

2022 NORTH CAROLINA RURAL HEALTH SNAPSHOT

Compiled by the North Carolina
Rural Health Association.



Foundation for Health
Leadership & Innovation

**NC RURAL HEALTH
ASSOCIATION**

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EXECUTIVE SUMMARY

Dear Friends,

I am excited to introduce the NC Rural Health Association's (NCRHA) 2022 North Carolina Rural Health Snapshot. NCRHA is one of the Foundation for Health Leadership & Innovation's core programs, and it exists to connect all organizations interested in advancing rural health in North Carolina. NCRHA was founded on the principles of collaboration, looking forward, and taking an equity-focused approach to improving rural health in every North Carolina community.

NCRHA members do important work for our neighbors in rural communities every day, and I hope this report provides valuable context for the work we do together.

Access to high-quality health care is an essential building block for a healthy and productive life.

In North Carolina, where you live matters, particularly if you have a low income and are a member of a historically marginalized population.

The 2022 North Carolina Rural Health Snapshot identifies stark differences between rural and metro areas in the areas of affordable access to care, preventive care, dental disease, maternal health, food security, and premature death.

Further, we continue to see persistent racial disparities in health coverage, chronic health conditions, mental health, and mortality for Black, Indigenous, and people of color (BIPOC) households in rural areas because of structural inequities across multiple sectors of the health care system.

As state health reforms take hold and additional resources become available, state legislators and local care delivery systems have an opportunity to help reduce these disparities and improve the health of everyone in North Carolina, regardless of geography and demographics.



I am grateful for the organizations who represent NCRHA and to those who provided data and support in the development of this report. Finally, I'd like to express my sincere appreciation for NCRHA Chair Emily Roland of the North Carolina Healthcare Association, and Vice Chair Patrick Woodie of the NC

Rural Center, for their continued commitment to improving health in our state's rural communities.

Best regards,

Kelly Calabria, President & CEO

Foundation for Health Leadership & Innovation



ABOUT NCRHA

THE NC RURAL HEALTH ASSOCIATION SUPPORTS PARTNERSHIPS AND STRATEGIES THAT IMPROVE HEALTH OUTCOMES IN RURAL NORTH CAROLINA.

VISION

NCRHA is committed to magnifying the voice of rural and underserved North Carolinians to improve health for all.

MISSION

The mission of the North Carolina Rural Health Association (NCRHA) is to address rural health issues in the state of North Carolina and find solutions that will improve health.

NCRHA is a collaborative network of associations, organizations, and individuals representing healthcare, education, economic development, local government, and a variety of rural stakeholders invested in supporting rural health. It is committed to amplifying the voice of North

Carolina's rural communities with the intention of improving the health and well-being of all citizens.

Though members of the Association began convening in the 1990s, NCRHA was formally established in 2014. NCRHA is sponsored by the Foundation for Health Leadership & Innovation in Cary, North Carolina and is funded by the National Rural Health Association (NRHA).

GUIDING PRINCIPLES

- We believe in the value, strengths, and assets of our rural communities.
- We strive for NCRHA to be at the forefront of rural health.

- We endeavor to build the rural voice at the local, regional, state and national levels.
- We promote shared and coordinated resources; including, but not limited to, time, knowledge, expertise, and funding.
- We seek to collaborate across our individual organizational missions and visions to achieve the greatest good for rural communities.
- We promote authentic community engagement and involvement, across all demographic and geographic groups representing rural North Carolina.
- We serve as a hub for innovative approaches and collective actions that advance rural health.
- We engage in proactive advocacy for policies and positions that promote whole-person, whole-community health for rural North Carolinians.



NCRHA MEMBERS

Alignment Healthcare

Blue Cross Blue Shield of North Carolina

Carolina Complete Health

Center for Rural Health Innovation

The Duke Endowment

Green Rural Redevelopment Organization, Inc. (GRRO)

Hometown Strong

Joyce Lewis Miles

Mary McNeill Sanders

NC Rural Center

North Carolina Academy of Family Physicians (NCAFP)

North Carolina Area Health Education Centers (NC AHEC)

North Carolina Agromedicine Institute

North Carolina Association of Free & Charitable Clinics

North Carolina Coalition on Aging

North Carolina Community Health Center Association (NCCCHA)

North Carolina Healthcare Association (NCHA)

North Carolina Medical Society (NCMS)

North Carolina Office of Rural Health
(NC Department of Health and Human Services)

North Carolina Pediatric Society (NCPeds)

Roanoke Chowan Community Health Center

Robyn Seamon

UNC Eshelman School of Pharmacy

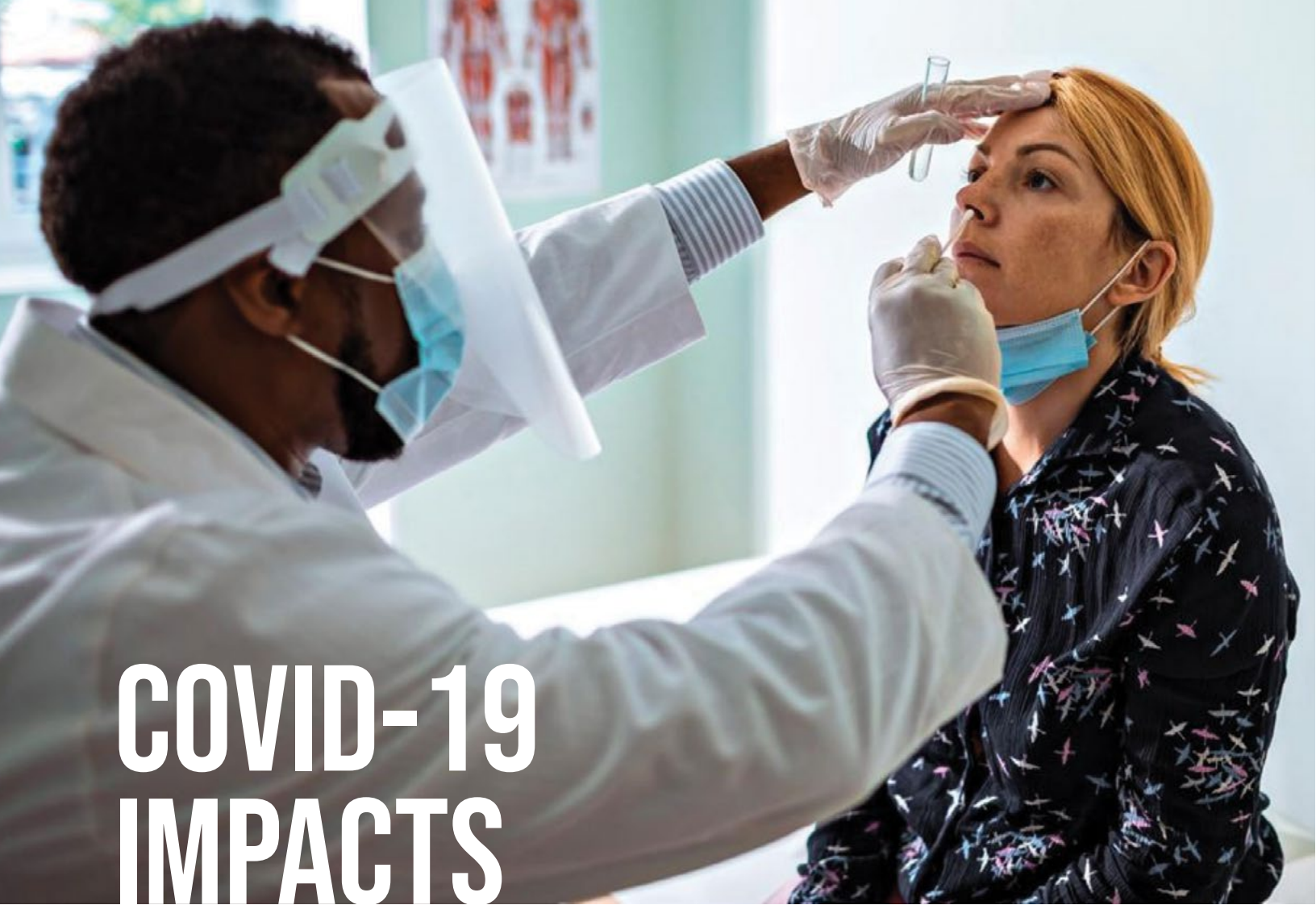
United Healthcare

Unite US

WellCare

WNC Bridge Foundation

THE NC RURAL HEALTH ASSOCIATION IS COMPROMISED OF RURAL HEALTH AND COMMUNITY LEADERS FROM A VARIETY OF PARTNER ORGANIZATIONS.



COVID-19 IMPACTS

No health report would be complete without recognizing the profound impact the COVID-19 pandemic has had on North Carolina's rural communities.

While many of the healthcare challenges created and exacerbated by COVID-19 affect all Americans, those living in rural communities throughout our state face particular risks and challenges that have created a landscape where our rural citizens continue to be disproportionately affected by COVID-19.

In rural areas, not only is there a greater proportion of older adults dealing with higher rates of chronic health conditions, but access to quality healthcare remains a challenge for rural residents, even with the expanded adoption of telehealth.

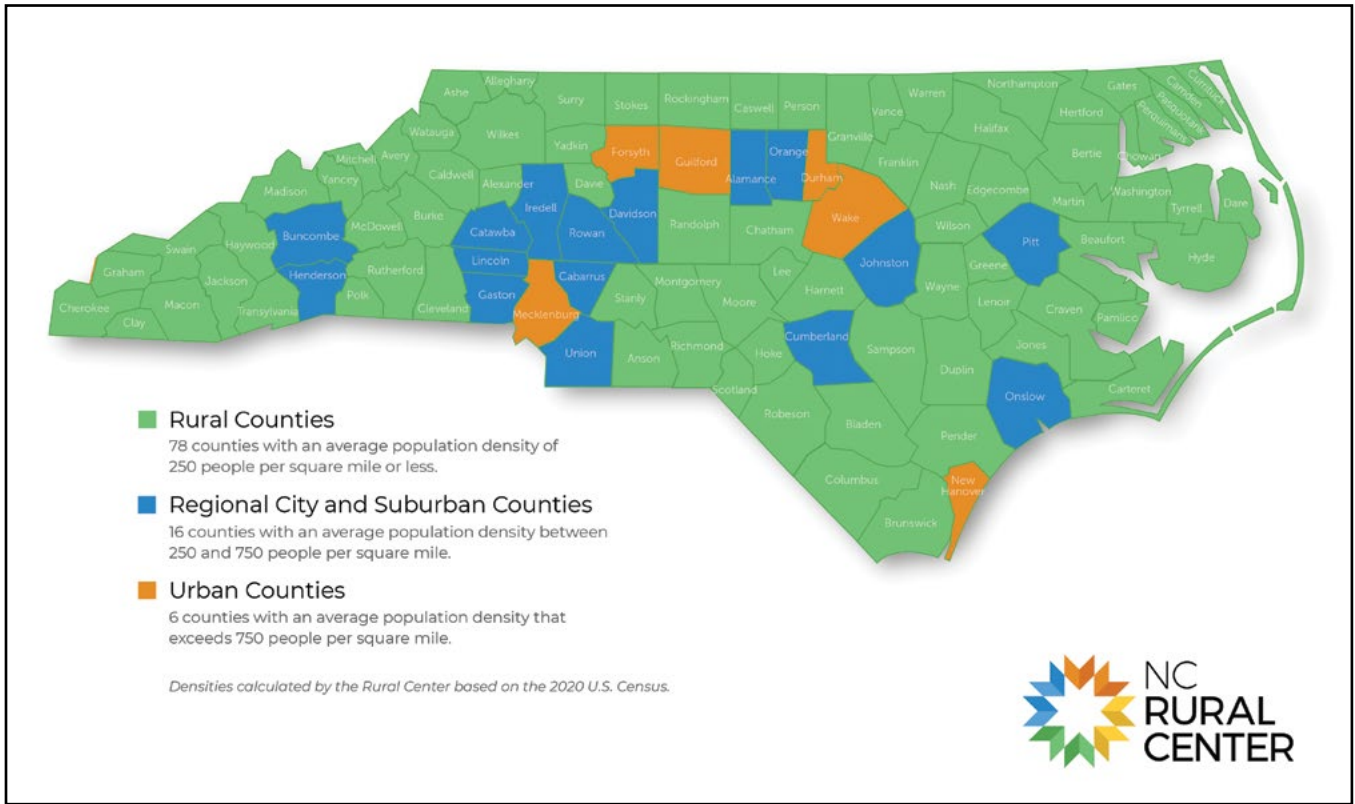
Additionally, rural North Carolina holds a high share of workers in essential jobs (e.g., agriculture, food processing) with a

limited capability to undertake these jobs from home, making telework and social distancing much harder to implement.

And finally, with each new COVID-19 case that requires medical attention and/or hospitalization, our local rural hospitals and clinics are at risk of having their local resources overwhelmed. Many of these facilities were already teetering on the edge of financial safety before the pandemic, facing a shortage of care providers, hospital beds, and equipment.

It is our hope that public and private organizations will come together to slow the spread of COVID-19, support local health departments, get our citizens vaccinated as quickly as possible, and address all underlying inequities in access to health and well-being for rural North Carolinians.

NC COUNTY MAP



RURAL COUNTY

County with an average population density of 250 people per square mile or less = 78 counties

REGIONAL CITY & SUBURBAN COUNTY

Counties with an average population density between 250 and 750 people per square mile = 16 counties

URBAN COUNTY

Counties with an average population density that exceeds 750 people per square mile = 6 counties

78
NORTH CAROLINA'S COUNTIES DESIGNATED AS RURAL

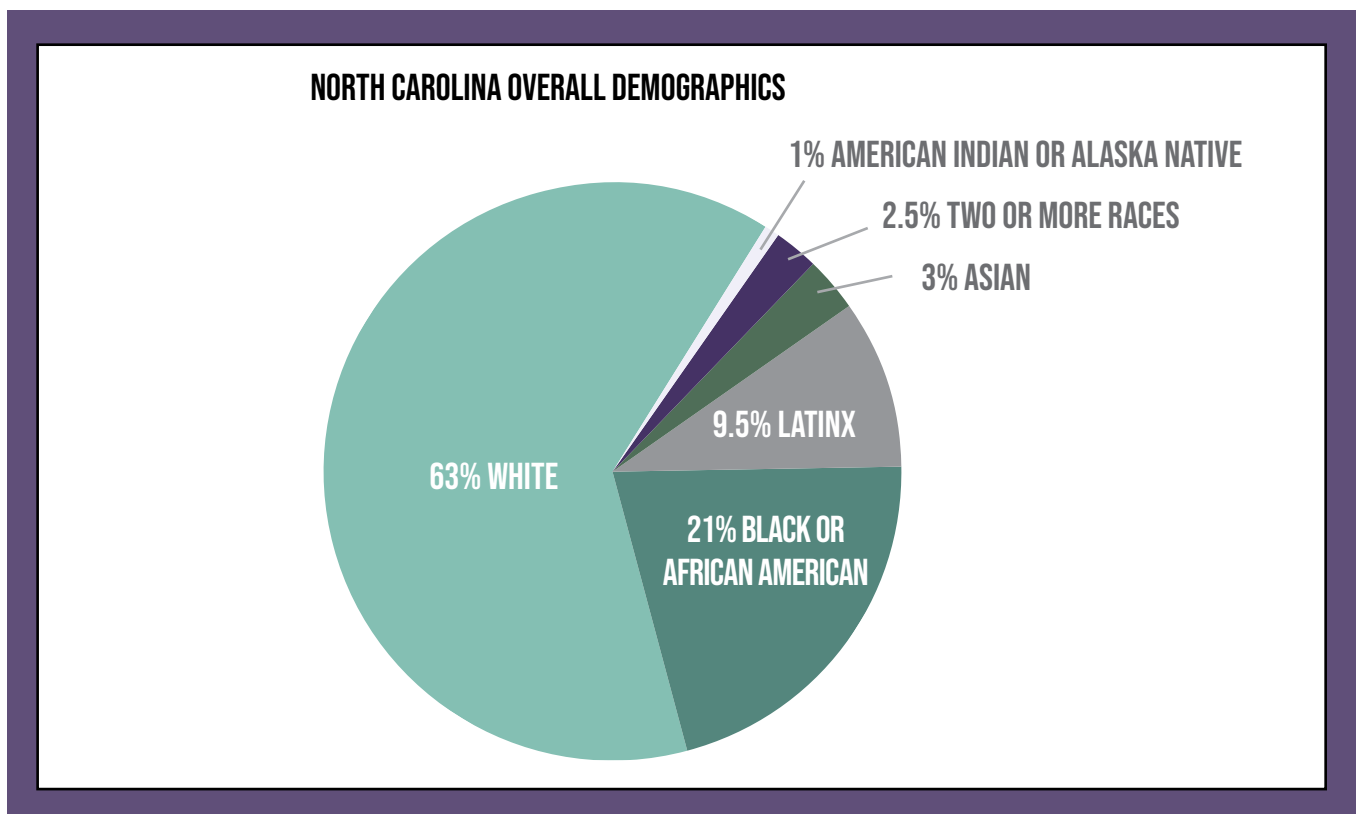
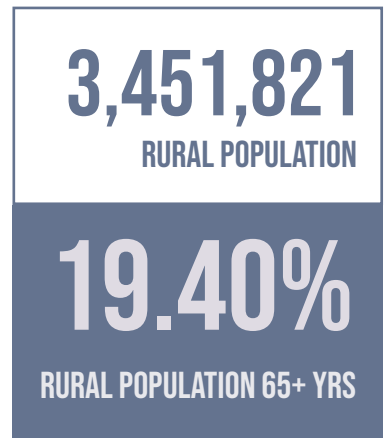
POPULATION

SOCIAL AND ECONOMIC FACTORS

Individuals with low incomes and long work hours may have less time to prepare meals at home and less time to participate in physical activities. Their stress levels or history of trauma may make them more likely to use substances like alcohol or tobacco. Advertisers of unhealthy foods or products target low-income communities and people of color. People with higher levels of education may have more knowledge and access to information about safe sexual practices, healthy eating, and the dangers of tobacco use.*

PHYSICAL ENVIRONMENT

People living in rural areas and low-income communities may be far from a grocery store that sells healthy foods. Their communities may lack formal facilities for exercise, or the roads and public spaces may not be safe to move around in.





POPULATION

According to the U.S. Office of Rural Health, almost a quarter of all veterans in the U.S. (4.7 million) return from active military careers to reside in rural communities. Active-duty military personnel and veterans have a significant presence in North Carolina, meaning that more North Carolina adults are veterans than the national average: 7.9% versus 6.9% nationwide. In 2019, nearly 642,000 veterans lived in North Carolina according to the most recent American Community Survey estimates. Of those, 46 percent live in rural areas.

While veterans may enjoy the benefits of rural living, they may also experience rural health care challenges that are intensified by combat-related injuries and illnesses.

CHALLENGES FOR RURAL VETERANS

LIMITED ACCESS TO PHYSICAL & BEHAVIORAL HEALTH CARE

Just like any rural resident, it may be difficult for rural veterans and their caregivers to access health care due to rural delivery challenges, including hospital closings; fewer housing, education, employment and transportation options; geographic and distance barriers; limited broadband for telehealth; and the inherent difficulty of safely aging in place in rural America.

HEALTH CARE COVERAGE GAP

Veteran populations may fall into the health insurance coverage gap, as they may be ineligible for VA health care coverage and may not qualify for TriCare.

INCREASED RISK OF SUICIDE

Men 45+, American Indians, whites, and rural residents all face higher rates of suicide than their respective demographic counterparts. The suicide rate among all veterans is 1.5 times that of the non-veteran population. Veterans face unique mental health, financial, and insurance coverage challenges that contribute to the increased rate within the population.



EDUCATION

NATIONALLY, THE MOST RECENT DATA INDICATES AN AVERAGE OF \$13,494 IS SPENT ANNUALLY ON PUBLIC EDUCATION PER STUDENT.

HOWEVER, SIGNIFICANT VARIATION EXISTS ACROSS STATES, AS DEMONSTRATED BY NORTH CAROLINA, WHICH SPENDS JUST OVER \$3,500 BELOW THE NATIONAL AVERAGE. STATE SPENDING ACROSS THE NATION RANGES FROM \$8,272 TO \$25,519 PER STUDENT.

SOME FACTORS THAT INFLUENCE STATE EDUCATION SPENDING TOTALS INCLUDE COST-OF-LIVING, CLASS SIZES, AND STUDENT DEMOGRAPHICS.

45.1%

READING AT A PROFICIENT LEVEL OR ABOVE BASED ON THIRD GRADE END OF GRADE EXAMS

NORTH CAROLINA SPENDS

\$3,500

BELOW NATIONAL AVERAGE PER STUDENT

54%

RURAL RESIDENTS WITH POST-SECONDARY EDUCATION, COMPARED TO 66% OF URBAN RESIDENTS

EDUCATION

ADVERSE CHILDHOOD EVENTS

Adverse childhood experiences (ACEs) – such as exposure to trauma, violence, or neglect during childhood – increase the likelihood of poor physical and mental health as a child grows up. Research has shown that exposure to adverse experiences can impact children’s neurobiological development, negatively affecting their learning, language, behavior, and physical and mental health.

\$9,958

NC PER
PUPIL SPENDING

43

NC RANK AMONG 50 STATES
FOR PER PUPIL SPENDING

13.4%

OF NC CHILDREN 0-17
HAVE EXPERIENCED
TWO OR MORE
ADVERSE CHILDHOOD
EXPERIENCES

A two-year estimate of the percentage of children ages 0-17 who experienced two or more of the following:

- Economic hardship
- Being treated or judged unfairly due to race/ethnicity
- Parental divorce or separation
- Witness to domestic violence
- A parent who served jail time
- Death of a parent
- Victim or witness to neighborhood violence
- Living with someone who had an alcohol or drug problem
- Living with someone who was mentally ill, suicidal or severely depressed

INCOME & POVERTY

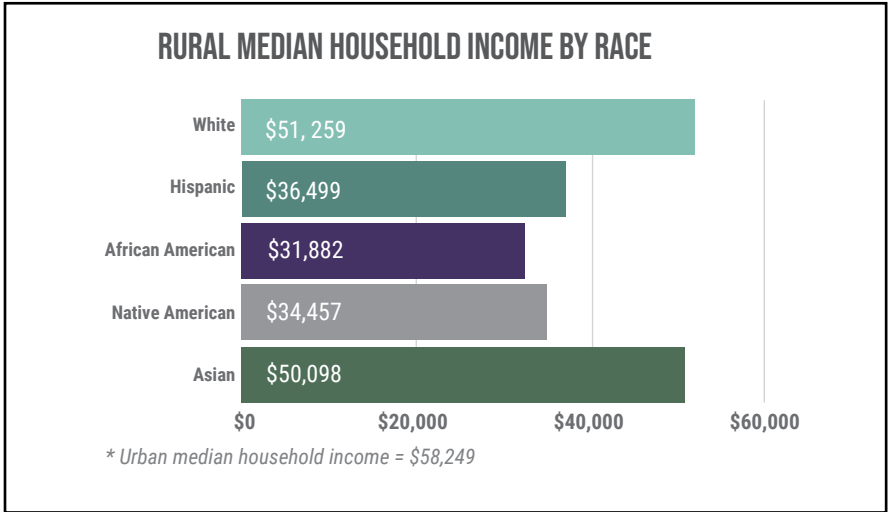
RURAL FAMILIES ARE RENT-BURDENED

42%

ARE SPENDING > 30% OF HOUSEHOLD INCOME ON RENT



At least 1 of 4 households experience severe housing problems (HNC 2030)

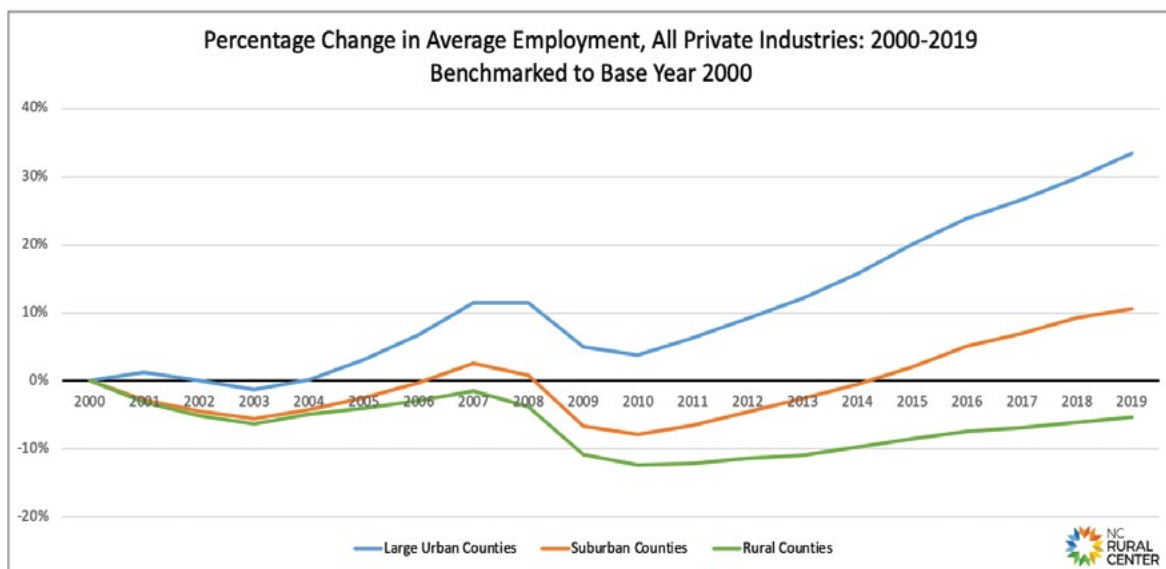


“People who live in homes that cost a large portion of their income – or where there is overcrowding or poor maintenance – are exposed to a variety of health risk factors. In many areas of North Carolina, there are insufficient affordable, quality housing options for low-income people and their families.”

North Carolina Department of Health and Human Services, North Carolina Early Childhood Action Plan, February 2019

INCOME & POVERTY

EMPLOYMENT CHANGE OVER TIME



Data Source: NC Department of Commerce, Quarterly Census Employment & Wages, Accessed from LEAD D4 website on February 28, 2021

From Healthy North Carolina 2030: “Though unemployment is not an orthodox measure of health, economic well-being is inextricably linked to health outcomes...Loss of income poses clear financial barriers to accessing resources that protect and improve health...Beyond the financial strain, unemployment is correlated with adverse health outcomes related to stress. Treated as a stress-inducing event, the experience of unemployment increases vulnerability to stroke,

heart attack, heart disease, and arthritis. Those laid off are more likely to have fair or poor health, have higher admissions to hospitals, and have a greater need for medical attention and medication.”

* The graph above does not account for pandemic-related employment changes.



FOOD ACCESS



13.1%

OF NORTH CAROLINIANS
IN BOTH RURAL AND URBAN
AREAS ARE FOOD INSECURE

Some rural residents and households are food insecure, meaning they cannot always rely on access to enough affordable and nutritious food, increasing the risk of poor health outcomes. According to the 2017 United States Department of Agriculture Economic Research Service (USDA-ERS) publication [Food Insecurity, Chronic Disease, and Health Among Working-Age Adults](#), food insecurity is strongly associated with chronic disease and poor health, both of which disproportionately affect rural populations.



18.1%

OF RURAL NORTH CAROLINIANS
ENROLLED IN SNAP (VERSUS
11.3% OF URBAN RESIDENTS)

Rural shoppers may rely on more expensive and less nutritious food, such as the types available at gas station convenience stores or face a long drive to a town with a grocery store that stocks fresh and nutritious foods.

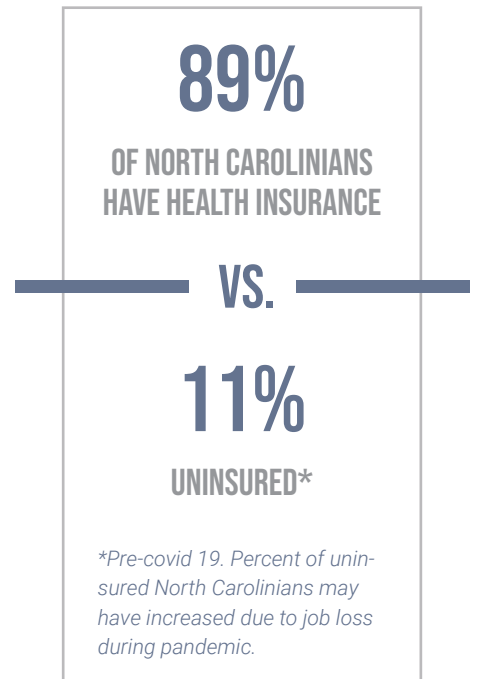
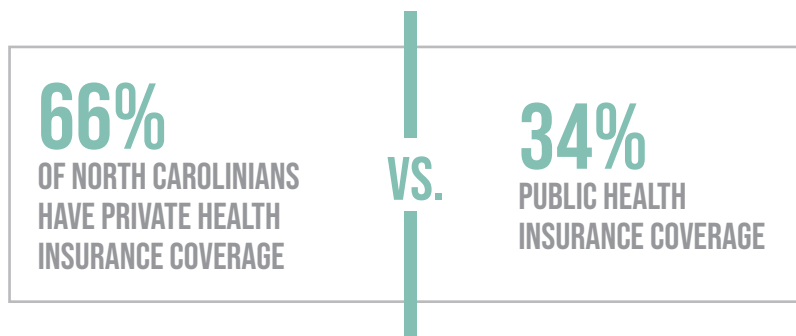


7%

OF NORTH CAROLINIANS ARE
LIVING IN A FOOD DESERT

Access to healthy and affordable food can be a challenge for rural residents. Many rural areas lack food retailers and are considered food deserts (i.e., areas with limited supplies of fresh, affordable foods). In rural areas, access to food may be limited by financial constraints or other factors, such as transportation challenges.

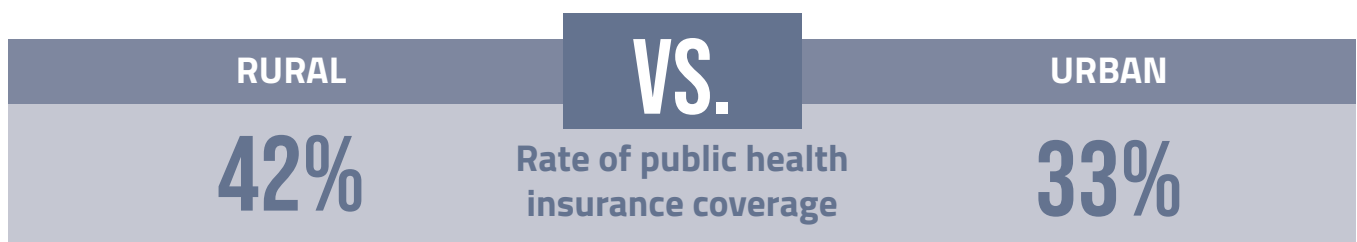
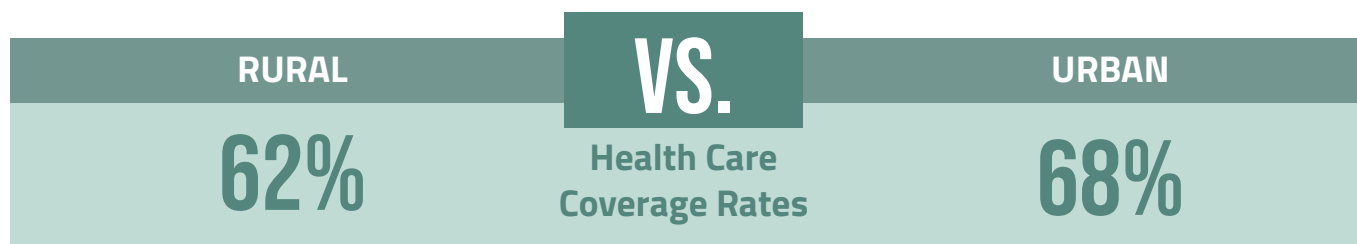
HEALTHCARE COVERAGE



In 2018, private insurance rates were higher for urban populations (68 percent compared to 62 percent) whereas rural areas had higher rates of public health insurance relative to urban areas (42 percent compared to 33 percent).

Additionally, Medicare and Medicaid are critically important to older Americans and people with disabilities. Moreover, the clinical infrastructure in many rural areas is more limited, with a focus on primary care and chronic disease management

and less access to specialty care.³⁵ There are also gaps in oral and mental health services (DHHS Rural Health Action Plan, page 10).





MATERNAL HEALTH

One of the most important factors in an infant's health is their mother's health before and during pregnancy. Low birth weight, birth defects, and even infant death are tied to factors such as access to prenatal care, health risk factors, and health behaviors like smoking or drinking alcohol. Importantly, structural racism presents consistent barriers to healthy outcomes for women of color and their babies.

PREGNANCY-RELATED SERVICES

While almost 70% of all women in NC receive prenatal care in the first trimester, African-American and Hispanic women are less likely to receive prenatal care compared to their white counterparts.

Racial disparities also impact NC's infant mortality rate: African-American babies are more than twice as likely to die before their first birthday than white babies.

-- 2021 North Carolina Child Health Report Card published by NC Child and the NC Institute of Medicine

INFANT MORTALITY RATES

The overall Infant Mortality Rate is 6.9 in North Carolina, with that number rising to 7.4 across our rural counties.

Black infant mortality (12.8 per 1,000) is more than 2.5 times the rate of White, non-Hispanic infant mortality in North Carolina.

In 2018, Pamlico county had the highest infant mortality rate in the state (22.2%)

In 2020, Warren County had the highest infant mortality rate in the state (22.5)

TRAVEL TIMES TO RECEIVE CARE

The rural hospital closure crisis is continuing to intensify. According to the UNC Sheps Center, in 2019, the United States experienced the greatest number of closures in a single year since the beginning of the century.

At least 120 rural hospitals have closed since 2010, leaving communities without access to emergency care, increasing travel times for patients, and exacerbating social disparities in health outcomes.

SEXUAL HEALTH

TEEN PREGNANCY

NC RANKS 20TH

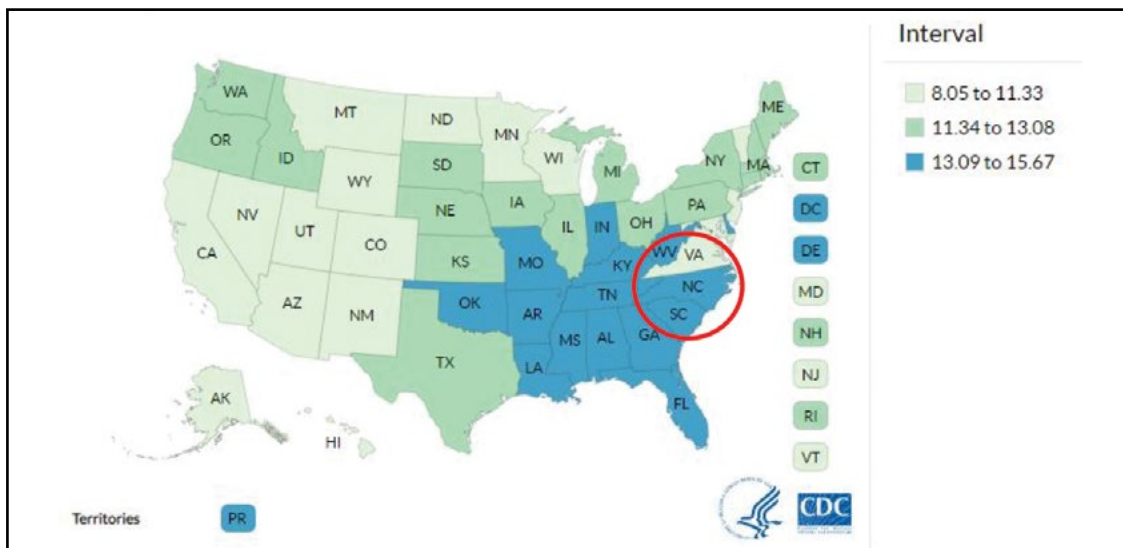
among all states with 17.3 births to girls aged 15-19 years of age per 1,000 people.

HIV DIAGNOSES

NC RANKS 37TH

among all states with 11.5 new HIV diagnoses per 100,000 people.

HPV-Associated Cancer Rates



Despite the availability of safe and effective vaccines, fewer adolescents in rural areas are getting the HPV vaccines compared to adolescents in urban areas, leaving them vulnerable to serious diseases.

According to the *Centers for Disease Control & Prevention 2018 National Immunization Survey of Teen Data*, rural teens were 15 percentage points lower in receiving HPV vaccines compared to teens in urban areas.

BEHAVIORAL HEALTH

NORTH CAROLINA RANKINGS

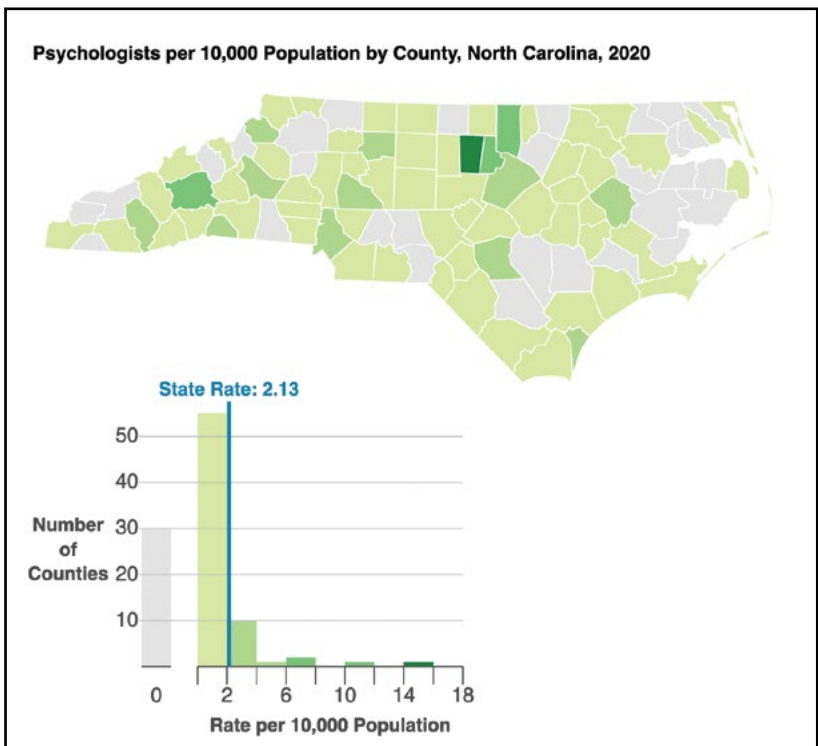
30 counties with no active psychologists

34th out of all states for adults with a mental illness who did not receive treatment in 2021 (56.5%).

35th out of all states (and Washington, DC) for prevalence of untreated youth with depression (60.2%)

44th for youth with severe major depressive episode who received some consistent treatment (21.9%).

94 of NC's 100 counties have a population or geographic mental health HPSA (94%)



* The term "mental health workforce" includes psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in mental health care.

BEHAVIORAL HEALTH

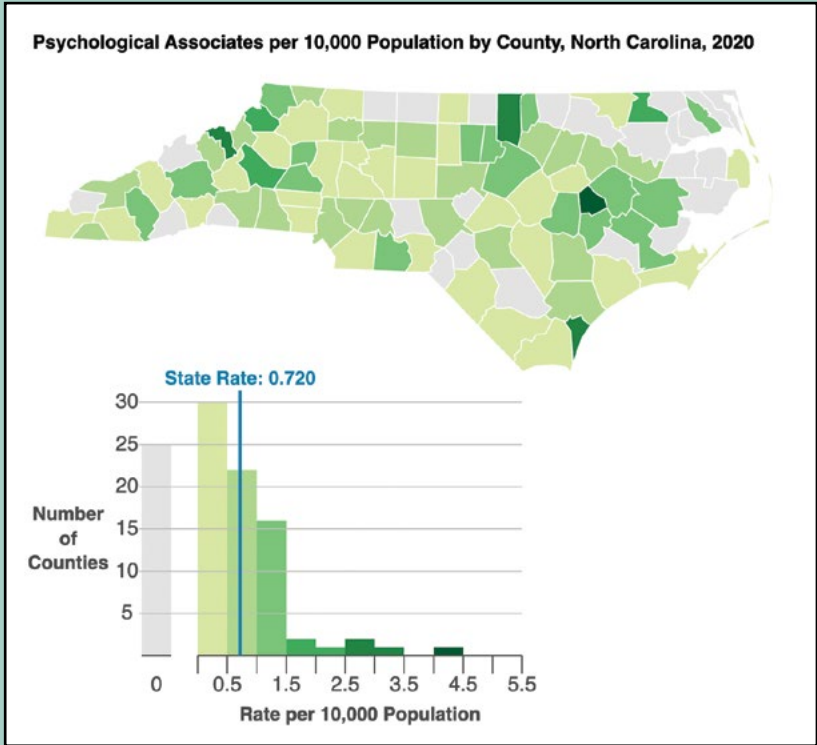
34 COUNTIES WITH NO ACTIVE LICENSED PSYCHOLOGIST

25 COUNTIES WITH NO ACTIVE LICENSED PSYCHOLOGIST ASSOCIATE

RURAL YOUTH ARE TWO TIMES MORE LIKELY TO COMMIT SUICIDE THAN THEIR URBAN COUNTERPARTS.

NORTH CAROLINA RANKINGS

10th
among all states
with a suicide rate of
12.9 per
100,000 people.





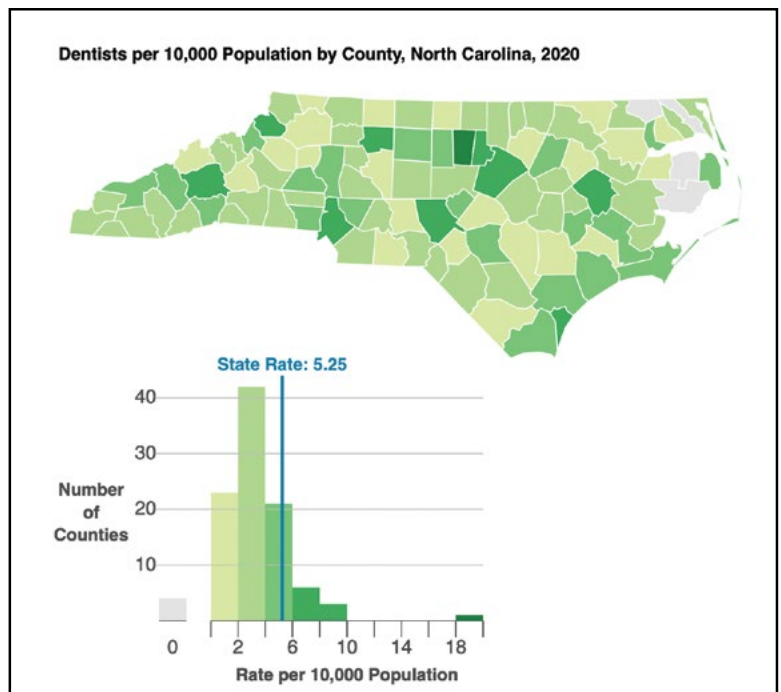
ORAL HEALTH

ORAL HEALTH CARE ACCESS

- As of September 2019, an estimated **2.4 million** North Carolinians struggled to get adequate dental care, according to the Health Resources & Services Administration of the U.S. Department of Health and Human Services.
- As of January 2022, the U.S. Health Resource and Services Administration has either partially or fully designated **all 100 North Carolina counties** as a Dental Health Professional Shortage Area (dHPSA).
- Only 35.1% of dentists participate in Medicaid in North Carolina, making NC 37th out of all the states in dentist participation in Medicaid or CHIP.

FLOURIDATED WATER ACCESS

- Nearly 90% of the overall state population has fluoridated community water access.
- Only 17.9% of the population served by public water systems receive fluoridated water in Region 1, which includes Cherokee, Graham, Clay, Macon, Swain, Jackson, Haywood, and Transylvania Counties.



ORAL HEALTH



SUGAR-SWEETENED BEVERAGES

- 26.9% of rural respondents had 1 or more SSB a day as compared to 16.7% of urban counterparts.
- 23.8% of rural residents had 1 or more sugar sweetened fruit beverages, sweet tea, sports drinks, or energy drinks. (i.e., Kool-aid, lemonade, Gatorade, Red Bull, etc.) as compared to 18.4% of urban residents



TOBACCO USE

- Cigarette Smoking is more prevalent in rural areas than in urban areas (20.6% in rural areas vs 11.2% in urban areas). Cigarette smoking can cause oral health problems.



THE RURAL SAFETY NET

NORTH CAROLINA SAFETY NET PROVIDERS

80 Rural Health Clinics or Rural Health Centers

20 Critical Access Hospitals

13 State-designated Rural Health Centers

11 Small Rural Hospitals

257 Federally Qualified Health Clinics

83 Free & Charitable Clinics

10 Rural PPS Hospitals

Safety net providers are “those providers that organize and deliver a significant level of health care and other health-related services to uninsured, Medicaid and other vulnerable populations.”

Core safety net providers are those who “either by legal mandate or explicitly adopted mission, offer care to patients regardless of ability to pay; and a substantial share of their patient mix are uninsured, Medicaid and other vulnerable patients.

Source: Presentation to the NCIOM Legislative Health Policy Fellows Program by Pam Silberman, JD, DrPH, Professor, Dept. Health Policy and Management Gillings School of Global Public Health, April 23, 2018.

HOSPITAL SUSTAINABILITY

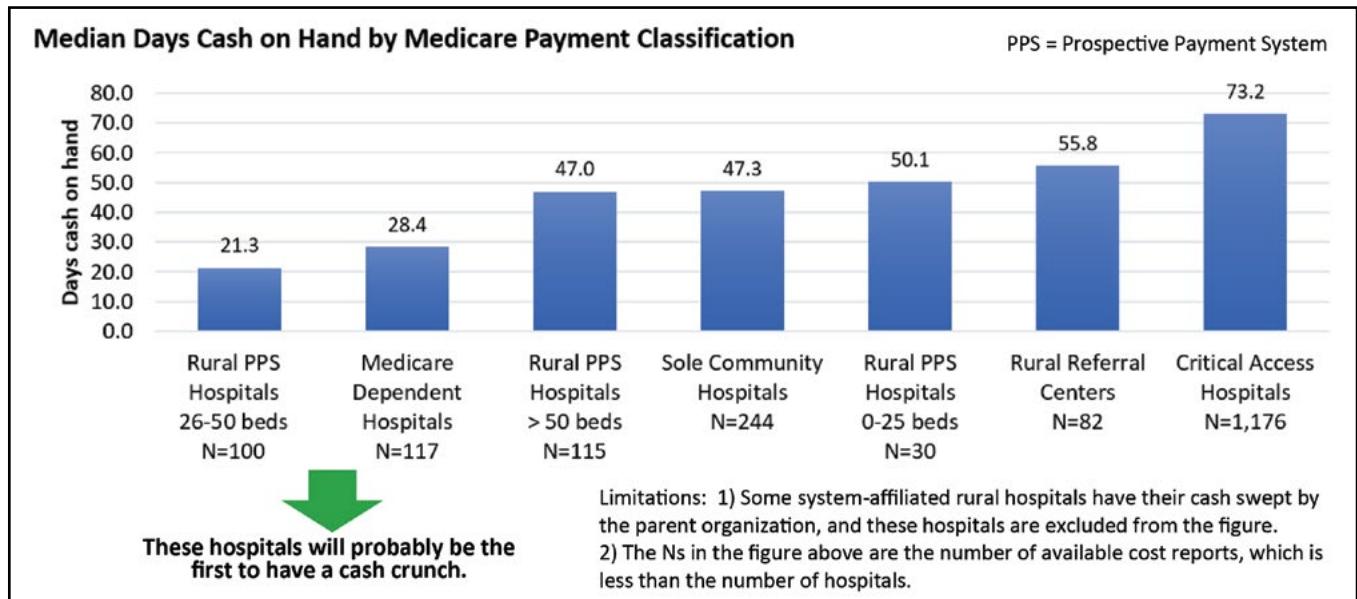
According to the North Carolina Rural Health Research Program at The Cecil G. Sheps Center for Health Services Research, acute care hospitals have lower revenue because elective procedures and some routine care are being canceled to ensure capacity for COVID-19 patients. Many also face higher expenses because of supplies, equipment, and staff required for COVID-19 patients.

Many rural hospitals have low cash levels and may struggle to get through the current cash crunch.

Rural residents are 40% more likely to be uninsured and eligible for Medicaid expansion. Prior studies have shown that Medicaid expansion is associated with improved hospital financial performance and reductions in hospital closures.

11 RURAL HOSPITALS HAVE CLOSED IN NC SINCE 2005

138 RURAL HOSPITALS HAVE CLOSED SINCE 2010

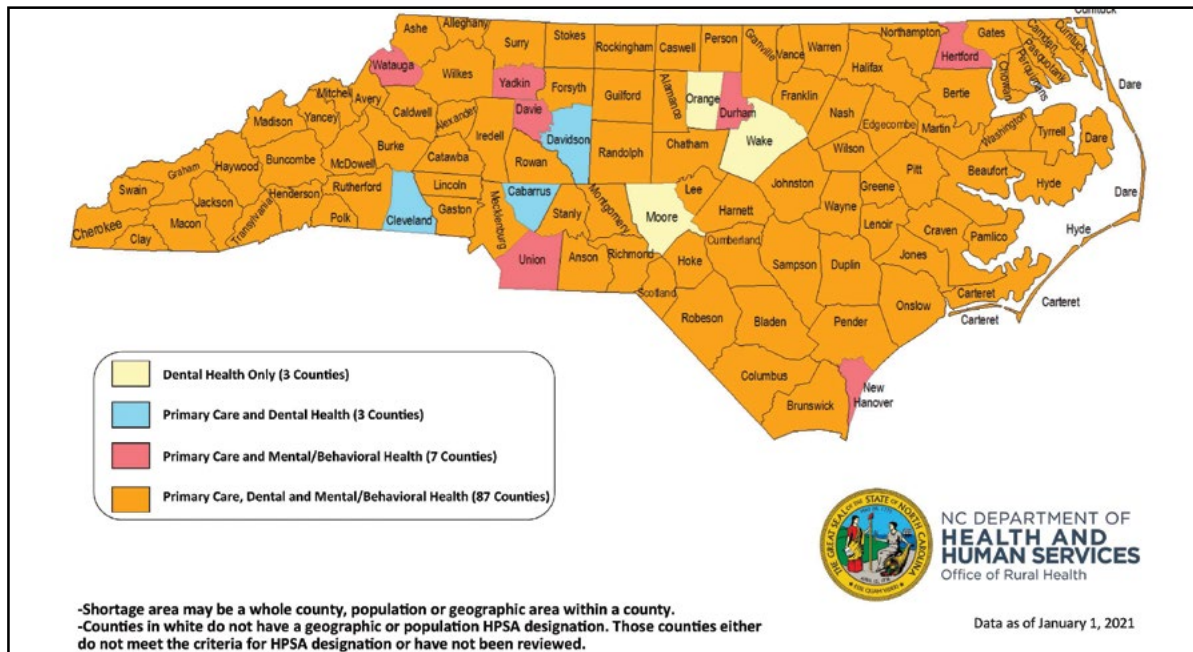




Ideally, people have access to the type of care they need in their communities. However, 80 counties in North Carolina face shortages of primary care providers, with many counties

also experiencing shortages of dental and/or behavioral health providers (Health Professional Shortage Areas or HPSAs).

NORTH CAROLINA COUNTIES DESIGNATED HEALTH PROFESSIONAL SHORTAGE AREAS SFY 2020





4 counties with no dentists and only 25% of dentists practicing in rural areas

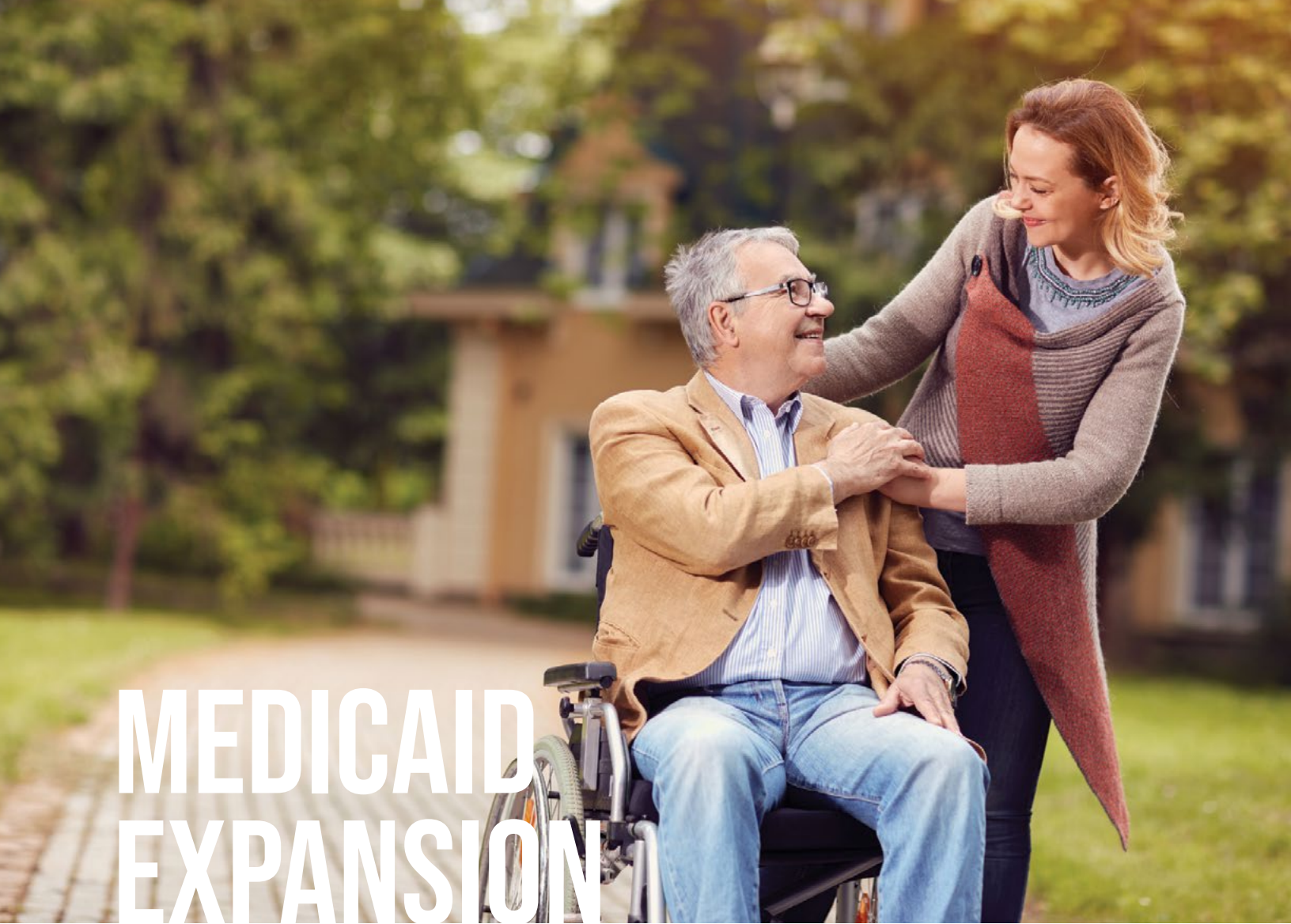
2 counties with no physicians and 21% of physicians in rural areas

30 counties with no psychologists and 15.5% of psychologists in rural areas

1 county with no nurse practitioners and 26% of nurse practitioners in rural areas

4 counties with no physician assistants and 25% of physician assistants in rural areas

13 maternity units or full hospital closures that include maternity units (2014-2019)



MEDICAID EXPANSION

**BY EXPANDING MEDICAID,
MORE THAN 600,000 NORTH
CAROLINIANS WILL OBTAIN
ACCESS TO TIMELY, AFFORDABLE
HEALTH CARE, A CORNERSTONE
OF OVERALL HEALTH,
WELL-BEING, AND ECONOMIC
SECURITY.**

The Foundation for Health Leadership and Innovation (FHLI) and the NC Rural Health Association (NCRHA) support Medicaid expansion in North Carolina. By expanding Medicaid, more than 600,000 North Carolinians will obtain access to timely, affordable health care, a cornerstone of overall health, well-being, and economic security. The working families of this state, including veterans, front-line workers, small business owners, parents, and others, will benefit from expansion. Increasing access to health care for more North Carolinians will strengthen our economy, create more resilient communities, and reduce uncompensated health care costs. We also believe that expanding Medicaid in North Carolina will better support our

rural health care systems and providers, who face especially daunting challenges during the global pandemic.

FHLI aims to advance programs and partnerships that increase access to affordable, quality health care services and improve the overall health of our state's communities. We are proud to endorse this policy change in alignment with our organization's principles.



Foundation for Health
Leadership & Innovation

NC RURAL HEALTH ASSOCIATION

SUPPORTING
PARTNERSHIPS AND
STRATEGIES THAT
IMPROVE HEALTH
OUTCOMES IN RURAL
NORTH CAROLINA



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