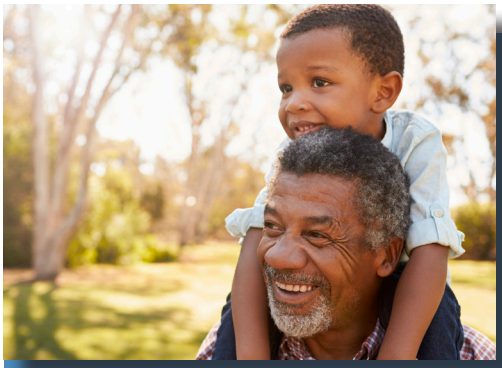

HEALTH EQUITY AND COVID-19: THE IMPACT OF RURAL RESIDENCE ON COVID-19 DISPARITIES

The GHPC COVID Collection

Brief Highlights

- The average numbers of diagnosed cases of COVID-19 infection and COVID-19–related deaths per 100,000 population are higher in Georgia's rural counties versus urban counties.
- Black and Hispanic populations in Georgia experience a disproportionate share of COVID-19 infections, compared to their share of the overall population.
- Disparities for COVID-19 infections and deaths mirror long-standing disparities seen among rural and, more specifically, rural minority populations in Georgia for the leading causes of death and social determinants of health.
- This brief, the second in a series on health equity and COVID-19 disparities, examines racial COVID-19 disparities occurring in Georgia through the lens of urban and rural disparities, explores some of the drivers of these differences, and assesses current practices and opportunities for closing the gap.

Rural Communities Fare Worse With COVID-19, With Greatest Challenges Seen for Minority Communities Living in Rural Areas

Washington state reported the first case of COVID-19 in the United States in January 2020. By March 2020, the United States had become the epicenter of the disease, with the most reported cases worldwide.[1] Pandemics, such as COVID-19, often amplify existing health inequities and historically have disproportionately affected socially and economically disadvantaged groups.[2] Although much of the focus around COVID-19 disparities centers on racial and ethnic disparities, health disparities have long been an issue in rural communities.

Equity is achieved when every person has the opportunity to attain his or her full health potential and no one is disadvantaged from achieving it because of social position or other socially determined circumstances.[1]

Health disparities are differences in health status between groups of people related to social or demographic factors such as race, gender, income, or geography.[3]

Like it does for many chronic health conditions, the rural context impacts prevention, treatment, and response to COVID-19. The following analysis for Georgia shows that rural communities are faring worse during the COVID-19 pandemic than their urban counterparts, exacerbating disparities for racial and ethnic minorities living in these communities. This pattern of worse outcomes for rural Georgia counties with a higher proportion of racial and ethnic minority residents is consistent across COVID-19, chronic health conditions, and social determinants of health.

Health Behaviors and Outcomes in the Rural Setting

While quality of life is perceived by many to be better in rural communities, rural residents in the United States have less access to health-enhancing conditions and worse health outcomes than their urban counterparts. All-cause mortality rates are higher in rural communities, especially for the five national leading causes of death — heart disease, cancer,

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unintentional injury, lower respiratory disease, and stroke — with these disparities widening over the past decade.[3] As with other health disparities, the causes of mortality are complex. It is well documented that rural residents engage in fewer health-related behaviors that can protect against chronic disease, compared to urban residents. For example, smoking and other tobacco use is more common in rural areas,[4] heavy drinking is more common, physical activity is less common, and a higher proportion of the population is obese.

Social determinants of health are "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[5] Social determinants of health are often grouped into five areas: economic stability, education access and quality, health care access and quality, neighborhood and built environment, and social and community context.

While engaging in some health behaviors reflects personal choices, others are a function of the environment. For example, sparse population density, a lack of public transportation, large geographical distances, and a less developed built environment may limit opportunities for health-enhancing behaviors, like physical activity, healthy food options, and social engagement.

Social Determinants of Health in the Rural Setting

Rural communities have higher rates of poverty, leading to lower and, in many cases, declining tax bases, compared to urban communities, making needed investments in infrastructure difficult. For example, rural local governments have less money to invest in social services, public health, or clinical care than urban governments, which consistently spend more on these services.[6] This creates a "catch-22" pattern where rural communities suffer from a disproportionate burden of disease, are in more need of government services, but are unable to provide them at the level necessary to meet demand, which in turn leads to a greater burden of disease.

Access to Care in the Rural Setting

Rural residents generally have less access to health care, especially to specialty providers, than their urban counterparts.[7] Financial strain and resulting closures of rural hospitals, as well as fewer doctors per capita, can make accessing care difficult.[8] Even though the COVID-19 emergency fast-tracked the provision of many health services via telehealth, one-third of rural Americans still lack reliable high-speed internet connections, creating access challenges during a time when more providers are relying on technology to safely see patients.[9]

COVID-19 in the Rural Setting

Given these long-standing disparities between rural and urban communities related to underlying health and access to care, it is not surprising that the COVID-19 epidemic would hit rural communities hard. Because transmission of the virus was initially higher in urban areas due to higher density, rural communities were somewhat overlooked in terms of COVID-19 prevention and treatment. For example, states with a higher percentage of rural communities are testing for COVID-19 at much lower rates than states with more urban communities.[10] Yet, it is estimated that half of rural residents are at higher risk for serious illness and hospitalization due to underlying health conditions and older age, yielding 10% more hospitalizations for COVID-19 per capita than urban residents given equal infection rates.[11] This lack of robust testing plus with limited access to health care providers and intensive care units, plus higher rates of older individuals with underlying medical conditions, puts rural areas at greater risk for COVID-19 outbreaks and unnecessary deaths.[12]

Racial and Ethnic Disparities in the Rural Setting

Rural health disparities often are exacerbated for racial and ethnic minorities living in rural areas.[13] For example, rural Black populations tend to be older and haver higher rates of underlying health conditions, such as diabetes, obesity, and high blood pressure than white rural counterparts.[14] Rural minorities are also less likely to have a regular health care provider than white rural residents.[15] And because 94% of rural Black Americans live in the rural South, an area with already limited access to health care services and greater rates of underlying health conditions, it is likely that observed racial disparities in COVID-19 infections and deaths will be even more dramatic in Southern rural communities.[12]

Data sources and analysis methods are explained with each display of findings. Overall, the size of the data points on the scatterplots correspond to the value of the y-axis (COVID-19 cases or deaths).

COVID-19 In Georgia: Rural Counties Fare Worse

Overall, there have been 285,280 diagnosed cases of COVID-19 infection and 6,778 COVID-19–related deaths in Georgia, as of Aug. 31, 2020. Both average diagnosed cases of COVID-19 infection and COVID-19–related deaths per 100,000 population were higher in Georgia rural counties versus urban counties.

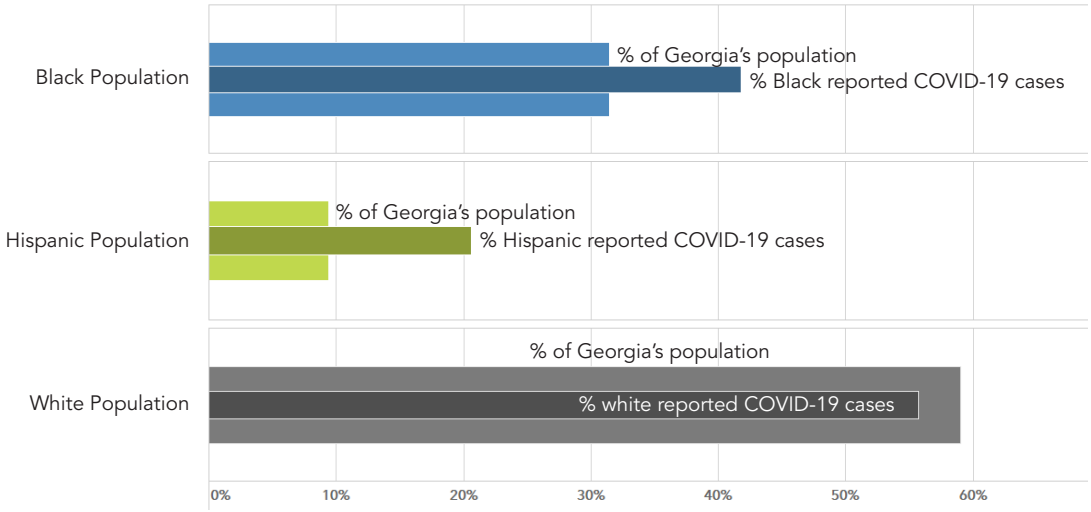
Through Aug. 31, 2020, Black and Hispanic populations in Georgia experienced a disproportionate share of COVID-19 infections, compared to their share of the overall population. Disparities for COVID-19 infections are dramatic but mirror long-standing disparities seen among rural and, more specifically, rural minority populations in Georgia for the leading chronic conditions and social determinants of health.

CASES	
Rural	**Urban**
767 per 100,000	612 per 100,000
DEATHS	
Rural	**Urban**
39 per 100,000	23 per 100,000

Note: This analysis used the Georgia State Office of Rural Health's definition of rural county, which is a county having a population of less than 50,000 according to the last U.S. census, excluding military bases or installments.

Data source: Georgia Geospatial Information Office as of Aug. 31, 2020.

Share of COVID-19 Cases By Race



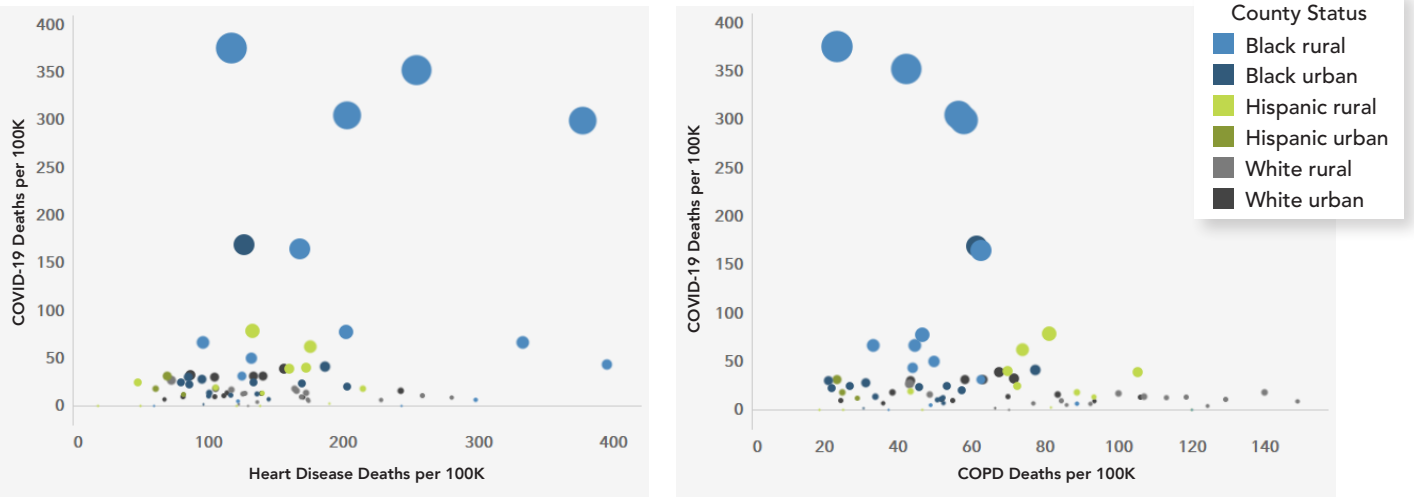
Note: Calculations based on 184,070 COVID-19 cases with known race, 182,303 cases with known ethnicity.

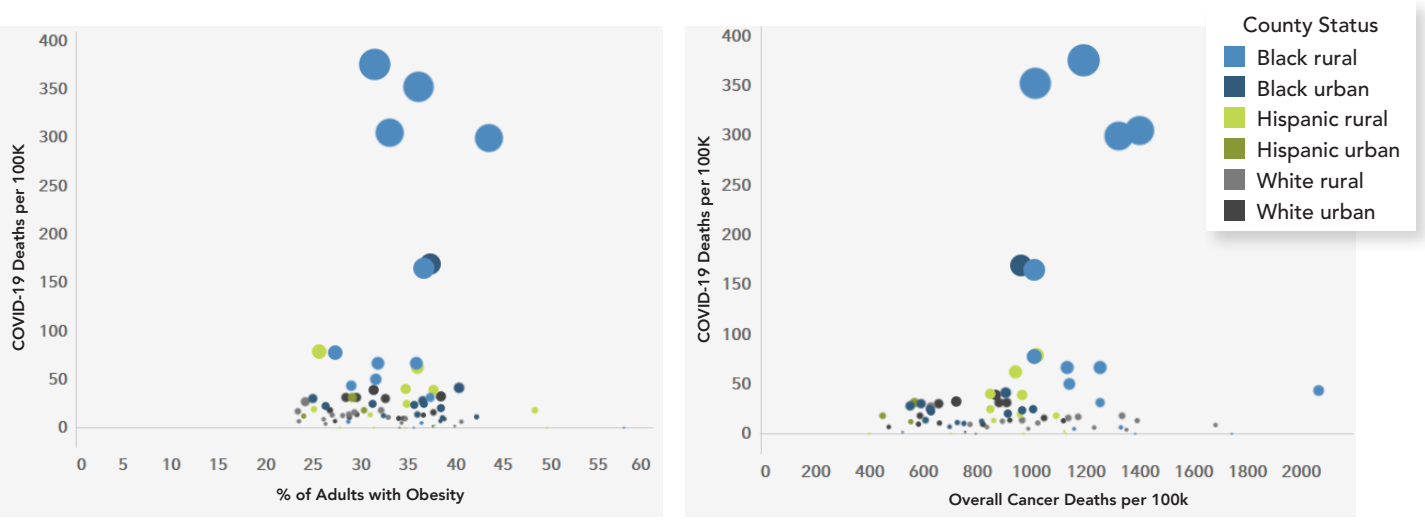
Data source: Georgia Geospatial Information Office as of Aug. 31, 2020

Chronic Conditions Impact COVID-19 Outcomes, Particularly in Predominantly Black Rural Counties

Rural counties in Georgia with the highest proportion of Black residents have the most COVID-19 deaths, adjusted for population. This pattern of excess mortality is consistent for predominantly rural Black counties across common chronic conditions that are leading causes of death in Georgia — heart disease and cancer — and for obesity, a contributing factor to chronic diseases and worse COVID-19 outcomes. Likewise, rural counties with the greatest Hispanic populations have higher rates of deaths for leading chronic conditions, including chronic obstructive pulmonary disease (COPD).

How Do COVID-19 Deaths Compare to Deaths From Chronic Health Conditions (by Race and Residence)?





Note: Heart disease, cancer, and chronic lower respiratory disease were selected as they are the top three causes of mortality in Georgia.[16] Obesity was included as it is a risk factor for many chronic conditions and for worse COVID-19 outcomes. Heart disease includes "hypertension and hypertensive renal, and heart disease" plus "ischemic heart and vascular disease."

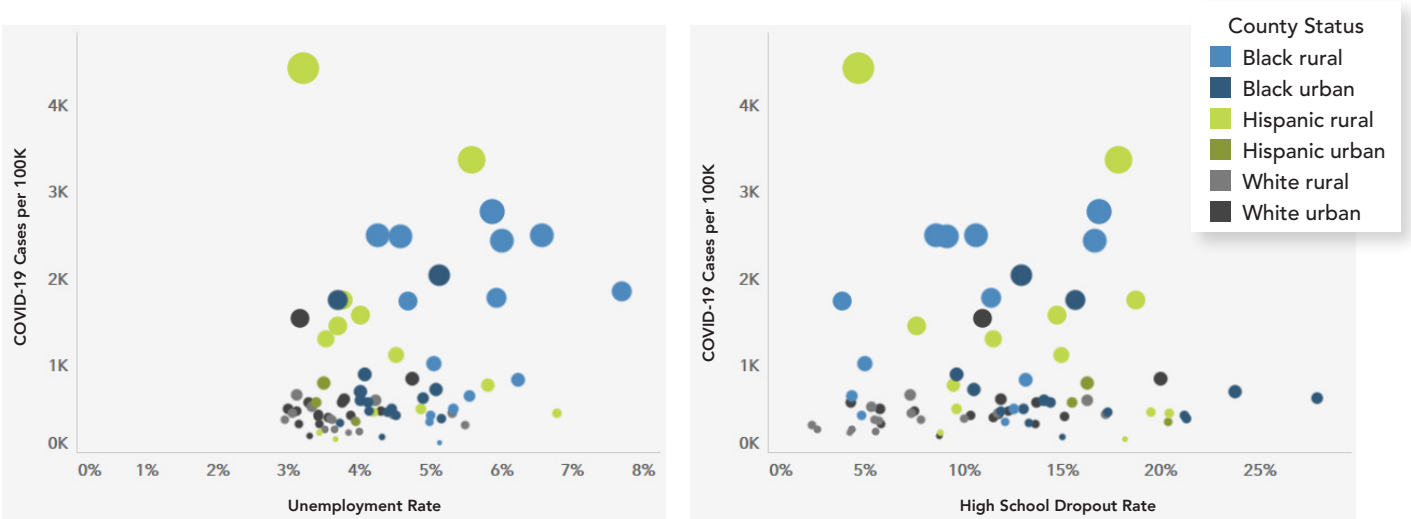
The percentage population for each race and/or ethnicity was calculated for each Georgia county by dividing each racial/ethnic population by the total population of the county. The top 15 rural counties and top 15 urban counties were determined and included by sorting the percentage of each specific racial/ethnic population in descending order.

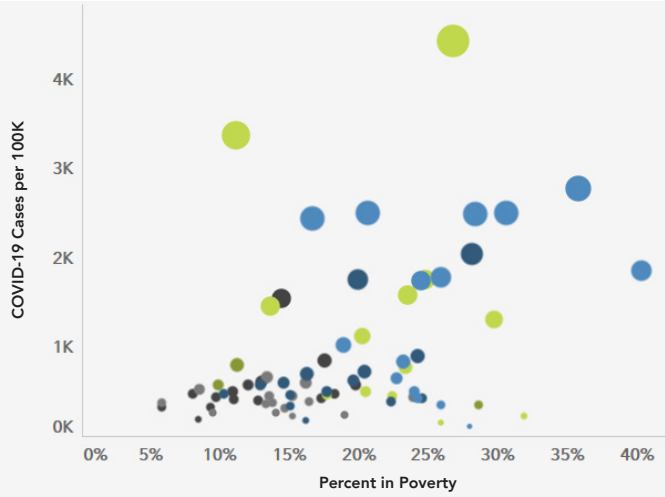
Data sources:
County racial or ethnic composition: American Community Survey, 2018.
Heart disease, COPD, obesity: Georgia Department of Public Health Online Analytical Statistical Information System, 2018.
Cancer: Georgia Department of Community Health, Georgia Cancer Data Report (Table 4: overall cancer deaths), 2016.

Socioeconomic Disparities Tied to COVID-19 Outcomes, Particularly in Black, Hispanic Rural Counties

In Georgia, data shows a correlation between higher rates of COVID-19–related deaths and worse levels for common measures of social determinants of health. Rural counties with the highest proportion of Black residents have lower high school graduation rates, a higher percentage of unemployment, and higher percentages of the population living in poverty. All of these factors are known to contribute to worse health outcomes, both generally and for COVID-19.

How Do COVID-19 Deaths Compare to Socioeconomic Measures (by Race and Residence)?



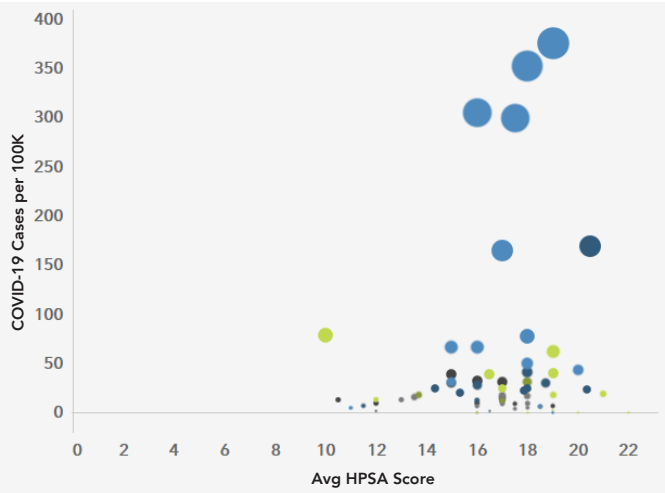


Notes: Poverty is defined as living below the federal poverty level.

Data sources:
High school graduation: County Health Rankings — EDFacts 2016-2017
Unemployment: County Health Rankings — Bureau of Labor Statistics, 2020
Poverty: American Community Survey, 2018

Access to Care Limited Among Black Rural Residents in Georgia

Georgia data confirms known limitations to accessing care among rural residents, and among minority populations in rural communities, specifically. Counties with a high proportion of Black and Hispanic residents in Georgia show greater health professional shortages, which correlates with higher rates of COVID-19–related deaths.



Note: The higher the Health Professional Shortage Area (HPSA) Score, the greater need for clinicians.

Data Source: National Health Service Corps, HPSA Scores, 2016-2020.

Limitations

National data, as well as historic data in Georgia, show that the state's Hispanic population faces great challenges in accessing health care and has worse health outcomes and lower rates of well-being, compared to white populations. The state's Hispanic population is relatively small (8.8% in the 2010 U.S. census versus 17% nationally), and health disparities in the Hispanic population may not be fully captured by county-level data, as there are no majority-Hispanic counties. Thus, this analysis may underestimate health disparities in Georgia's Hispanic populations.

Conclusions

Overall, Georgia data indicates a consistent pattern — rural counties show worse COVID-19 outcomes than urban counties, and Black and Hispanic populations are disproportionately affected by COVID-19. Rural counties with the highest proportion of Black and Hispanic residents have the greatest number of COVID-19–related deaths. These deaths correlate both with pre-existing higher rates of chronic conditions (e.g., heart disease, cancer, COPD, and obesity), as well as lower rates of well-being as measured by socioeconomic drivers of health (high school graduation, employment, and poverty).

Policy Approaches to Address Health Disparities

Below is a summary of some tangible, practical policies and actions funders and policymakers, employers, health providers, and community-based organizations can take to address health disparities.

What Can You Do?

Common Steps

- Review the community health needs assessment at the state level and for regional or local nonprofit hospitals or public health departments to understand priority areas where action is needed (including resources and evidence-based interventions).
- Identify health disparities, if they are not identified in health needs assessments, and examine strategies explicitly mentioned in health implementation plans (e.g., State Health Improvement Plan).
- Study the relationship between health outcomes and access to care (e.g., insurance status, geography, health care workforce, etc.) in the state or region.
- Identify specific measures to assess if policies and evidence-based actions are making a difference (e.g., rates of engagement in healthy behaviors, rates of chronic diseases overall and for target populations).
- Collaborate to support cross-sector efforts to better understand cultural differences among populations and increase opportunities for better health (e.g., access to healthy food, physical activity, health care, etc.).
- Diversify representation in statewide, organizational, and community health equity efforts by including trusted community leaders representative of populations facing worse COVID-19 and health outcomes (e.g., rural Black and Hispanic residents).
- Tailor communication strategies to educate and inform rural Black and Hispanic residents about COVID-19 and ways they can protect themselves, coupled with general education on physical activity, healthy eating, chronic disease management, and stress management, as well as promoting sites for COVID-19 testing and free or low-cost health care.

Funders and Policymakers	Employers	Health Providers	Communities
Healthy Living and Disease Prevention Policies that Target Health Disparities			
• Incent aligning actions across sectors • Build community capacity for systems change • Develop policies and funding that support safe, quality affordable housing, transportation, and amenities for physical activity • Promote smoke-free policies	• Provide work site wellness and other efforts to increase physical activity (e.g., step challenges) • Ensure safe work environments to minimize accidents	• Screen and make referrals for social needs, including food insecurity, housing, and physical activity • Partner with other sectors, including community-based organizations to improve referrals for social needs • Develop organizational capacity and partnerships to implement evidence-based strategies	• Partner to increase access to fruits and vegetables in underserved communities; to create enhanced opportunities for physical activity; and to improve safety, walkability, and social engagement
Screening and Early Detection Policies that Target Health Disparities			
• Offer free or low-cost health screenings in the community	• Offer free or low-cost health screenings	• Offer free or low-cost health screenings	• Offer free or low-cost health screenings

What Can You Do?			
Funders and Policymakers	**Employers**	**Health Providers**	**Communities**
Access to Care and Treatment Policies that Target Health Disparities			
• Consider policies that address coverage gaps through policies that improve affordability of policies or expanding options for low-income and other vulnerable populations. • Consider policies that address out-of-pocket spending and surprise medical bills • Consider policies that increase resources for community health centers serving un- or underinsured individuals. • Consider policies (e.g., loan repayment) that address health care worker shortages in underserved areas and that aid in diversifying the health care workforce • Consider policies that address poverty and provide safety net options	• Provide insurance benefits • Provide paid sick time off • Observe prevention awareness days • Host a health fair for employees	• Make a plan to provide care even if there is a local outbreak, including through telehealth • Recognize and address cultural differences • Consider variance in health literacy and develop materials and processes to simplify instructions and materials • Partner to establish community health worker programs • Health providers can review their protocols for unfunded care to make them less restrictive and provide financial programs to support uninsured	• Establish programs and training for community health workers, including for youth, to connect individuals to needed care • Build clinical-community linkages • Work with local health systems to increase access to care

Approaches to Addressing Rural Health Disparities

Rural communities have unique assets and challenges related to health and health care access. Increasingly, community-based organizations, as well as state and federal agencies, are paying attention to opportunities for rural health improvement. Some specific approaches to addressing rural health disparities include the following.

Improved surveillance

Tracking health and opportunities to increase community-level interventions requires data. For accurate estimations, it is necessary to increase the number of rural responses, and particularly from rural racial and ethnic minority respondents, to national health surveys. Further, state and local health departments and health systems can monitor and actively aim to address potential disparities among rural and racial and ethnic minority populations.[18]

Investing in contextually sensitive research

More support is needed for research on the rural context and how it contributes to the health disparities in outcomes with an aim to generate contextually aware, solution-oriented policies and programs that are based in root-cause analysis. Research examining the impact of social determinants on health and mortality frequently focuses on urban minority communities, and an expanded contextual perspective to understanding the effects of rural residence, particularly for minority populations The rapid implementation of telehealth programs in response to the COVID-19 pandemic holds tremendous potential for addressing rural health disparities. Rural providers demonstrated great innovation and resiliency in overcoming infrastructure challenges to accessing telehealth services.[18] Formal evaluation of clinical care outcomes, as well as of provider and patient experiences during early telehealth implementation, are essential to improving the utility of these programs going forward and to ensuring development of an evidence base to support their sustainability post-pandemic.

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