Portrait of Oral Health

In North Carolina

Foundation for Health Leadership & Innovation

NC ORAL HEALTH COLLABORATIVE

2024

Contents

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A Portrait of Oral Health

Executive Summary

North Carolina has made significant strides in recent years–from Medicaid Expansion to legislation expanding public health dental hygienists' ability to practice at the full scope of their licensure. However, far too many people across the state remain without access to quality care.

The 2024 Portrait of Oral Health outlines the state of access and equity in North Carolina, diving into data to paint a picture of who does and does not have access to the care they deserve.

In 2024, North Carolinians' ability to access oral health care largely depends on where they live and how much they earn. For all who lack traditional access to care, the oral health safety net is strong. However, it is not large enough to meet all of North Carolina's needs. Dentists in private practice must significantly participate in the Medicaid Dental Program to increase the system's capacity.

Moving into the second half of the 2020s, North Carolina must recommit its focus on systems-level change and **retaining and strengthening a robust safety net**.

To do this, North Carolina needs structural changes to ensure progress is felt in every corner of the state. Opportunities for systems-level change include:

1. **Investing new funding in the North Carolina Medicaid Dental Program.**
2. **Creating a Rural Areas Forgivable Loan Pilot Program that includes dental staff.**
3. **Promoting legislation to allow all dental staff to practice at the full scope of their training and licensure.**

The North Carolina Safety Net

North Carolina's safety net includes a robust network of Federally Qualified Health Centers (FQHCs), local health departments, and free and charitable clinics. It also includes all providers who offer services to uninsured, underinsured, or Medicaid-insured individuals.

Data at a Glance

- North Carolina ranks 18th in the nation for community water system fluoridation.
- There are 151 operating safety net dental clinics across North Carolina, 86 in urban counties and 65 in rural counties.
- As of 2024, 93 of North Carolina's 100 counties are dental Health Provider Shortage Areas (dHPSAs).
- Only 28% of dentists are considered meaningful Medicaid providers.
- The rate of emergency department visits for non-traumatic dental conditions is more than double for Black North Carolinians compared with White North Carolinians.
- North Carolina has risen from 37th to 24th in the nation for dentists per capita, but only 20% of new dentists practice in the state's 90 rural counties.
- From December 2023 through July 2024, more than 520,000 North Carolinians gained dental health benefits through Medicaid Expansion.

Progress and Pain During a Global Pandemic

When the World Health Organization (WHO) declared an end to the COVID-19 pandemic public health emergency in May 2023, existing disparities, exacerbated challenges, and strain on an overburdened oral health care system remained.[1] The COVID-19 pandemic significantly altered the oral health landscape in a way that will continue to pose significant challenges. To mitigate the spread of COVID-19, people were advised to postpone non-emergency dental care.

Around 76% of dental offices closed temporarily in accordance with public health guidelines, limiting services to emergency care. Another 19% closed entirely.[2] While service disruption was necessary during a global pandemic, this gap in routine care for millions of Americans increased risks for long-term consequences, from untreated conditions that now require more invasive treatments to increased discomfort in traditional health care settings.

Early data and anecdotal evidence from dental professionals emphasize the widespread toll the pandemic had on oral health across the United States. Economic hardship, stress-induced oral health issues, and limited access to healthy food options also contributed to deteriorating oral health conditions.[3]

According to surveillance data from a systematic sample of schools across North Carolina, there was a noticeable shift in tooth decay among kindergartners from the pre-pandemic years (2016–2020) to post-pandemic (2022–2023). Specifically, untreated decay increased from an average of 15.3% pre-pandemic to 19.9% post-pandemic. Across the same period, treated decay rates decreased from an average of 24.8% to 22.1%. These shifts reflect how access to care changed during the pandemic.[1]

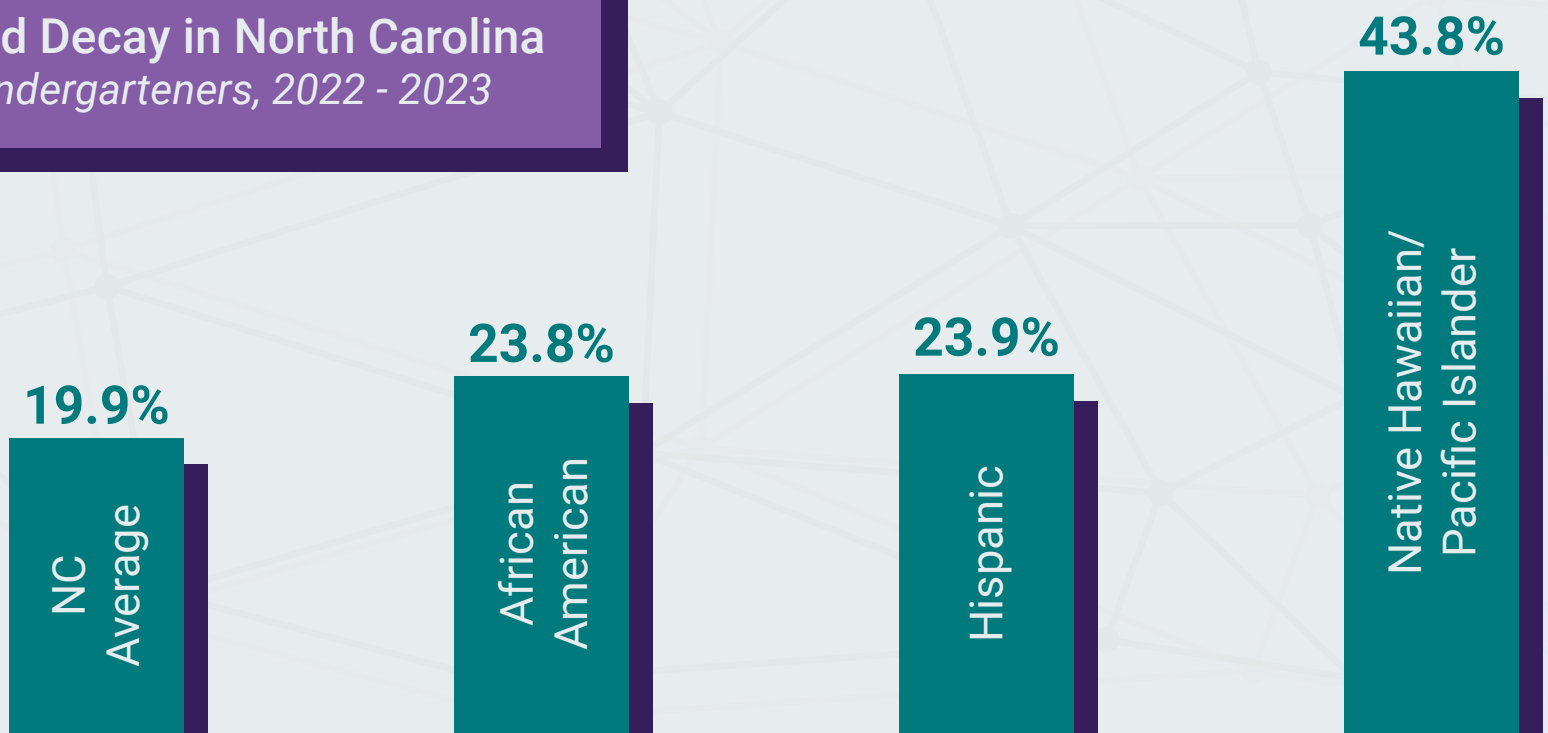
The data also revealed stark racial disparities in oral health, with Native Hawaiian and Pacific Islander children experiencing untreated decay at a rate of 43.8%, the highest among all racial groups and more than double the state's average of 19.9% in 2022-2023.

Compounded by the fact that 31.3% of these children face urgent dental needs, these inequities indicate a critical gap in preventive care and treatment access. Similarly, Hispanic and Black children face their own set of challenges, with untreated decay present in 23.9% and 23.8% of these groups, respectively, also surpassing the state average.

While this data only represents kindergartners in North Carolina, it underscores the need for a targeted approach to resolve oral health disparities, especially for Native Hawaiian and Pacific Islander, Hispanic, and Black children.[4]

Untreated Decay in North Carolina

Among kindergarteners, 2022 - 2023



Progress Made During COVID-19

More widespread adoption of teledentistry, plus regulatory alignment allowing for reimbursement of teledental services.

Expanded adoption of Silver Diamine Fluoride as an important modality to arrest tooth decay.

Although the pandemic exposed new and existing challenges, public health also managed to make progress on a variety of critical issues. The crisis shed light on innovative strategies that have the potential to reshape the health care landscape as we know it.

Teledentistry

The pandemic accelerated a more widespread adoption of telehealth, offering temporary solutions to maintain continuity of care when in-person visits were considered unsafe. While many pandemic-specific teledentistry provisions ended with the sunset of the public health emergency, efforts to make these and other adaptations permanent must continue.

Benefits of expanded access to teledentistry services extend far beyond pandemic-related safety precautions and include:

- Increased options for preventive care in regions without reliable local access points.
- Opportunity for preventive care, check-ups, and diagnostic care that minimizes the need for transportation, time off from work, childcare, and other common barriers.
- Expanded viability of care in non-traditional settings, including school-based care and care at retirement homes that includes a direct digital connection to in-office dental providers.

Silver Diamine Fluoride

Silver Diamine Fluoride (SDF) emerged as a pivotal non-surgical approach to manage tooth decay, particularly among vulnerable populations. Despite slower adoption in North Carolina, SDF's ability to stop decay without the need for anesthesia or invasive procedures highlights a shift towards more accessible care.

The unique circumstances presented by the COVID-19 pandemic prompted widespread precautions to mitigate the spread of the virus, placing unprecedented burdens on the oral health care system. Decision-makers must fully understand the current landscape, including lasting impacts prompted by the pandemic, to tackle challenges effectively. Comprehensive data collection efforts across demographic groups will remain important in developing informed solutions to oral health disparities.

Access and Equity

North Carolina's Public Health Infrastructure

Marked inequities in access to oral health care in North Carolina remain prominent, reflected by disparities in outcomes and service utilization rates. This chapter examines access through a public health infrastructure lens. Key indicators of oral health disparities rooted in public health infrastructure include water fluoridation rates, access to safety net providers, and Medicaid provider participation.

- Historically, few North Carolinians access oral health services while pregnant, with further disparities for certain subpopulations.
- Individuals with intellectual and developmental disabilities (IDD) face a shortage of providers equipped to treat them and are less likely to receive oral health care.
- Receipt of and payment for oral health care in North Carolina varies widely by race, income, and geography.

Water Fluoridation

Since 1945, when Grand Rapids, Michigan, became the first municipality to fluoridate its drinking water, community water fluoridation has grown to become what many consider among the greatest public health achievements to date.

In North Carolina, 87.8% of the population served by a community water system (CWS) have access to fluoridated water. This rate is significantly higher than the national average of 72.7% receiving fluoridated water through their CWS.[5]

North Carolina ranks

18th

in the nation for community water system fluoridation

While this is a positive indicator for the state, when broken down by geographic region, only 70.8% of rural North Carolinians receive fluoridated water through their CWS, compared with 91.8% of urban residents. Many rural homes in North Carolina have private wells and are potentially much less likely to have adequate water fluoridation.

Since 2000, community water fluoridation across North Carolina has slowly grown from 83.3% coverage to its current rate.[6] The state should work to continue this trend, maintaining a high rate of access to fluoridated water to help fight tooth decay. Additionally, the state government and non-governmental advocates should consider providing additional education and resources to municipal governments managing fluoridated water systems.

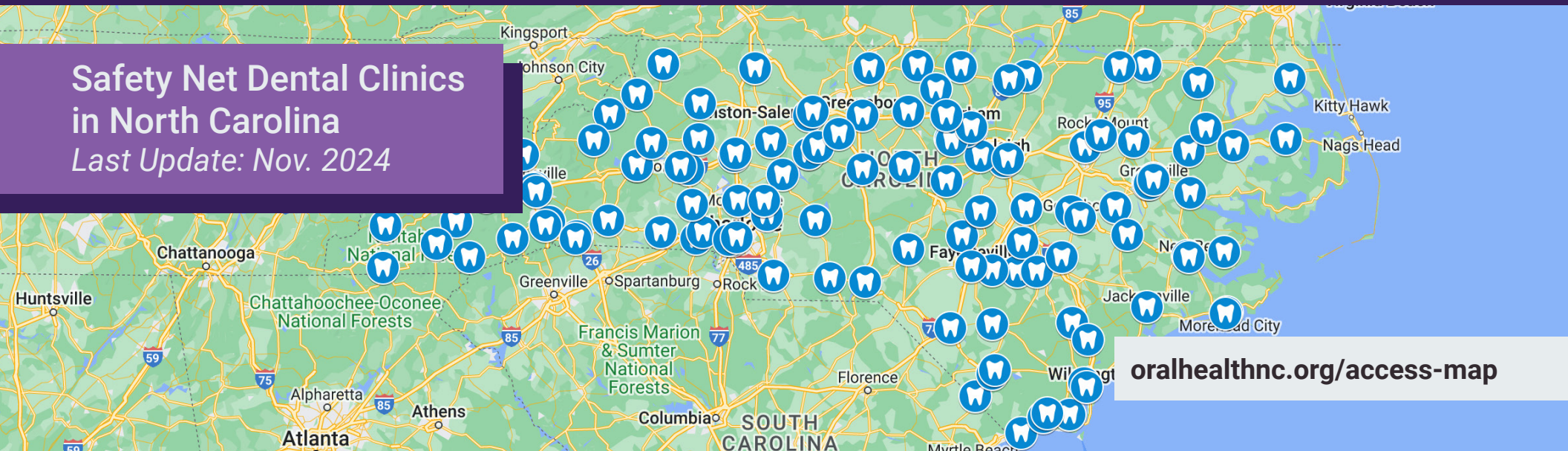
Safety Net Providers

Safety net dental clinics provide critical access to care for low-income, uninsured, and Medicaid-insured populations in North Carolina. These providers offer affordable or free dental services that are often the only option for underserved groups. Examples of safety net access points in North Carolina include county health departments, rural health centers, community health centers, other local health departments, free and charitable clinics, and private practice providers who accept Medicaid insurance and/or offer care on sliding fee scales.

There are currently 151 operating safety net dental clinics across North Carolina (this number does not include private practice providers who participate in the safety net).[39] Most of the 100 North Carolina counties have access to at least one clinic; however, geographic disparities exist and disproportionately impact rural residents. Of the 151 clinics statewide, 86 are in urban areas, while only 65 are in rural counties. Additionally, 15 counties considered rural by the North Carolina Department of Health and Human Services (NC DHHS) do not have any safety net dental clinics.[39] This leaves many rural communities with inadequate safety net access, compounding transportation barriers for rural, low-income patients.

Safety net providers play an essential role for North Carolinians who would otherwise lack access to care. Dr. Katrina Mattison-Chalwe, dental director at Piedmont Health Services, a safety net provider with 11 clinic locations, said these clinics provide high-quality, low-cost care regardless of insurance status. She said they have been especially vital during and after the COVID-19 pandemic in helping address service backlogs and by offering low-cost care to those financially impacted by the pandemic. Clinics still face funding challenges, however, due to limited government support and low Medicaid reimbursement rates. This leads to many issues with staffing, supplies, salaries, and provider burnout.

Safety net dental clinics remain underfunded despite their importance, and they continue to face sustainability challenges in serving vulnerable populations. With Medicaid Expansion, an anticipated influx of new patients will further strain capacity. Addressing provider concerns around resources, staffing, and reimbursement rates should be a top priority for reducing disparities and maintaining access, especially in rural North Carolina.



The private practices pretty much can beat us out in wages every day all day…In order for you to go into public health you have to be mission oriented and heart driven. But sometimes the money wins out; people need to be able to support their families at home.

– Dr. Katrina Mattison-Chalwe
Dental Director, Piedmont Health Services

Medicaid Provider Participation

Low Medicaid reimbursement rates for dental services have limited provider participation, restricting dental care access for Medicaid enrollees in North Carolina. Many private practice providers do not accept Medicaid insurance or limit participation in the program, as patients with private insurance offer significantly higher payments.

Only around 42% of North Carolina dental providers accept Medicaid insurance. However, only 28% are considered meaningful participants, billing over $10,000 annually for Medicaid services.[9] This is far below the 85.7% of physicians who accept patients with Medicaid insurance. Just over 1,000 meaningful dental providers must care for nearly 3 million Medicaid-insured patients, with hundreds of thousands of more people gaining insurance through Medicaid Expansion.[10] As of 2020, 31% of North Carolina Medicaid enrollees were unable to secure dental appointments.[9]

While North Carolina benefits from a robust safety net and a Medicaid program that provides comprehensive oral health benefits to children and adults, significant improvements are vital to ensure everyone can access the care they deserve. Policy changes to modernize Medicaid reimbursement rates and efforts to expand safety net access points would bring about much-needed improvements for millions of North Carolinians.

North Carolina Medicaid

2023 Reimbursement Rates

Procedure	2023 NC Medicaid Rate	Median Private Insurance Reimbursement	Percentage of Private Rate
Resin-based composite (tooth filling)	$73.72	$230.00	32%
Periodic oral evaluation	$24.51	$65.00	38%
Prophylaxis (teeth cleaning) - child	$28.46	$85.00	33%
Prophylaxis (teeth cleaning) - adult	$39.53	$114.00	35%
Comprehensive orthodontics	$856.10	$5,924.00	14%
Tooth extraction	$66.44	$240.00	28%

Race, Income, and Geography

While significant strides have been made over the past few decades regarding oral health access and equity, serious issues remain and are especially concentrated with racial, income, and geographic disparities. Analyzing and remedying these disparities is vital to ensuring health equity for all North Carolinians.

Racial, income, and geographic barriers are interconnected, as certain racial and ethnic groups and rural populations are also more likely to have lower socioeconomic status. Additionally, individuals can be a part of multiple underserved populations, which intersect and amplify disparities. For example, individuals with low incomes and several minority populations across North Carolina are less likely to use dental services, a gap that widens even more in rural areas.

Race

Certain racial and ethnic groups are, on average, less likely to have access to care and, as a result, are more likely to face worse health outcomes. The rate of non-traumatic emergency department visits for Black North Carolinians, at 149.8 visits per 10,000 people, is more than twice the rate of 62.3 for White residents.[20]

According to a 2023 NC DHHS survey of kindergartners, Black, Hispanic, Native American/Hawaiian, and American Indian/Alaska Natives all had untreated tooth decay rates significantly higher than the rate of 16.1% for White children.[21]

Additionally, the percentage of Hispanic kindergartners who needed urgent dental care was double that of White kindergartners. Native American/Hawaiian and American Indian/Alaska Natives had rates over five and 10 times that of white Kindergartners, respectively.[21] Many minority groups, particularly Black and Hispanic populations, are more likely to be uninsured or have Medicaid insurance.

> “Historically underrepresented and rural communities are left behind, and accommodations often feel like an afterthought.
>
> *— Kelsey Yokovich, Community Voice Program Manager, Foundation for Health Leadership and Innovation*

Income

Income plays an important role in the affordability and subsequent utilization of dental health services. According to a survey by the Western North Carolina Health Network, those with low income and very low income were far less likely to use dental services compared with all adult Western North Carolina residents.[22]

Across the United States, low-income families spend more than ten times waht wealthier families spend on oral health care, proportionate to their total income.[40] This leads to lower utilization and worse outcomes among low-income groups. Additionally, individuals with low incomes are far more likely to be uninsured or Medicaid-insured, meaning they lack access to providers who only accept private insurance.

Many low-income, uninsured patients can only afford oral health care through safety net providers, who provide quality care but are underfunded and understaffed, making it difficult to fully meet the needs of the populations they serve.

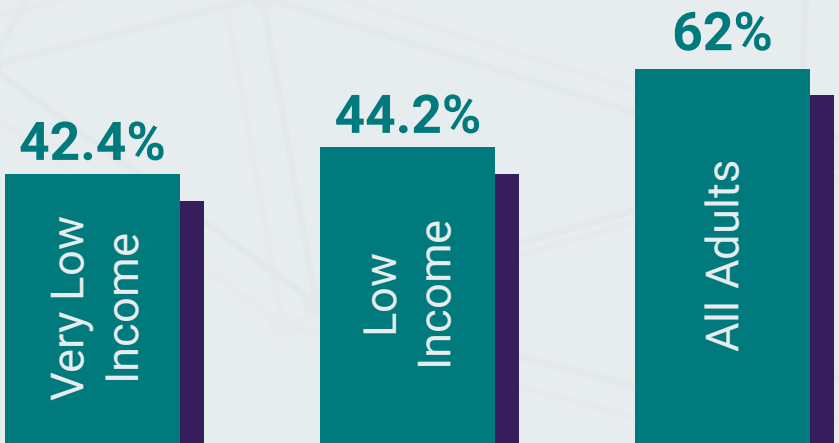
Low utilization contributes to worse outcomes. Seven out of every 10 emergency department (ED) visits in North Carolina for non-traumatic dental conditions were made by patients with Medicaid or uninsured individuals.[20]

Geography

Geographic disparities in dental care access continue to exist across North Carolina and were exacerbated by pandemic-influenced workforce shortages. There are dental workforce shortages across the state, with 93 of North Carolina's 100 counties designated as dental Health Provider Shortage Areas (dHPSAs).[41] Only 26.83% of the population lives in non-shortage areas. In rural areas, the dentist-to-population ratio is lower compared with urban areas. Currently, four rural North Carolina counties, Gates, Tyrrell, Hyde, and Jones Counties, have no practicing dentists.[42]

Pregnant people in North Carolina's western and southeastern regions are more likely to use a dental service under the Medicaid for Pregnant Women (MPW) program, and those in rural counties are more likely to travel outside of their counties to seek care. Additionally, safety net providers, critical sources of care for populations with low incomes, are distributed closer in urban counties, with 49 rural sites compared with 75 urban sites as of 2024. This distribution further exacerbates geographic disparities in access to care as rural counties have a nearly 45% higher poverty rate compared with urban counties.[23]

WNC Dental Service Utilization, 2018[22]



To mitigate the extent of racial, income-based, and geographic disparities, North Carolina must develop comprehensive strategies to promote oral health equity and ensure all residents have access to quality dental care. Targeted interventions are necessary to address the complex and intersecting oral health disparities, including:

- **Expanding the dental workforce, particularly in rural areas, and increasing Medicaid provider participation through higher reimbursement rates to improve access for populations with low incomes.**
- **Strengthening resources for vital safety net clinics to ensure they can meet the needs of underserved communities.**

The Oral Health Workforce

An adequate supply and appropriate distribution of all members of the dental team are necessary to maintain a strong oral health workforce. However, as of January 2024, 93 of North Carolina's 100 counties are considered dHPSAs, with further disparities between rural and urban areas.[24]

In recent years, the number of dentists per capita has increased in North Carolina, taking the state from 37th nationally in 2017 to 24th in 2021. However, the current rate of 57.2 dentists per 100,000 residents still falls below the U.S. average of 60.4.[25]

While the total supply of dentists has increased, dental professionals disproportionately work in metropolitan counties with an existing strong supply of providers. Ninety, primarily rural counties, which make up over 60% of North Carolina's population, added just 20% of new dentists from 2017 to 2021.[26]

North Carolina is the third fastest growing state in the country.[43] While a significant portion of North Carolina's population growth has been concentrated in urban areas, 75 of the states 100 counties have grown since 2022.[44]

To bolster the upward trend of dentists per capita, North Carolina, the state should work to attract and retain oral health practitioners. It is important to tailor these initiatives to address the urban-rural disparity among other underserved populations.

COVID-19 Impact on the Oral Health Workforce

North Carolina faced growing oral health workforce shortages before the COVID-19 pandemic, and the pandemic further exacerbated these staffing challenges. Heightened competition for the remaining staff in a limited market led private practices to offer higher salaries and benefits to attract workers. While a positive trend for the workforce overall, this has resulted in pronounced staffing consequences for safety net clinics, such as Piedmont Health, where Dr. Katrina Mattison-Chalwe serves as the dental director.

Safety net clinics operate on limited budgets due to government funding constraints and low Medicaid reimbursement rates. Because of this, they are often unable to match private sector salaries and benefits. Dr. Mattison-Chalwe explained that this growing wage gap has made retaining and recruiting staff much harder for safety nets, compounding the workforce shortage post-COVID-19.

Dr. Mattison-Chalwe gave an example of private practices offering 30% higher raises than what her clinic can offer to hygienists. She described the struggle of losing her existing workforce, saying that "2021 to 2022 was our biggest jump off. I think we lost around 50% of staff and providers, who all went into private practice."

Additionally, Dr. Mattison-Chalwe emphasized that the workforce shortage combined with a lack of funding for Federally Qualified Health Centers (FQHCs) strains her capacity to fully serve her safety net patient population. She spoke about how her providers can only see a certain number of patients per day and can only see patients if they have an assistant to work with them. At the time of this report, her office had at least four unused treatment rooms every day.

Maintaining adequate staffing is essential for safety nets to meet community needs and help reduce disparities. Increased funding, higher Medicaid reimbursement rates, incentives to work at safety net clinics, and other targeted investments could help clinics attract the professionals they need.

Our providers see a certain amount of patients everyday per column. But they can only run their column if they have an assistant. And so right now our clinic has at least 4 chairs that are down. So that is 36 patients a day that Piedmont Health can't see. Whether they be insured or uninsured. We can't see them because of the shortage. And so exponentially, you know, that makes a big difference when you're open. At least 200 days out of the year and you're losing 36 patients a day.

– Dr. Katrina Mattison-Chalwe, on the oral health workforce shortage and its impact on safety net clinics.

Workforce and Emergency Department Utilization

In 2019, 75,934 North Carolinians went to emergency departments (EDs) for oral health care because they lacked accessible routine care.[20] ED visits for non-traumatic dental conditions (NTDCs) in North Carolina lead to high medical expenses for individuals and overextended resources at the systems level.

A CareQuest Institute for Oral Health study showed that in 2019, the average ED visit for NTDCs in North Carolina cost $1,527. With 75,934 visits in 2019, that amounts to approximately $115 million in health care costs. Of that, up to $109 million could have been saved by diverting those patients through regular preventive care at dental offices.[27]

North Carolina adults ages 25 to 34 go to EDs for NTDCs at the highest rate compared with other age groups, nearly twice the national rate. Adults ages 25 to 34 without insurance represent 61.1% of ED visits for NTDCs, and those covered by Medicaid represent 20.7%. Black residents of all ages are the most likely to visit the ED for NTDCs (twice as likely compared with White residents) at a rate of 149.8 visits per 10,000 people.[27]

To improve oral health outcomes at the individual and systems levels, steps should be taken to increase geographic access to providers and care options for underserved populations, including those without insurance. Increasing Medicaid reimbursement rates would give safety net providers much-needed support to increase access for North Carolinas outside of EDs. Ultimately, a reduction in ED use will decrease costs for individuals seeking care and the government, which is the largest source of payment for uncompensated care.[45]

Dental Workforce Demographics

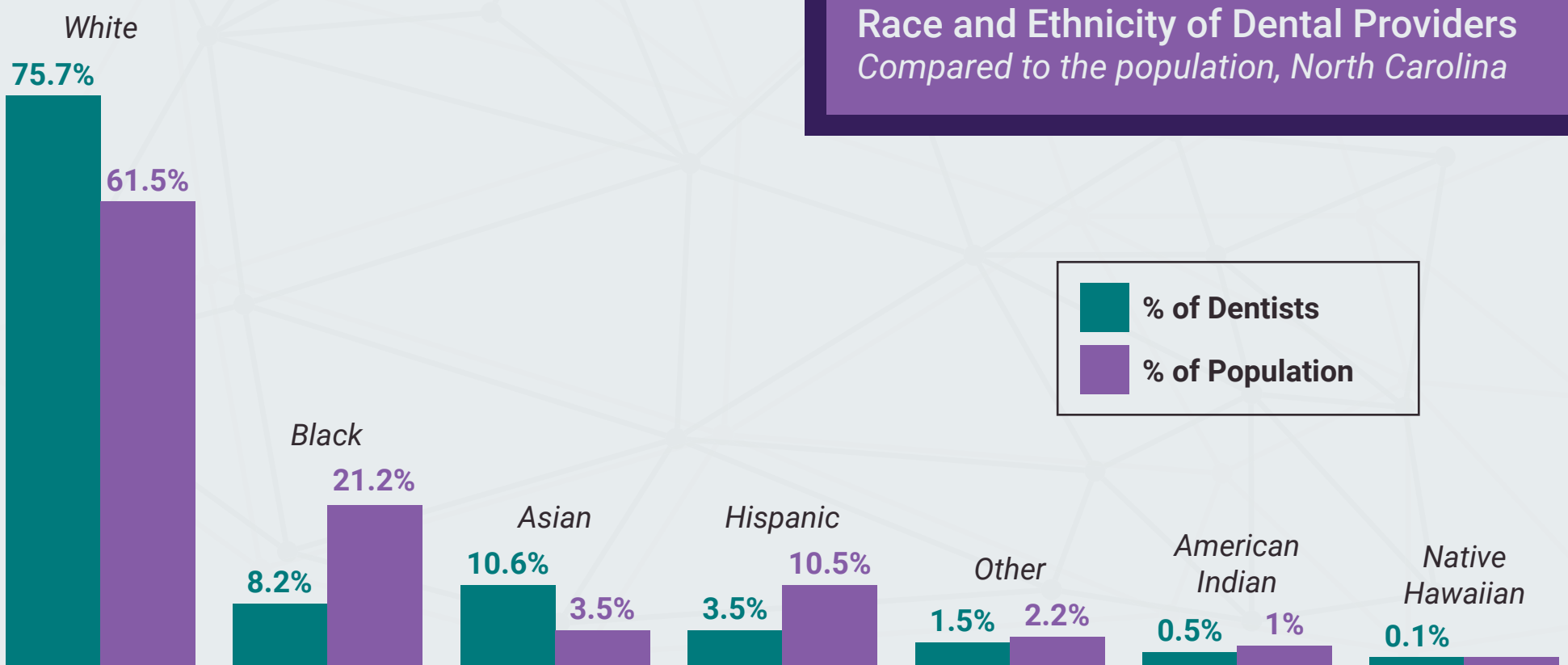
North Carolina's dental workforce has historically lacked diversity in gender, race, and ethnicity compared with the state's population.[28] A more representative workforce is critical for reducing access barriers and meeting the needs of underserved communities. Studies show that female and underrepresented racial and ethnic (HURE) dentists are more likely to treat underserved and low-income communities.[29] Additionally, patients report feeling more comfortable receiving care from a provider of their own race.[32]

In 2023, 75% of North Carolina dentists were White, compared with just 61.7% of the general state population. Additionally, although Black North Carolinians make up 21.2% of residents, they represent only 8.2% of dentists. This disparity extends to gender, with males accounting for 61.1% of dentists despite a more balanced overall population demographic.[25]

Continued efforts to diversify and expand North Carolina's dental workforce could significantly contribute to improving oral health for underserved communities. Recent trends show small signs of improvement, but more focus on recruitment, training, retention, and the career pipeline is required to develop a more representative workforce.

Race and Ethnicity of Dental Providers

Compared to the population, North Carolina



Many students are not taught cultural attunement, and these practices are not woven into their curriculums. Behavioral health is often not included in their learning, creating a gap that causes disparities in providers not understanding long-term impacts.

– Kelsey Yokovich, Community Voice Program Manager
Foundation for Health Leadership and Innovation

Provider Perspectives

Dental Integration in North Carolina

"There are so many benefits to integrated care. It's best for improving patient outcomes, reducing costs, and improving satisfaction for patients and providers, especially in rural areas."

– Dr. Rob Tempel, Associate Dean for Extramural Clinical Practices, East Carolina University School of Dental Medicine

Oral health is overall health. Tooth decay and gum disease can impact the rest of the body and vice versa. Unfortunately, oral health care is often experienced in a vacuum–separate from traditional medical care and frequently seen as a luxury service.

There is growing interest in oral health integration, from broad medical-dental integration to more specific partnerships between oral health providers and behavioral health, pediatrics, obstetrics and gynecology, special needs care, and more.

According to a 2021 National Institute of Health report, "Oral Health in America: Advances and Challenges," periodontal diseases have been hypothesized to be associated with 57 different systemic conditions.47 The report identifies several opportunities for partnerships to address overlapping conditions, including:

- Integrated electronic health records
- Dental-primary care integration
- The addition of medical screenings at dental appointments and vice versa
- Oral health-pediatric care integration

Dr. Tempel underscored the importance of integrated care in Health Professional Shortage Areas (HPSAs), which extend into almost every North Carolina county. He said systems that can provide all services within one building or networks of independent providers with an effective referral system can help bridge gaps made worse by long drives and low provider densities in these areas.

"Especially in a rural area when you're a sole provider, it's stressful and it's isolating," said Dr. Tempel. "When you have a team of professionals working together, it becomes a lot more fun. If you have the satisfaction of being part of a team, you can see the successes, and I think you're going to be able to retain and recruit more people."

Many integrated care efforts are underway in North Carolina, but little conclusive data currently exists. In lieu of data, this section focuses on perspectives from two North Carolina dental directors overseeing integration efforts. They provide insight into launching an integration model, using integrated care to improve services outside of traditional medical and dental settings, and challenges that pose risks to integrated care efforts.

Whether they enter the system through a dental home or a medical home, all of us need to understand how to get them help if we identify need. If the care is not integrated, then I could provide the best dental care in the world, but if they're not going to be able to get control of something like diabetes, then their outcomes are going to be worse.

– Dr. Rob Tempel, Associate Dean for Extramural Clinical Practices, East Carolina University School of Dental Medicine

Launching a Medical-Dental Integration

Dr. Elly Steel, Dental Director for the Cabarrus Health Alliance, oversaw a medical-dental integration program launch in the summer of 2024. Cabarrus Health Alliance placed a public health dental hygienist on their clinical floor, serving pediatrics, women's health, and communicable (infectious) disease patients.

> It's not just about experience. It's about having that full-body picture and the willingness to figure out, 'okay, well today this is what's working, and tomorrow something entirely different is going to work.' The good news is that public health is really good at that.
>
> *Dr. Elly Steel, Dental Director*
> *Cabarrus Health Alliance*

"Those patients range in age from one week old to, I think, the oldest I'm looking at right now is 37," said Steel. "And a good proportion of them have Medicaid, and a good proportion of them have no insurance. A lot of the children have never seen a dentist before."

Cabarrus Health Alliance's integrated hygienist provides cleanings, fluoride treatments, hygiene instructions, nutrition counseling, and anticipatory guidance. Additionally, she helps patients with further care needs schedule follow-up appointments. Cabarrus Health Alliance's dental and medical offices are in the same building, which Steel says helps make their integrated care model work.

"It's been going really great," said Steel. "Having the right hygienist to do this work is really, really important. Having a champion is important for the project."

Steel said that the integrated hygienist, who was only working part-time on Cabarrus Health Alliance's clinical floor then, had seen 110 individual patients in less than eight weeks.

Integrating Mobile Care for Migrant Farmworkers

Dr. Hilary Patterson, Chief Dental Officer at Carolina Family Health Centers, Inc., has worked to integrate dental and medical care in a mobile outreach program focused on providing care to migrant farmworkers in Nash, Edgecombe, and Wilson Counties.

Since 2021, a team from Carolina Family Health Centers, Inc. has taken their mobile unit to farms to provide care to migrant farmworkers. The mobile unit includes two fully functional operatories and is equipped to provide HIV, blood sugar, and A1C testing. It can also provide complete medical exams and various dental services, including X-rays, basic screenings, and cleanings.

"We also have a pharmacy as well if we need to dispense any medications," said Patterson. "Basic stuff like ibuprofen, Benadryl, antibiotics, and if there's something that we can't provide them at the time, we can write a prescription and deliver that medication the next day."

Patterson described a network of care that accounts for many of the unique needs migrant and seasonal farmworkers face. By integrating medical and dental care in a mobile unit, Carolina Family Health Centers, Inc. meets farmworkers where they are, navigating significant time and transportation barriers that the community often faces.

Patterson said that providing care can still be difficult, however. She noted that the farmworkers she and her staff see often have more extensive treatment needs than can be serviced on a mobile unit.

"Another thing we notice is that they often put off medical and dental care until the last possible minute because they don't want to miss work," said Patterson. "They don't want to admit that they're sick."

In addition to those challenges, internet and cell service access remain persistent, especially in rural areas.

"Even right now, I have one single bar sitting in the office," said Patterson. "There are many locations where you don't have service at all, much less any kind of ability for data transferring."

Mobile care units can operate without a digital connection, but access to electronic health records and teledentistry or telemedicine services is important for enhancing care offered in non-traditional settings.

"If we have good signal, we can pull up our EHR and go ahead and schedule people, give them their appointment. But it all depends on the signal," said Patterson.

Integrating Care with East Carolina University

Dr. Tempel spoke about examples of integrated care directly related to the ECU School of Dental Medicine. The Roanoke Chowan Community Health Center (RCCHC) is physically connected to one of ECU's Community Service Learning Centers (CSLCs), which has given both organization's providers an opportunity to explore integrated care.

ECU CSLCs are located across North Carolina and are part of the primary care system in each rural community. They provide dental students with hands-on opportunities to gain experience caring for patients, and they give their communities opportunity to access affordable, high-quality care.

In Ahoskie, the ECU CSLC and RCCHC refer patients to each other when a medical provider identifies a dental need and vice versa.

“It’s connected by a walkway and it’s connected through leadership,” said Dr. Tempel. “When they get a patient needing dental care they refer to us, and we can refer to them for medical needs.”

Dr. Tempel said that ECU’s CSLC model helps RCCHC keep costs low, something that helps make their model work. Additionally, their integrated care efforts have opened up new and unique funding opportunities from the federal government and private grantors.

“Because we have low fees and accept Medicaid, we also get some patients just directly showing up to our clinic and vice versa with the medical clinic,” said Dr. Tempel. “Many of these folks don’t have a medical or dental home, but with integrated care but we can help them get the care they need.”

Barriers to Successful Care Integration Efforts

1. **Staff time and clinic budget constraints.** Available time for extended appointments, open rooms in clinical offices, and funding to offset reimbursement gaps pose threats to successful integration.
2. **Technology constraints.** In significant parts of North Carolina, internet access and cell service pose barriers to integrated care in non-traditional settings like schools, farms, and special care facilities. Additionally, gaps between electronic health and dental records complicate integrated care efforts.
3. **Patient anxiety.** Especially for patients who do not regularly access dental care, anxiety around existing dental conditions and past negative experiences will continue to be a barrier to successful integrated care appointments. Further integration of behavioral health services could help navigate this barrier.
4. **Staff turnover and staffing shortages** continue to plague clinical care, especially in public health settings. For clinics with existing staff shortages, new integrated care models risk overstraining an already strained system. For clinics implementing integrated care models, high turnover rates risk losing the institutional knowledge necessary to make innovative approaches work.

Tips for Successful Integrated Care

1. **Have a "champion."** Having a staff person who believes in the work and has time dedicated to ensuring care gets delivered efficiently and effectively so that it works for patients and providers alike.
2. **Generate buy-in.** Work to generate buy-in from staff on both sides of the integration effort.
3. **Think creatively.** Be ready to adapt integrated care models to fit the needs of the people you serve.
4. **Use a public health mindset.** Take a public health approach to adapting to change and centering patients in care.

Throughout the Lifespan

Oral health is essential for a child's development and overall well-being. Although robust dental benefits are available for children and adults covered by Medicaid in North Carolina, there is a significant discrepancy in health care utilization across age groups. Several factors contribute to this, including dental provider shortages, low provider participation in Medicaid, anxiety, fear, and shame associated with dental care, and a lack of public awareness of what services Medicaid covers.

Among Medicaid enrollees, 55% of children (<21 years old) received at least one dental service in 2022. That same year, dental service utilization for adults (21 and older) was only 11% revealing a stark disparity between age groups.[33]

Preventive care plays a vital role in establishing good oral health from an early age. Preventive care during childhood is especially important given the low dental service utilization rate among Medicaid-enrolled adults. Fluoride varnishes and dental sealants are important preventive care metrics. Unfortunately, among children enrolled in Medicaid, only 36% benefitted from fluoride varnishes and 9% received sealants in 2022.

Unlike fluoride varnishes, only applied once during childhood to prevent tooth decay. As a result, it is not a sole indicator of adequate oral health care. Children from families with low incomes who are at a higher risk of tooth decay are less likely to receive sealants compared with children from families with higher incomes. Continuous access to comprehensive dental services is vital to ensuring children's oral and overall health.

Common Preventive Services

Fluoride varnish – common oral health service used at routine cleanings to strengthen enamel and prevent tooth decay.

Sealant – another type of preventive service often used in children to prevent tooth decay from developing or stop existing decay from progressing.

Rethinking Oral Health for North Carolina's Older Generation

In addition to serving individuals with intellectual and developmental disabilities (IDDs), Access Dental Care tackles the nuanced challenges of providing oral health care to older adults, particularly people living in nursing homes and those without dental insurance. The nonprofit seeks to meet the pressing demand for dental services that address both the complex health care needs and economic barriers that many older individuals face.

Betsy White, Access Dental's COO, highlighted that traditional Medicare, specifically Parts A and B, does not cover dental services. The exclusion of oral health benefits dates back to Medicare's inception, when oral health dynamics differed significantly from today's.

Maintaining natural teeth into older adulthood is more common today. While a positive trend, this change also increases the need for older adult dental services. White noted that there is a growing movement to adapt Medicare to reflect these changes, and advocates are working to integrate dental care into the system.

For older adults with lower incomes and no dental insurance, tooth loss is a significant concern. As a result, the priority for dental treatment for this age group is often to "maintain and retain" as many teeth as possible. Unfortunately, White said that finances remain a prominent barrier for adults 55 and over without dental insurance, especially among those living below 200% of the Federal Poverty Level.

These economic challenges are exacerbated by stagnant Medicaid reimbursement rates, which have remained unchanged since 2008. While older adults are more often on Medicare and do not directly benefit from Medicaid dental coverage, the strain low reimbursement rates place on the safety net creates downstream effects, diminishing access for un- and underinsured people.

Access Dental's initiatives, including mobile dental units and dedicated clinic days, take an innovative approach to overcoming the logistical and financial barriers that restrict access to care for North Carolina's older adult population.

Oral Health During Pregnancy

Maintaining good oral health during pregnancy is vital to the overall health of pregnant people and their children.[11] Currently, North Carolinians have robust access to oral health care during pregnancy thanks to 2022 legislation expanding the Medicaid for Pregnant Women program to provide extended coverage up to 12 months postpartum. This policy led to an additional 28,000 eligible beneficiaries in 2022.[12] From 2014 through 2106, prior to this expansion, only 8.5% of pregnant North Carolinians enrolled in Medicaid for Pregnant Women used their dental benefit.[13]

In 2012, only 63.7% of pregnant North Carolinians had coverage (public or private) for dental care.[17] Between 2014 and 2016, the rate of people using any dental service under the Medicaid for Pregnant Women program dropped from 9.4% to 7.9%, while the rate for preventive services fell from 4.8% to 3.8%.[17]

Although 74.9% of pregnant people had dental insurance (public or private) in 2020, only 43.5% received a cleaning, down from 45.3% in 2012.[14, 15] Among Medicaid for Pregnant Women beneficiaries in 2020, only 5.7% sought care covered by their insurance.[15]

Many factors, including the COVID-19 pandemic, could have contributed to the decrease in care sought by pregnant North Carolinians. Considering the end of the COVID-19 public health emergency and Medicaid Expansion taking effect, policymakers and providers must prioritize measuring changes from 2023 onward to create a new baseline.[12] North Carolina needs a targeted initiative to ensure that the successful increase in insurance among pregnant North Carolinians corresponds with access to care.

Individuals with Intellectual and Developmental Disabilities

People living with intellectual and developmental disabilities (IDD) experience notable disparities, a challenge that both Dr. Michael Milano and Betsy White have dedicated their careers to addressing. Their collective insights paint a comprehensive picture of the barriers to access and equity in dental care for this underserved population in North Carolina and offer opportunities for improvement.

Dr. Milano is a former North Carolina pediatric dentist with extensive experience working with individuals with IDDs and White is the COO of Access Dental Care, the sole nonprofit organization in North Carolina that services individuals in group home settings. Both highlighted the need for greater recognition and action to address access and equity issues for individuals with IDDs across the state of North Carolina.

They also emphasized the many barriers persist, ranging from patient anxiety to the systemic financial constraints imposed on the families of individuals living with IDD. National statistics show that the IDD population is more frequently (53%) denied health care or oral health care due to discrimination compared with households not experiencing IDDs (37%).[19]

White said that private practitioners often report they, "don't feel comfortable taking care of somebody that's that medically and behaviorally complex… it's hard for patients with complex medical and behavioral needs to fit into the traditional standard 45-minute appointment slot… there's a lot of care coordination that has to go on because these patients don't make their own treatment decisions."

National Snapshot

- Across the United States, individuals with intellectual and/or developmental disabilities (IDD) face oral health challenges that lead to poorer outcomes.
- These individuals are 3 times more likely to visit the emergency department (ED) for dental care or pain.
- Only 67% of households experiencing disability reported visiting a dentist in the last 2 years, compared with 80% of households not experiencing disability.

Individuals living with IDDs are twice as likely to experience high rates of dental anxiety compared with those not experiencing disability.[19] Dr. Milano noted the heightened anxiety among the IDD community, along with other behavioral challenges that providers are often unprepared to effectively manage.

He said, "[Providers] expect a 15-year-old to behave a certain way, but if they have an ID or a DD, they may be presenting as a 3-year-old, and that throws the provider off. So suddenly, they're not comfortable treating that patient, and their anxiety is different and has to be dealt with differently."

White highlighted the economic hurdles caused by low reimbursement rates as further disincentives for providers to offer care to patients with IDDs.

Education and advocacy were common themes discussed by both Dr. Milano and White. Dr. Milano's passion for and work with the Special Olympics and University of North Carolina (UNC) dental clinics illustrate the potential impact incorporating more experiential learning and community engagement in dental education could have in shaping more confident and compassionate providers.

Similarly, White advocates for comprehensive training programs to equip providers with the skills necessary to navigate more complex health care needs.

Spotlight: Innovative Care at UNC-Chapel Hill

The UNC Adams School of Dentistry offers unique opportunities for future dentists to work with individuals with IDD. Their pediatric dentistry program curriculum includes comprehensive training to teach students how to deliver care to this unique patient population. Their clinic dedicates Monday mornings exclusively to patients with IDD, granting students opportunities to learn and interact with these patients in a clinical setting. Incorporating specialized training and patient exposure into the broader dental curriculum is essential to prepare future dental professionals for the diverse communities they will serve.

Lack of access to regular and specialized dental care exacerbates oral health issues among the IDD population in North Carolina. Through advocacy, education, and direct care, Milano and White both aim to establish a more inclusive health care system equipped to meet the IDD community's unique needs.

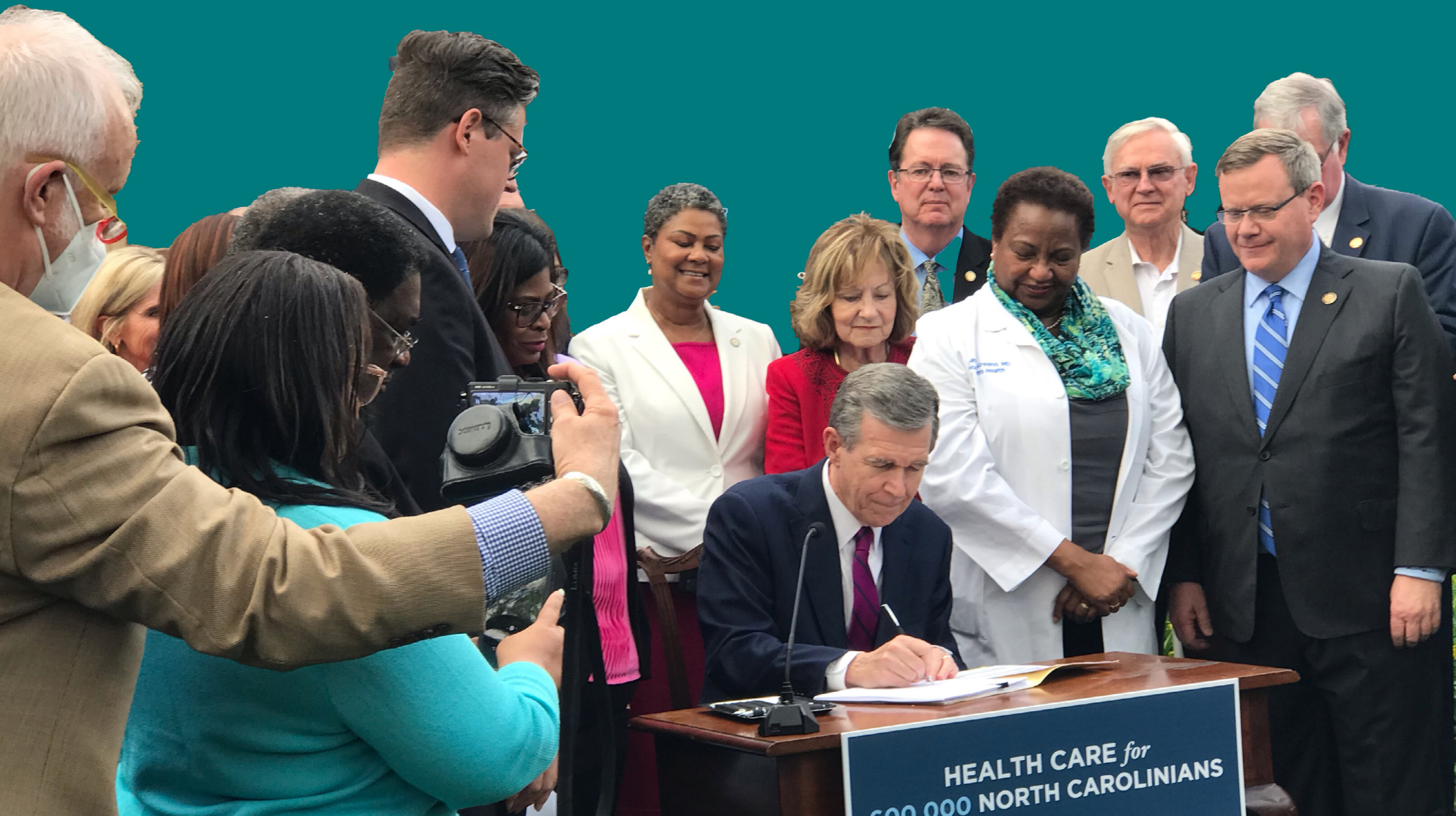
A multifaced approach to oral health care reform, emphasizing the importance of financial policy change, enhanced training, and education for both new and existing providers, and fostering community partnerships could significantly improve access to and quality of care for the IDD population in North Carolina.

Multifaceted barriers restricting oral health care access and utilization in North Carolina exist throughout the lifespan, with distinct challenges emerging for children, working adults, older adults, pregnant individuals, and the IDD community. The post-COVID landscape poses additional challenges, with potentially negative outcomes due to reduced service utilization during the pandemic.

To combat this, efforts must be made to improve dental service usage for all age groups. Special attention should be given to older adults and individuals with unique circumstances, including pregnant North Carolinians and the IDD community, to ensure they receive necessary care in appropriate settings.

Medicaid Expansion

After years of political stalemate, North Carolina reached a bipartisan agreement to expand Medicaid in December 2023. This change was enacted on December 1, 2023, closing the health coverage gap for an estimated 600,000 residents.[36] While North Carolina is the 40th state to expand Medicaid, it is one of only 26 states that offer extensive dental benefits to both children and adults.[37]



Medicaid expansion extended coverage to people ages 19 through 64 years old who previously fell within the health care coverage gap, meaning they earned too much to qualify for Medicaid but too little to access the Affordable Care Act marketplace. Since expansion began on December 1, 2023, more than 520,000 newly eligible recipients have already enrolled as of August 2024.

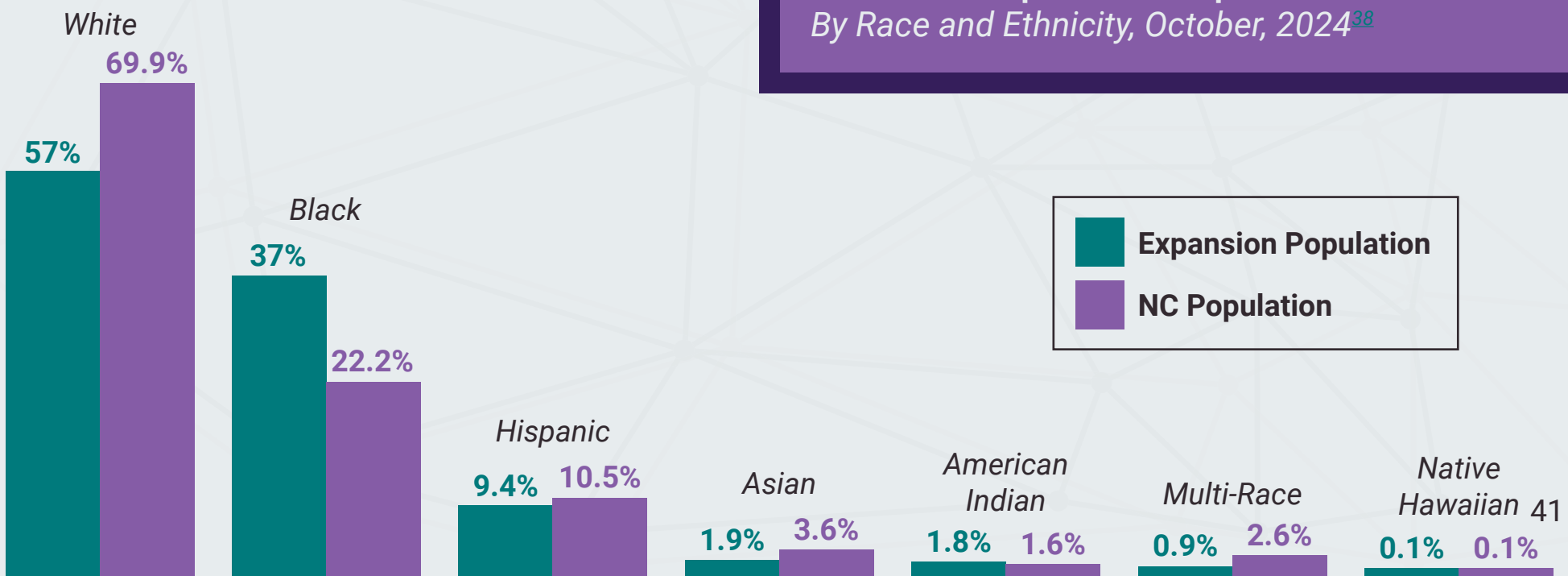
This public health policy victory extends comprehensive dental coverage to hundreds of thousands of newly eligible beneficiaries, a promising step toward oral health equity. However, Medicaid coverage alone does not mean access, and momentum is building to ensure that Medicaid Expansion translates into tangible, improved oral health outcomes for all North Carolinians.

As public health officials, advocates, and leaders navigate the challenge of managing a wave of new beneficiaries, it will be important to assess the impact on long-standing access gaps and take steps to resolve those inequities.

New enrollments since Medicaid Expansion began have brought the total number of beneficiaries to nearly 3 million.[46] Of the newly eligible enrollees, trends are positive for certain populations, particularly among Black/African American and Hispanic populations.

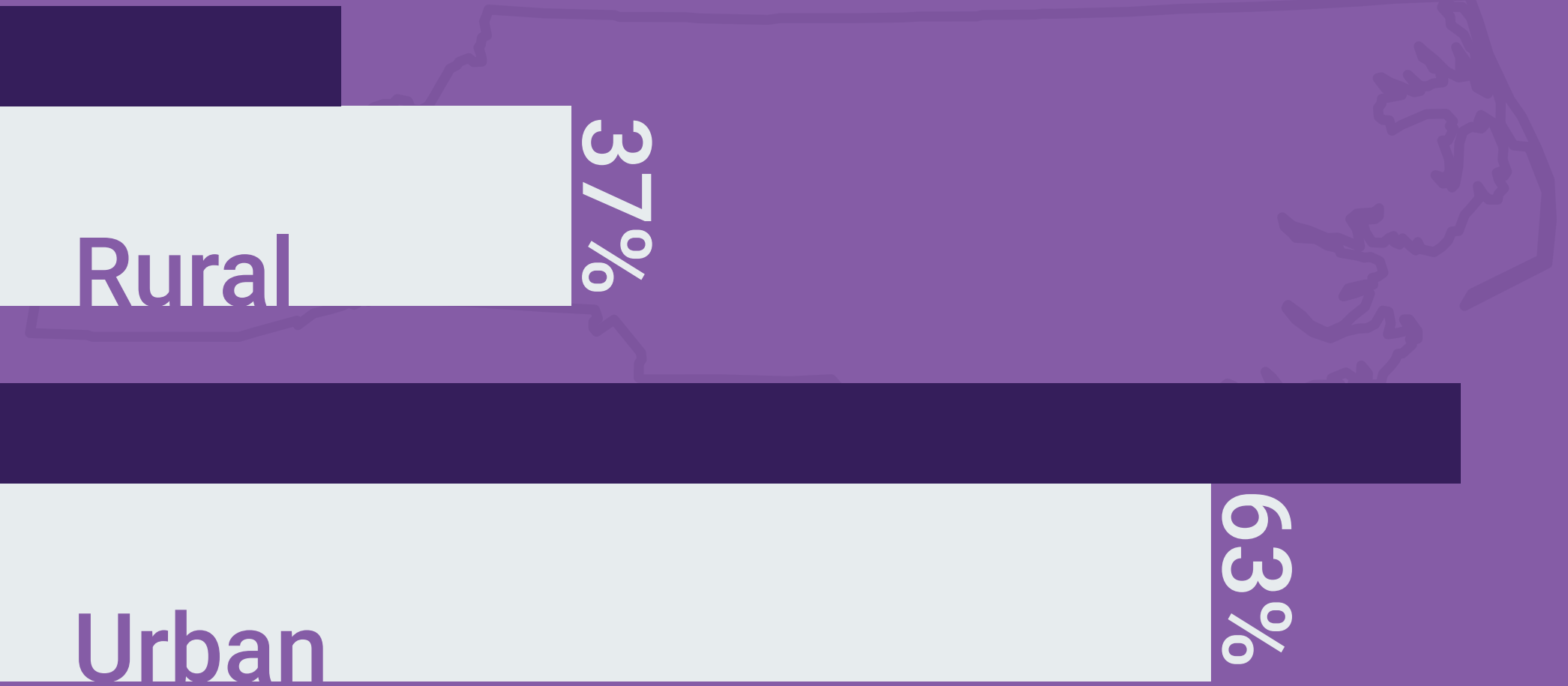
Medicaid Expansion Population Breakdown

By Race and Ethnicity, October, 2024[38]



Medicaid Expansion Population

Urban vs. Rural



North Carolina urban and rural population ages 19 - 64

Medicaid Expansion population

Medicaid Expansion will significantly impact North Carolina's oral health care landscape, especially within the context of the current provider shortage. With only 1,284 active licensed dentists participating in Medicaid in 2022, each of these providers could face an influx of approximately 270 additional patients per year if all new enrollees seek care.[9]

Most newly eligible adults have gone without dental care for extended periods, according to Dr. Steve Cline, Vice President of the North Carolina Oral Health Collaborative. This leads to a buildup of care needs that cannot be immediately addressed due to the short supply of Medicaid providers. This is further exacerbated by Medicaid dental reimbursement rates, which, as Dr. Cline pointed out, average around 34% of the usual fee for covered procedures.

The combination of rapidly increasing demand, low reimbursement rates, and lack of provider participation in Medicaid could result in an even worse bottleneck, severely limiting access for significant portions of North Carolina's population.

Rural North Carolinians make up a nearly 38% of Medicaid Expansion enrollees, despite only representing 19% of the state's population (ages 19 – 64).[38] The geographic distribution of dental providers, which skews toward urban areas, further exacerbates access issues for rural communities. The dentist-to-patient ratio in urban areas is double that in rural areas, and all rural counties in North Carolina are currently considered dHPSAs.

Beyond access to care, additional concerns remain over awareness of dental coverage for Medicaid beneficiaries. Insights from oral health experts such as Dr. Rhonda Stephens reveal a general gap in knowledge about oral health benefits for Medicaid-insured people. This lack of awareness may prevent people from fully benefitting from Medicaid Expansion. Education and awareness should be priorities to ensure people can use their full health benefits.

Amid the monumental success of Medicaid Expansion, challenges remain to ensuring that new coverage translates to improved access and equity in care. These advancements will not be naturally distributed evenly across all demographics–ensuring equity will require significant effort.

Barriers such as workforce shortages, low provider participation in Medicaid, and a lack of awareness of Medicaid's oral health coverage may hinder the impact of expansion. As momentum builds to enhance access and equity, overcoming these obstacles will be essential to realizing Medicaid Expansion's full potential.

Data Equity

> Public health data systems need improvement for the data to be a true reflection of everyone's life experiences and to drive equitable projects. We need equitable data systems to be able to effectively address inequities.
>
> *– CDC Foundation*

Across disciplines, equitable data is vital to combatting systemic health disparities. In oral health, researchers, advocates, providers, and consumers of care would all benefit from more frequent and comprehensive data collection. This would allow for more precise points in time to measure success and the ability to analyze racial, geographic, and other demographic disparities.

The government, educational institutions, and philanthropic organizations must collaborate to provide the staffing and financing necessary to create infrastructure for truly equitable data collection and distribution.

The 2024 Portrait of Oral Health reflects the most up-to-date data available for oral health in North Carolina. It also reveals significant gaps. Workforce data like racial diversity of dental hygienists and patient metrics such as tooth decay among adults are examples of statistics that would help individuals and organizations better serve both providers and seekers of care. Data also must be thoughtfully disaggregated so researchers can explore specific trends and the many ways sub-populations can access care.

Applying a data equity framework would create a windfall, allowing for more data-driven efforts to increase access and equity in care.

The Data Equity Framework

We All Count outlined a seven-step framework to approach data equity from a collection point-of-view:

1

Funding

Not only is funding necessary for data collection, but it is also equally important for people using data to know where the funding to collect it came from.

2

Motivation

What leads researchers to conduct their research, and what do they hope to get out of that research, should be clearly defined.

3

Project Design

People using data should be able to understand how research was conducted, what perspectives and experiences were incorporated into the data collection process, and what steps were taken to widen the scope of input into the design of a data collection plan.

4

Data Collection and Sourcing

Diversity of populations sampled when collecting data is a must, but the work to improve sampling equity must also be balanced with privacy concerns and relationship building to create a structure for researchers to "engage with data instead of extracting it."

5

Analysis

Data analysis must be conducted by experts, but the decisions made when breaking down and displaying data should be transparent and intentional.

6

Interpretation

Interpreting data cannot be done in a vacuum, so researchers should show their motivation, definition of equity project design, data quality, and analysis that supports the conclusions they draw.

7

Communication and Distribution

Once equitable data is created, it needs to be shared equitably.

Opportunities for Action

Build and Retain a Robust Dental Workforce Across Every Corner of North Carolina

While successful strategies are not limited to legislative action, the North Carolina General Assembly has been and will continue to be a vital focal point for targeted advocacy efforts building off recent victories, including:

- Expanding Medicaid to close the health insurance coverage gap.
- Enhancing the Medicaid for Pregnant Women program to include oral health services and extend all benefits to one year postpartum.
- Codifying teledentistry into the North Carolina Dental Practice Act.
- Authorizing dental hygienist-administered anesthesia.

NCOHC and its parent organization, the Foundation for Health Leadership & Innovation (FHLI), have been involved in each of these public health victories and will continue to act as conveners leading up to and throughout the 2025-2026 legislative session.

Successful advocacy cannot be done in a vacuum, and NCOHC will continue to bring together coalitions from a wide range of backgrounds to collaborate and identify the best solutions to the problems too many North Carolinians continue to face.

Necessary partners will include leaders from oral health care, academic institutions, government, advocacy organizations, philanthropy, and local communities across North Carolina. By leveraging FHLI's Community Voice Model, NCOHC will seek out communities historically left out of the conversation, working directly with them to ensure they play a leading role in driving decision-making around desired outcomes, resource needs, and solution identification.

FHLI Community Voice Model

NCOHC's 2025-2026 Policy Agenda

NC Legislature: Codify revisions to General Statute 90-233 to allow for alignment of dental rules 16W and 16Z

Dental rules 16W, regulating public health hygienists, and 16Z, regulating limited supervision hygienists, conflict and create inefficiencies in practice. By updating General Statute 90-233 and establishing regulations to support it, we can create efficiencies and better allow hygienists in public health and limited supervision settings to care for North Carolinians.

NC Legislature: Increase North Carolina Medicaid dental reimbursement rates

With low reimbursement rates, which haven't seen a meaningful increase since 2008, North Carolina's safety net is weakened, creating gaps in care that can lead to dental disease and costly surgical procedures. By modernizing reimbursement rates, the North Carolina Legislature can help retain and strengthen the safety net, providing more preventive, cost-effective care.

NC Medicaid: Begin to reimburse for necessary school-based dental examinations

NC Medicaid reimburses dental providers for limited oral evaluations through teledentistry, but it currently does not reimburse for periodic oral evaluations, negatively impacting the sustainability of school-based programs. By reimbursing for teledental periodic oral evaluations, safety net providers can more effectively and affordably provide care in non-traditional settings like schools and elder care facilities.

North Carolina State Board of Dental Examiners: Collect data to inform workforce development needs

Dental workforce data, especially for hygienists and assistants, is limited in North Carolina. By collecting data to illuminate a detailed view of the dental provider landscape through the licensure renewal process, North Carolina can better understand and prepare for its future workforce needs.

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