

Rural Communities at Risk

Widening Health Disparities
Present New Challenges in
Aftermath of Pandemic



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Our research into health disparities and socioeconomic factors, first published in 2017, revealed sizable differences between rural and urban communities.

According to our analysis, rural communities at the time were older, less healthy, less affluent, and faced limited access to care. This reality created significant challenges for rural hospitals, which have been forced to contend with numerous factors (e.g., population migration, physician and staff recruitment, retention, and retirement) and the unintended consequences of policies (e.g., sequestration and bad debt reimbursement) that create downward pressure on rural hospital revenues.

Since this analysis was conducted, the rural healthcare crisis has escalated. Hospital closures have totaled 138 over the course of the last 11 years,¹ and our research has identified 453 facilities vulnerable to closure. At the same time, services such as obstetrics and chemotherapy are disappearing from rural hospitals at an alarming rate, further restricting access to care for rural Americans. And even though the immediacy of the pandemic is receding, the combination of existing health disparities and vaccine hesitancy and resistance all but assures that rural communities will remain highly susceptible to COVID-19 for the foreseeable future.

In this paper, we discuss vulnerable rural communities in terms of their health status and various health disparities, as well as socioeconomic disparities, and overlay that with research discussing the vulnerability of the rural health safety net as it relates to rural hospital viability. When we overlay a new examination of health disparities among rural communities with our longitudinal research on the stability of the rural health safety net (which includes rural hospitals vulnerable to closure), there is a remarkable overlap. Communities with the most pronounced health disparities are also likely located in a geography where the local rural hospital is in danger of closing.

Rural communities are vulnerable, and our analysis suggests that the socioeconomic disadvantages and health disparities dividing rural and urban communities may be widening. Particularly alarming are gaps we have identified in disparity measures between rural communities and those communities in which a rural hospital is vulnerable to closure. Within communities that are home to a rural facility vulnerable to closure, we found:

- Lower rates of insurance coverage
- Less access to primary care and mental health services
- Higher rates of premature death

Our findings suggest that it is within these communities where the rural health safety net is its weakest and residents are at greatest risk. For rural health advocates and policymakers, this analysis offers a stark reminder of the pre-pandemic realities of rural healthcare. The COVID pandemic has not wiped away any of the factors applying downward pressure on rural hospitals. In fact, the prolonged presence of the virus within rural communities will exacerbate many of the factors that fueled the closure and rural hospital vulnerability crises over the course of the last 11 years. While several factors converging are destabilizing the rural health safety net, none may be more meaningful than the fact that rural hospitals serve populations that are socioeconomically disadvantaged and suffer from numerous health disparities.

138

Rural hospital closures over the course of the last 11 years

453

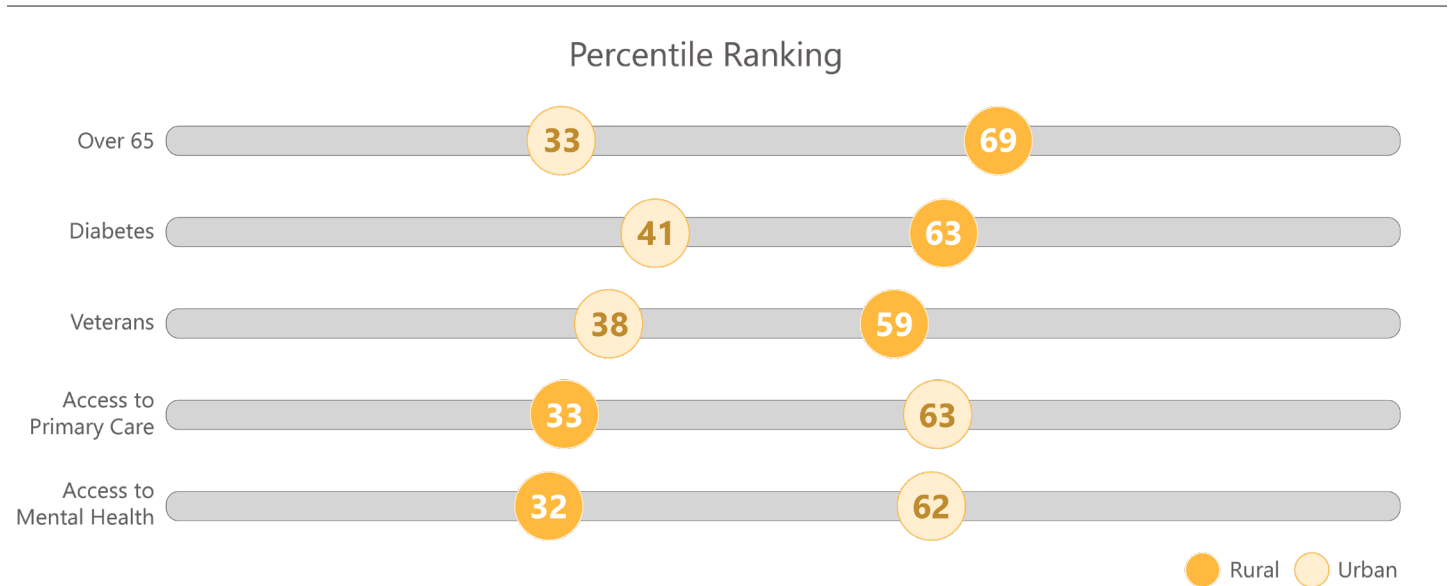
Facilities vulnerable to closure

DISPARITY GAPS EMERGE ACROSS RURAL AMERICA

In consideration of the broader new normal for rural hospitals, we have revisited the health and socioeconomic disparities that exist within rural communities. Since 2010, 138 rural hospitals have closed, and another 453 are vulnerable to closure. Even in places where hospitals remain open, services are disappearing rapidly. Our [“Crises Collide”](#) study published earlier this year revealed that more than 160 rural communities have lost access to obstetrics and that 252 rural hospitals that offered chemotherapy in 2014 no longer offered the service by 2018.²

When compared to their urban counterparts, our research shows that communities served by rural hospitals continue to be older, less affluent, less healthy, and therefore vulnerable. Our analysis shows that the gaps between rural and urban hospital service areas in metrics such as Over 65, Diabetes, Access to Primary Care, and Access to Mental Health Services has remained statistically consistent, though the national medians in some cases have worsened a couple of percentage points (Figure 1).

Figure 1: Disparity between rural and urban communities (2021)



An analysis of health disparities measures reveals that when compared to their urban counterparts, rural communities continue to be older, be less healthy, and struggle with access to care.

Last year, The Chartis Center for Rural Health [published a study](#) exploring rural hospital vulnerability and identified more than 450 rural facilities vulnerable to closure. As part of this updated disparities analysis, we have isolated communities in which vulnerable rural hospitals reside to better understand the challenges and factors driving care within these communities. For this research, we’ve labeled these “vulnerable hospital communities.” Our analysis reveals that across several metrics, there are statistically significant gaps between these vulnerable hospital communities and their rural counterparts. That translates into populations that are in turn more vulnerable and at even greater risk.

In urban communities, for example, access to primary care is at the 63rd percentile while the rural median is at the 33rd percentile. This means that individuals in rural communities have much less access to primary care than their urban counterparts. That is, the rate of a county’s population to the number of primary care physicians is much higher in urban communities than rural. Within vulnerable hospital communities, however, that median is just the 23rd percentile, which tells us that the rate of the county population to physicians is larger. Thus there are fewer physicians to provide care.

We found similar disparity as it relates to access to mental health services. For urban communities, access is at the 62nd percentile, while the rural median is just more than half of that figure (32nd percentile). Within those communities in which a vulnerable rural hospital is located, though, access plummets to the 17th percentile. There are far fewer mental health professionals providing care in these counties than we see in a typical rural or urban community.

The most significant differences, however, exist for measures related to uninsured and premature death. In urban communities, the percentage of adults and children uninsured is at the 48th percentile and 40th percentile, respectively. In rural communities, these median rankings rise to the 53rd and 60th percentile. But in vulnerable hospital communities, we found a lower percentage of adults and children with health insurance. For uninsured adults, the metric rose to the 73rd percentile, and for children to the 69th percentile.

We found a similar level of disparity regarding premature death. In urban communities, the percent of adults that die prematurely is ranked at the 40th percentile, whereas in rural communities the median percentile increases to 61. In vulnerable hospital communities, however, the percentage of adults that die prematurely is ranked at the 77th percentile at the median (Table 1).

Table 1: Disparities between rural and vulnerable hospital communities

DISPARITY MEASURE	URBAN	RURAL	VULNERABLE HOSPITAL COMMUNITY	CHANGE (+/-) RURAL VS. VULNERABLE RURAL
Primary Care Access	63	33	23	-10
Mental Health Access	62	32	17	-15
Uninsured Adult	48	53	73	20
Uninsured Child	40	60	69	9
Premature Death	40	61	77	16

Significant gaps in health and socioeconomic disparities exist between rural and urban communities. The gaps increase substantially when rural communities with rural hospitals vulnerable to closure are compared to urban communities.

VACCINATION HESITANCY AND RESISTANCE

In a [national survey](#) conducted by Chartis in partnership with the National Rural Health Association, nearly half of respondents said that between 21 percent and 50 percent of healthcare personnel had declined a COVID vaccine. Nearly 50 percent said that they believe the decision to decline a vaccine is “a matter of personal choice.” These results mirror attitudes toward COVID vaccination seen within rural communities. According to the Kaiser Family Foundation, 21 percent of rural residents will “definitely not” get the vaccine.³

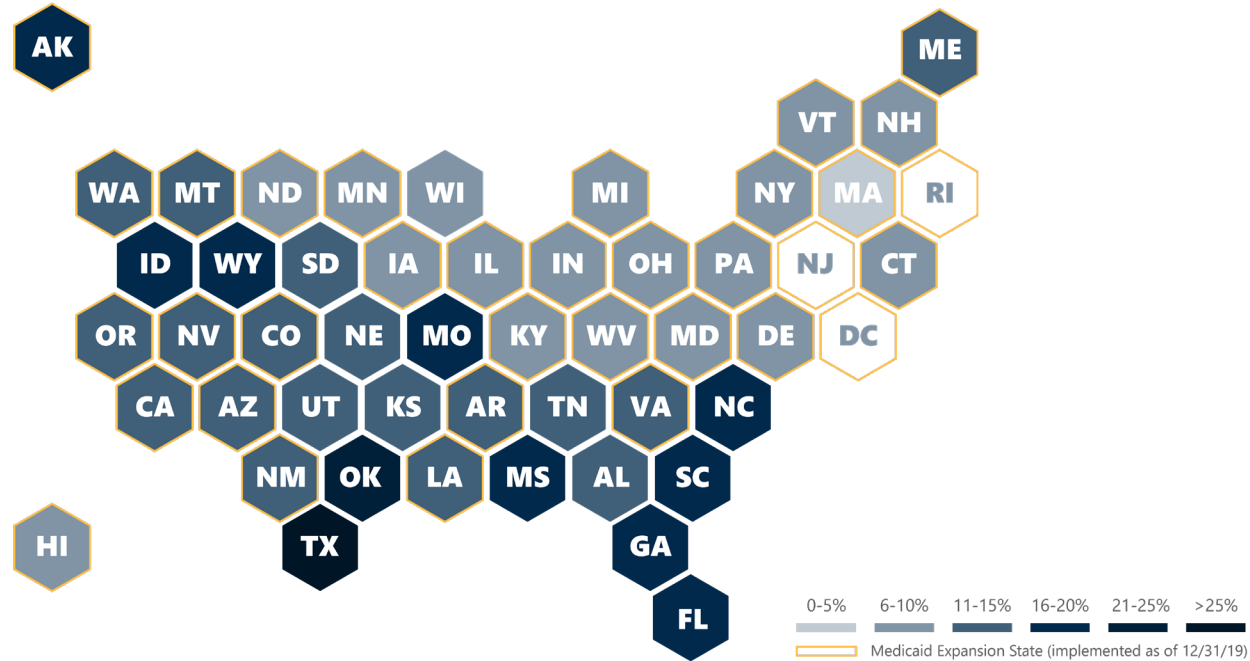
Within rural communities, instances of chronic conditions such as diabetes and obesity are much more prevalent than in urban settings. When we consider population health disparities as measures for assessing vulnerable and underserved rural communities, the survey results make a compelling argument for integrating COVID vaccination rates into future analysis. Our research informs us that the health of many residents of rural communities is already at risk given the prevalence of chronic conditions such as diabetes and obesity. If unvaccinated, these individuals will be very susceptible to COVID infection, with more severe illness, hospitalizations, and death — thus amplifying their general vulnerability. Our previous research on the impact of COVID on rural hospitals found that 63 percent of rural hospitals lack intensive care unit beds.

PERCENTAGE OF UNINSURED ADULTS CONTINUES TO DISRUPT STABILITY OF SAFETY NET

According to our research, Medicaid expansion status is a statistically significant measure for determining rural hospitals vulnerable to closure. Since the implementation of the Affordable Care Act, it is estimated that more than 20 million Americans have gained health insurance.⁴ However, nearly 30 million nonelderly individuals are uninsured.⁵ Although charity care for the uninsured is partially aided by Medicare disproportionate share provisions, hospitals are largely unable to recuperate these costs, and Congress is committed to reducing disproportionate share hospital (DSH) payments, which will negatively impact rural hospitals in non-Medicaid expansion states.

Our analysis reveals that the percentage of adults under the age of 65 lacking health insurance is greatest in states such as Florida, Georgia, Mississippi, North Carolina, Oklahoma, South Carolina, and Texas. Of this group, only Oklahoma adopted (but has not yet implemented) Medicaid expansion in June 2020 via a voter-approved ballot initiative (Figure 2).

Figure 2: Percentage of adult rural residents uninsured



Many of the states with a higher percentage of uninsured adults younger than 65 have yet to implement Medicaid expansion under the Affordable Care Act.

In Texas, the state with the most rural hospital closures and the most vulnerable hospitals, the percentage of uninsured adults is greater than 25 percent. For rural hospitals in Texas (as well as those in the other six states), this means that rural hospitals must continue to operate with the specter of losing significant revenue to charity care.

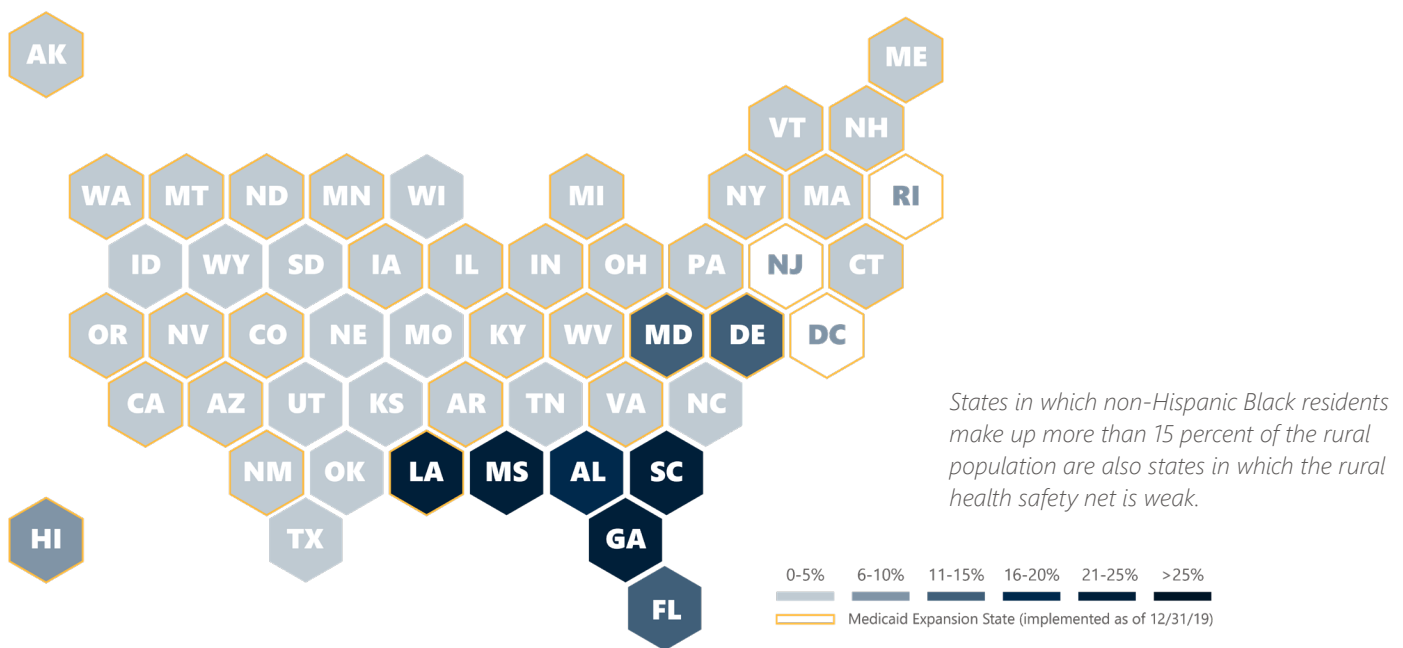
The fact that Medicare beneficiary debts are also only partially subsidized through bad debt reimbursement compounds the financial burden. Today, Medicare only reimburses providers for 65 percent of unpaid out-of-pocket costs. Our analysis shows that every 10 percent cut to Medicare reimbursement for bad debt results in a national rural loss of approximately \$67 million, which equates to a potential loss of roughly 1,000 healthcare worker jobs and roughly 1,400 total community jobs.

RACIAL HEALTH INEQUALITY WITHIN RURAL COMMUNITIES

Over the course of the last year, racial health disparities have become a more prominent fixture of the national healthcare conversation in the wake of the social justice movement and the COVID pandemic. According to Kaiser Family Foundation data, for example, 35 percent of Black adults living in rural areas and 43 percent of Hispanic adults either express hesitancy at getting a COVID vaccine (e.g., “wait and see”/“only if required”) or are a firm “no” (e.g., “definitely not”).⁶ While a majority of rural communities are less diverse than the national medians, our analysis did reveal variation at the state level that merited a closer examination.

According to our analysis, there are five states in which the percentage of Black Americans living in rural communities exceeds 15 percent. These states are Alabama, Georgia, Louisiana, Mississippi, and South Carolina (Figure 3). Only one of these states (Louisiana) has expanded Medicaid under the Affordable Care Act, an indicator the multi-level regression model developed for our rural hospital vulnerability study identified as statistically significant in predicting rural hospital closure. Within these five states, rural hospitals are struggling. The percentage of rural hospitals in these states with a negative operating margin range from 43 percent (Georgia) to 78 percent (Alabama). Together, these states are home to nearly 80 facilities that we have identified as vulnerable to closure.

Figure 3: Percentage of rural residents non-Hispanic Black



While not all disparity measures provide us with the ability to analyze variance across race, those that do (e.g., premature death) underscore the sharp divide between Black Americans living in rural communities and those who live in urban communities. Research recently published in *The Journal of the American Medical Association* indicates an increase in early mortality in rural communities over the course of the last two decades.⁷ We wanted to better understand the divide between urban and rural with a particular focus on communities where rural hospitals are vulnerable to closure and in rural communities of color.

In Georgia, for example, premature death for Black American adults receiving care in rural hospital service areas is at the 75th percentile, compared to the 46th percentile for those hospital service areas in urban communities. This means that Black Americans living in rural communities in Georgia are nearly twice as likely to die prematurely as Black Americans living in one of the state’s urban communities. In Mississippi, the premature death median ranking for Black Americans in rural communities is 87, while the same measure for those in urban communities is 68 (Table 2).

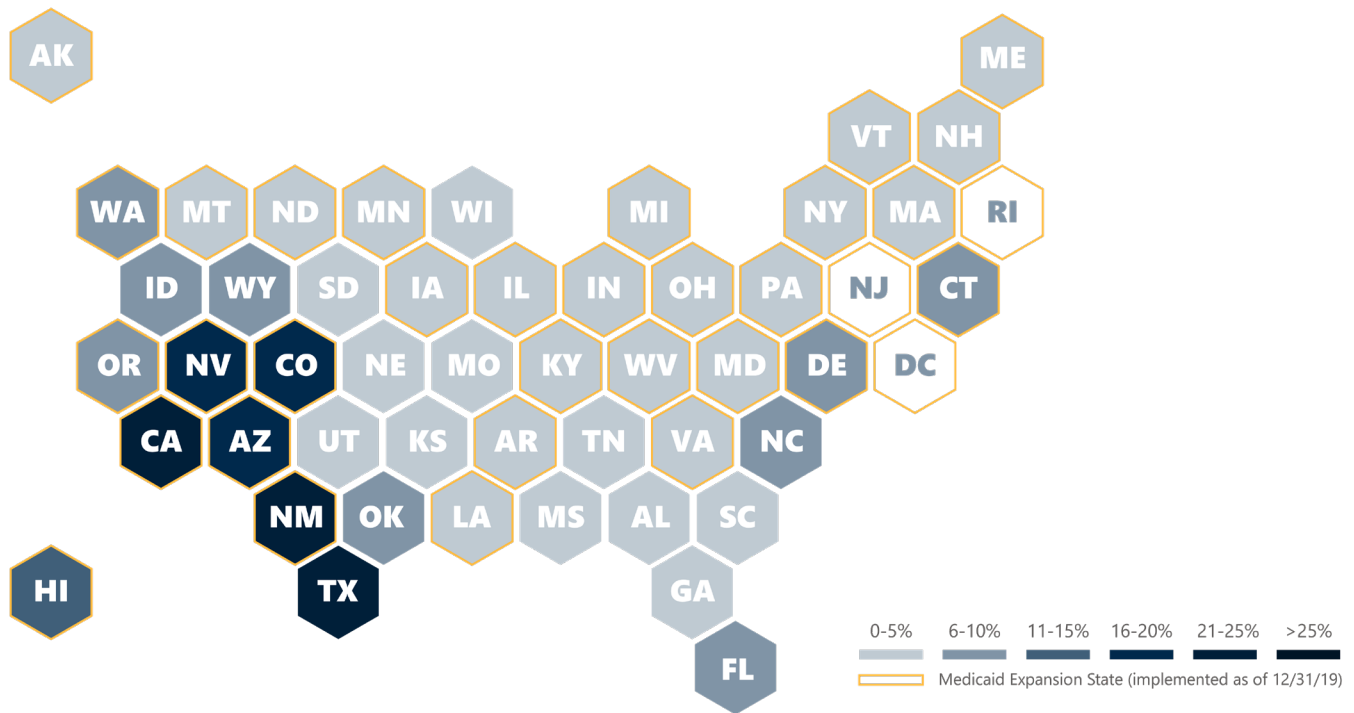
We also identified variation among Black Americans living in rural communities versus urban communities regarding child poverty. Poverty, particularly in children, can have an adverse effect on general health, development and well-being. In each of these five states, the rural median for Black Americans is higher than that of Black Americans living in urban communities. The only statistically significant difference is in Georgia, where the rural median for Black Americans is the 80th percentile versus the 54th percentile for Black Americans living in urban communities.

Table 2: Rural and urban premature death percentile rankings for Black Americans

STATE	PREMATURE DEATH (BLACK AMERICANS) URBAN	PREMATURE DEATH (BLACK AMERICANS) RURAL	CHILD POVERTY (BLACK AMERICANS) URBAN	CHILD POVERTY (BLACK AMERICANS) RURAL
	PERCENTILE RANKING	PERCENTILE RANKING	PERCENTILE RANKING	PERCENTILE RANKING
Alabama	70	86	72	79
Georgia	46	76	54	80
Louisiana	78	86	80	88
Mississippi	68	87	76	88
South Carolina	65	79	63	75

Similarly, there are six states in which the percentage of Hispanics living in rural communities exceeds 15 percent: Arizona, California, Colorado, New Mexico, Nevada, and Texas. Across these states, the rural health safety net is also weakening. In this group, the percentage of rural hospitals operating with a negative operating margin in the red ranges from 23 percent (New Mexico) to 48 percent (Colorado). Most notable is the state of Texas, in which the percentage of Hispanics living in rural communities is greater than 20 percent. There is perhaps no other state in which the rural health safety net is more in jeopardy than Texas. The state leads the nation in rural hospital closures since 2010 (21) and in the number of rural hospitals vulnerable to closure (77).

Figure 4: Percentage of population served by rural hospitals that is Hispanic



In Texas, Hispanic residents make up more than 20 percent of the rural population. No other state has lost as many rural hospitals to closure as Texas or has as many facilities vulnerable to closure.

Using the same disparity measures as above, our analysis reveals a similar divide between Hispanics living in rural communities and those who live in urban communities. In Texas, for example, the premature death rate for Hispanics in rural communities is at the 85th percentile, while in urban communities, the rate is closer to the national median at the 56th percentile. In Nevada, the premature death median for Hispanics in rural communities is at the 62nd percentile nationally, while the same measure for those in urban communities is at the 48th percentile. Despite being nearly equal, the rural and urban premature death percentile rankings for Hispanics in New Mexico are worth noting, given that they have among the highest rates in the nation (Table 3).



No other state has lost as many rural hospitals to closure as Texas or has as many facilities vulnerable to closure.

Table 3: Rural and urban premature death percentile rankings for Hispanics

STATE	PREMATURE DEATH (HISPANICS) URBAN	PREMATURE DEATH (HISPANICS) RURAL	CHILD POVERTY (HISPANICS) URBAN	CHILD POVERTY (HISPANICS) RURAL
	PERCENTILE RANKING	PERCENTILE RANKING	PERCENTILE RANKING	PERCENTILE RANKING
Arizona	79	89	65	70
California	55	71	36	46
Colorado	80	87	23	43
New Mexico	97	99	58	72
Nevada	48	62	45	19
Texas	56	85	44	57

With Child Poverty, we found that in five of the six states, the rural medians for Hispanics are higher than those of Hispanics residing in urban communities. While not statistically significant, the largest variation is in Colorado, where the rural median for Hispanics is at the 43rd percentile versus the 23rd percentile for urban. Although the rural percentile rankings are lower than those we found for Black Americans living in rural communities, the data suggests that Hispanic children in rural communities are living in poverty at higher rates than their urban counterparts, and therefore susceptible to its adverse effects (Table 3).

Within rural communities nationwide, people of color are particularly vulnerable and underserved, but this data suggests that the risk is greater in the states identified above. In states where the population of Black Americans and Hispanics living in rural communities exceeds 15 percent, our analysis found higher rates of premature death when compared to Black Americans and Hispanics living in urban communities. The analysis also suggests that in the future, barriers to care could grow even higher, given the prevalence of rural hospitals in these states vulnerable to closure. The communities with the greatest health disparities, most significant socioeconomic challenges, and least access to care may in fact lose the critical access points that serve as a safety net that they depend on. As we look at health disparities within rural communities and examine the gaps that exist between rural and urban, we must further expand that lens moving forward to better understand how racial health inequality impacts people of color living in rural communities.

STABILIZING THE RURAL HEALTH SAFETY NET

The COVID crisis is set to linger within rural America, given lower-than-desired vaccination rates and the prevalence of chronic conditions such as obesity and diabetes. We cannot ignore that many of the other factors that pushed rural hospitals to closure, or the brink of closure, have not been resolved. As we move beyond the immediacy of the pandemic, rural health advocates and policymakers in Washington may need to reimagine strategies for addressing the rural hospital crisis and the widespread vulnerability of the communities they serve. Central to those ideas and plans will be an understanding of the dynamics on the ground within a rural community, across a state or region, and ultimately across the nation. While our analysis confirms the gaps in health disparity and socioeconomic measures between urban and rural communities as well as elevated gaps in rural communities of color, we have gained new insight into the disparities that exist between rural communities and those home to a hospital vulnerable to closure. It is in these communities in which the challenges may be most difficult and the need to stabilize the rural health safety net may be most urgent.

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SOURCES

The primary data sources for this analysis were the Robert Wood Johnson Foundation (2020) and CMS' Hospital Service Area File (2019).

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