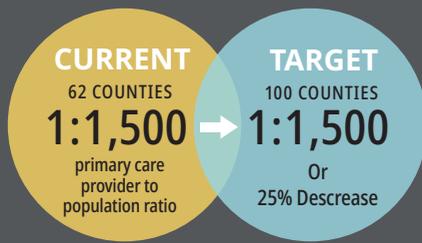


HEALTH INDICATOR 17: PRIMARY CARE WORKFORCE

DESIRED RESULT: INCREASE THE PRIMARY CARE WORKFORCE



DEFINITION

Primary care workforce as a ratio of the number of full-time equivalent primary care clinicians to county population

DETAILS

Includes physicians, nurse practitioners, physician assistants, and certified nurse midwives; provider location defined by primary practice location on licensure information

NC PRIMARY CARE WORKFORCE (2017)

62 counties with a 1:1,500 primary care provider to population ratio

2030 TARGET

100 counties reaching the 1:1,500 ratio or achieving a 25% decrease in the provider to population ratio

RANGE AMONG NC COUNTIES

1:6,278 – 1:365

RANK AMONG STATES

Not Applicable

DATA SOURCE

Cecil G. Sheps Center for Health Services Research analysis of licensure data from North Carolina Medical Board and North Carolina Board of Nursing

STATE PLANS WITH SIMILAR INDICATORS

Not Applicable

Rationale for Selection:

Access to primary care can encourage preventive health care and improve health outcomes. Many rural areas of North Carolina lack adequate access to medical professionals, including those providing primary care.

Context

Primary care providers typically serve as the entry point into the health care system and provide a wide array of services including preventive, diagnostic, chronic disease management, and urgent care. As such, primary care providers play an integral role in maintaining and improving the overall health and well-being of communities.¹⁴⁸ Access to primary care is associated with fewer health care disparities and better health outcomes across socioeconomic circumstances.¹⁴⁸

Ideally, people would have access to high quality primary care, dental care, and behavioral health care in their communities. However, 38 counties in North Carolina do not meet the recommended ratio of one primary care provider per 1,500 residents^{VV} (see Figure 31), with many counties also experiencing shortages of dental and/or behavioral health providers. The primary care workforce is experiencing increases in demand due to aging baby boomers requiring more care, overall growth in the population, and increasing numbers of people living with chronic illnesses. Despite overall growth in the primary care workforce in the last 30 years, North Carolina's most underserved and rural areas face persistent primary care shortfalls. Rural communities often struggle to recruit and retain health care professionals due to professional, economic, infrastructure, and cultural challenges. Shortages of health care professionals in rural areas impede residents' ability to get the care they need. To access services, those services must be available, obtainable in a timely manner, and affordable. Barriers to access, including shortages of health professionals, result in unmet health care needs, delays in receiving care, forgoing preventive care, preventable hospitalizations, and death.¹⁴⁹

Nationwide, the number of medical school graduates choosing primary care has been on the decline, arguably due to high costs of medical education and a large disparity between the earnings of primary care physicians and those of most specialists.¹⁵⁰ At the same time, the primary care workforce has been supplemented by increasing numbers of advanced practice nurses (e.g., nurse practitioners) and physician assistants (PAs) entering the work force. Similar to physicians, non-physician clinical providers often pursue medical subspecialties and work in specialty practices, although this is more true for PAs than for advanced practice nurses.^{151,152,153} Also, like physicians, the percent of PAs practicing in rural areas has fallen, although a larger percent of PAs than physicians who practice in primary care are practicing in rural areas.¹⁵⁴ In contrast, there has been national growth in the number of primary care nurse practitioners practicing in rural areas.¹⁵⁵

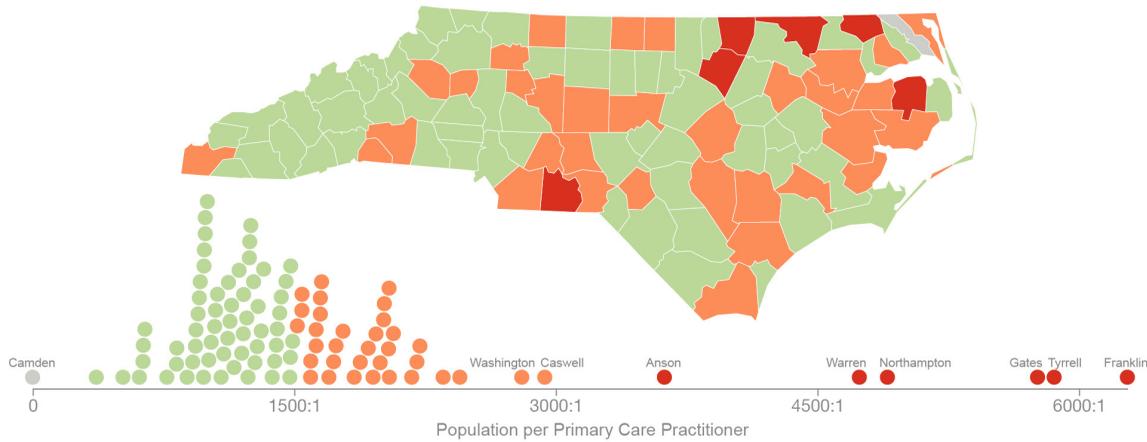
^{VV} Recommended provider to population ratio based on analysis by the Cecil G. Sheps Center for Health Services Research, which concluded that counties with ratios between 1:1,500 and 1:3000 are likely to have populations that periodically experience delays in access to care or conditions that require them to seek primary care outside their county and counties with ratios of 3,000 or more will have populations with regular difficulties seeing a local practitioner and will require special programs or procedures to overcome the lack of local, in-county primary care access.

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FIGURE 31

Population per primary care provider in North Carolina



Notes: Primary care physicians, physician assistants, and nurse practitioners are defined as in Spero, J. C., & Galloway, E. M. (2019). Running the Numbers. *North Carolina Medical Journal*, 80(3), 186-190. Physicians with a primary area of practice of obstetrics/gynecology were weighted as 0.20 of a full-time equivalent (FTE) primary care practitioner. All other primary care physicians were weighted as 1 FTE. Primary care physician assistants, nurse practitioners, and certified nurse midwives were weighted as 0.75 FTE. Physician and physician assistant data are derived from licensure data provided by the North Carolina Medical Board. This analysis only includes physicians who are not residents-in-training and are not employed by the Federal government. Nurse practitioner and certified nurse midwife data is derived from licensure data provided by the North Carolina Board of Nursing. Data include active, licensed practitioners in practice in North Carolina as of October 31, 2017. Practitioners are assigned to counties based on primary practice location. County populations were adjusted for age and gender according to primary care use rates described in data from the Medical Expenditure Panel Survey. The raw (unadjusted) population data was from the NC Office of State Budget and Management (<https://www.osbm.nc.gov/demog/county-projections>).

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Disparities

Provider distribution is a critical barrier to meeting the primary care needs of the population. For a state where 1 in 5 residents lives in a rural area, this access barrier is particularly acute. Of the state's 100 counties, 40 counties have a primary care ratio that exceeds the recommended access threshold (see Figure 31).^{WW} At present, some incentives exist to encourage providers to relocate to rural communities, such as loan repayment. However, providers with families may be dissuaded by school systems with fewer resources, fewer career opportunities for partners or spouses, and slow economic development in rural areas, and may be concerned about the financial viability of opening practices when faced with low patient volumes.^{156,149}

2030 Target and Potential for Change

Currently, only 62 of North Carolina's 100 counties have a provider to population ratio of 1:1,500 or fewer. To set the target for this indicator, the group reviewed data across counties in North Carolina. Considerations included the fact that county borders do not limit access to health care (i.e., individuals can cross from one county to another to see their provider) and that it may not be possible for all counties in the state to meet the optimal 1:1,500 ratio. The group set the 2030 target of all counties being either at or below the 1:1,500 ratio or see a 25% decrease in provider to population ratio for counties that have not yet met the 1:1,500 ratio.^{XX} The aim toward decreasing, rather than meeting a specific ratio, is a more attainable goal for counties that currently have high population to provider ratios.

Levers for Change

- Support pipeline programs in rural areas to encourage high school and college students to pursue careers in medicine (Abernathy & Byerley, 2019)
- Identify rural provider champions and increase support for physicians in ongoing practice (Fraher & Spero, 2015)
- Increase residency positions in rural areas (Fraher & Spero, 2015)
- Invest in rural economies (Holmes, 2018)
- Increase telehealth primary care initiatives in rural areas (McGranaghan, 2018)
- Increase access and payment for specialist consults
- Support increased funding for provider loan repayment programs that incentivize primary care providers to practice in medically underserved areas

^{WW} Analysis and calculations by Spero, JC and Galloway, EM of the Cecil G. Sheps Center for Health Services Research.

^{XX} Achieving this goal by 2030 would mean that 20 of the 30 counties currently above the optimal primary care provider to population ratio would reach a ratio of 1:1,500 or lower by 2030. For those 11 counties that are closer to the 1:1,500 goal, a 25% decrease would bring them to ratios at or below the optimal 1:1,500. The 8 counties with the highest ratios would see meaningful increased access through a 25% decrease in their ratios.