BALLARD BRIEF

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# Healthcare Access Disparities among Rural Populations in the United States

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# Summary

In the United States, people living in rural areas face significant disparities in access to healthcare, quality of treatment, and the presence of chronic physical and mental ailments. Given their geographic isolation, it is relatively difficult for these individuals to seek emergency care, an issue that is exacerbated by socioeconomic gaps. These relationships flow in both directions—health and wealth often rise and fall in unison. Rural individuals also have to travel further to access healthcare, and the number of practitioners is sparse in comparison to metropolitan areas. Cultural and behavioral risks such as smoking, as well as the aforementioned shortage of healthcare professionals working in rural communities, contribute to disparities in both outcomes and access. One consequence of these disparities is that, in the United States, individuals living in rural areas also have life expectancies that are roughly two years shorter than their urban peers.[1] Governmental and non-profit organizations have each instituted programs aimed at mitigating these disparities, but the gaps continue to widen. Programs like Mental Health First Aid can offer resources to the public that will help them bridge the gaps that rural people face in accessing quality, affordable healthcare.

# Key Terms

**Chronic Diseases**—Conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both.[2]

**Coverage Gap**—When an individual or family's income is "above Medicaid eligibility levels but below eligibility levels for tax credits," leaving them without an affordable insurance option.[3]

**Health Practitioner**—"A physician and surgeon, psychiatrist, psychologist, dentist, resident, intern, podiatrist, chiropractor, licensed nurse, dental hygienist, licensed clinical social worker or associate

clinical social worker, marriage, family, and child counselor, or any other person who is currently licensed under Division 2 (commencing with Section 500) of the Business and Professions Code."[4]

**Medicaid**—"Medicaid provides health coverage to millions of Americans, including eligible low-income adults, children, pregnant women, elderly adults, and people with disabilities. Medicaid is administered by states according to federal requirements. The program is funded jointly by states and the federal government."[5]

**Medicare**—"Medicare is the federal health insurance program for people who are 65 or older, certain younger people with disabilities, people with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a transplant, sometimes called ESRD)."[6]

**Mental Health Literacy**—"Mental health literacy assists patients to recognize, manage and prevent emotional disorders such as depression."[7]

**Morbidity**—The rate of a disease in the population.

**Mortality Rate**—The rate of death in a population.

**Public Health Coverage**—Programs in which the healthcare costs are paid for by the government.[8] While Medicare and Medicaid are the primary public health insurance programs in the United States, programs like TriCARE for military members and the Children's Health Insurance Program (CHIP) could also fit under this label.

**Randomized Controlled Trial**—An experimental form of impact evaluation in which the population receiving the program or policy intervention is chosen at random from the eligible population, and a control group is also chosen at random from the same eligible population.[9]

**Rural**—According to the US Census Bureau: all territory, persons, and housing units not defined as urban.[10]

**Social Determinants of Health**—Conditions in which people are born,

grow, live, work, and age that shape health.[11]

# Context

### *Q: What does it mean if there are "health disparities" between two populations?*

**A:** Health disparities are differences in health outcomes, health care access, or health care needs between two or more populations. These disparities can exist either with physical or mental health, often stemming from characteristic or location-based factors, such as the divide between rural and urban populations.[12] This paper will focus on how disparities in rural healthcare access play a contributing role in outcome disparities. Access disparities include issues with insurance, practitioner availability, and the quality of care.

### *Q: What locations within the US are considered rural?*

**A:** The United States Census has created standards to define urban (Metropolitan Statistical Areas, MSA) and rural areas (non-MSA).[13] These standards dictate that rural areas are those with an urban core (areas with high population densities) of fewer than 50,000 people.[14] An urban core is an area where the population density exceeds 7500 people per square mile. Roughly 20% of the population within the United States can be considered rural, despite covering 86% of the geographic territory.[15]

### *Q: Who is the population most affected by healthcare disparities?*

**A:** Several factors could play a role in causing and exacerbating these disparities, including but not limited to rurality, age, access to transportation, reliable internet access, and socioeconomic status.[16] Healthcare expenses tend to increase with age, with those who are 85+ consuming

twice the number of healthcare resources as those between 75–84 and 3 times as much as those between 65–74.[17] About 19% of rural residents are over 65, in comparison to 15% in urban areas.[18] It is also worth noting that Medicare generally covers those who are 65 or older. Of those who are 65 or older, less than 1% remain uninsured, while 39.8% are covered by private insurance, and 58.1% are covered by some form of public health coverage.[19] Additionally, race likely places a significant role in determining health outcomes among rural populations. An examination of 61 measures related to health and healthcare found that Hispanic, Black, and Alaskan Native populations fare worse than their White and Asian counterparts.[20]

## *Q: When did this issue arise, and how has it changed over time?*

**A:** While it is impossible to point to a specific point at which rural-urban health disparities first occurred, it does appear that the gulf between the two populations is widening.[21, 22] Theoretically, the disparity between socioeconomic castes could be a predictor of the timeline of this issue, since rural Americans are more likely to live below the poverty line than their urban peers.[23] Although, no research makes this direct connection. As of 2022, the bottom 50% of Americans hold just 3.2% of the country's wealth, while the top 10% hold nearly 70%.[24] In 1989, the average net worth of the top 20% of Americans was roughly 144 times that of the bottom quintile.[25] By 2016, that number had ballooned to 244 times.[26]

## *Q: What are the attitudes of individuals in the rural United States regarding their access to healthcare?*

**A:** The existing body of research indicates that rural Americans struggle to consistently access quality, affordable healthcare; however, do rural Americans perceive this as a fixable issue or simply an intrinsic tradeoff that comes with living in a geographically isolated area? In one

survey, 921 rural residents in Tennessee were asked about their perceptions surrounding rural healthcare disparities. A majority of the respondents did not feel that there was an issue with healthcare access in their communities.[27] On its face, this might seem promising, and yet the survey still found that roughly 29% of rural residents who felt that there was a problem with their access to healthcare were unable to find health-related transportation, a contributing factor to healthcare disparities.[28] This result indicates that while a majority of rural respondents are content with their access to healthcare, a sizable minority of rural people still perceive significant issues with their ability to access healthcare.

In another study, 101 rural West Virginians were split into focus groups and asked to describe the barriers they faced in accessing healthcare resources. The barriers that they described ranged from issues with transportation and the quality and availability of healthcare to social isolation and financial disparities.[29] While the definite inferences we can draw from these two Appalachian samples might be limited, they indicate that, to some degree, rural Americans struggle with accessing quality, affordable healthcare but may disagree on the extent of these disparities.

### *Q: Where are the rural areas that are most affected by health and healthcare disparities in the United States?*

**A:** A few rural areas within the US highlight the intersection between disparities in rural healthcare access and rural health. The South, the northern Midwest, and Appalachia all face a disproportionate amount of health disparities, even in comparison to other rural areas in the United States. The outsized effect of the opioid epidemic, along with higher rates of smoking and physical inactivity, likely play a role in the region's disparities.[30] Poverty rates in Appalachia are also greater than average, which likely plays a role in the region's health

disparities.[31] An analysis of health-related factors found that Appalachia compared unfavorably to the rest of the country on 33 out of 41 metrics.[32]


# Contributing Factors

## *Geographic Isolation*

Geographic isolation plays a leading role in contributing to rural healthcare disparities in the United States because the distribution of health services within rural communities is often scarce.[33] One pertinent example of the scarcity of health resources in rural areas is the primary care physician-to-population ratio. While urban areas have, on average, 53.3 primary care physicians per 100,000 people, rural areas have only 39.8 primary care physicians per 100,000 people.[34] When specialists are accounted for, the disparity becomes even more glaring. Urban areas have roughly 312 physicians per 100,000 people, while rural areas have only 131.[35] Notably, the sheer geographic size of rural areas containing 100,000 people is also innately larger than that of urban areas, making this disparity even more problematic. According to one leading expert, people who lack access to quality, consistent care eventually seek care in urban centers, but when they do so, they become sicker later and utilize more resources.[36]

One problem with seeking care that requires more resources is the strain it puts on the severe shortage of primary care physicians in the United States. One study estimated that if Americans visited their physicians as frequently as recommended, primary care physicians

should be spending "7.4 hours per day on preventive care,[37] 10.6 hours on managing chronic diseases,[38] and 4.6 hours on handling acute illness[39]—totaling 22.6 hours a day."[40] This demonstrates that primary care doctors are already stretched thin; if we account for the staffing disparities in rural areas, that 22.6-hours-a-day number likely grows to over 24. Research suggests that rural populations are keenly aware of this shortage; 33% of rural residents say there are not enough doctors in their community, a sentiment that only 20% of urban residents share. These issues play a significant role in determining how difficult it will be for an individual to visit a health practitioner.[41]

The distance rural individuals must travel to visit a practitioner is another prohibitive factor in their access to care. A 2018 survey found that rural Americans have to travel twice as far to visit a hospital as their urban counterparts, with rural residents averaging roughly 10.5 miles, compared to 4.4 for urbanites.[42] Rural individuals also travel roughly 34% further for routine care than those in urban areas.[43] Additionally, quality public transit is generally infeasible in rural areas due to geographic sprawl, which presents a barrier to accessing care that is unlikely to be resolved. Particularly for older adults, this lack of public transportation makes it difficult to regularly visit health practitioners.[44] Additionally, people in rural areas are likely to miss or cancel appointments because they are unable to schedule transportation. In a recent survey of rural populations, 4.6% of respondents said they missed or delayed a routine health checkup because they lacked transportation. 4.1% of respondents said they missed a chronic health appointment for the same reason.[45] Other data surrounding the reasons for missed appointments among rural and urban demographics is sparse.

Reliable internet access exacerbates existing access disparities among rural populations.[46] According to a recent article, roughly 13% of people living in non-metropolitan areas do not have access to the internet at home. In comparison, only 7% of those living in

metropolitan areas report the same issue.[47] This places a burden on residents of rural communities who are trying to use telehealth platforms, which exploded in popularity during the COVID-19 pandemic.[48] Rural populations would logically benefit from the use of telehealth platforms, given the barrier that transportation poses in seeking services. However, telehealth platforms, like other live video streaming, require a reliable, fast connection. A 2021 survey found that rural individuals report lower rates of broadband access than those living in urban and suburban areas, making many telehealth platforms infeasible.[49] Another 2021 survey found that 35% of rural residents cited a lack of high-speed internet or broadband as a major or minor obstacle in using telehealth platforms.[50]

## *Adverse Socioeconomic Conditions*

Adverse socioeconomic conditions contribute to healthcare disparities in the United States because rural Americans are less likely to be able to afford treatment and more likely to be underinsured.[51] This can be partially explained by the fact that rural, non-elderly families are roughly 20% more likely than average to live below the national poverty level.[52] Additionally, inpatient and outpatient services, along with health insurance premiums, are, on average, more expensive in rural areas than in metropolitan ones.[53] Preliminary research also suggests that the effect of current inflation also impacts rural Americans more significantly than those living in metropolitan areas.[54] A key reason for this outsized impact is the effect of rising transportation and fuel costs. Because rural Americans need to travel further and have fewer public transportation options, the effects of rising fuel costs make it more expensive for them to obtain healthcare services or go to work, which could exacerbate socioeconomic disparities for individuals in rural areas.[55]

As previously mentioned, rural residents are more likely to live below the poverty line, meaning their health is dually impacted by the intersection

of rural living and poverty. Poorer Americans have more extensive healthcare needs and less access to necessary services than their wealthier peers.[56, 57] The relationship between health and wealth is mutually reinforcing—as one improves, the other tends to as well.[58] This socioeconomic health gap is highlighted during recessionary periods. Middle and upper-class individuals tend to have more savings and access to credit, allowing them to weather recessions while also improving their health, given that they have more time for health-promoting behaviors. However, recessions cause lower and lower-middle-class individuals to become less healthy because they generally lack the resources to combat the effects of decreased income on their health.[59]

The interaction between geographic isolation and poverty may be particularly damaging to rural Americans.[60] Rural Americans are roughly 1.3 times more likely to use public health coverage and 1.7 times more likely to "fall into the 'coverage gap'" than their peers living in urban or metropolitan communities.[61] Those who fall into the coverage gap make too much money to qualify for Medicaid and too little to claim tax credits, often leaving them without an affordable option for health insurance. Additionally, fewer careers in rural America offer employer-sponsored health insurance (ESI).[62] While poorer, underinsured people living in metropolitan areas may find it easier to identify a provider who is willing to offer low-cost or pro bono care, this may not be the case in rural communities due to the innate geographic isolation that comes with rural living and the scarcity of doctors practicing in rural areas.[63]

## *Cultural & Behavioral Risk*

The health disparities that rural Americans face can be explained, in part, by the cultural attitudes in rural areas and the health-related behaviors that residents sometimes adopt. The cultural attitudes of a particular region can influence the trust that people living in that region have in health care interventions and providers.[64] A 2008 study found that rural residents were 1.7 times more likely than metropolitan residents to "[avoid] visiting their doctor even when they [suspected] they should."[65] Avoiding doctor's visits even when an individual suspects something to be wrong could reasonably lead to crucial gaps in communication about needed treatment. One particularly salient example of this is the difference in survival rates between cancer that has been detected in early versus late stages.[66] In this instance, the gap in communication can have dire effects on the outcomes experienced by cancer patients.

The cultural or often religious values of an individual play a meaningful role in shaping their perception of risk.[67] Rural Americans are not culturally homogeneous; however, classifying them as a cultural subgroup that views certain health practices differently than urban Americans can be helpful. A 2018 study found that rural and urban residents have considerably different political and social views when it comes to issues like "race, immigration, same-sex marriage, abortion, and the role of government."[68] These findings suggest that there are differences in the philosophical underpinnings that guide rural and urban individuals.

The COVID-19 pandemic is an effective case study of these differences, particularly as they relate to rural and urban populations and their trust in healthcare interventions. Polling conducted at the end of 2020 indicated that rural respondents were 70% more likely to say they were not worried about whether they or a family member would contract COVID-19.[69] Rural residents were also 33% more likely to say they "definitely

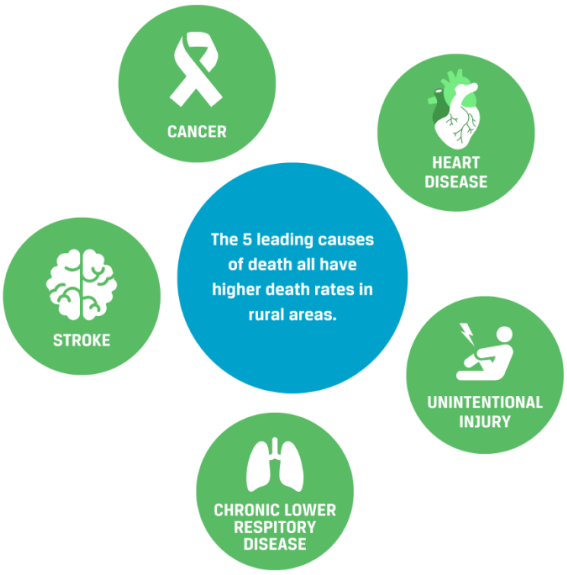
would not" get the vaccine.[70]Epidemiologists and practitioners generally agreed that the COVID-19 vaccines were safe and effective and would curb the effects of the pandemic.[71] And while the survey did not indicate why rural residents were less likely to get the vaccine, these polling results could indicate one example of the prioritization of personal beliefs over an expert's advice regarding healthcare treatment. Classifying rural residents by their beliefs and values is especially constructive when paired with the fact that people are more likely to trust advice, whether that be medical or otherwise, from people who share the same cultural background as they do.[72] These cultural differences likely inhibit rural residents from seeking care from urban doctors, even though they might be the most accessible option.

# Consequences

## *Morbidity & Mortality*

The barriers that rural Americans face in receiving affordable healthcare (geographic isolation, poverty, cultural and behavioral risks, and so forth) contribute to the disparity in both morbidity and mortality. Residents of rural areas tend to face increased rates of chronic diseases and worse outcomes in treating those diseases than those living in metropolitan areas.[73] According to a 15-year analysis published by the CDC, rural Americans are more likely to die from the five leading causes of death than their urban counterparts.[74] Rural individuals are roughly 1.3 times as likely to be diagnosed with diabetes and 1.2 times as likely to be diagnosed with obesity.[75] Those living in rural areas also present with higher rates of heart disease, chronic obstructive pulmonary disease (COPD), arthritis, high blood pressure, and high cholesterol.[76] Notably, these disparities persist even when accounting for the aging

population that lives in disproportionately rural locales.[77] Adverse social determinants and rural healthcare infrastructure play an important role in creating these disparities.




Obesity, a product of both genetics and behavior, compounds the morbidity and mortality of ailments such as diabetes and cardiovascular disease within rural populations; however, the relationship between the two is not unidirectional. People in rural communities are often obese due to pre-existing health issues and physical limitations.[78] Given that people in rural communities are more likely to struggle with obesity, the challenges that they face in treating chronic diseases are likely to be compounded.[79] Thus, obesity can be considered both a contributing factor and a negative consequence of the disparities facing rural healthcare.

Rural residents exhibit a higher prevalence of negative health behaviors that are both associated with and exacerbated by healthcare avoidance, stemming in part from a distrust of physicians.[80] According to a study published on the CDC's website, urban residents are far more likely to report that they engage in positive health behaviors than rural individuals.[81] Ten percent more rural people are smokers, 7.5% more rural people are more than moderate drinkers, and 7.5% more rural people do not maintain normal body weight.[82] A 2013 study found that if a patient trusted their physician, they would be more likely to adhere to the prescribed care plan. The study looked specifically at "adherence to diabetes management recommendations," but

the principle could easily be suggested to apply to other illnesses that require care plans.[83] The negative health behaviors exhibited by rural Americans, in conjunction with healthcare avoidance, often exacerbate the quantity and severity of their health issues.

As previously outlined, fewer physician specialists work in rural areas, placing a significant barrier between rural residents and specialized care. While nearly 20% of Americans live in rural areas, only 3% of medical oncologists practice in rural communities.[84] This means that rural residents must travel further to be diagnosed and receive treatment for cancer. And while cancer rates are lower overall in rural areas than urban ones, the death rates in rural areas are considerably higher due to lower rates of early screening and adequate treatment.[85] The excess mortality rate could partially be explained by the inability of rural residents to quickly access quality care in times of crisis, considering that it takes rural residents 42% longer on average to drive to the closest hospital.[86]

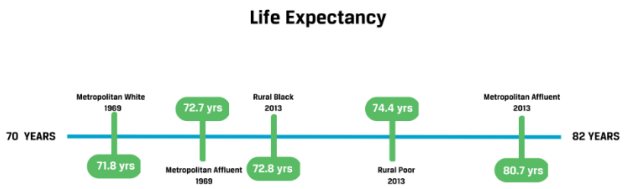
## *Life Expectancy*

Healthcare disparities contribute to the life expectancy for those born in rural areas of the United States, being roughly 2 years (77.4) less than those born in metropolitan areas (79.3).[87, 88] This discrepancy exists in 45 out of 50 states, and the gap has steadily increased over the last 50 years.[89] This 2-year gap is especially notable because 50 years ago, in 1971, the same gap was almost non-existent at roughly 0.4 years.[90] While such a small disparity could be dismissed as merely stochastic, a 2017 study found that roughly 27% of the county-level variation in life expectancy can be directly attributed to healthcare access and quality.[91] Counties in rural Appalachia, primarily eastern Kentucky and southwestern West Virginia, exhibited particularly low life expectancies, ranging between 66–69 years.[92] This indicates that the quality, affordability, and accessibility of healthcare resources in rural areas play

a significant role in the negative deviance in life expectancy that rural-born Americans experience.

It is important to note that this disparity cannot be attributed solely to the increased infant, child, and adolescent deaths, or, in other words, more young people dying. In fact, the driving force in this geographic inequality is due to older adults dying younger.[93] This "midlife mortality," meaning increased mortality among those between 25–64, disproportionately affects rural communities. The average life expectancy in the United States decreased in the years following 2014, and over 30% of the national increase in mortality can be attributed to 4 states: Ohio, Kentucky, West Virginia, and Indiana.[94] Eight of the 10 states with the highest excess adult deaths, meaning states where the mortality rate has increased among the adult population, are in Appalachia and the "industrial Midwest."[95] These results indicate that the rise in midlife mortality can be largely attributed to states with sizable rural populations.

The gap in rural-urban life expectancy widens when race and socioeconomic factors are accounted for. Research from 2013 found that current life expectancies for rural people who are Black (72.8) or poor (74.4 years) are similar to that of urban whites (71.8 years) or the urban rich (72.7 years) in 1969. Black rural Americans currently have a life expectancy (72.8), which is 8 years fewer than Americans living in affluent metropolitan areas (80.7).[96]




## *Mental Health & Behavioral Disorders*

Disparities in the affordability and accessibility of rural healthcare have an adverse effect on the treatment of mental health of rural populations. Although the numbers have likely risen over the last five years, in 2016, the rate of depressive disorder diagnoses was 14.8% higher in rural areas than in

metropolitan areas.[97] The rise in depression and other behavioral disorders has led to a rise in suicide mortality. Suicide rates in the United States have steadily risen over the last 20 years.[98] Rural communities are now facing a stark rise in both opioid and firearm suicide mortality.[99] As of 2017, suicide death rates in rural counties are roughly 45% greater than urban counties.[100, 101] According to a study published in Health Services Research, the disparity in suicide mortality is likely due to the fact that "rural residents are more likely than their urban peers to experience circumstances, conditions, and behaviors that challenge health and may increase the prevalence of depression."[102]


Those who are uninsured or lack a usual source of outpatient care are also less likely to receive mental health treatment, even when they are moderately or severely depressed.[103] Research from 2019 found that 62% of uninsured Americans who classify themselves as moderately to severely depressed do not receive treatment.[104] While the study did not stratify by rural status, rural Americans are less likely to be insured and have less access to care, which suggests that they are also more likely to be a part of the group of depressed individuals who do not receive treatment.[105]

# Practices

## *Mental Health First Aid Training*

Mental Health First Aid Training (MHFA) is an educational program aimed at providing the public with the information and tools necessary to assist people who are experiencing a mental health crisis. Given the disparities in access to healthcare that people living in rural areas face,

educating the public to identify and respond to mental health events when immediate professional care is not available is particularly important. Mental Health First Aid International (MHFAI) is the overarching not-for-profit organization that creates the MHFA programs taught across 24 countries.[106] Their mission statement is "Identify. Understand. Respond."[107] The first program was created in Australia in 2000 by Betty Kitchener and Tony Jorms. The primary focus of MHFA is training community members to recognize and intervene when individuals are experiencing mental health or substance abuse crises. The training is not intended to be a solution to the crisis at hand; rather, it allows non-professionals to intervene safely until professional support is able to arrive.

The tools outlined above are particularly helpful in rural areas, where it may take longer for individuals experiencing a crisis to receive care. As noted in the Contributing Factors section, the time that it takes for an individual to travel to a care provider and the extended response time for first responders in rural areas makes it especially important that the community is trained to intervene where possible.

The training consists of an 8-hour course wherein community members learn to identify important risk factors for common mental health issues such as depression, anxiety, and substance abuse disorders.[108] Participants are also provided with "a 5-step action plan to assess a situation, identify appropriate interventions, and help people access mental health services and the resources available to help people experiencing a mental health issue."[109]

Rural Health Information Hub gave the Mental Health First Aid (MHFA) program an "evidence-based" rating, finding that there is significant research that supports the claim that "participants are better able and more likely to help others regarding mental health issues."[110] While no all-encompassing meta-analysis has been performed, several randomized

controlled trials have been conducted that demonstrate the impact and replicability of this training. Numerous peer-reviewed RCTs have been conducted in Great Britain, the United States, and Sweden that yield results indicating that having participated in an MHFA program had a positive, quantifiable impact on the participants.[111, 112, 113, 114, 115, 116]

Program participants experienced numerous benefits. They became increasingly confident in their ability to aid and advise people who were experiencing mental health struggles and even found that their own mental health had improved because of their participation.[117] A study performed in Australia found that the experimental group, meaning those that received the training, were more likely to correctly identify mental health disorders and offer help to those with mental health struggles.[118]

Given that MHFA programs have been broadly replicated among different populations, the impact is difficult to articulate. Each RCT employs a unique methodology, so while the results are both substantively and statistically significant, we are unable to draw broad statistical inferences from the data available. The outputs and impacts provided indicate that the primary impact is made on those participating in the program rather than those who experience mental health or substance abuse crises. So while over 1 million people have participated in the program, including over 160,000 people in rural areas, the only direct impacts that studies have defined are related to the contributing factor of geographic isolation and access to care.[119] While a relationship between this contributing factor and the overall social issue has been displayed, further research is needed that explores the impact that participants had on people experiencing mental health crises.

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