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Why the approach to rural health equity needs reexamination

Contents

Introduction

Rural areas account for 86% of the landmass in the United States and support most of the country's agricultural and natural resource production.[1] Rural industries such as agriculture, industrials, and tourism, cannot function without a healthy workforce. Despite this economic significance, many rural communities are underserved and marginalized leading to health inequities for an estimated 46 million US residents residing in these regions.[2] On average, rural communities experience a 2.4-year shorter life span than urban communities. On top of long-standing challenges such as provider shortages, many rural hospitals have also recently seen decreasing margins and concerns about ongoing viability.[3] Efforts to address rural health inequities are likely to greatly increase the overall health and well-being of the broader United States.

To better understand the distinctive strengths and needs of rural communities, we will explore what it means to be rural, outline the imperative for health equity, highlight the tensions experienced in rural communities, and explore how a deeper understanding of the nuances unique to rural communities should impact the health ecosystem's approach to health equity.

Definition of rural

Federal Office of Rural Health Policy

- All non-metro counties
- All metro census tracts with Rural-Urban Commuting Area (RUCA) codes 4–10
- Large-area metro census tracts of at least 400 sq. miles in area with population density of 35 or less per sq. mile with RUCA codes 2–3

Notes:
RUCA codes classify US census tracts using measures of population density, urbanization, and daily commuting. Lower numbers indicate more urban-centric commuting patterns.

Differing definitions of rural may lead to inconsistent statistics on a national scale. Citations will be provided throughout; however, some data points may vary depending on the definition of rural being applied.

Source: Health Resources and Services Administration

What it means to be rural

An examination of rural health equity requires defining what it means to be rural. The US government has no standard definition of rural and defines the topic differently across agencies. The definition utilized throughout this piece is provided by the Federal Office of Rural Health Policy (see sidebar on page three, "Definition of rural").[4]

When we look beyond the technical definition of rural communities, there are often preconceived notions of what it means to be rural—some of these perceptions are supported by evidence, and others are drawn from our own experiences and biases (figure 1).

Figure 1. Assessing the accuracy of perceptions of rural America

	Perception	Evidence
1	Rural communities are largely white, agricultural, and impoverished	**Partially true** – Rural communities generally have less racial diversity compared to more urban communities[1] and recognize poverty as an issue[2] but have **many varied sources of economic output.**
2	The rural population has been declining steadily for many years	**Partially true** – 2010–2020 was the **first decade-long rural population loss** in history (at -0.5%).[3]
3	The rural population is older	**Partially true** – Rural counties tend to skew older than urban areas; however, the **65+ population is growing fastest in suburban and small-metro areas.**[4]
4	Rural communities are largely located in the Midwest and South	**Partially true** – **24.2%** of the South and **25.7%** of the Midwest are non-urban. Only **11.1%** of the West is non-urban, but rural areas there face unique health care challenges (e.g., planes as emergency response vehicles vs. ambulances due to large distances).[5]
5	Rural communities have less prevalence of drug abuse	**False** – Since 1999, the rate of **drug overdose deaths** in rural areas has **risen** and **trended higher** than the urban rate.[6]

Sources: 1) USDA Economic Research Service, 2018; 2) Pew Research Center, 2018; 3) UNH Carsey School of Public Policy, 2022; 4) Pew Research Center, 2018; 5) US Census Bureau, 2020 data; 6) CDC, 2017

Despite many commonalities, there are multiple identities encapsulated in the term "rural" (figure 2). Differentiating factors across demographic, economic, social, and environmental characteristics should be understood against the broader rural tapestry of the United States. Outlined in figure 2 are three examples of counties which are all classified as rural but hold different identities, and therefore likely have unique needs. The individuality of each rural community requires consideration as health equity is addressed across the country.

Figure 2. Rural counties have different identities

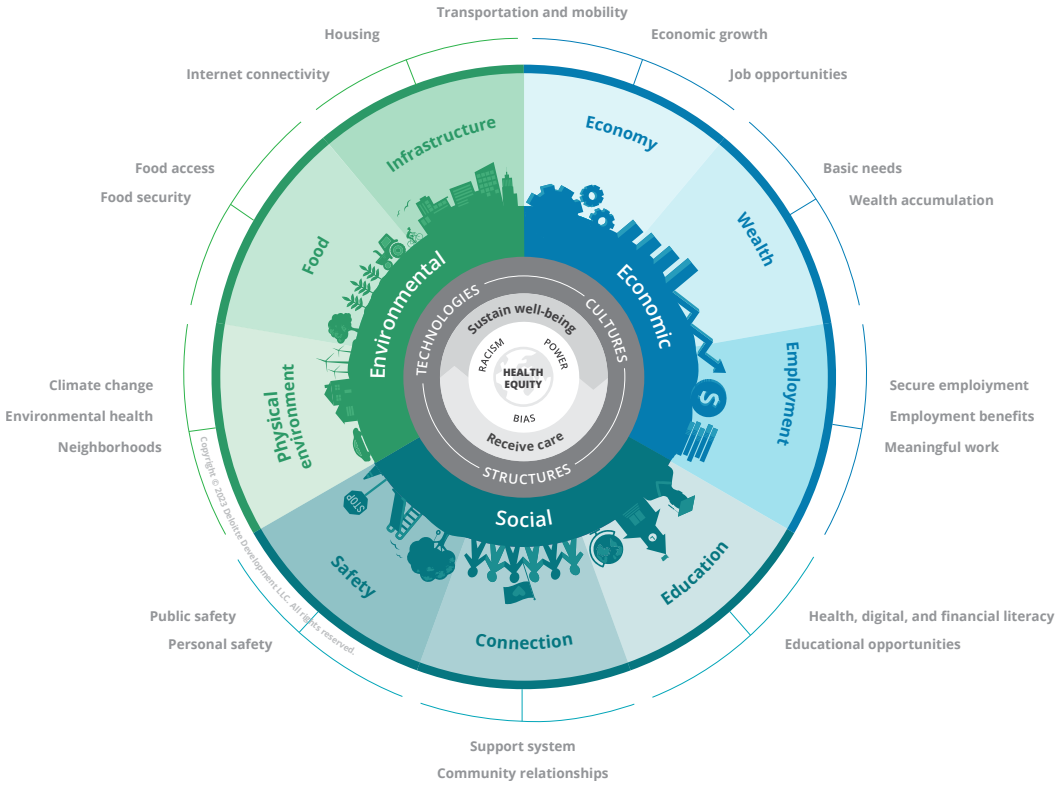
	Sioux County, Nebraska	Bullock County, Alabama	Teton County, Wyoming
Economic driver	Agriculture	Manufacturing	Tourism
Population	• Low density • Slight decline	• High density • Very low decline	• Medium density • Slight growth
Demographics	• 21% ≥65 years old • Primary Race: 94% White	• 22% <18 years old • Primary Race: 70% Black	• 19% <18 years old • Primary Race: 82% White
Political landscape	• Democratic: 10% • Republican: 80% • Unaffiliated/Other: 9%	• Democratic: 88% • Republican: 10% • Unaffiliated/Other: 12%	• Democratic: 22% • Republican: 62% • Unaffiliated/Other: 16%
Health	• Fair or Poor Health: 15% • Mental Distress: 12% • Premature Death: No data • Life Expectancy: No data • Maternal Vulnerability Index:* 30.0	• Fair or Poor Health: 31% • Mental Distress: 19% • Premature Death: 11,400 per 100,000 people • Life Expectancy: 73.8 years • Maternal Vulnerability Index:* 99.0	• Fair or Poor Health: 12% • Mental Distress: 11% • Premature Death: 3,300 per 100,000 people • Life Expectancy: 86.7 years • Maternal Vulnerability Index:* 19.4
Drivers of Health	• Poverty Rate: 8.5% • Unemployment: 2.3% • Household Income: $48,269 • Food Insecurity: 11% • Healthy Food Access: 79% • Education: 30.5% of population with a 4-year degree or higher • Uninsured Rate: 14% • Living Wage (hourly) for 2 Working Adults with 2 Children: $22.83	• Poverty Rate: 28.9% • Unemployment: 19% • Household Income: $37,785 • Food Insecurity: 16% • Healthy Food Access: 68% • Education: 25% of population with no high school degree • Uninsured Rate: 11% • Living Wage (hourly) for 2 Working Adults with 2 Children: $22.31	• Poverty Rate: 6% • Unemployment: 6% • Household Income: $84,678 • Food Insecurity: 9% • Healthy Food Access: 96% • Education: 57% of population with a 4-year degree or higher • Uninsured Rate: 17% • Living Wage (hourly) for 2 Working Adults with 2 Children: $39.57

*Maternal Vulnerability Index scale runs from 0–100, high score indicates greater risk.
Sources: USDA Economic Research Service – Atlas of Rural & Small Town America (2019); Wyoming Government Voter Registration (Oct 2022); Nebraska Government Voter Registration (Oct 2022); Alabama Government May 2022 Primary Election (May 2022), March of Dimes Peristats (2022), County Health Rankings (2022), MIT Living Wage Calculator (2023)

The health equity imperative for rural communities

Deloitte defines health equity as *the fair and just opportunity for everyone to fulfill their human potential in all aspects of health and well-being*.[5] Equity in health and health care is affected by the intersection of economic, social, and environmental factors—the non-medical drivers of health (figure 3). These factors compounded with influences like power, racism, and bias in and out of the health care ecosystem need to be addressed to help improve the health and wellness of the nation.[6]

Figure 3. Deloitte's Health Equity Framework



Rural health equity is a moral imperative as...

Rural communities constitute a significant portion of the US population.

- 13.4 million children (< 18 years old) live in rural areas across the United States.[7]
- 60% of American counties were considered "completely" or "mostly" rural, according to the US Census Bureau.[8]

Rural communities support global trade and provide valuable resources for the United States and abroad.

- 2 million farms dot America's rural landscape with one US farm feeding 166 people annually in the United States and abroad.[9]
- In 2018, $139.6 billion worth of American agricultural products were exported around the world helping to create a positive agricultural trade balance.[10]

Rural communities experience unique challenges that perpetuate inequitable health outcomes.

- Between 1969 and 2009, residents in metropolitan (urban) areas experienced larger gains in life expectancy than those in nonmetropolitan (rural) areas.[11]
- Rural communities experience a higher mortality rate from heart disease, unintentional injuries, COPD, lung cancer, stroke, suicide, and diabetes.[12]
- The majority (70%) of government-designated primary care Health Professional Shortage Areas (HPSAs) are located in rural or partially rural areas—and this trend is poised to worsen as rural hospitals lose COVID-19 funding. In addition, 19 hospitals closed in 2020 alone—the most of any year in the previous decade.[13]

Rural needs

Rural communities experience many health inequities, some of which are similar to those experienced by urban areas, while others are more unique to rural communities.

Shared needs

Food—Food insecurity is prevalent in both rural (10.8%) and urban regions (12.2%) as compared to suburban areas which have a lower food insecurity rate (8.8%).[14]

Wealth and employment—32% of rural respondents and 41% of urban respondents indicate that poverty is a top issue. Additionally, 42% of rural and 34% of urban respondents recognize the availability of jobs as a top issue.[15]

Sustaining well-being: Substance use—Drug usage is a shared issue with 50% of urban adults, and 46% of rural adults believing drug addiction is a major problem in their communities.[16]

Sustaining well-being: Mental health—Both rural and urban communities report a similarly high level of diagnosed mental health conditions. As a notable disparity, rural areas are reporting a suicide rate that is 55% higher (19.7 per 100,000 population) than in large urban areas (12.7 per 100,000 population).[17]

Distinct needs

Childcare—An analysis across eight states found that 55% of children in rural communities live in areas with low or no childcare availability as compared to urban areas where about 33% of children experience low or no availability.[18]

Receiving care—Rural areas often have significantly fewer primary care providers (PCPs) per citizen (39.8/100,000) when compared to urban areas (53.3/100,000).[19]

Health: Provider access—Urban areas have almost three times as many physicians (33.6) per capita as rural areas (12.7).[20]

Infrastructure: Access to care—Rural Americans live an average of 10.5 miles from the nearest hospital, almost double the distance when compared to suburban (5.6 miles) and urban (4.4 miles) populations (many rural Americans have no acute care service access altogether). For 25% of rural Americans, it takes an average of 34 minutes to get to the nearest acute care facility.[21]

Infrastructure: Public transportation—Access to public transportation is more likely to be listed as a community need in rural communities (43%) as opposed to urban communities (19%).[22]

Infrastructure: Broadband—Rural areas generally lag behind their more urbanized counterparts in access to high-speed internet. In fact, less than 70% of households have high-speed internet access in the nation's most rural counties.[23]

Infrastructure: Social determinants of health (SDOH) and community resources—Food assistance programs such as food pantries and soup kitchens are typically located in urban areas with high population density to serve a large number of people in need. However, this model is not effective in rural counties with low population density. Rural counties, which constitute about 60% of all US counties, account for 79% of those with the highest rates of food insecurity, meaning limited access to affordable and nutritious food, according to Feeding America, a network of more than 200 food banks.[24]

Note: Because rural areas can be defined differently, the statistics listed above may not be using the same geographic or population units when describing rural areas.

Solutioning with community strengths

Although rural and urban communities may encounter similar drivers of health needs, they often have different root causes requiring unique solutions to those commonly applied in an urban setting. Addressing health care access gaps and transportation is one example of these varied needs.

Health care access and transportation

Both rural and urban communities experience barriers with timely transportation to enable access to medical care

Illustrative urban solution	Illustrative rural solution
Non-emergency medical transportation (or NEMT) can more efficiently serve urban populations as patients with transportation challenges are less geographically dispersed than in rural areas. NEMT is covered as a benefit* under Medicare and can provide transportation for both acute needs and scheduled appointments.[25]	Medical transportation teams (often staffed by EMS volunteers in rural areas) can be digitally connected to hospital providers and specialists in real time to share medical tracings/clinical data and receive instructions to address complex acute needs during what can often be a long journey to a health care facility. This may require collaboration with cellular providers to enable these capabilities and to transit information.

*Benefits may vary by state and program.

Rural communities have strengths and assets that can be leveraged to address health equity, including unused land, surplus resources, and social capital inherent to smaller communities. Rural health care providers may have generalized knowledge across a wide range of health issues. Given rural providers' potential adaptability and experience dealing with diverse patient needs, they may be well suited to collaborate with specialists via digital technologies to improve standards of care and leverage specialized expertise that may otherwise not be available. While high-speed internet access may be lacking in some areas, resources (such as the Federal Communications Commission's Rural Digital Opportunity Fund) exist to help remedy the issue.[26] For example, Atrium Health stood up a digitally enabled hospital-at-home program in partnership with Best Buy that added the care capacity equivalent of a midsize hospital in its community.[27]

Additionally, health care and community vitality are interconnected in rural communities. Hospitals may serve as economic anchors to the community through direct employment and tax revenues and indirect reinforcement of the local economy through purchasing goods and services from other organizations. Hospitals can also help build the pipeline of health care providers in their communities by funding education for community members and employees. This level of influence can be leveraged to make immediate impact within the community. The imperative to act intentionally to address health equity in rural areas is clear, and the benefits are likely to ripple across the entire United States.

Implications for stakeholders

Health ecosystem stakeholders can complement the unique strengths of rural communities with their own strengths, enabling their objectives and closing disparities. With this understanding of rural identity, stakeholders should reexamine their approach to rural health equity and create tailored solutions to address community needs.

Payors, including commercial plans as well as Medicare and Medicaid plans, can utilize their assets to help improve rural health equity by:

- Leveraging innovative reimbursement structures to amplify access and deliver preventive care and specialty care, such as reimbursing for medical inputs, such as mobile devices and coverage of broadband.
- Incentivizing remote patient monitoring to "bring the hospital home" and amplify providers' ability to serve patients in dispersed geographies.
- Amplifying telehealth access by investing in physical connectivity hubs with high-speed internet access in rural communities—potentially housed within established community centers such as libraries or schools.
- Accounting for unique rural health realities and needs (e.g., lower patient volumes, financial instability, limited or virtual-only access to medical and social resources among some rural providers) when designing and implementing value-based care models.
- Building relationships and referral structures with social services and drivers of health providers (e.g., housing navigation services, food providers, domestic violence shelters) and referring patients after screening for broader needs.

Innovator spotlight:
Centers for Medicare & Medicaid Services (CMS) assists health care providers in rural, tribal, and geographically remote communities by providing them with information about CMS policy updates and aiding eligible individuals in comprehending their coverage and benefits. To illustrate, CMS Regional Office Rural Health Coordinators and CMS Native American Contacts facilitate the dissemination of CMS policy changes to health care providers, while also organizing events that allow individuals, organizations, and government entities to stay informed about recent CMS initiatives and offer their input. Similar educational initiatives can be implemented by health plans nationwide in the rural regions they serve.[28]

Providers may act as community anchors and have a direct pulse on local needs. They can help improve rural health equity by:

- Incorporating drivers of health screenings into their workflows, offering solutions (e.g., transportation, hospital-at-home services) to address identified health needs, and building relationships with local community support services (e.g., food banks, housing resources) for patient referrals.
- Leveraging data, through partnerships with state- or national-based rural health consortiums, to approach health needs from a population health lens, which may include tailoring program designs and adjustments to patient care workflows.
- Launching hospital-at-home, paramedicine, and other digital/virtual workforce solutions to combat resource limitations faced by rural communities to help improve health outcomes.
- Leveraging hub-and-spoke models of care to tap into specialist care and allow providers to practice at the top of their license. Health systems can equip specialists in central locations with virtual technology that allows them to connect to and assist providers, other health care professionals, or even volunteers (as emergency medical teams can often be volunteer-based in rural areas).
- Partnering with clinician and medical education programs within and outside of their area to sponsor students to practice and build training rotations at their rural facilities.
- Partnering with medical and social resources (in person and virtual) outside of their local community to enhance access for their community members.

Innovator spotlight:
Vermont implements the "Hub and Spoke" approach to address opioid use disorder (OUD), where a comprehensive treatment system is established. Nine Regional Hubs provide daily assistance to individuals with complex addiction issues. Additionally, more than 75 local Spokes, comprising doctors, nurses, and counselors, deliver continuous OUD treatment in conjunction with general health care and wellness services. This framework emphasizes the use of medication for opioid use disorder (MOUD) in treatment and utilizes OUD specialists to enhance accessibility to OUD treatment for state residents.[29]

Life science companies can help improve rural health equity by:

- Ensuring equitable representation of rural communities in research, clinical trials, and market access to understand the implications and help address rural community-specific barriers.
- Incorporating remote monitoring products and other digital solutions to support provider shortages in rural communities.
- Continuing patient access programs that make medications more affordable.
- Locating manufacturing plants in rural areas while providing strong health and wellness benefits to the employees working in those plants.

Innovator spotlight:
In November 2020, Pharmaceutical Research and Manufacturers of America (PhRMA) and its member companies released the first-ever industrywide set of principles called "Principles on Conduct of Clinical Trials & Communication of Clinical Trial Results." These principles, which took effect in April 2021, are designed to establish structured and effective methods for addressing health care disparities and promoting diversity among participants in clinical trials. This includes a focus on improving representation across different geographic locations.[30]

Non-health care and life sciences industries can play a variety of health-equity driven roles within rural communities. Some examples include:

- Designing and building technologies that meet rural needs (e.g., telehealth, remote monitoring, and hospital-at-home technologies) by leveraging satellite internet.
- Amplifying access to health education by integrating educational health modules into health care, fitness, and mental health apps and devices.
- Increasing general employment by offering healthy wages, as well as adequate training and upskilling opportunities for employees.
- Convening community and business leaders to collectively address needs by collecting more comprehensive demographic and drivers of health data, for nonprofits and social-impact organizations (including within corporations).
- Continuing to invest in high-speed internet infrastructure and access in rural communities (e.g., partnering with other carriers to enhance access and speed; leveraging government grants and funds).[31]

Innovator spotlight:
The Two Georgias Initiative, launched in 2017 by the Healthcare Georgia Foundation (the "Foundation"), is a long-term project that focuses on reducing the disparities in health care and overall health outcomes between urban areas and rural communities in Georgia. Its objective is to assist local coalitions in enhancing health care access for residents living in rural regions of the state. The Foundation allocated $1.1 million in funding to support the development and execution of community health improvement plans by 11 rural community health coalitions in Georgia. These initiatives aim to empower individuals who are disproportionately affected by health inequities, encouraging them to actively participate and voice their health care concerns.[32]

Conclusion

With the health ecosystem rapidly shifting, we are moving toward a future where the industry will likely look beyond traditional health care delivery to upstream drivers of health. When shaping this new future, players should understand the nuances of rural identity, recognizing that each community has unique attributes, strengths, and needs that cannot be addressed with a blanket approach. When done with intentionality and in collaboration across stakeholders, a future can be created where health care is more accessible and equitable for rural populations across the United States.[33]

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Endnotes

1. Health Resources & Services Administration (HRSA), "Defining rural population," based on 2010 US Census Bureau data.
2. Elizabeth A. Dobis et al., "Rural America at a glance," US Department of Agriculture (USDA), Economic Research Service, Bulletin No. 230, November 2021.
3. Zachary Levinson, Jamie Godwin, and Scott Hulver, "Rural hospitals face renewed financial challenges, especially in states that have not expanded Medicaid," Kaiser Family Foundation (KFF), February 23, 2023.
4. HRSA, "Defining rural population."
5. Kulleni Gebreyes et al., "Activating health equity," Deloitte, April 12, 2021.
6. Kulleni Gebreyes et al., "Addressing the drivers of health," Deloitte, November 5, 2021.
7. HRSA, "Defining rural population."
8. US Census Bureau, "Our rural communities," 2010 census data, last revised August 31, 2022.
9. American Farm Bureau Federation (FB), "Fast facts about agriculture & food," retrieved from *2021 Food and Farm Facts* (Washington, DC: American Farm Bureau Federation, 2021).
10. US Census Bureau, "Our rural communities."
11. Gopal K. Singh and Mohammad Siahpush, "Widening rural–urban disparities in life expectancy, U.S., 1969–2009," *American Journal of Preventative Medicine* 46, no. 2 (2014): pp. e19–e29.
12. Ibid.
13. American Hospital Association (AHA), "Rural hospital closures threaten access: Solutions to preserve care in local communities," September 2022.
14. Alisha Coleman-Jensen et al., *Household food security in the United States in 2021*, ERR-309, USDA, Economic Research Service, September 2022.
15. Kim Parker et al., *What unites and divides urban, suburban and rural communities*, Pew Research Center, 2018.
16. US Census Bureau, "Our rural communities."
17. Dawn A. Morales, Crystal L. Barksdale, and Andrea C. Beckel-Mitchener, "A call to action to address rural mental health disparities," *Journal of Clinical and Translational Science* 4, no. 5 (October 2020): pp. 463–67; John Gale et al., Behavioral health in rural America: Challenges and opportunities, Rural Policy Research Institute (RPRI), December 2019.
18. Katherine Paschall, Tamara Halle, and Kelly Maxwell, *Early care and education in rural communities*, OPRE Report #2020-62 (Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services, 2020).
19. National Rural Health Association (NRHA), "About rural health care," accessed October 2023.
20. HRSA Area Health Resources Files (2021–2022), "Per capita rates of health professionals – Selected occupations," via Rural Healthcare Workforce Frequently Asked Questions page, Rural Health Information Hub, last modified February 24, 2023.
21. Onyi Lam, Brian Broderick, and Skye Toor, "How far Americans live from the closest hospital differs by community type," Pew Research Center, December 12, 2018.
22. Coleman-Jensen et al., *Household food security in the United States in 2021*.
23. Kevin Pollard and Matthew Martinez, "Digital divide in high-speed internet access leaves rural areas behind," Population Reference Bureau (PRB), December 15, 2021.
24. Elaine S. Povich, "Mobile food banks roll to isolated, rural poor," *Trust Magazine*, November 2, 2018.
25. Centers for Medicare & Medicaid Services (CMS), "Non-emergency medical transportation (NEMT)," last modified September 6, 2023.
26. Alexander Marré, "Bringing broadband to rural America," *Community Scope 8*, no. 1 (Richmond, VA: Federal Reserve Bank of Richmond, 2020).
27. Atrium Health, "Atrium Health and Best Buy Health partner to enhance hospital at home experience," June 3, 2023.
28. CMS, *CMS framework for advancing health care in rural, tribal, and geographically isolated communities*, November 2022.
29. State of Vermont, Blueprint for Health, "Hub and Spoke," accessed October 2023.
30. Christine Chang et al., *Enhancing clinical trial diversity*, Deloitte Insights, 2021.
31. USDA, "Biden-Harris administration announces $401 million for high-speed internet access in rural areas," press release, July 28, 2022.
32. Jay Bhatt et al., *Advancing health equity through community-based ecosystems*, Deloitte Insights, 2022.
33. Neal Batra and Bill Fera, "The future of rural health equity," *Health Forward Blog*, Deloitte, October 20, 2022.

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