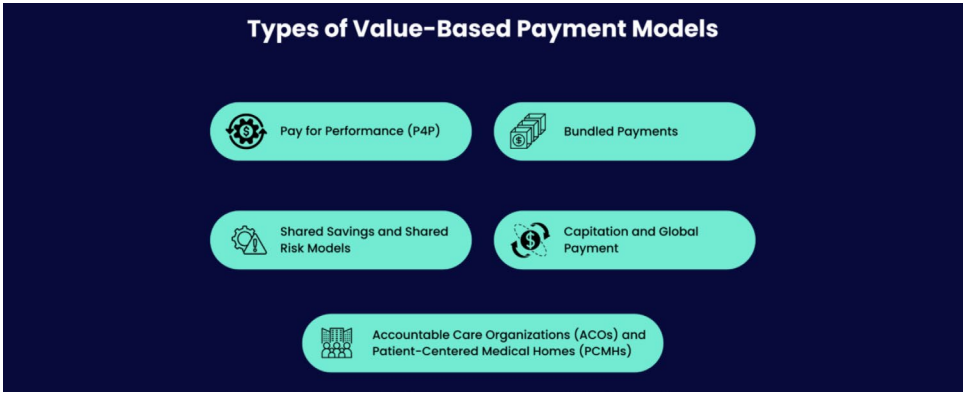
The various hospital designations described above often come with provisions that either supplement a base payment or use a more generous method. For example, CAHs receive cost-based reimbursement from Medicare that is likely substantially more than they would receive under the more broadly used PPS. The Congressional Budget Office and the Medicare Payment Advisory Commission have estimated that cost-based reimbursement yields payment rates approximately 20 percent and 30 percent, respectively, higher than what would have been obtained under the PPS (Congressional Budget Office, 2011; Holmes et al., 2013; Holmes & Pink, 2013; Medicare Payment Advisory Commission, 2005).

The Center for Healthcare Quality and Payment Reform argues that public payers are actually more advantageous for rural hospitals than private payers and that less generous payment rates by private payment systems are the primary driver of financial challenges in rural hospitals (Saving Rural Hospitals, n.d.-a). In particular, increasing penetration of Medicare Advantage has led policymakers (King, 2023; Stensland and Domenella, 2025) and provider associations (Shaver et al., n.d.) to

raise concerns about rural hospital financial viability and led one researcher to conclude, "Medicare Advantage plans appear to be among the worst payers at small rural hospitals" (Saving Rural Hospitals, n.d.-a). Not all research has found that Medicare Advantage is detrimental to rural hospitals' financial strength. One study found that areas with higher Medicare Advantage penetration had greater financial stability and lower risk of closure (Henke et al., 2023).

New Payment Methods

The health sector's transition toward value-based payment (VBP) – a broad category of new payment models, including accountable care organizations and episode-based or bundled payments – has created challenges for rural hospital finances. To manage the risk inherent in VBP, providers must be responsible for a sufficient number of covered lives, which is particularly challenging in rural settings. A central premise of many VBP models is to pass risk to the provider; with fewer lives to spread risk across, tighter margins, and lower liquidity to cover downside risk, rural providers have been reluctant to enroll in VBP models. Furthermore, the premise of most VBP approaches is that providers will manage the patient experience and associated costs. This is difficult to achieve when care is increasingly provided by urban hospitals, with patients transferred to rural settings only for postacute care, for example (Hoffman et al., 2020).



In addition, the technical design of how payers calculate cost savings in VBP may be biased against rural providers, providing an incentive to avoid rural settings for some types of care when the provider is at risk for the total cost of care. For example, Medicare standardizes the reported cost of care to account for geographic price adjusters. However, this does not account for swing beds (beds that can convert between acute and long-term care). Thus, for CAHs providing postacute care through swing beds, the

cost of care as measured for the episode will be much higher, effectively acting as a disincentive for using CAHs for postacute care (Malone, Pink, and Holmes, 2021).

Medicare Payment Policy

Medicare payment policy has myriad effects on rural hospitals – some positive and some negative. Certain aspects of that policy are particularly likely to be detrimental to rural hospital finances. For example, the Inpatient Prospective Payment System Proposed Rule for fiscal year 2020 included an adjustment to the standard approach for calculating the wage index. By applying a floor to the adjustment, this approach increased the wage index for small rural hospitals and therefore increased their Medicare payments. But because the wage index calculator is required to be cost neutral, the higher floor had to be financed by those with higher wage indexes, which are disproportionately urban hospitals. Unsurprisingly, urban hospitals resisted this approach. Ultimately, the cost neutrality requirement pits rural hospital finances against urban hospital finances, sometimes to the detriment of rural hospitals.

State Coverage Policy

While the Affordable Care Act included a mandatory expansion of the Medicaid program, a subsequent US Supreme Court decision made expansion optional to states. Research has found that a state's decision on whether to expand Medicaid affects hospital closure rates (Lindrooth et al., 2018); Medicaid expansion tends to increase revenue at rural hospitals more than it does at urban hospitals (Kaufman et al., 2016).

Other Important Trends

A number of trends affect rural hospitals even though they do not directly relate to hospital closures.

Shift to Outpatient Care

A secular trend of declining admissions in rural hospitals is changing the nature of the rural hospital. Although the average daily census at urban hospitals is largely unchanged over the past few years (notwithstanding the COVID-19 era), rural hospitals have seen a steady decline. This is the result of a slow national decrease in

hospitalization rates, combined with an increased tendency of rural residents to be admitted to urban, rather than rural, hospitals (Friedman and Holmes, 2022). The practical consequence is increased reliance on outpatient care for the rural hospital's book of business. Roughly 70 percent of rural hospitals receive more than 75 percent of their revenue from outpatient care, compared to 11 percent of urban hospitals. While not a financially challenging trend per se, it limits the utility of traditional Medicare inpatient-based policy levers as rural hospitals become less reliant on that business line.

Service Line Erosion

Hospital-based services commonly considered to be unprofitable, such as labor and delivery, home health, and skilled nursing care, have declined in rural hospitals, while services commonly considered profitable, such as chemotherapy and oncology, neonatal intensive care, orthopedics, and cardiac care, have increased in rural hospitals (Chen et al., 2009; John et al., 2022; Whitacre et al., 2024). A hospital closure is a major event in a community, but the slow erosion of services may receive less public attention even though the health consequences for the population can be large. The primary exception to this lower level of attention is the loss of labor and delivery units.

The increase in more financially attractive services may be a net benefit for rural residents, as they have closer access to key services. However, there is a trade-off to be considered with respect to quality: The lower volumes associated with a smaller hospital may lead to poorer quality care. One study found higher mortality and lower quality of care in CAHs than in other hospitals for three common conditions (Joynt et al., 2011).

Consolidation

The consolidation of healthcare providers – both horizontal (merger of similar providers, such as hospitals) and vertical (merger of different provider types, such as hospitals acquiring physician clinics) – is shaping the rural healthcare ecosystem.

Mergers are one strategy unprofitable rural hospitals employ for survival (Carroll et al., 2023). An interesting analysis (Jiang et al., 2022) of mergers on closure rates by researchers from the Agency for Healthcare Research and Quality found that mergers can be protective for high-risk hospitals yet increase the risk of closure for low-risk hospitals. This suggests that mergers are heterogenous: Hospitals in distress may merge to increase their chances of survival, but financially healthy hospitals that merge may bring financial challenges (Jiang et al., 2022).

Rural hospital consolidation is an important and underresearched topic. Mergers and their effects are likely different in different scenarios, making it difficult to generalize about their effects. Different scenarios include at least the following: (a) financially strong rural hospitals being acquired to help shore up market power (Jiang et al., 2021); (b) financially weak rural hospitals being acquired with the hope of being supported by a strong system; and (c) financially weak hospitals being acquired by an entity that may not be committed to the long-term success of the hospital (Stempniak, 2024).

Service line closure may lie on the causal pathway. Hospitals that merged were more likely to stop providing maternity, surgical, and mental healthcare (Henke et al., 2021) as well as imaging and primary care (O'Hanlon et al., 2019) but have shown improved mortality relative to controls (Jiang et al., 2021).

Effects of Closures

Rural hospital closures have negative effects on the community across multiple dimensions. From a health standpoint, research has shown that closures lead to longer trips for emergency medical services (Miller et al., 2020) and increased rates of preventable hospital admissions (Khushalani et al., 2023). When hospitals close, access to care generally declines as residents must travel farther for care, although there is some evidence that the decrease in access to timely care may lead to increased care seeking in the long run (Planey et al., 2024). Most, but not all, studies have found a decrease in the number of healthcare workers in the county experiencing a closure, creating additional barriers to healthcare access (Germack et al., 2019).

Negative economic and sociodemographic effects have also been observed after rural hospitals close. These effects include declines in per-capita income, employment, and population (Malone et al., 2022; Mills et al., 2024). Rural hospitals are an amenity to rural communities, which increases migration to the area (Holmes et al., 2006). A rural community without a hospital will face larger challenges attracting affluent, newly retired residents than a rural community with a hospital. One study by the Appalachian Regional Commission noted the importance of rural hospitals as a driver of local initiatives; losing a hospital means that community-driven initiatives to address public health threats may lack the infrastructure and resources necessary to support the effort. Rural hospital closures can lead to shrinking population, increased poverty, and weaker social capital to help support the community and address pressing challenges (Lane et al., 2018).

The human cost of rural hospital closures has many dimensions. People likely feel more secure knowing they can go to the hospital when they need acute services, including emergency care. Just under 20 percent of Americans live closer to a rural hospital than to an urban hospital (author's analysis of data from Cecil G. Sheps Center for Health Services Research, n.d.; Health Resources & Services Administration, 2025; Opendatasoft, n.d.; US Census Bureau, 2020, 2023). Even those living in large urban settings may find themselves at a rural hospital as they are traveling to another city, visiting family, or vacationing. The loss of security that comes with a hospital closure is important, even if it is difficult to quantify.

Potential Policy Options

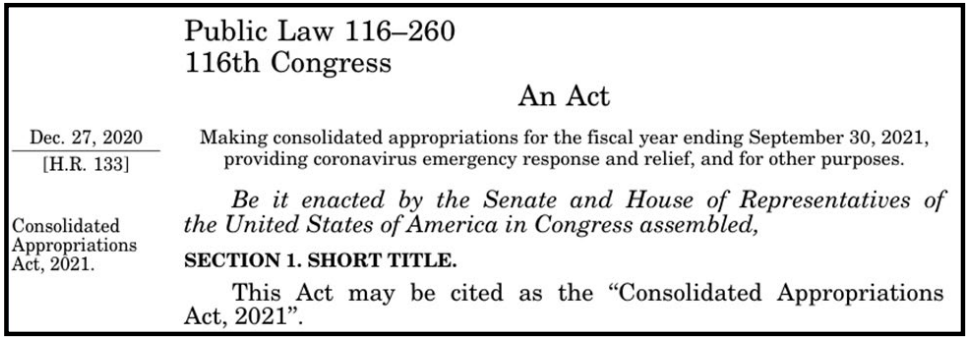
The variety of causes of closure and financial distress for rural hospitals leads to a wide variety of potential policy solutions. The options discussed here are focused on strengthening rural hospital viability, while options focused on improving population health or increasing access through telehealth are discussed in other papers in this series.

Expanded Eligibility for Special Designations

The CAH program has been successful at reducing rural hospital closure rates and maintaining survivability of the smallest rural hospitals (Holmes et al., 2013). In the past, hospitals could qualify for CAH status through two methods: a distance-based approach based on the hospital's proximity to the nearest hospital or a governor's designation (sometimes known as "necessary provider"). Due to concerns with the rapid increase in the number of CAHs throughout the early 2000s, Congress removed the necessary provider waiver effective January 1, 2006, leaving only the distance test. Although the intent of the necessary provider qualification was to recognize that local circumstances may make the "35 miles from another hospital" requirement too rigorous, this designation could be applied liberally and potentially inappropriately. Indeed, a 2013 Office of the Inspector General report found that nearly two-thirds of CAHs would not have met the 35-mile requirement (Office of Inspector General, 2013).

Legislation has been proposed, including a bill cosponsored by Senators Dick Durbin (D-IL) and James Lankford (R-OK), that would reinstate the necessary provider qualification, offering a potential pathway for small rural hospitals to qualify as CAHs (Dick Durbin, 2025). The Bipartisan Policy Center recommends reinstating the necessary provider designation for a three-year pilot and evaluating its effects (Sheffert and Sandalow, 2025).

Similarly, although 38 hospitals have converted to REHs, more would consider it if certain provisions were revised. One change would be to allow conversion of hospitals that closed before the enactment of the Consolidated Appropriations Act, 2021. Another change would be to allow the skilled nursing areas of the REH to be grandfathered in. Currently, REHs are allowed to provide skilled nursing only through a distinct part unit, which has different, usually more stringent, certification requirements (e.g. hallway width), meaning a hospital considering converting to an



Public Law 116–260
116th Congress

An Act

Dec. 27, 2020
[H.R. 133]

Making consolidated appropriations for the fiscal year ending September 30, 2021, providing coronavirus emergency response and relief, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Consolidated Appropriations Act, 2021.

SECTION 1. SHORT TITLE.

This Act may be cited as the "Consolidated Appropriations Act, 2021".

REH may have to close its skilled nursing services. Yet another change would be to allow REHs to qualify for the 340B pharmacy program, which gives them access to highly discounted drugs. The 340B program has been shown to help support unprofitable service lines (Owsley et al., 2024; Owsley and Bradley, 2023).

The House version of the 2025 budget reconciliation bill included a provision allowing hospitals that closed between January 1, 2014, and December 26, 2020, to convert to REHs, subject to additional provisions (KFF, 2025). If the REH program was showing early signs of success by providing hospitals an option to continue offering emergency services to their communities, Congress could have determined the program was meeting its goals and might have considered some refinement of the criteria to allow more struggling hospitals to become REHs. This provision was not included in the final enacted legislation.

Medicare Advantage Reform and Oversight

Rural hospital administrators often cite Medicare Advantage as one of the biggest challenges to their financial sustainability due to lower rates, slower payment, and higher denial rates. Some rural hospitals are canceling their contracts with Medicare Advantage plans (Zionts, 2025). Enforcement of existing Medicare Advantage regulations regarding prompt payment along with efforts to lower claims denial rates, for example, could make Medicare Advantage less burdensome to rural hospitals.

Additionally, Medicare Advantage generally pays hospitals less than traditional Medicare rates. This particularly impacts CAHs, which undergo cost settlement to ensure that traditional Medicare covers the cost of caring for Medicare beneficiaries. The increase in Medicare Advantage market penetration decreases the revenue of CAHs as beneficiaries transition from traditional Medicare to Medicare Advantage. Changing CAH cost settlement to include Medicare Advantage in the formula would improve payment for CAHs.

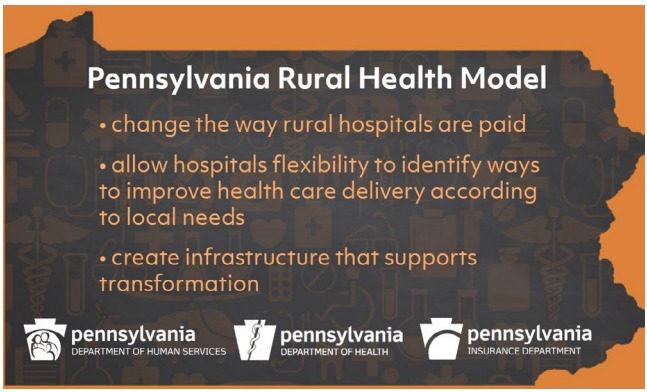
Overhaul of Special Payment Provisions

Rural hospitals are paid through a variety of special payment provisions, some of which were launched more than four decades ago. A comprehensive review of these provisions, potentially redesigning them to better target at-risk hospitals, may

enable more efficient use of federal dollars to address the hospitals most in need of support (Carroll et al., 2024).

Fundamental Changes in the Payment Model

The Pennsylvania Rural Health Model was designed to address one of the core challenges to rural health delivery: Low volumes mean higher financial risk and higher per-unit costs. The model uses global budgets and care transformation to change the incentives and provide rural hospitals with more certainty about their budget that is less dependent on volume, allowing them to focus on what is good for the patient rather than what generates revenue for the healthcare system. While the evaluation of the Pennsylvania Rural Health Model is ongoing, early results are positive with respect to patient experience and costs (NORC, n.d.).



Harold Miller, president and CEO of the Center for Healthcare Quality and Payment Reform, proposes a two-armed payment model: a fixed amount that supports standby costs and variable revenue driven by use of services such as imaging (Saving Rural Hospitals, n.d.-b). This is a similar approach to how federally qualified health centers are paid. They receive a grant from the Health Resources & Services Administration to support core services and then bill for insured patients. The intent of the grant is to keep the provider whole as they suffer losses from billed claims where costs exceed revenue. Payment for the REH is similarly structured; the additional facility payment provides core infrastructure funding, while per-unit costs are covered through billing under the PPS and other typical claims-based processes.

Using Medicaid as a Policy Lever

Medicare has been the dominant policy lever used by federal policymakers to pursue intended goals. Medicare is less effective for certain policy targets, with maternity care as a prime example. While state administration of Medicaid can complicate the use of federal policy, in certain instances it may be appropriate. For example, a federally mandated low-volume adjustment, similar to that used in the low-volume

hospital program, could help retain access to maternity services by providing enough additional revenue for hospitals with low-birth volumes to remain open.

Infrastructure and Direct Technical Assistance

Many rural hospitals have an aging infrastructure with limited resources available to modernize the facility for current practice and/or adjust the size of the space for patient volumes of the 2020s rather than when the facility was built. Diminished access to needed capital may be an important driver of mergers, as access to capital can dramatically increase when an independent hospital becomes part of a system. Loans from the US Department of Agriculture provide a key source of capital financing for rural hospitals, but there is greater need.

Information technology is another source of infrastructure that can impose substantial costs. Subsidized electronic health record and interoperability efforts can help rural hospitals improve their information technology systems, leading to improved quality of care at lower costs. The more limited resources of rural hospitals have also led to vulnerability to cyberattacks and ransomware (Burchfield et al., 2025). The federal government, primarily through the Health Resources & Services Administration, has invested heavily in technical assistance for rural hospitals, including for financially challenged hospitals, hospitals considering converting to REHs, and hospitals looking to expand or launch workforce training programs. These services, many of which are proposed for elimination from future federal funding, can help hospitals better understand the advantages and disadvantages of various approaches to address their threats.

Workforce

Difficulty in recruiting key healthcare workers, such as physicians, nurses, and allied health professionals, in addition to nonclinical personnel, has been well documented for decades (American College of Healthcare Executives, 2024; MacDowell et al., 2010). During the COVID-19 pandemic, labor costs increased considerably (Gerovich et al., 2023). Challenges in recruiting and hiring key personnel necessary for profitable service lines may lead to financial difficulty (Karim et al., 2015). One of

the most effective ways to increase physician supply in rural areas is to train healthcare workers in rural communities (Russell et al., 2022). Strategies to increase health professional training in rural areas, such as the Rural Residency Planning and Development program, can increase the effectiveness of recruitment for rural hospitals, thus addressing workforce gaps threatening hospital viability (Weidner et al., 2024).

Conclusion

The challenges facing rural hospitals are long standing and a result of deep-rooted disparities in the environment facing rural versus urban hospitals, chief of which is the economics of scale. The viability gap between rural and urban hospitals has been growing for the last decade, and as hospitals exit the short-term federal financial supports provided to them during the COVID-19 pandemic, it is likely that the negative trends of the prepandemic period will return. A comprehensive and tailored approach to rural hospitals will help ensure that they continue to survive and provide access to care for rural America. The successful policy strategy will likely be a blend of immediate, incremental approaches combined with long-term, sustained, more innovative designs.

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Image Citations

P. 17: OSF Community Health Needs Assessment, Winnebago County Health Department https://publichealth.wincoil.gov/osf-community-health-needs-assessment/#

P. 81: "Benito Juarez Head Start Center in San Ygnacio, TX," Wikimedia Creative Commons https://w.wiki/HjJb

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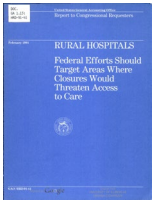
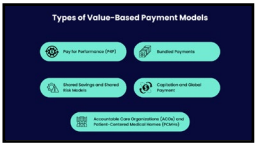


P. 96: "Federal Efforts Should Target Areas Where Closures Would Threaten Access to Care" https://babel.hathitrust.org/cgi/pt?id=uiug.30112033965267&seq=1



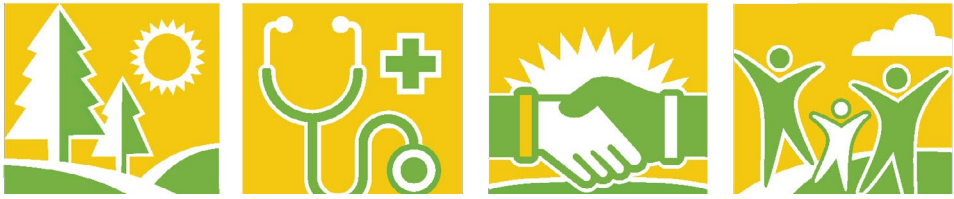
P. 103: "What are Value-Based Payment Models in Claims Processing?" https://promantra.us/blog/value-based-payment-models/

P. 110: "Eight more hospitals join PA's rural health model" https://henrykotula.com/2019/12/27/eight-more-hospitals-join-pas-rural-health-model/

P. 121: "National Rural Health Day," National Organization of the State Offices of Rural Health (NOSORH) https://socialpresskit.com/powerofrural

NOTE: The "Power of Rural" graphic is part of the National Rural Health Day campaign created by NOSORH. NOSORH was not involved in the development of this report.

Celebrating the **Power of Rural!** ®



MEETING THE HEALTH NEEDS OF
RURAL AMERICA

A Report of the Aspen Health Strategy Group

The mission of the Aspen Health Strategy Group (AHSG), an initiative of the Health, Medicine & Society Program at the Aspen Institute, is to promote improvements in policy and practice by providing leadership on complex health issues. AHSG brings together senior leaders representing a mix of influential sectors, including health, business, philanthropy, and technology, to tackle a single health issue annually through year-long, in-depth study. Co-chairs are Kathleen Sebelius, 21st US Secretary of Health and Human Services and 44th Governor of the State of Kansas, and William Frist, former US Senate Majority Leader and US Senator from the State of Tennessee.

The topic of AHSG's tenth annual report is meeting the health needs of rural America. The compilation opens with a consensus report based on the group's in-depth learning process, followed by a set of background papers. Taken together, these materials describe the many factors contributing to poorer health outcomes for Americans living in rural areas than those in urban settings, and offer ideas to address these growing health disparities.

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