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Medical Debt in Collections among Counties by Rural-Urban Location and Racial-Ethnic Composition

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Key Findings

- Rural counties have a higher proportion of people with medical debt in collections than urban counties (15.7% vs 14.8%, $p<0.001$), and this difference is associated with lower average household incomes in rural counties in general.
- The county-level median amount of medical debt in collections held by rural residents is $62 higher compared to their urban counterparts, even after accounting for income differences ($p<0.001$).
- The proportion of people with and amount of medical debt in collections are both higher in rural and urban communities of color than in rural and urban communities overall.

Purpose

Medical debt, or medical costs owed for health care services, is a pressing issue across the U.S., with implications for health and well-being for those facing debt burden. While recognition of medical debt as a social problem is growing, details about who is most at risk of holding this debt remain less clear. We address this gap by examining the differences in the proportion of people with medical debt in collections and median amount of medical debt by rural-urban location. We also focus on additional differences within rural and urban communities of color.

Background and Policy Context

The high cost of health care and associated medical debt in the U.S. persist as pressing social issues with an estimated over 100 million people having some medical debt.[1,2] The consequences of medical debt are wide-reaching. Beyond the financial and household budget strain, individuals also report being denied, delaying, or not seeking health care because of cost and debt with repercussions for health, mental health, and well-being.[1,3]

Because rural residents face health and income disparities, further investigation into medical debt by location is needed. For example, rural health inequities are linked to structural constraints such as a lack of job availability, increased poverty rates, barriers to health care access and availability, lower per-capita local public spending on health and social services, and a higher proportion of aging population health needs.[4–6] In addition, health inequities across location and racial-ethnic community composition exist as well, with rural Black and American Indian populations having the highest rates of premature death across the U.S.[7] as well as worse rates of self-rated health compared to non-Hispanic white rural residents.[8]

These health inequities, along with longstanding racial and ethnic wealth and income gaps linked to systemic and institutional racism,[9,10] complicate the issue of medical debt. As medical debt is increasingly prevalent and has im-

plications for population health and well-being, there is a need to better understand who is most at risk of accumulating this debt. In this policy brief, we examine how medical debt varies by rural-urban location as well as among communities of color[11] in order to better understand and work toward policy designed to alleviate this health equity issue.

Approach

We draw upon the Debt in America dataset produced by the Urban Institute.[12] The Urban Institute compiles these data at the county level from several sources: 1) a 4% nationally representative panel of de-identified, consumer-level records from February 2022 from a major credit bureau of 10 million consumers; and 2) summary statistics from the American Community Survey (ACS) 2021 1-year estimates, ACS 5-year estimates (2017-2021), and 2020 Census as necessary to provide sociodemographic and geographic information.[13]

We use two measures of medical debt for county/county-equivalents with available data. The first is the county-level proportion of people with a credit bureau record who have medical debt in collections (n=3,059 counties), and the second is the county-level median dollar amount of medical debt in collections among those with any medical debt in collections (n=2,255 counties). The Urban Institute does not provide data based on fewer than 50 sampled individuals within a county. Thus, fewer counties have available data for the median medical debt since at least 50 sampled people in a county must have had medical debt in order to compute a county-level median.[12]

We define urban and rural counties as those classified as metropolitan counties and non-metropolitan counties respectively using the 2020 definitions of metropolitan statistical areas used by the Census Bureau.[14]

According to the Urban Institute, although the credit bureau data they acquired does not include individuals' racial or ethnic identity, the Urban Institute instead provide a measure of racial and ethnic composition of ZIP codes within a county from the ACS/Census within the Data in America dataset. Thus, for subpopulation analyses, Urban Institute provides data on communities of color as records of those who live in ZIP codes where at least 60% of the population is Black, Hispanic, Asian or Pacific Islander, American Indian or Alaska Native, another race other than white, or multiracial within each county. This resulted in 424 eligible counties with at least one ZIP code defined as a community of color. Metrics were not reported if based on fewer than 50 people in a county.[13] Household income was the average county-level household income from the ACS/Census in 2021 dollars.

We used t-tests and ordinary least squares regression models to determine statistically significant differences between rural and urban counties overall, as well as differences between rural and urban communities of color. For our maps, we use boundary data from IPUMS NHGIS.[15]

Results

Figure 1 shows the county-level proportion of people with medical debt in collections by rural-urban location. Across rural counties, an average of 15.7% residents have medical debt in collections compared to 14.8% across urban counties ($p<0.01$). Per our analysis, this difference is related to differences in average county-level household income among rural and urban households. Average household income across rural counties is $69,800.62 and $88,059.68 across urban counties ($p<0.001$). Adjusting for average county-level household income, rural counties have a lower proportion of people with medical debt in collections compared to urban counties (14.3% vs. 17.1%, $p<0.001$).

Figure 1. Average Proportion with Medical Debt in Collections in Rural-Urban Counties

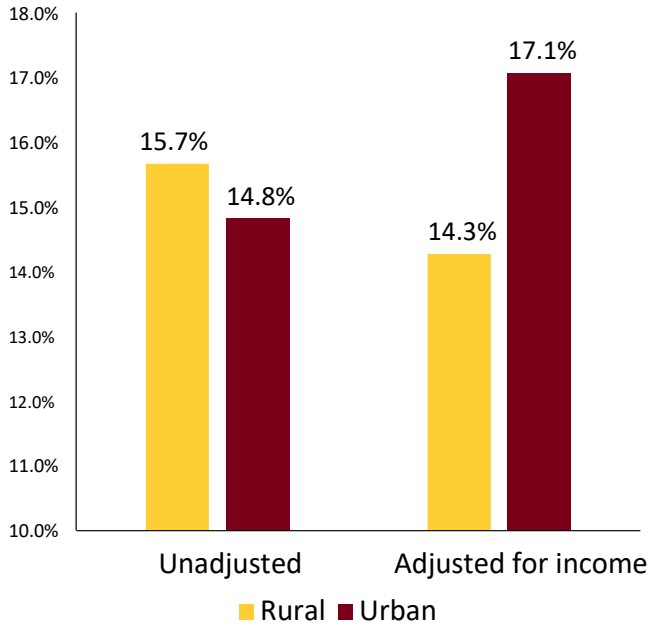
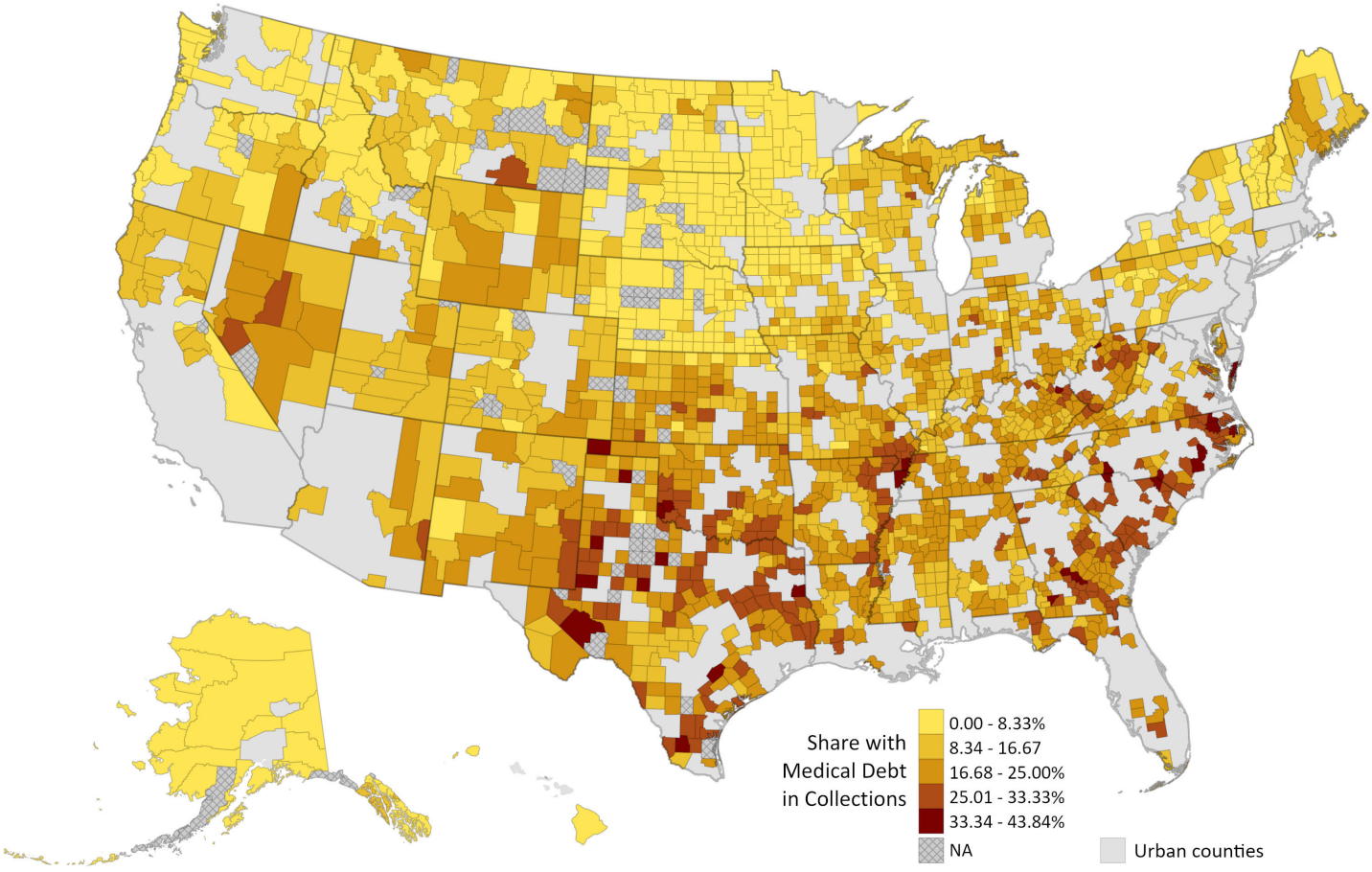


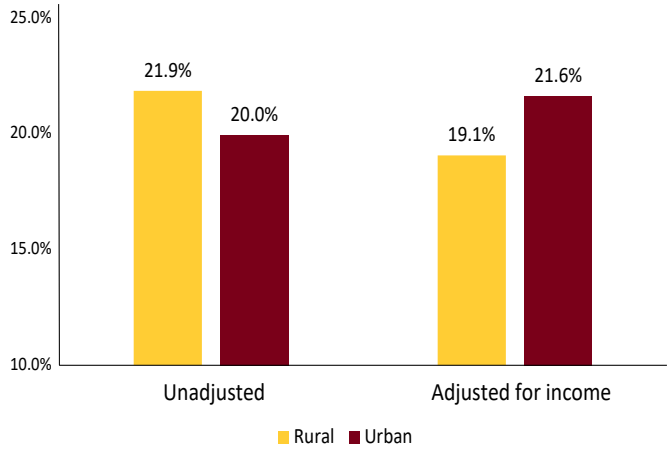
Figure 2 maps the proportion of residents with medical debt in collections in rural counties across the U.S. The map displays five quintiles ranging in equal intervals from 8.3% (1/12th) or less to over 33.3% (1/3rd). The highest county-level rates span across the South, including parts of West Virginia, Virginia, North Carolina, South Carolina, Georgia, Arkansas, Missouri, Oklahoma, and Texas. Two rural counties in North Carolina had the highest proportions of residents holding medical debt in collections, with proportions near 44%. A county in Texas and a county in Oklahoma had the next two highest proportions among rural counties, both with over 42%. The lowest rates of medical debt among rural counties are concentrated in the Upper Midwest (especially Minnesota, North Dakota, South Dakota, Nebraska, and northern Iowa), New England (Vermont and New Hampshire), and parts of the West (Alaska, Hawaii, Washington, and parts of Oregon and Idaho). Finally, some data was unavailable, which limits our understanding of medical debt in the least populated counties in the U.S.

Figure 2. Average County-Level Proportion with Medical Debt in Collections in Rural Counties



In Figure 3 we show the average county-level proportion of people with medical debt in collections among communities of color by rural-urban location. In communities of color, those located in rural counties held a larger proportion of medical debt than their urban counterparts (21.9% vs 20.0% respectively, p<0.05). But after adjusting for average household income, rural communities of color have 19.1% of people with medical debt compared to 21.6% in urban communities of color (p<0.01).

Figure 3. Average Proportion with Medical Debt in Collections in Communities of Color in Rural-Urban Counties



We also examined the median county-level dollar amount of medical debt in collections from counties with available data. Figure 4 shows that the median county-level medical debt amount in rural counties is $96 higher compared to urban counties ($804 vs. $708, p<0.01). Adjusting for average county-level household income, a rural disparity of $62 higher median medical debt in collections remains ($788 vs. $726, p<0.001).

Figure 4. Median Amount of Medical Debt in Rural-Urban Counties

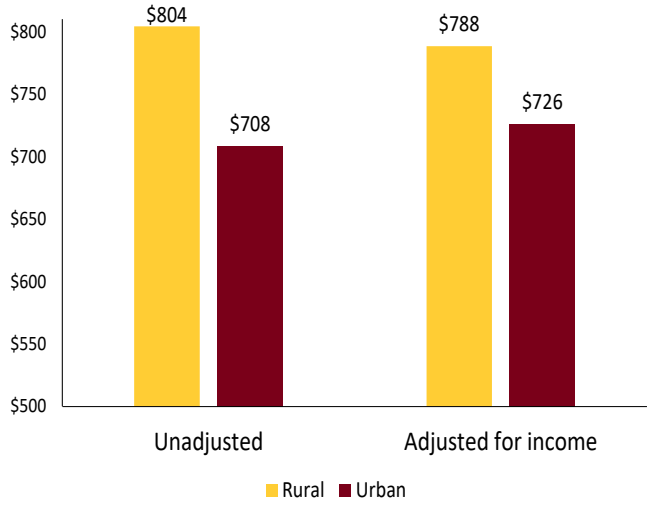


Figure 5 is a county-level map showing the median county-level dollar amount of medical debt in collections across the U.S. The map displays five quintile groupings, ranging from $233-$600 to $1,500-$3,067 median medical debt in a county. Counties with higher median medical debt are concentrated in the central Mountain West (particularly Wyoming and Utah) and in northern Wisconsin, with more instances scattered through the southern and central Plains (from Texas and New Mexico to Indiana), southern Appalachia, the Deep South, and Maine. The four counties with the highest median medical debt are in rural Wyoming counties.

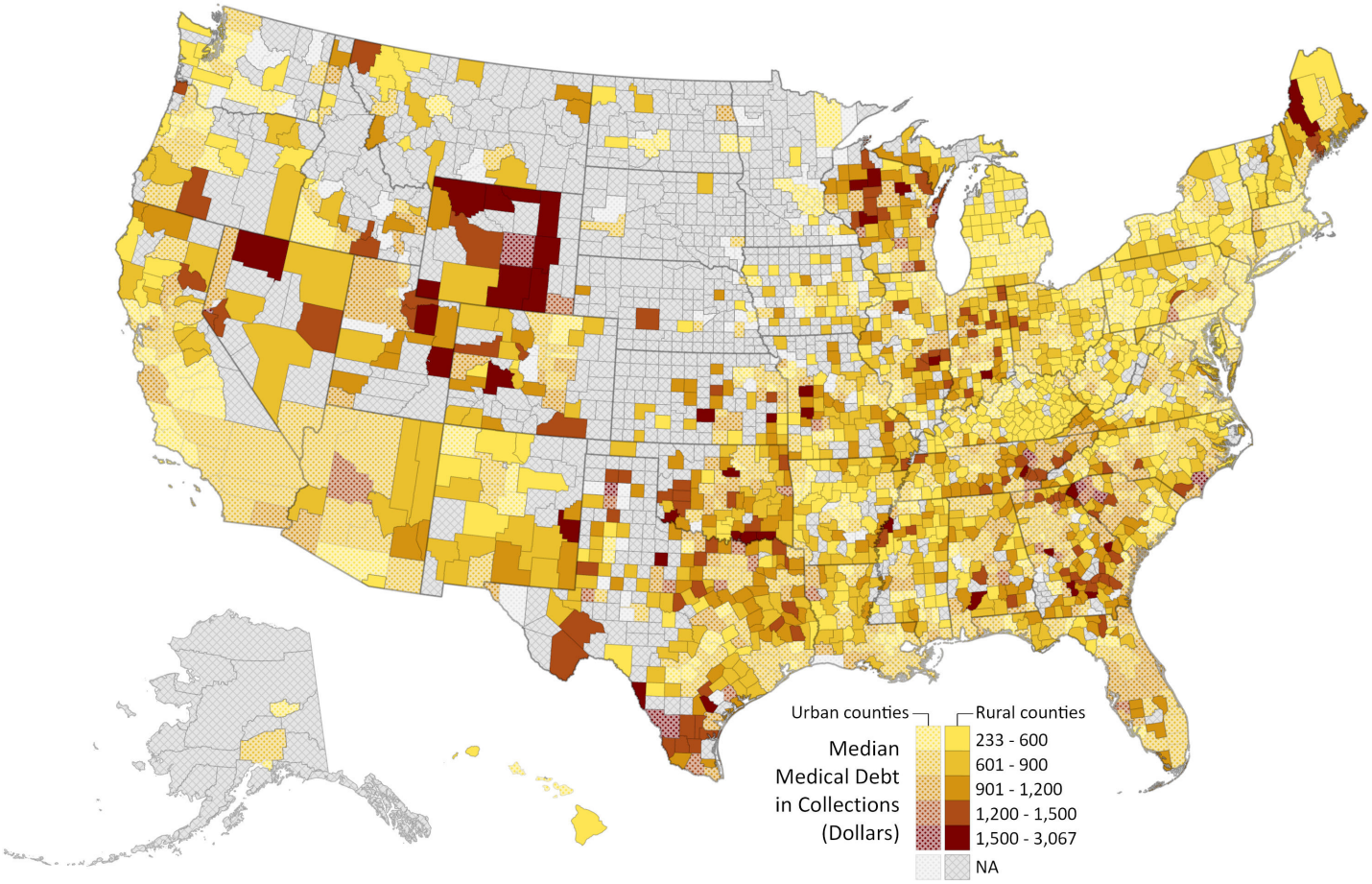
Examining rural-urban differences among communities of color, we find increased county-level median medical debt amounts with $836 in rural and $734 in urban communities (p<0.001), as seen in Figure 6. Controlling for county-level income, we still find that rural communities of color have higher county-level median medical debt by $14 compared to their urban counterparts, but this difference was no longer statistically significant (p=0.68).

Figure 7 is a county-level map of the median amount of medical debt among communities of color. The counties with higher medians are spread throughout the urban and rural South. Of the seven counties in the highest mapped group (having a median debt greater than $1,500), only three are rural, but one of these three has the highest median medical debt ($2,020) among communities of color. Six of the ten highest medical debt counties are located in Texas with five in the South Texas state region in addition to one in the panhandle.

Discussion and Implications

We find that county-level rates of medical debt in collections are higher in rural counties compared to urban counties when looking at the U.S. as a whole and when looking at communities of color. However, rural counties have lower proportions of people with medical debt in collections once the lower average county-level household income in rural counties is taken into account. In other words, the economic circumstances and social factors contributing to lower average household incomes among rural counties are

Figure 5. Median County-Level Amount of Medical Debt in Collections



driving differences in the proportion of residents experiencing medical debt in those counties.

We find that rural counties have higher median amounts of medical debt in collections than urban counties even after accounting for lower incomes in rural areas. In addition, we find both rural and urban communities of color have higher amounts of median medical debt compared to their overall rural and urban counterparts.

Overall, policies focusing on relieving income and economic inequality in all locations would help alleviate problems with medical debt. Within rural areas specifically, the higher dollar amount burden is concerning and may be attributed to lower incomes in addition to other factors outside of our analysis. These could include higher health care costs due to lack of access and longer/more costly transportation costs and overall increased rates of health problems and chronic disease.[4,6] For instance, we found that the four counties with the highest median medical debt

Figure 6. Median Amount of Medical Debt in Communities of Color in Rural-Urban Counties

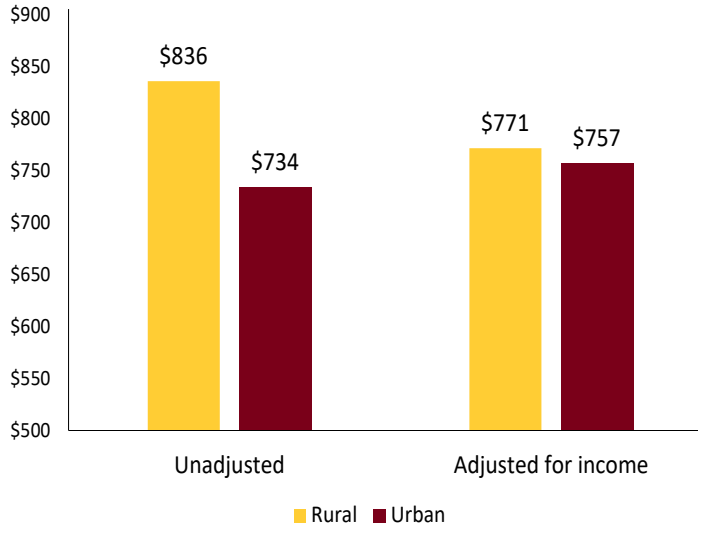
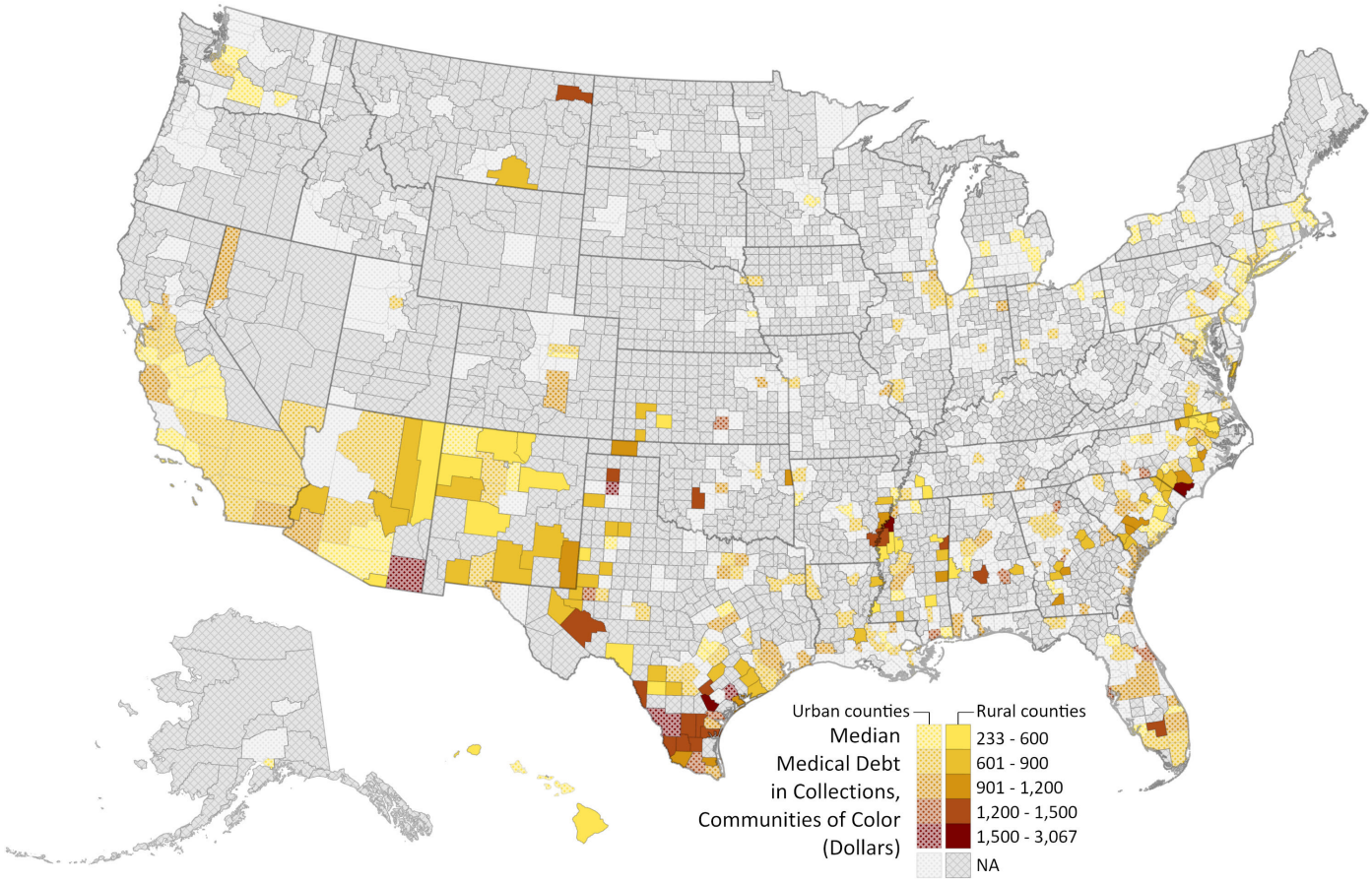


Figure 7. Median County-Level Amount of Medical Debt in Collections among Communities of Color



are rural Wyoming counties. Wyoming in particular has struggled with health care affordability as a state with a small population but large area geographically, leading to higher costs and fewer options for health care.[16] Studies have found that Wyoming employers and employees together pay more for nearly every type of health care service than much of the nation.[17]

Overall, some policies have been enacted to help ease medical debt; for instance some states, counties, and municipalities have initiated medical debt forgiveness using funds from the American Rescue Plan Act.[18,19] Yet these have been primarily enacted in urban areas, leaving disproportionately impacted rural areas without similar relief policies.[20] Policies focusing on addressing the high costs of health care in the U.S.[21] in order to prevent debt accrual in the first place are needed as well.

In addition, further recognition and policy considerations to assist communities of color are warranted given their higher amounts of medical debt. For instance, five of the top ten counties with the highest median medical debt in communities of color are in Texas, and three are comprised of 90% to 95% Hispanic populations.[22–24] Policies must focus on marginalized populations across location to best assist those facing medical debt burden and promote equitable health outcomes. For example, a presidential Executive Order from 2021 on advancing racial equity notes an overall goal of removing barriers in order to provide equal access to governmental benefits and opportunities.[25] Additional actionable policies tailored to local contexts would continue to reduce inequities by location.

Although this brief adds needed information about who is holding medical debt, not all medical-related debt is held in formal collections. Medical debt may also be accumulated in ways not formally classified as medical debt, such as general credit card debt, bank loans, payday loans, or loans from family or friends.[1] For this reason, we encourage continued research on individuals' self-reports of medical-related debt in order to fully capture the breadth and impact of this issue.[26]

Conclusion

Overall, we find that rural counties have a higher proportion of people with medical debt in collections than urban counties, but this difference is attenuated after adjusting for lower average household incomes in rural areas in general. Yet we do find that rural counties have higher median amounts of medical debt in collections even when accounting for differences in average income across rural-urban counties. Communities of color, across both rural and urban counties, have higher median medical debt and higher proportions of people with medical debt in collections compared to overall rural and urban county populations. Knowing who is most likely to experience medical debt as well as the amount of debt held by location is important to improve health equity by targeting policies to assist those most in need in this widespread and growing social problem.

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