POLICY BRIEF
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University of South Carolina
Rural Health Research Center

Identification and Characteristics of Under-Resourced and High-Need Rural Counties

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KEY FINDINGS

- A total of 270 out of 1,932 (14%) rural counties nationwide were identified as "high-need" – defined as having the top-tertile (i.e., top 33.33%) burdens across all three domains: high chronic disease prevalence, low socioeconomic status, and limited physician availability.
- Nearly two-thirds (64%; 1,237 out of 1,932) of rural counties nationwide were classified as high-need in at least one domain.
- High-need counties were predominantly (78%) located in the southern U.S. census region.
- Compared to low-need counties, high-need counties had significantly greater odds of not having access to a Federally Qualified Health Center (FQHC), hospital, or pharmacy nationwide.
    - There was no difference in odds of having access to Rural Health Clinics (RHCs) across county-need classifications

INTRODUCTION

Rural communities throughout the United States face a multitude of challenges and barriers towards achieving the same level of health outcomes as their urban dwelling counterparts. Rural communities have a higher prevalence of multiple chronic diseases[1], a larger proportion of residents with low socioeconomic status[2], and significantly greater mortality rates[3]. They must travel substantially further to access healthcare compared to urban communities.[4] While on average rural communities face greater challenges than urban communities, not all rural communities are equally burdened by the same barriers and challenges that result in poor health outcomes. Rural counties can vary significantly in socioeconomic status even within the same state. For example, in Mississippi, Issaquena County and Lee County are both classified as rural, yet their per capita incomes are vastly different. Issaquena County has a per capita income of $24,489 while Lee County's per capita income is $52,044—more than twice as high. This illustrates the stark economic disparities that can exist between rural areas in close proximity.[5] Similarly, two rural counties in South Carolina, Marlboro County and Abbeville County, have nearly the same population size, yet Marlboro county has a population to primary care physician ratio of 6400 to 1 whereas Abbeville County's ratio is 1800 to 1.[6] These comparisons demonstrate the wide diversity among rural communities which reflect the variability in the resource needs of rural communities. Local, state, and national-level policy makers need to know not only the types of issues affecting rural communities but also which specific areas need targeted funding or policy initiatives.

Addressing these challenges in rural communities requires careful and thoughtful consideration of resource planning and allocation. There is currently a lack of easy-to-use resources or tools that policy makers can use to identify specific rural communities that are under resourced or in high need of specific public health policy intervention. The primary aim of this report is to describe the use of publicly available county-level data on the healthcare workforce, chronic disease prevalence, and the socioeconomic environment of rural communities to create a metric

that will allow for the identification of rural counties based on how under-resourced and disadvantaged they are. Secondly, this report aims to describe the sociodemographic and health related characteristics of identified high-need rural counties. This report will allow policy makers to identify the highest need counties for targeted policy initiatives and public health intervention.

METHODS

Data Sources

Data on county-level chronic disease prevalence estimates came from the 2023 release of the Centers for Disease Control and Prevention's PLACES dataset (**Table 1**).[7] A full description of the PLACES data is published elsewhere.[8] The 2023 released PLACES uses small area estimation methodology with data from the 2021 Behavioral Risk Factor Surveillance System to produce model-based estimates of health outcomes, health status, and health risk behaviors among nationally representative participants age 18 or older. Data on county-level indicators of socioeconomic status came from 2020 5-year estimates of the American Community Survey.[9] Data on the county-level counts of healthcare providers came from the Health Resources and Services Administration's 2021-2022 Area Health Resource Files.[10] Additional data on county-level characteristics (**Table 1**) and healthcare facility access came from the American Community Survey[9], Health Center Service Delivery and Look–Alike Sites[11], and Homeland Infrastructure Foundation-Level Data from the Geospatial Management Office.[12] Healthcare facilities examined included Rural Health Clinics (RHCs), Federally Qualified Health Centers (FQHCs) and look alike sites, community hospitals[13] (i.e., defined as all nonfederal, short-term general, and other special hospitals. Hospitals not accessible to the public are excluded), and pharmacies. From this point forward, the term "hospital" will be used to refer to community hospitals.

Table 1. Data sources used

Data Category	*Data Source*	*Variables*
Chronic Disease	CDC PLACES -2023	Adult Prevalence: Asthma, Cancer, Coronary Heart Disease, Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease, Depression, Type 2 Diabetes, High Cholesterol, and Obesity
Socioeconomic Status & County Demographics	American Community Survey - 2020	Median Household Income; Proportion of residents with only a high school education; Proportion of adults uninsured; Proportion of adults unemployed, Proportion of households with no vehicle, Proportion of households without broadband
Healthcare Workforce	Area Health Resource File 2021-2022	Providers per 100,000 population: Obstetrician gynecologists*, Cardiologists, Primary Care Physicians, Dentists
Healthcare Facilities	Homeland Infrastructure Foundation-Level Data	Pharmacy Locations & Hospital Locations
	Health Center Service Delivery and Look–Alike Sites	Federally Qualified Health Center (FQHC) Locations
	Centers for Medicare & Medicaid Services	Rural Health Clinics (RHC) Locations

*Only the female population included in the calculation

Definition of Rural

County-level rurality was determined based on the 2023 release of Rural-Urban Continuum Codes (RUCC) from the Economic Research Service of the U.S. Department of Agriculture.[14] RUCC values range from 1-9 with a value of 1 representing the most urban counties and a value of 9 representing the most rural counties (**Table 2**). Counties with a RUCC value of 1-3 were classified as urban counties, and those with a RUCC value of 4-9 were classified as rural counties. Only rural counties were included in the final analysis.

Table 2. Rural urban continuum code definitions

RUCC Value	*Description*
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
4	Population of 20,000 or more, adjacent to a metro area
5	Population of 20,000 or more, not adjacent to a metro area
6	Population of 5,000 to 20,000, adjacent to a metro area
7	Population of 5,000 to 20,000, not adjacent to a metro area
8	Population of fewer than 5,000, adjacent to a metro area
9	Population of fewer than 5,000, not adjacent to a metro area

Resource Need Categories

Chronic Disease

As an indicator of county-level chronic disease burden, we created a composite score that allowed us to identify counties estimated to have a high prevalence of multiple chronic diseases. We used the 10 most prevalent and costly chronic diseases in the US[15] including: obesity, hypertension, high cholesterol, coronary heart disease, chronic obstructive pulmonary disease, asthma, chronic kidney disease, diabetes mellitus, cancer (excluding skin cancer), and depression. For each of the chronic diseases included, we ordered all counties by the disease prevalence and created cutoff thresholds based on tertiles. Those counties in the bottom 33.33% of disease prevalence were assigned a score of 0, those in the middle 33.33% were assigned a score of 1, and those in the top 33.33% were assigned a score of 2. We summed the scores for each chronic disease included together to provide a total score ranging from 0 to 20. A score of 0 indicated that the county was in the lowest tertile for all 10 disease prevalence estimates, and those with a score of 20 were in the top tertile for all 10 disease prevalence estimates. We then created 3 chronic disease burden categories to order the chronic disease burden scores from lowest to highest and create three evenly distributed groups: those with the lowest burden, moderate burden, and highest burden of chronic disease prevalence. The state of Florida was excluded from this portion of the analysis due to the state reporting low BRFSS data, resulting in its exclusion from PLACES estimates.

Table 3. Thresholds for Chronic Disease Prevalence Estimates

Variable	Tertile 1 Scored **0** (Lowest Prevalence)	Tertile 2 Scored **1**	Tertile 3 Scored **2** (Highest Prevalence)
Obesity	≤ 36.20%	36.30% - 39.30%	≥ 39.40%
Hypertension	≤ 30.10%	30.20% - 34.20%	≥ 34.30%
High cholesterol	≤ 30.20%	30.30% - 32.60%	≥ 32.70%
Coronary heart disease	≤ 5.40%	5.50% - 6.10%	≥ 6.20%
Chronic obstructive pulmonary disease	≤ 6.30%	6.40%-7.70%	≥ 7.80%
Asthma	≤ 9.90%	10.00% - 10.70%	≥ 10.80%
Chronic kidney disease	≤ 2.70%	2.80% - 3.00%	≥ 3.10%
Diabetes mellitus	≤ 9.30%	9.40% - 11.10%	≥ 11.20%
Cancer	≤ 6.20%	6.30% -6.40%	≥6.50%
Depression	≤ 21.70%	21.80% - 24.30%	≥ 24.40%

Socioeconomic Status

As an indicator of county-level low socioeconomic status (SES), we examined four key variables: county-level estimates of median household income, proportion of residents with only a high school education, proportion of adults unemployed, and proportion of adults with no medical insurance. We determined that these variables encompassed at least three (i.e., economic stability, education access and quality, and healthcare access and quality) of the five social determinants of health domains based on the Healthy People 2030 framework.[16] For each included variable, we examined the distribution of the data and determined tertile threshold cutoff values. Counties were assigned a score of 0-2 whether they fell in the bottom, middle, or top 33.33% of each negative SES variable examined including proportion of residents with only a high school education, proportion of adults unemployed, and proportion of adults with no medical insurance. For the median household income variable, because higher income represents better SES, counties were assigned a score of 0 when they fell in the top 33.33% of the national median household income, a score of 2 when they fell in the bottom 33.33%, and a score of 1 when they fell in the middle 33.33%. To account for regional variations in purchasing power, county-level median income estimates were adjusted using Regional Price Parity (RPP) estimates from the Bureau of Economic Analysis for 2020.[17] County-level median incomes were divided by the RPP for their respective states to calculate adjusted income values. These adjustments ensure a more accurate comparison of income levels across counties with differing costs of living. The values were summed together for each of the four tertile distributions giving a possible range of values between 0-8. A total value of 0 meant that a county was in a strong socioeconomic position with relatively high median household income, low unemployment, low insurance percentage, and low proportion of residents with only a high school diploma while a score of 8 indicated the opposite and was a county with a relatively poor socioeconomic position. We ranked the values from lowest to highest to create three evenly distributed groups: those counties with the worst socioeconomic status, moderate socioeconomic status, and those with the best.

Table 4. Thresholds for Socioeconomic Status Factors

Variable	Tertile 1 Scored 0 (Best SES)	Tertile 2 Scored 1	Tertile 3 Scored 2 (Worst SES)
Household Median Income ($)	≥ $62,830	$52,355 - $62,829	≤ $52,356
Percent with only a high school education	≤ 30.96%	30.97% - 37.34%	≥ 37.36%
Percent Uninsured	≤ 6.61%	6.62% - 10.62%	≥ 10.63%
Percent Unemployed	≤ 4.05%	4.06% - 5.77%	≥ 5.78%

Healthcare workforce

As an indicator of a county's healthcare workforce, we considered four types of healthcare providers: Obstetrician gynecologists (OB-GYNs), cardiologists, primary care physicians, and dentists. We determined that primary care physicians and dentists encompass components of preventive and routine care necessary for maintaining optimal health of the population. Based on the fact that heart disease is the primary cause of death in the United States[18], we additionally determined that including the specialty care of a cardiologist is vital to a strong healthcare workforce. Additionally, there is growing concern of the state of maternal and child health;[19] therefore, it was important to include OB-GYNs in our analysis. While the inclusion of OBGYNs and cardiologists is important, it should also be pointed out that many rural counties do not have either or both clinicians. These counties rely on urban-based specialists in these areas who may see them locally, or they may travel to an urban county for these services. Many rural areas may also receive OB services from a family medicine doctor. While these are limitations, the inclusion of these clinicians does link together the various categories of need in a way that informs the analysis. From the Area Health Resource Files, we took the count of the number of providers in each category and calculated the number of providers per 100,000 residents in the county. For the number of OB-GYNs only the adult female population was used in this calculation, as this is the population cared for by OB-GYNs. For each type of health provider, we took the distribution of the number of physicians per 100,000 and assigned the counties a value of 0-2 determined by whether they were in the bottom, middle, or top 33.33% of the distribution. These values were reverse coded so

that counties at the bottom end of the distribution were assigned a value of 2 indicating worse physician availability. The values were summed up and ranged from 0-8. Similarly, we ranked these values from lowest to highest to create three evenly distributed groups: those counties with the worst physician availability, moderate availability, and good availability.

Table 5. Thresholds of the Number of Providers Per 100,000			
Variable	Tertile 1 Scored 0 (Best Availability)	Tertile 2 Scored 1	Tertile 3 Scored 2 (Worst Availability)
Obstetrician gynecologists	≥ 13.00	2.00 – 12.00	≤ 1.00
Cardiologists	≥ 2.00	1.00	0.00
Primary care physicians	≥ 60.00	34.00 – 59.00	≤ 33.00
Dentists	≥ 43.00	24.00 – 42.00	≤ 23.00

Overall need categories

Using the final ranking categorizations from each of the included components (i.e., chronic disease, socioeconomic status, and healthcare workforce) we created a final three level variable indicating resource neediness. Category one was those counties that were deemed "low need" and defined as counties that had the lowest burden of chronic disease, the best socioeconomic status, and good physician availability. Category two were those counties that were deemed to have "moderate need" and had high value rankings for at least one but not all three groups. For example, a county with a high burden of chronic diseases, low physician availability, but high socioeconomic status would fall into the moderate need category. Lastly, category three were those counties with the highest overall need. These were defined as counties that were categorized as having a high burden of chronic disease, the worst socioeconomic status, and low physician availability.

Analysis

Using ArcGIS Pro v3.2, we mapped the geographic distribution of each individual category and the overall need categories using choropleth maps. We then examined median values of county-level sociodemographic characteristics stratified by county need classification status. Statistically significant differences in median values were evaluated using the Kruskal–Wallis test. Because the counties were divided into different need-classification categories, the Kruskal–Wallis test was used to assess whether the median values of characteristics such as income, poverty, or rurality were significantly different across those groups. We used multivariable logistic regression to examine the association between need categorization and the presence of healthcare facilities using odds ratios. An odds ratio greater than 1 indicates that moderate- or high-need counties were more likely than low-need counties to have no facility of that type, whereas an odds ratio less than 1 indicates they were less likely. Facilities examined included the locations of Rural Health Clinics, Federally Qualified Health Centers, Community Hospitals, and Pharmacies. We adjusted each model for county population size to account for the role of population size in facility availability and the variation in rural county population sizes.

RESULTS

This analysis includes a total of 1,932 rural counties in the United States. Of these counties, based on our need classification, we identified 72 counties (3.62%) that were low need, 1,590 (82.50%) that were of moderate need, and 270 (13.88%) were considered to be in high need, meaning that these counties ranked among the worst in terms of prevalence of chronic disease, poor SES, and healthcare provider availability (**Table 6)**. Appendix **Table 1** provides the names of the counties that were identified to be in high need. The characteristics of counties vary significantly across resource need categories **(Table 7)**. The highest-need counties had the largest proportion of non-Hispanic Black residents (5.69%), compared with moderate-need (1.09%) and low-need counties (0.71%). In contrast, low-need counties had larger proportions of Asian residents (0.90% vs. 0.24%) and Hispanic residents (4.33% vs. 2.48%) than high-need counties.

Healthcare Facilities

We found statistically significant differences in the median number of each of the healthcare facility types that we examined across county need categories. Among low need counties, there was a median of four FQHC facilities within the county, whereas moderate and high need counties had a median of two facilities (p-value<0.05). Moderate need counties had nearly three times greater odds of lacking an FQHC (OR: 2.85, 95% CIs: 2.01, 3.88), while high need counties have approximately 1.5 times greater odds of lacking an FQHC (OR: 1.53, 95% CIs: 1.03, 2.26) when compared to low need counties (**Table 8**). We found no statistically significant differences in the availability of Rural Health Clinics (RHCs) across county need categories. Among low-need counties, the median number of RHC facilities within the county was four, whereas moderate- and high-need counties also had a median of three facilities (p-value > 0.05). The odds of lacking an RHC did not differ significantly between need categories. Moderate-need counties had slightly lower odds of lacking an RHC compared to low-need counties (OR: 0.98, 95% CIs: 0.83, 3.67), while high-need counties had slightly higher odds (OR: 1.07, 95% CIs: 0.88, 2.61) (**Table 8**). Low need counties had a median of 2 hospitals whereas moderate need counties had 1 hospital, and high need counties had 0 hospitals (p-value<0.05). High need counties had four times greater odds of not having a hospital than low need counties (OR: 4.0, 95% CIs: (1.15, 10.10). Among pharmacies, the differences were quite large. There was a median of nine pharmacy locations within low need counties, whereas the high need counties had a median number of three pharmacy locations (**Table 7**). Compared to low need counties, high need counties had more than six times greater odds of not having a single pharmacy (OR: 6.42, 95% CIs: 2.10, 11.53), while moderate need counties had more than five times greater odds (OR: 5.38, 95% CIs: 1.63, 12.67). These findings indicate minimal variation in RHC availability across county need levels.

Geographic Distribution

Figures 1-3 show the geographic distribution of chronic disease burden, socioeconomic status, and physician density scores in rural counties across the United States. Figure 4 shows the geographic distribution of overall resource need scores in rural counties in the United States. Counties with the highest burden of chronic diseases and worst socioeconomic status are heavily concentrated in the southeastern region of the United States (Figures 1 and 2). Physician density displays much more geographic variation: there are pockets of low physician density in the South and Midwest, while states in the Northeast and West generally have higher physician density. Overall resource needs are heavily concentrated in the southeastern United States, and most rural Alaskan counties are also high need counties. The lowest need counties are found in the Western and Northeastern United States.

Table 6. Number of Rural Counties by Need Across Domains

	Number of Rural Counties		
Categories	**Low Need**	**Moderate Need**	**High Need**
Chronic Disease	523	639	772
Socioeconomic Status	373	864	719
Physician Availability	303	913	738
Any	792	1,453	1237
All*	72	1,590	270

*Counties identified as low need overall were counties that were classified as low need across each of the three domains. Counties considered moderate need were counties that were only classified as high need for a maximum of two domains; A county was classified as high need if it was classified as high need for each of the three domains.

Table. 7 County-level characteristics by Overall Need Category			
Variables	Low Need Counties (n=72)	Moderate Need Counties (n=1,590)	High Need Counties (n=270)
Demographics	**Median (Interquartile Range)**		
Race & Ethnicity (%)			
Non-Hispanic Black **	0.71 (0.52, 1.17)	1.09 (0.4, 3.83)	5.69 (0.8, 33.62)
Non-Hispanic White**	89.9 (83.88, 93.52)	87.14 (68.95, 93.26)	71.38 (55.35, 92.83)
Hispanic /Latino **	4.33 (2.41, 9.13)	3.79 (2.14, 9.47)	2.48 (1.61, 4.97)
Non-Hispanic AI/AN	0.31 (0.18, 0.86)	0.3 (0.1, 0.95)	0.22 (0.05, 0.69)
Non-Hispanic Asian**	0.9 (0.57, 1.43)	0.49 (0.2, 0.83)	0.24 (0.06, 0.51)
Non-Hispanic Pacific Islander	0.01 (0.0, 0.08)	0 (0, 0.04)	0 (0, 0.02)
Non-Hispanic Other	0.10 (0.03, 0.21)	0.03 (0, 0.14)	0 (0-0, 11)
**No vehicle in household (%) ** **	5.27 (3.91, 6.53)	5.47 (3.98, 7.21)	7.26 (5.51, 9.42)
**No internet in household (%) ** **	11.955 (9.9, 14.35)	18.4 (15.08, 22.85)	26.15 (22.83, 31.09)
**Living with a disability (%) ** **	13.405 (10.93, 15)	16.28 (13.71, 19.12)	20.29 (17.75, 23.48)
Healthcare Access			
Number of FQHCs**	4.00 (2.00, 6.00)	2.00 (1.00, 3.00)	2.00 (0.00, 3.00)
Number of Hospitals**	2.00 (0.00, 1.00)	1.0 (0.00, 1.00)	0.0 (0.00, 1.00)
Number of Pharmacies**	9.00 (6.00, 12.00)	5.00 (2.00, 8.00)	3.00 (2.00, 5.00)
Number of RHCs	3.00 (1.00, 6.00)	3.00 (1.00, 5.00)	4.00 (1.00, 6.00)
	Proportion of Rural Counties in a Need Group		
U.S. Region			
Midwest**	40.00	41.59	20.15
Northeast**	21.43	4.71	0.37
South **	4.29	36.64	78.73
West**	34.29	17.06	0.75

****Statistically significant at the alpha=.05 level**

Table 8. Association between need category and lack of facility availability*				
	Hospital aOR (95% CI)	FQHC aOR (95% CI)	Pharmacy aOR (95% CI)	RHC aOR(95% CI)
Low Need	1.00[a]	1.00[a]	1.00[a]	1.00[a]
Moderate Need	2.20 (0.66, 5.57)	2.85 (2.01, 3.88)	5.38 (1.63,12.67)	0.98 (0.83, 3.67)
High Need	4.0 (1.15, 10.10)	1.53 (1.03, 2.26)	6.42 (2.10, 11.53)	1.07 (0.88, 2.61)

a. Reference group. *Odds ratio represents the odds of a facility not being present in the county adjusted for population size

Figure 1. Chronic Disease Burden Score Geographic Distribution

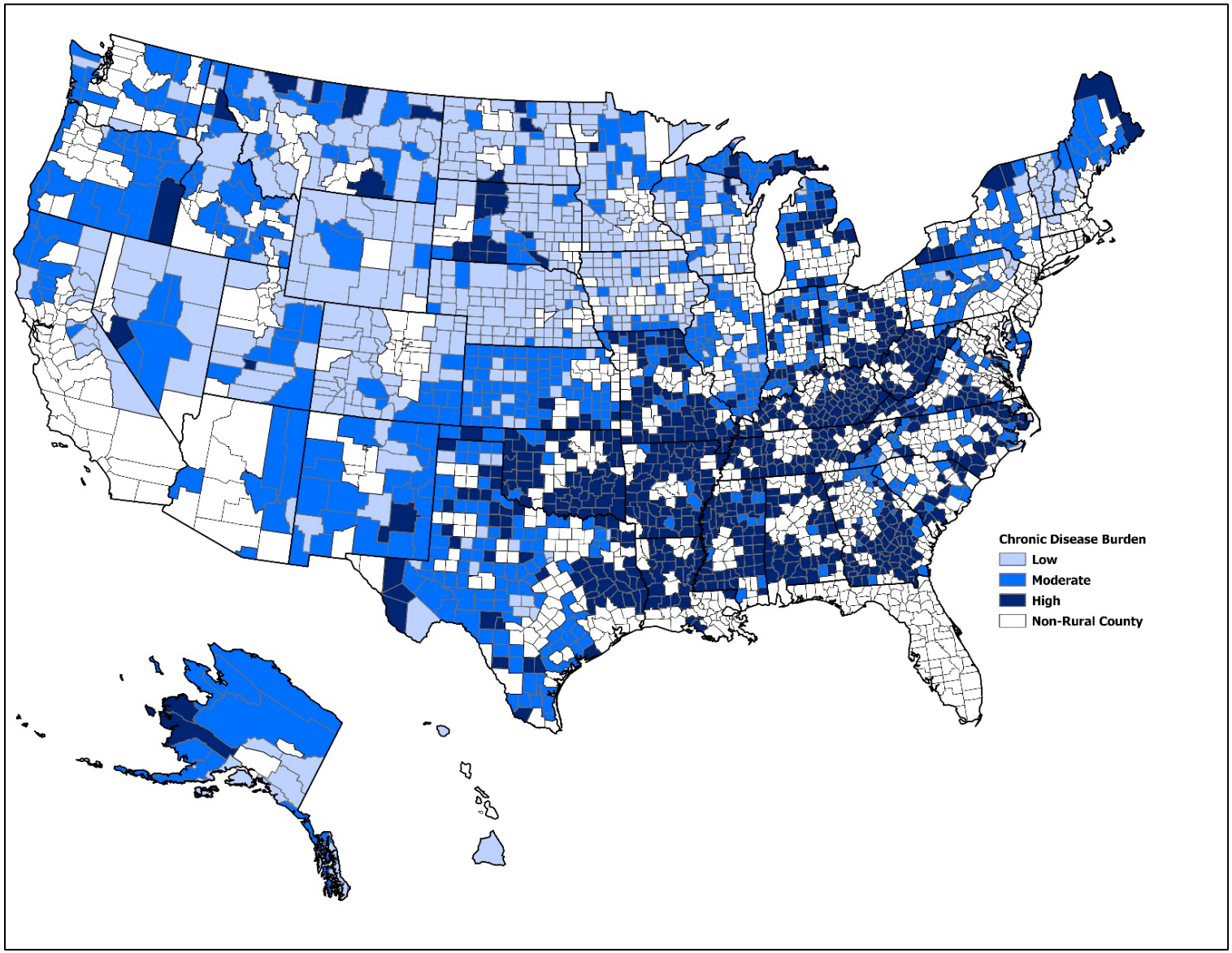


Figure 2. Socioeconomic Status Score Geographic Distribution

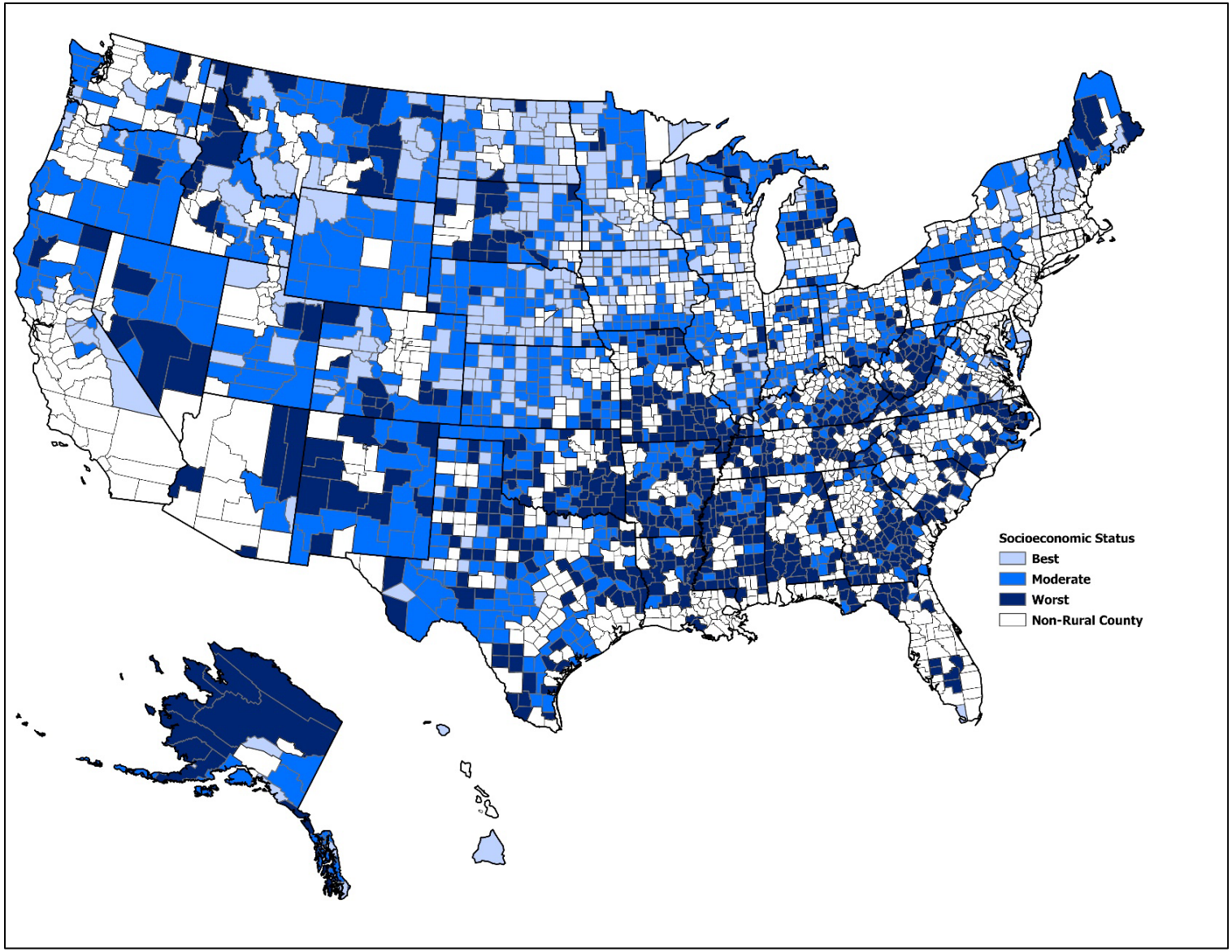


Figure 3. Physician Density Score Geographic Distribution

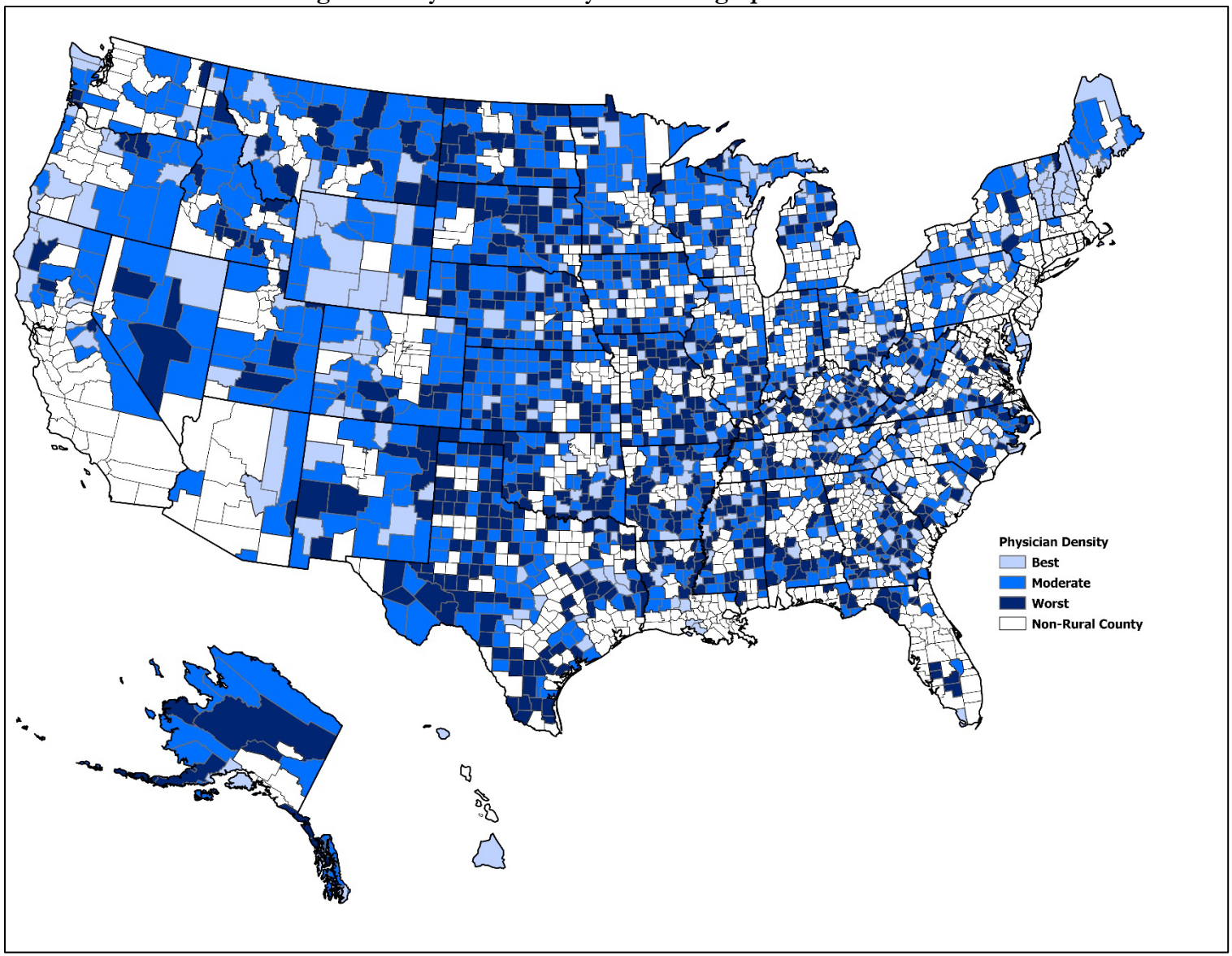
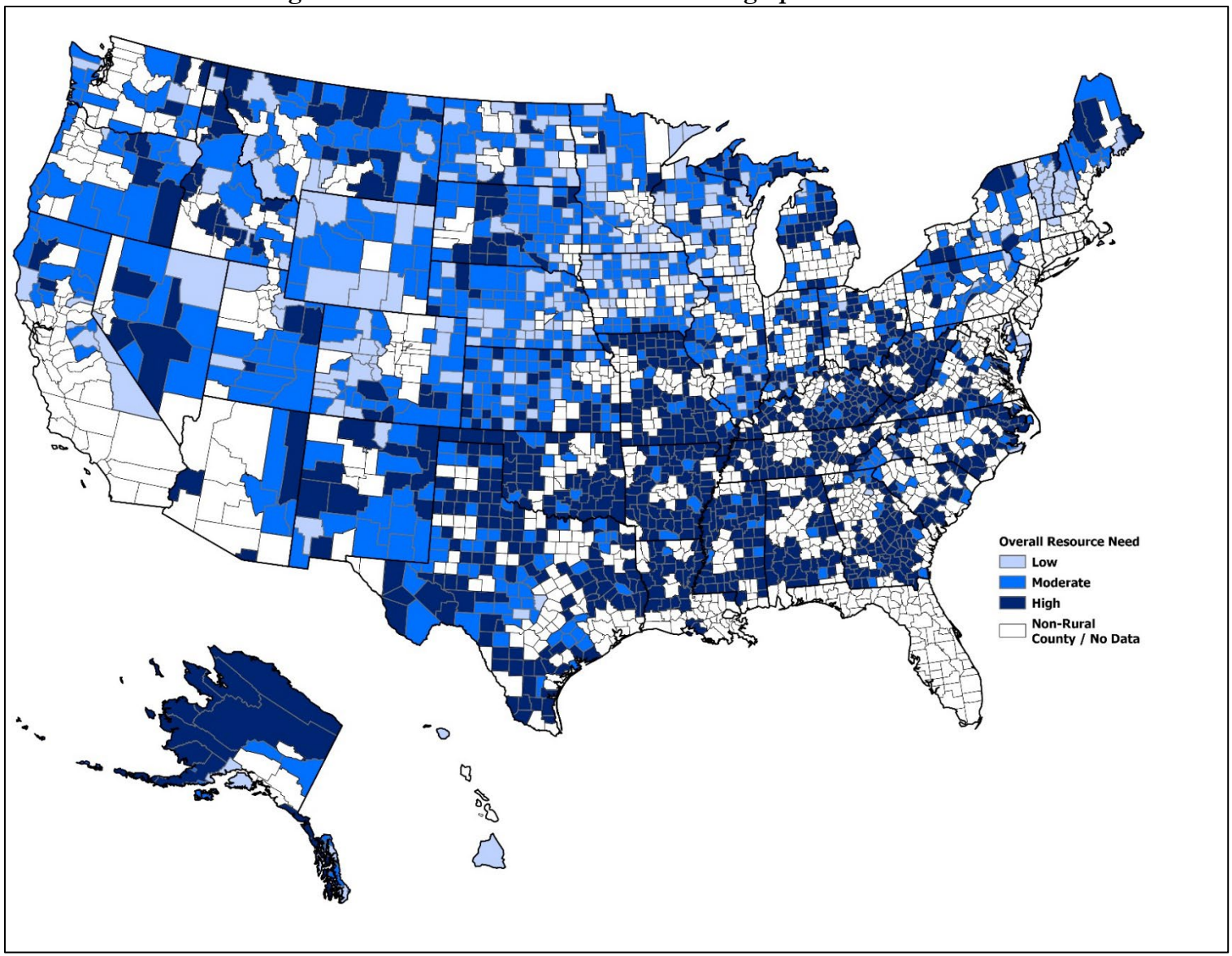


Figure 4. Overall Resource Need Score Geographic Distribution



CONCLUSION

This policy brief expands on the previous work identifying geographic variations in health and healthcare needs across rural communities.[20] It has been well documented that rural communities in the United States face poorer health outcomes compared to their urban counterparts[21], yet the underlying causes of these disparities are not uniform across all rural areas. Factors such as socioeconomic status, accessibility to healthcare services, and prevailing health behaviors among other social determinants of health vary widely contributing differently to health challenges in each community. However, the communities most in need of resources suffer from a combination of these factors.

Based on three domains of need: the burden of chronic disease, the availability of healthcare providers, and the socioeconomic environment, we identified 270 individual counties designated as high-need counties across the combination of the three domains. These counties were predominantly (78%) located in the Southern Census Region of the United States demonstrating a high prevalence of multiple chronic disease, poor socioeconomic status, and a lack of healthcare providers. Notably, while we found 270 rural counties that were considered high need in all three of these domains, when examining the domains individually, 1,237 (64%) of the 1,932 rural counties included in this analysis fell into at least one high-need domain. These results suggest the need to develop targeted interventions based on specific community needs in rural counties given the large variations in the health and health care burdens across domains.

When examining the geographic distribution of high need areas across domains with high chronic disease burden and low socioeconomic status heavily concentrated in the South, low physician availability was much more geographically dispersed. Suggesting that while the burden of chronic diseases may often correlate with low SES environments, it does not necessarily align with areas experiencing shortages in healthcare workforce in the short run. While the long-term effects of healthcare professional shortages warrant further investigation, the overlapping distributions of chronic disease prevalence and low SES highlight the value of targeted and tailored public health interventions in these rural communities given the lower employment rate[22] and limited health care infrastructure[2] in rural versus urban communities.

Rural stakeholders and policymakers at the local, state, and federal levels could use this current report to aid in the development of targeted rural health policy initiatives and interventions. By focusing on these high-need areas, stakeholders can perform more detailed needs assessments, enabling the development of targeted policy initiatives, programs, and interventions that address the specific needs of these communities. National level efforts, such as HRSA's Rural Public Health Workforce Training Network Program, seek to expand the capacity of health services in rural and tribal communities through public health job development, training, and placement.[23] The number of rural counties with low socioeconomic status and the lack of healthcare facilities in high need counties highlights the value of initiatives aimed at reducing poverty and improving access to care in rural communities, such as the Economic Impact Initiative Grants from the USDA which provide funds to assist in the development of essential community facilities, including healthcare facilities.[24] The results of this report can be used to target the efforts of these programs by identifying which counties are most in need of healthcare workforce development and other grant funding. There are many evidence-based initiatives aimed at improving the health of rural Americans and reducing

chronic disease, such as Project ECHO[25] and the StrongPeople Program.[26] However, these initiatives are frequently limited to a single state or region; the results from this report may be used to plan the scaling-up of these programs to the national level or identifying similar communities which may benefit from these interventions. Future program or policy evaluation initiatives could consider multiple domains of need to ensure that resources are being allocated appropriately and efficiently to the communities that would see the greatest net benefit from their use.

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Appendix

Table 1. High Need Counties

STATE	COUNTY
AL	Barbour
AL	Butler
AL	Cherokee
AL	Cleburne
AL	Conecuh
AL	Franklin
AL	Marengo
AL	Marion
AL	Monroe
AL	Perry
AL	Sumter
AL	Talladega
AL	Washington
AL	Wilcox
AK	Kusilvak
AR	Bradley
AR	Dallas
AR	Fulton
AR	Hempstead
AR	Hot Spring
AR	Howard
AR	Lafayette
AR	Lawrence
AR	Lee
AR	Logan
AR	Montgomery
AR	Nevada
AR	Phillips
AR	Scott
AR	Sevier
AR	Van Buren
AR	Woodruff
GA	Appling
GA	Atkinson
GA	Baker
GA	Berrien
GA	Calhoun
GA	Candler
GA	Charlton
GA	Chattooga
GA	Clay
GA	Dooly
GA	Hancock
GA	Irwin
GA	Jeff Davis
GA	Jefferson
GA	Jenkins
GA	Johnson
GA	Macon
GA	Mitchell
GA	Montgomery
GA	Pierce
GA	Polk
GA	Quitman
GA	Randolph
GA	Taliaferro
GA	Tattnall
GA	Taylor
GA	Treutlen
GA	Warren
GA	Wheeler
GA	Wilcox
GA	Wilkes
GA	Wilkinson
ID	Shoshone
IL	Pulaski
IN	Fayette
IN	Pulaski
IN	Switzerland
KS	Chautauqua
KS	Elk
KS	Harper
KY	Adair
KY	Breckinridge
KY	Carroll
KY	Clinton
KY	Estill
KY	Fleming
KY	Fulton
KY	Graves
KY	Green
KY	Hickman
KY	Jackson
KY	Knox
KY	Lee
KY	Lincoln
KY	McCreary
KY	Magoffin
KY	Morgan
KY	Owsley
KY	Powell
KY	Robertson
KY	Simpson
KY	Webster
LA	Avoyelles
LA	Bienville
LA	Caldwell
LA	Concordia
LA	Franklin
LA	Jackson
LA	Madison
LA	Red River
LA	Sabine
LA	Tensas
LA	West Carroll
MI	Arenac
MI	Gladwin
MI	Lake
MI	Missaukee
MI	Osceola
MI	Oscoda
MN	Mahnomen
MS	Carroll

MS	Claiborne
MS	Clarke
MS	Covington
MS	Humphreys
MS	Issaquena
MS	Jasper
MS	Jefferson Davis
MS	Kemper
MS	Lawrence
MS	Leake
MS	Marion
MS	Noxubee
MS	Panola
MS	Quitman
MS	Sharkey
MS	Tallahatchie
MS	Tippah
MS	Tishomingo
MS	Walthall
MS	Wilkinson
MS	Winston
MS	Yalobusha
MO	Barton
MO	Benton
MO	Carroll
MO	Cedar
MO	Crawford
MO	Dent
MO	Dunklin
MO	Grundy
MO	Hickory
MO	Iron
MO	Knox
MO	Lawrence
MO	Lewis
MO	McDonald
MO	Madison
MO	Maries
MO	Mississippi
MO	Morgan

MO	New Madrid
MO	Oregon
MO	Ozark
MO	Pemiscot
MO	Ripley
MO	St. Clair
MO	Shannon
MO	Shelby
MO	Texas
MO	Washington
MO	Wayne
MO	Wright
NC	Bertie
NC	Columbus
NC	Hyde
NC	Jones
NC	Northampton
NC	Tyrrell
NC	Warren
ND	Sioux
OH	Adams
OH	Harrison
OH	Meigs
OH	Monroe
OH	Vinton
OK	Adair
OK	Atoka
OK	Caddo
OK	Choctaw
OK	Coal
OK	Ellis
OK	Garvin
OK	Greer
OK	Haskell
OK	Hughes
OK	Jefferson
OK	Latimer
OK	Love
OK	Mayes
OK	Nowata
OK	Okfuskee

OK	Pushmataha
OK	Tillman
OK	Washita
PA	Cameron
SC	Allendale
SC	Barnwell
SC	Hampton
SC	Lee
SD	Bennett
SD	Dewey
SD	Mellette
SD	Ziebach
TN	Benton
TN	Bledsoe
TN	Clay
TN	Grundy
TN	Hancock
TN	Hardeman
TN	Henderson
TN	Houston
TN	Humphreys
TN	Jackson
TN	Johnson
TN	Lake
TN	Lauderdale
TN	Lewis
TN	Marshall
TN	Meigs
TN	Perry
TN	Rhea
TN	Van Buren
TN	Warren
TN	Wayne
TX	Cass
TX	Collingsworth
TX	Cottle
TX	Culberson
TX	Dawson
TX	Eastland
TX	Foard
TX	Hall

TX	Haskell
TX	King
TX	Lamb
TX	Leon
TX	Limestone
TX	Marion
TX	Morris
TX	Newton
TX	Red River
TX	Sabine
TX	San Augustine

TX	Starr
TX	Swisher
TX	Trinity
TX	Tyler
TX	Wilbarger
VA	Bath
VA	Brunswick
VA	Grayson
VA	Lee
VA	Page
VA	Russell

VA	Westmoreland
WV	Barbour
WV	Braxton
WV	McDowell
WV	Mingo
WV	Monroe
WV	Pleasants
WV	Ritchie
WV	Tyler
WV	Webster
WV	Wyoming

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