THE HEALTH OF NORTH DAKOTA

Ninth Biennial Report | 2027



University of North Dakota School of Medicine & Health Sciences Advisory Council

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***Disclaimer:** The *Biennial Report* represents the good-faith effort of the UND School of Medicine & Health Sciences and its Advisory Council to provide current and accurate information about the state of healthcare in North Dakota. Numerous sources were used in gathering the information found in this Report. We welcome corrections, which we will incorporate into subsequent editions of the *Biennial Report*.

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CHAPTER ONE

The Population of North Dakota and Attendant Healthcare Needs

ONE STATE WITH MANY HEALTHCARE NEEDS

Healthcare needs vary across North Dakota. Children, women, and older adults need different types of care. Where people live, their income, and their health coverage also affect access to services. Planning must consider these differences, including the needs of veterans, American Indian and Alaska Native populations, and people who face barriers to care.

People per Square Mile by County, 2025

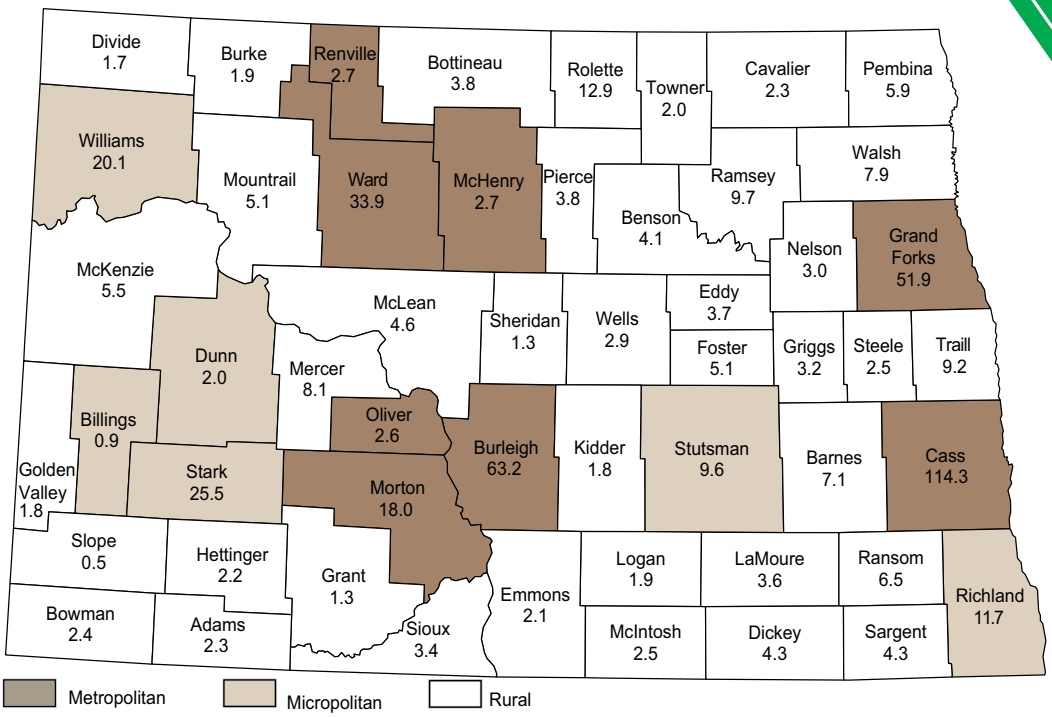


Figure 1.3. In 2025, population density ranged from 0.5 people per square mile in Slope County to 114.3 in Cass County.

Population Patterns Shape Healthcare Needs

37 of 53
counties have six or fewer residents per square mile.

24
counties had more than one in four residents age 65 or older in 2024—up from 10 counties in 2000.

INTRODUCTION: POPULATION-DRIVEN HEALTHCARE NEEDS

Healthcare delivery in the U.S. is driven by multiple factors, including the organizational structure of healthcare systems, payment and reimbursements, health policy, and technological advancements, among other contributing factors. The largest driver of healthcare delivery is the utilization patterns set by the population that accesses care in these places, or the demand of the population. The population may have varied healthcare service demands as segments of the population have unique healthcare needs that drive utilization of services. Examples of this include the healthcare needs for children under age 5 years, women of childbearing age, and older Americans. In addition to population-based demand, subsets of the population may have characteristics that influence their healthcare insurance coverage, resulting in limited access to healthcare due to payor agreements. Examples of this would be individuals who have served in the military and are veterans who have Veteran's Administration (VA). benefits, American Indian and Alaska Native populations who have access to healthcare under treaty agreements, and individuals in poverty who have state Medicaid coverage.

POPULATION

Historical Changes

North Dakota has been significantly influenced by its agricultural history and the role agriculture has played economically, socially, and culturally. The state's population growth from 1910 to 1930 (Figure 1.1). was likely influenced by the continuing development and growth in agriculture. The full effect of the Depression in the 1930s and World War II precipitated a population decline in North Dakota. During the 1930s, there was an out-migration of more than 120,000 people (Robinson, 1966).

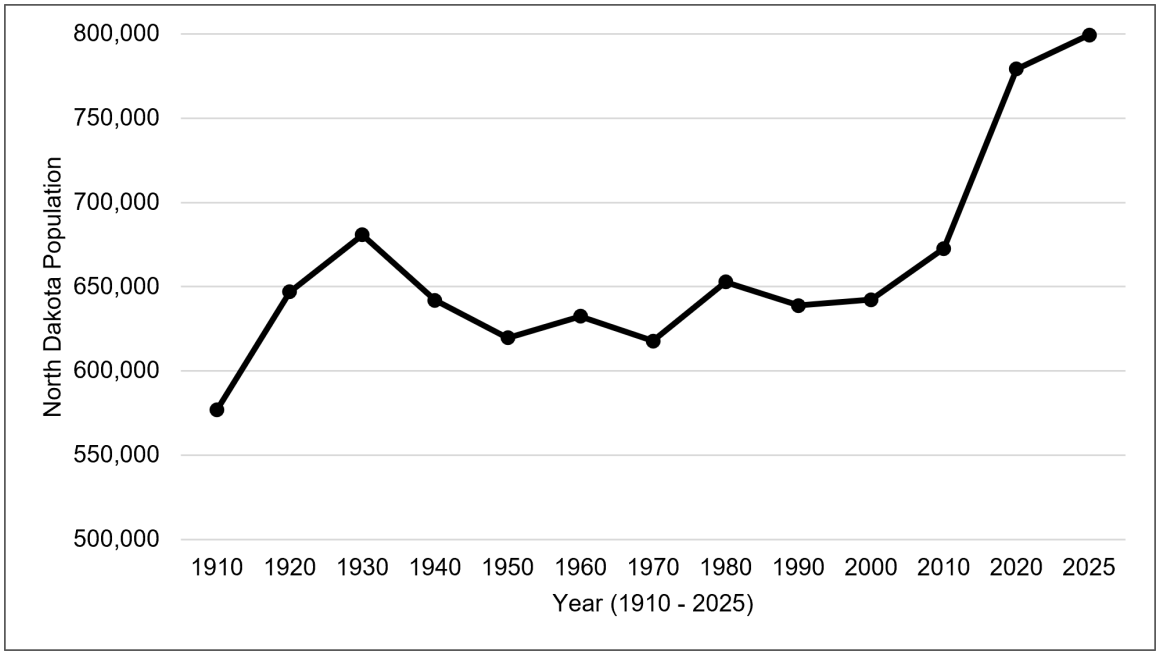


Figure 1.1: Population of North Dakota From 1910 to 2025 (U.S. Census Bureau, 2021; USCB, 2026b).

The population of North Dakota increased from 577,056 in 1910 to 680,845 in 1930, decreased to 617,761 in 1970, and then increased to 779,094 in 2020. North Dakota's highest population estimate was in 2025 when the U.S. Census Bureau estimated population was 799,358. The rapid increase in the late 1970s likely was a result of significant expansion of oil and gas production during that period and a trend toward urbanization. The oil boom of the late 1970s was followed by an oil bust in the 1980s, and the state's population once again declined and was accompanied by continuing rural depopulation. The population remained relatively stable between 1990 and 2000. Between 2010 and 2020 the state grew by more than 100,000 people, a nearly 16% increase, the single largest increase between Census years in the state's history. The population growth between 2000 and 2020, like the 1970s, can be attributed to both increases in oil and natural gas production as well as urbanization of the four largest metro areas of North Dakota. Population estimates between 2020 and 2025 show that this trend remains stable with a population increase of 20,000 people.

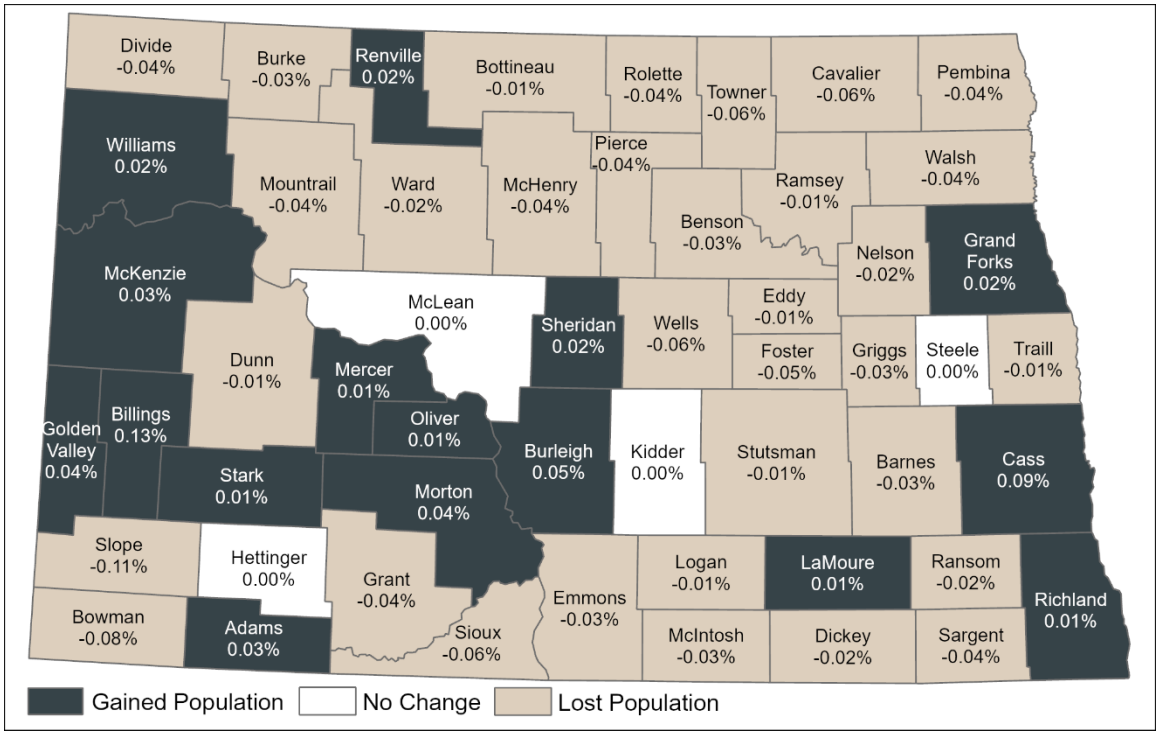


Figure 1.2: Population Change in County Population From 2020 to 2025 (USCB, 2026b). Sixteen counties increased in population between 2020 and 2025. Four counties had no change in population between 2020 and 2025. Thirty-three counties lost population between 2020 and 2025.

Metropolitan, Micropolitan, Rural, and Frontier Counties

North Dakota is comprised of a mixture of several densely populated larger cities, many smaller towns, and large areas with low population density. The distribution of North Dakota's population is another challenging issue for efficient healthcare delivery. Figure 1.3 shows the population per square mile for metropolitan, micropolitan, and rural counties in the state. Since its inception, the state has experienced low population density overall. North Dakota ranks 48th in population

density when compared nationally, with 11.6 people per square mile. As a reference, the District of Columbia has approximately 11,348 people per square mile (USCB, 2026b)

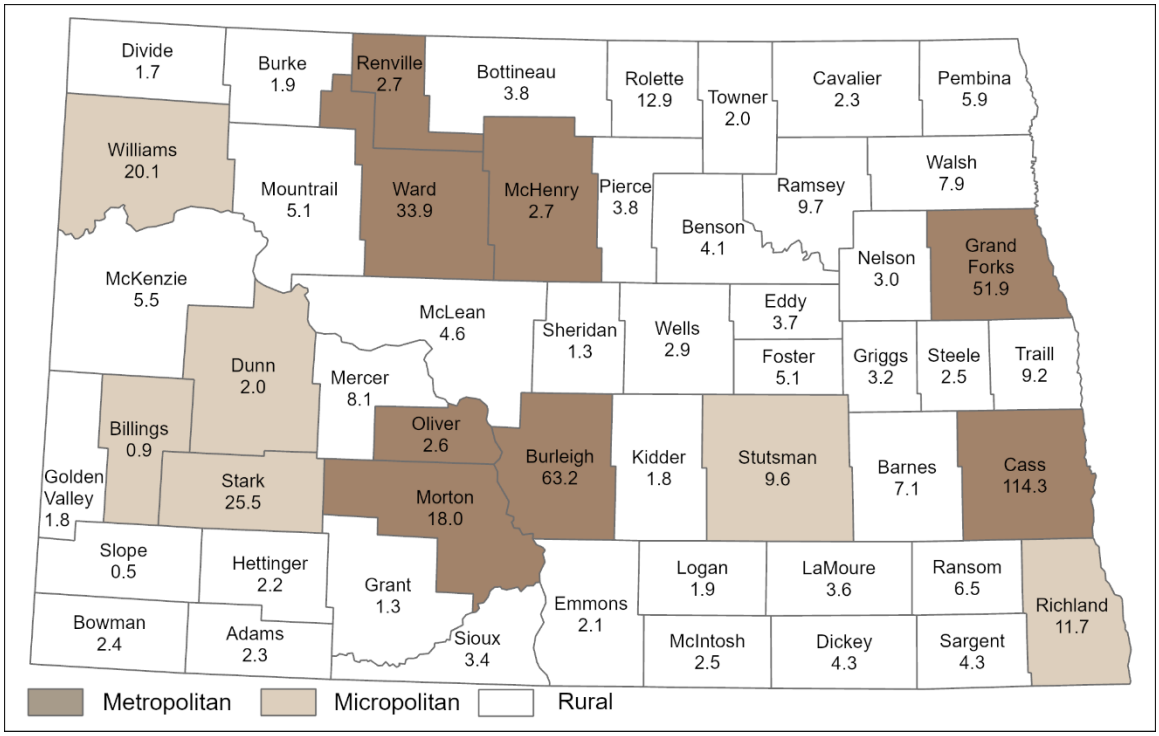


Figure 1.3: Population Densities of Metropolitan, Micropolitan, and Rural Counties in North Dakota, 2025 (USCB, 2024; USCB, 2026b). In 2025, Cass County had 114.3 people per square mile, followed by Burleigh County with 63.2 people per square mile, Grand Forks County with 51.98 people per square mile, and Ward County with 33.9 people per square mile. Forty-four of North Dakota's 53 counties have less than the state's average population density.

According to the 2025 U.S. Census Bureau's Population Estimates Program, North Dakota has increased 18.8% from 2010 to 2025 (USCB, 2010; USCB, 2026b). This population increase was driven largely by increases in Metropolitan counties which demonstrated a 24% increase, or 94,935 people. This was followed by Micropolitan counties with a 35% increase, or 30,717 people. Rural counties experienced a very small increase of 1%, or 1,115 people. To better define the population dispersion across North Dakota, standardized descriptions are used to facilitate comparison with other regions of the country:

- Metropolitan describes a population cluster or area with a core population of 50,000 or greater. The state's four largest cities and their surrounding area (Fargo, Bismarck, Grand Forks, and Minot). are located in metropolitan areas (USCB, 2024)
- Micropolitan (or large rural). describes areas with a population core from 10,000 to 49,999. This includes Dickinson, Williston, and Jamestown (USCB, 2024)
- Rural constitutes areas with a population cluster of fewer than 10,000. Both micropolitan and rural areas are considered nonmetropolitan. Prior to 2023, more than 50% of North Dakota's population has been designated as rural. In 2023, the Office of Management and Budget reclassified the greater Minot area from Micropolitan to Metropolitan. This

reclassification resulted in a smaller population attributed to rural, with 38.5% of the population of North Dakota in 2025 being classified as rural (U.S. Census Bureau, 2024; U.S. Census Bureau, 2026b). Depending on the definition of rural, North Dakota is among the five states with the largest component of rural areas (USCB, 2026b).

- Frontier is defined as a county with a population density of six or fewer people per square mile. Thirty-seven of the state's 53 counties are classified as frontier. Nine of 53 counties have population densities above the state's average density of 11.6 people per square mile. The lowest density is found in Slope County (0.5 people per square mile), and the most densely populated is Cass County (114.3 people per square mile). The average population density of the United States, as a point of comparison, is 96.7 people per square mile (USCB, 2026b).

It should be noted that Metropolitan, Micropolitan, and Rural are a combined set of definitions from the Federal Office of Management and Budget, while Frontier is a designation that is based on separate federal criteria.

Changes in Population by County and Age

Figure 1.4 shows the progression of population change for people aged 65 years and older at three census periods and one intercensal point (2000, 2010, 2020, and 2024). There has been a continual increase in the proportion of older adults in the rural counties. In 2024, there were 24 counties with 25% or more of their population aged 65 years or older with a majority being classified as rural, frontier, or both. When compared to other U.S. states, North Dakota has the highest percentage of counties with more than 25% of their population age 65 and older at 45% of counties. That is followed by Maine at 44%, Oregon at 42%, and Montana at 41%. The remaining states are all below 40% of counties with more than 25% of their population age 65 and older. In North Dakota the distribution of counties with more than 25% of their population age 65 and older are geographically distributed throughout the state with overrepresentation in rural areas. This population distribution is important when considering healthcare delivery. Aging populations have increased need for healthcare services and often face challenges in geographic mobility. This presents a challenge in service delivery for older North Dakotans and creates a unique need for sustainable healthcare delivery in the rural areas where those populations live. There has been a significant increase in the number of people aged 85 years and older. This group constitutes 2.3% of the state's population. North Dakota is ranked eighth in the country for states with the highest percentage of older adults; nationally, 1.9% of Americans are age 85 and older (USCB, 2026a).

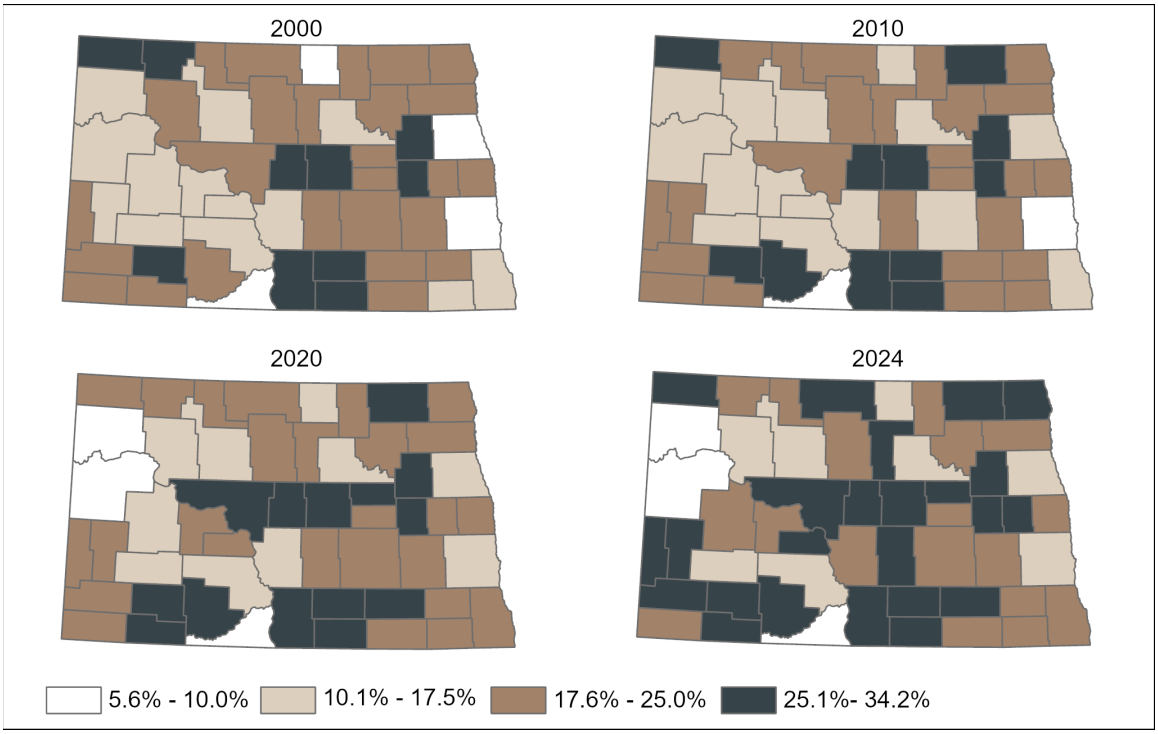


Figure 1.4: Percent of Population Aged 65 and Over in 2000, 2010, 2020, and 2024 (USCB, 2026a). In 2000, 10 counties had more than 25% of their population age 65 and older. In 2010 that increased to 11 counties, in 2020 that increased to 14 counties, and in 2024 that increased to 24 counties.

Change in Population by Births and Deaths

A large part of the increase in metropolitan population is the result of an increase in birth rate in metropolitan areas. The number of births in North Dakota has increased from 9,083 in 2010 to 10,019 in 2025, an increase of 10.3% (North Dakota Department of Health and Human Services [NDDHHS], 2025; NDDHHS, 2026). The overall trend of births between 2010 and 2025 demonstrates an increase, with a high point of 11,364 births in 2015 followed by a downward curve to 2022, then an increase into 2025. The number of deaths also increased from 5,909 in 2010 to 7,093 in 2025, an increase of 20.0% (North Dakota Division of Vital Records, 2026). Metropolitan areas have experienced the largest number of births. Although rural areas have the lowest number of births, there is a trending increase in the birth rate. Metropolitan areas had 2,383 more births than deaths on average from 2010 to 2025. Micropolitan areas had on average 1,166 more births than deaths. Rural areas had on average 165 more births than deaths. As a consequence of these two factors alone (not taking into account migration), metropolitan population has increased more than both micropolitan and rural population areas.

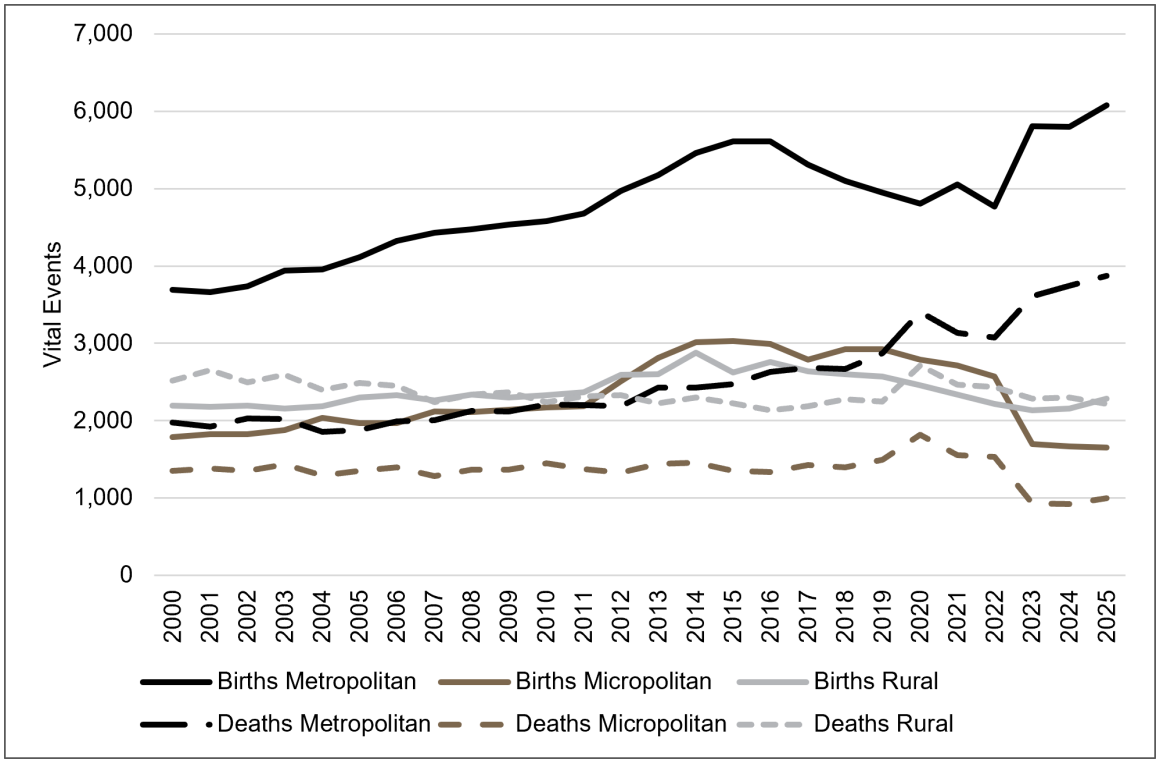


Figure 1.5: Number of Births and Deaths in North Dakota From 2000 to 2025 by Metropolitan, Micropolitan, and Rural Counties. Metropolitan births have been rapidly increasing. Rural births have been increasing slightly. Micropolitan births remained stable from 2023 to 2025 (NDDHHS, 2025; USCB, 2024. Rural, metropolitan, and micropolitan deaths all increased in 2020 and then decreased to 2023. The impact of Minot's transition from micropolitan to metropolitan resulted in a larger increase in metropolitan deaths from 2023 to 2025.

CURRENT DEMOGRAPHICS

The population of North Dakota influences the healthcare delivery system in the state. Changes in demographics drive the shift of focus of policy and service delivery to meet the needs of the changing population. For example, a geographic area that experiences the aging of its population will see more demand for chronic care services, home care, therapy services, and geriatric specialty care. While the demand for services for aging populations may be increasing, that demand may not be sufficient to support all services needed in every geographic area. This results in an increased need for alternative service delivery such as telemedicine, locum tenens or visiting specialists, or transportation options to allow patients to travel to urban centers for specialty care. Changing population characteristics will result in demand for services to meet the shifting population needs.

Areas experiencing population decline still have healthcare needs and health systems must attempt to adapt to changing conditions to maintain some level of service delivery. In more remote areas, there are needs for access to primary and emergency care, public health services, as well as reasonable access to acute and specialty services. Health systems may provide access to basic care but may need to refer services. Areas of population decline tend to

see a loss in families with children and adolescents, as well as younger working-age populations, with an older adult population staying in the area. This results in rural areas simultaneously experiencing a loss of population coupled with a relatively larger older-adult population requiring an increase in services.

Demographic factors, economic conditions, and public policy decisions have combined to create a complicated and challenging environment for maintaining access to essential healthcare services in the more rural areas of the state. North Dakotans recognize the barriers and challenges to community institutions and to the community or town itself. The maintenance of institutions and organizations is essential to solidify a healthcare service base, a foundation that is necessary to meet local access-to-care needs, improve population health status, and contribute to local economic and community development.

Age

Previous versions of this Report (Seventh Biennial Report 2023). have presented an aging trend for the state of North Dakota, with rural areas having more residents aged 65 and 85 years and older when compared to the United States. Between 1980 and 2000, North Dakota experienced an out-migration of younger populations due largely to economic drivers. The out-migration trend experienced a reversal in the mid-2000s due to an increase in oil and gas production in the western part of the state and an increase in the technology sector in the urban centers. Compared to the U.S. as a whole, North Dakota's population in 2010 was below average for persons under age 20 and between 40 and 64 years of age, but above average for those between age 20 and 39. In 2024, North Dakota had a larger percent of population attributed to the age categories under age 45, and age 85 and older, further establishing an earlier shift in trends. While the state is experiencing an overall trend toward younger age groups, it should be noted that the percent of the population age 85 and older is still near the top for all U.S. states, tying North Dakota for eighth in the country. This greatly influences the need for providers. For example, nationally in 2019, the age group under age 15 on average experienced 194.8 healthcare visits per 100 persons and individuals age 75 or older experienced 776.4 visits per 100 persons, a 400% difference (Santo and Kang, 2019). If we assume that a family physician provides 5,500 office visits a year, 1,000 individuals age 15 and under would take up 35% of one physician's practice, while it would take 1.4 family physicians to treat a similar number of older patients. Thus, simply comparing the number of North Dakota physicians per 100,000 persons can be misleading unless the age of the populations being compared is taken into account. Figure 1.6 shows specific age ranges across North Dakota, as compared to the U.S. North Dakota has a smaller percentage of individuals between the ages of 45 and 84 than the U.S.

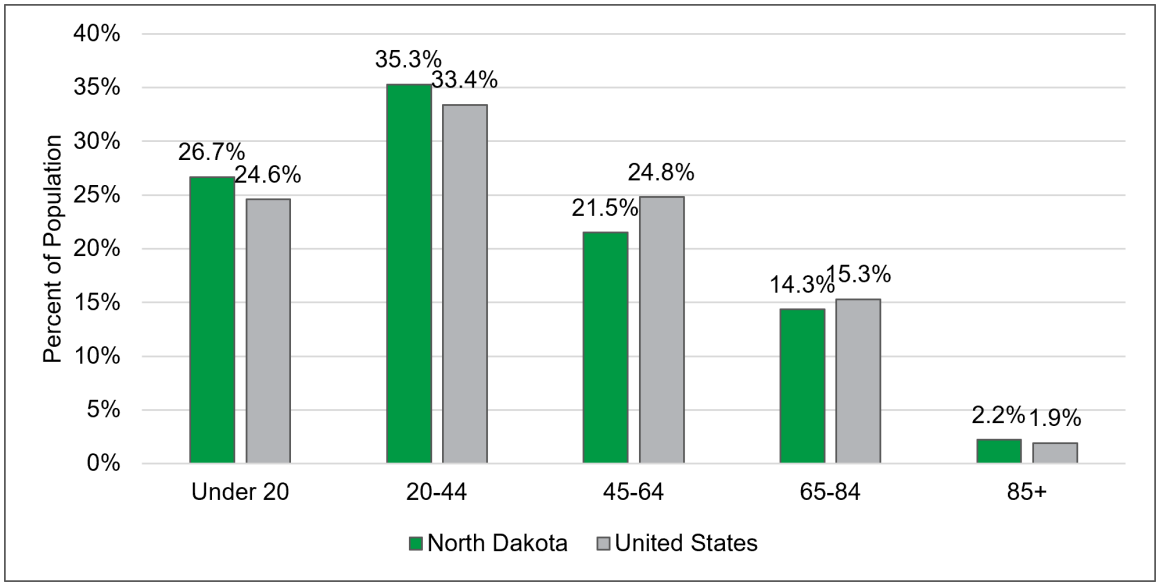


Figure 1.6: Age of People in North Dakota Compared With U.S. in 2024 (USCB, 2026a). There are more North Dakotans under age 44 and over age 85 compared with the U.S. population.

As shown in Figure 1.7, rural North Dakotans are older than their counterparts in micropolitan or metropolitan areas. The disproportionately older population in rural North Dakota likely is the consequence of the continuing out-migration from rural areas, with younger people moving elsewhere. This effect is evident in the agrarian sector, where the increase in average age has been particularly apparent in North Dakota farmers who have had an average age between 54 and 60 years old since 2002 (U.S. Department of Agriculture, 2022). As many rural counties have continued to see a decline in overall population, that decline is commonly associated with a loss of young individuals and families or difficulty in recruiting and retaining young individuals and young families. Older adults are less likely to leave an area where they have spent their entire lives.

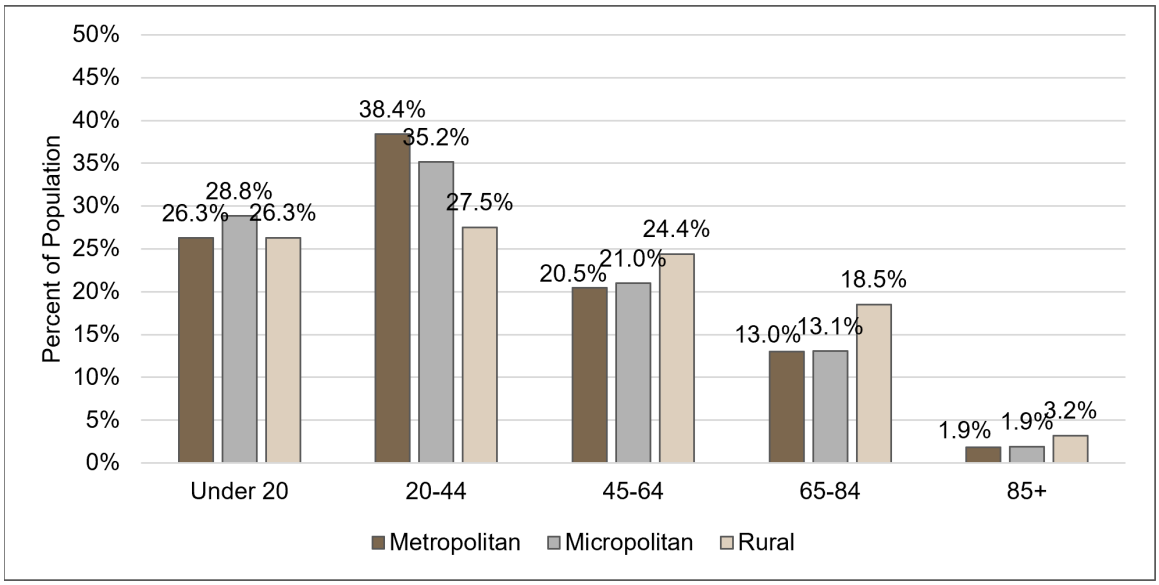


Figure 1.7: Age of People in North Dakota by Metropolitan-Rural Status, 2024 (USCB, 2024; USCB, 2026a). North Dakota's rural areas have disproportionately more population age 45 and older compared to metropolitan and micropolitan areas.

Sex and Gender

The characteristics of sex and gender are separated by the difference of a biological and social-cultural construct. A clarification set forth by the National Academy of Medicine (NAM), formerly the Institute of Medicine (IOM), clarifies the definitions of sex and gender. In their 2001 work titled "Exploring the Biological Contributions of Human Health: Does Sex Matter," the NAM made a recommendation to clarify usage and bring consistency to the literature around human subjects. Per these recommendations "the term sex should be used as a classification, generally as male or female, according to the reproductive organs and functions that derive from the chromosomal complement (p. 8)." And "the term gender should be used to refer to a person's self-representation as male or female, or how that person is responded to by social institutions on the basis of the individual's gender presentation (p. 8)." (Pardue and Wizeman, 2001). In general, most humans are born with a biologic sex of male or female defined by chromosomal and physiological characteristics. Alternatively, an individual's gender is defined by their social, cultural, and personal experiences that serve as a representation of self. These distinctions are important when considering the healthcare implications of both sex and gender. An individual's sex has biological implications in treatment and prevention strategies that must be taken into consideration when treating the physical self. An individual's gender (or gender identity). also has implications for care in regard to treating the individual as a whole.

In North Dakota in 2024, the sex breakdown of the total population was 51.2% male compared to 48.8% female. In the U.S. in 2024, that breakdown was 49.5% male compared to 50.5% female. The distribution of population by age shown in Figure 1.8 indicates that there are disproportionately more males under age 45, a similar population age 45 to 64, and more females over age 65 in North Dakota compared to the U.S (USCB, 2026b).

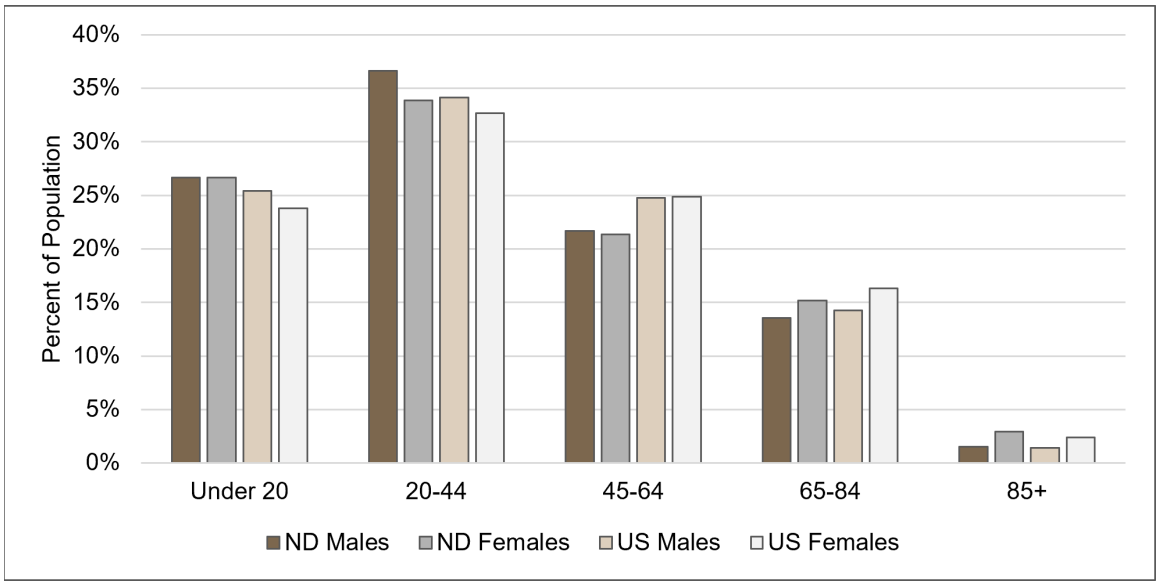


Figure 1.8: Age and Sex of People in North Dakota Compared to the U.S., 2024 (USCB, 2026a). Compared to the U.S., North Dakota has more younger males and older females.

Race and Ethnicity

The characteristics of race and ethnicity are similar to sex and gender in that they are generally separated by biological or physiological and social-cultural constructs. Broadly, race is characterized by physical traits such as skin color and other physical characteristics. Racial categories are roughly based on ancestral origins and while broad racial categories exist and are recognized, they are less distinct than in the past due to population migration and intermarriage. Where race is generally reliant on physical characteristics, a person's ethnic identity is focused more on cultural characteristics such as language, history, religion, and customs (Bulatao and Anderson, 2004).

In North Dakota in 2024, a majority (83%). of the population reported White alone as their race. This category was followed by two or more races (5.9%), American Indian/Alaska Native (4.4%), and Black (3.4%). In the U.S., a majority of the population (61%). reported White alone as their race. That was followed by two or more races (12.6%), Black alone (12.2%), other race alone (7.1%), and Asian alone (6%). In 2024, 0.9% of the population of the U.S. reported American Indian/Alaska Native alone as their race. The U.S. Census Bureau collects ethnicity data for those individuals reporting a Hispanic or Latino ethnicity. In 2024, 4.6% of North Dakota's population was Hispanic or Latino compared to 19.3% of the U.S (USCB, 2026a).

The racial and ethnic distribution of population for both North Dakota and the U.S. has changed over time. In comparison to 2024, data from 2010 presented a less diverse population. In North Dakota in 2010 an even larger majority of the population (90.5%). reported White alone as their race. That was followed by American Indian/Alaska Native alone (5.3%), two or more races (1.6%), and Black alone (1.1%). In the U.S. in 2010 a majority of the population (74.8%). also reported White alone as their race. That was followed by Black alone (12.7%), other race alone (4.9%), and Asian alone (4.3%). In 2010, 2.0% of North Dakota's population was Hispanic or Latino compared to 12.9% of the U.S (USCB, 2010).

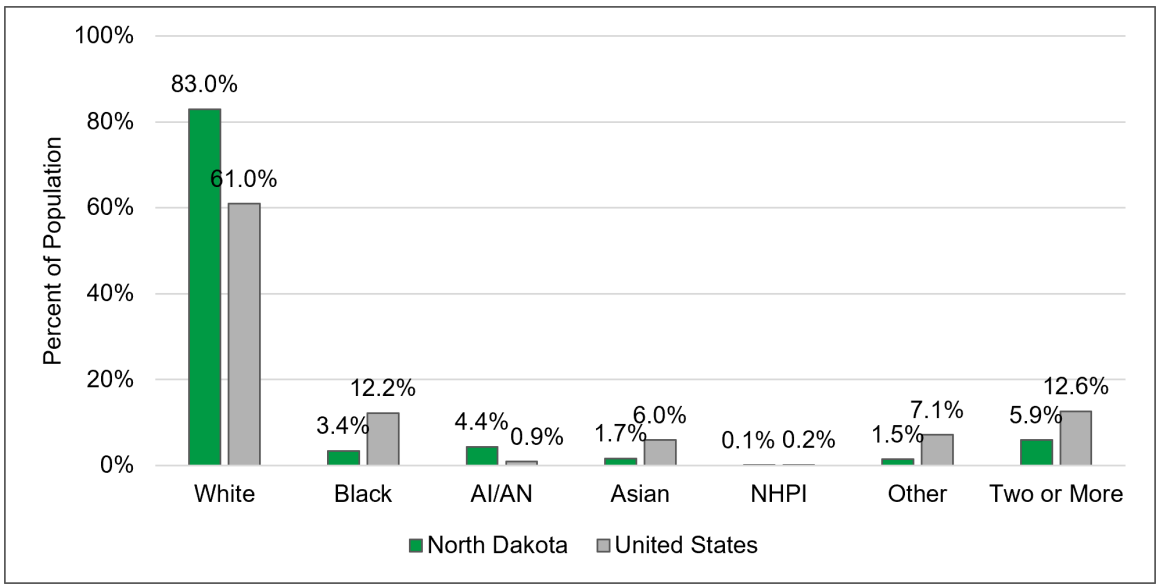


Figure 1.9: Percent of Population by Racial Group for North Dakota and the U.S., 2024
(USCB, 2026a). North Dakota has a larger proportion of the population than the U.S. for both White and American Indian/Alaska Native populations.

Veteran's Status

In the U.S., a military Veteran is defined as a person who served in the active military, naval, or air service, and who was discharged under conditions other than dishonorable. Individuals who serve in the U.S. military are eligible for benefits, including assistance with or access to programs specifically for Veterans that assist with areas such as housing, educational programs, and healthcare. These are services designed and intended to support Veterans after they separate from the military and ensure they have adequate support mechanisms in place within their communities.

In 2024, 7.1% of the adult population of North Dakota were Veterans compared to 6.2% of the U.S. population. When looking at the period of service for all Veterans, North Dakota's Veteran distribution had fewer Veterans in all eras examined except the second period of the Gulf War (9/2001) (USCB, 2026a).

When comparing North Dakota's Veteran population to the U.S., North Dakota and the U.S. have similar percentages of males and females. When examining age, North Dakota has more Veterans under age 54 than the U.S. When comparing race and ethnicity, North Dakota has a higher percentage of Veterans than the U.S. in the populations who are White alone (90.0% compared to 74.5%). or American Indian or Alaska Native (2.3% compared to 0.7%). In terms of educational attainment, North Dakota had a higher percentage of Veterans than the U.S. who had no high school education (5.8% compared to 4.5%), had a high school diploma or a GED (29.0% compared to 26.6%), or held an associate's degree (39.4% compared to 36.8%). North Dakota had fewer Veterans than the U.S. who were below poverty (6.7% compared to 7.4%). or disabled (28.6% compared to 30.7%) (USCB, 2026a).

INCOME FACTORS

Poverty

People in poverty tend to have a lower health status. In a 2021 report on quality and disparities, the Agency for Healthcare Research and Quality (AHRQ). found that people in poor and low-income households experienced worse care than their counterparts in high-income households on more than half of the quality measures examined. In that same report, AHRQ found that disparities have increased in approximately 5% of the quality measures (Agency for Healthcare Research and Quality, 2021).

Poverty rates vary based on age, race, household composition, and geography. Poverty rates have also varied for metropolitan, micropolitan, and rural areas since 2010. Rural rates have been the highest, followed by metropolitan and micropolitan (USCB, 2024; USCB, 2026d). The highest poverty rates are in rural counties.

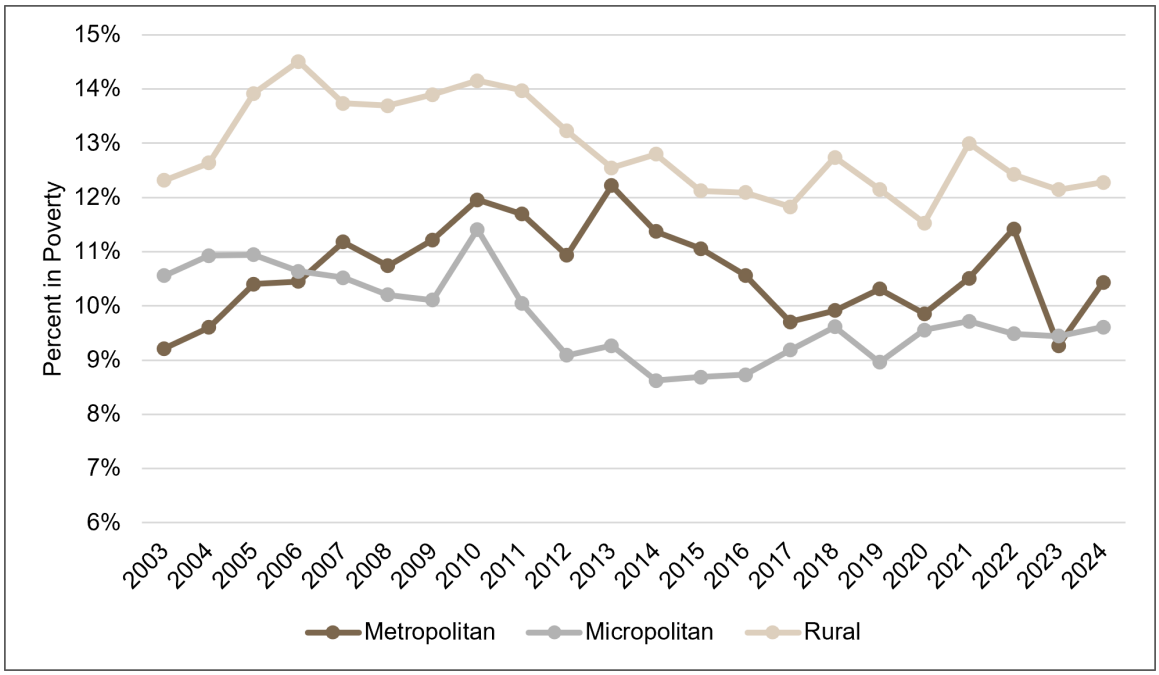


Figure 1.10: Poverty in North Dakota by Metropolitan, Micropolitan, and Rural Areas, 2000-2024 (USCB, 2026d). In 2026, the federal Office of Management and Budget (OMB). considered the poverty level for a family of two to be $21,640 and for a family of four it was $33,000. In 2024, 10.8% of North Dakota residents were in poverty compared to 12.1% of the U.S. Rural areas of North Dakota have had the highest poverty rates since 2003, where Metropolitan and Micropolitan have alternated twice.

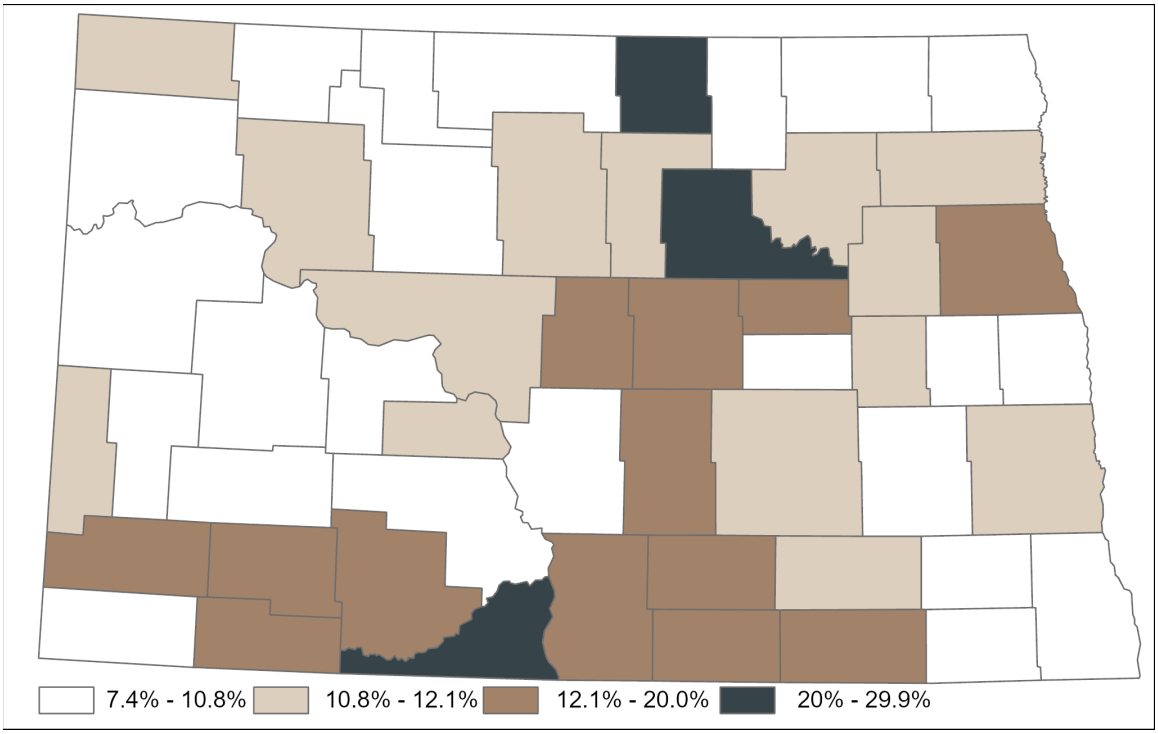


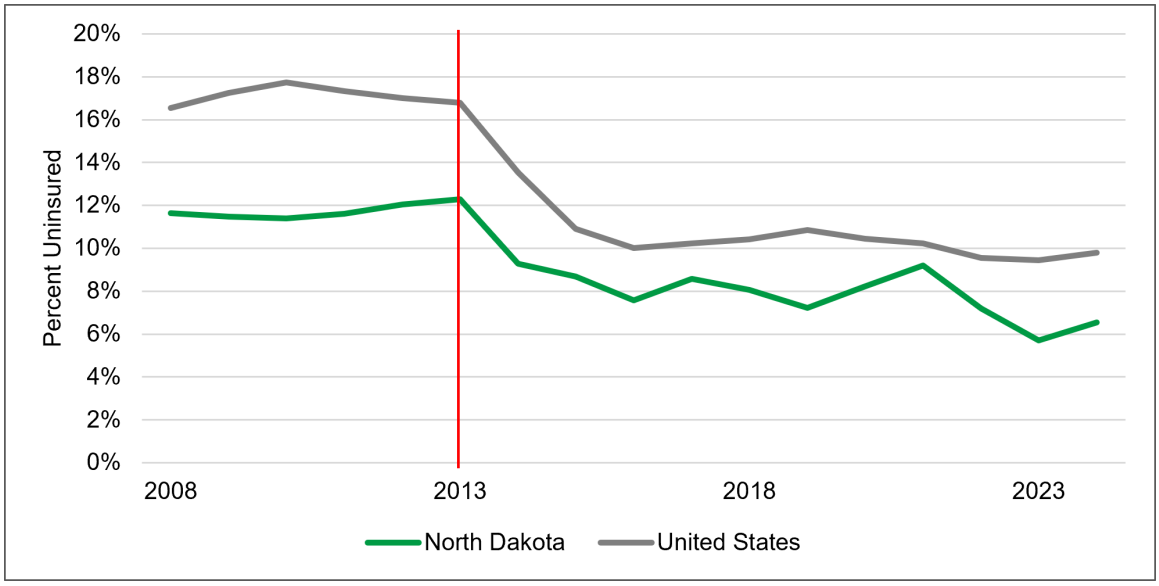
Figure 1.11: Percent of Population in Poverty in North Dakota, by County, 2024 (USCB, 2026d). In 2024, three counties had more than 20% of their population in poverty (Benson, Rolette, and Sioux). These three counties were designated as rural and had significant American Indian populations. Thirty-seven counties in North Dakota had poverty rates less than 12.1%.

Health Insurance Coverage

The Affordable Care Act (ACA). was signed into effect in the U.S. in 2010. One of the major provisions of the ACA was an individual mandate that required everyone to have health insurance or pay a penalty. While the penalty provision still exists, the Tax Cuts and Jobs Act of 2017 set the individual mandate penalty to $0 which went into effect in 2019 (Tax Cuts and Jobs Act, 2017). Currently there is still an individual insurance mandate in the U.S.; however, there is no mechanism by which that mandate is enforced. As such the topic of health insurance, or lack of health insurance, is a notable data point to consider when comparing populations. The U.S. Census Bureau's Small Area Health Insurance Estimates (SAHIE). are available on an annual basis starting in 2008 which allows for trend analysis of health insurance pre- and post-ACA implementation (USCB, 2026c).

In North Dakota in 2024, 6.6% of the state's population under age 65 years were uninsured compared to 9.8% of the U.S. population of the same age. In the years prior to the enactment of the ACA (2008-2010), North Dakota's rate of uninsured ranged from 11.4%-11.6%. During that same period, the rate of uninsured for the U.S. ranged from 16.3%-17.7%. As the ACA was signed in 2010, but penalties for not having health insurance did not go into effect until 2013, the rates of uninsured remained relatively stable until 2013 for the U.S. and increased slightly in North Dakota. The rates of uninsured started to decline for both the U.S. and North Dakota from 2013 to 2016. The U.S. rates of uninsured stabilized in 2016 and remained around 10% through

2024. The North Dakota rate also declined until 2016 and then demonstrated a varied pattern fluctuating between 7.2% and 9.2% with the state dropping to 6.6% in 2024 (USCB, 2026c). It should be noted that while the penalty for not having health insurance coverage was set to $0 in 2019, the rates of uninsured populations did not rise dramatically to those rates prior to the ACA. One possible confounding effect that may explain the rate variance in North Dakota between 2019 and 2022 is the SARS-CoV-2 (COVID-19). pandemic that impacted the number of individuals in the labor force.



*red line denotes the implementation of the penalty for not having insurance coverage in 2013

Figure 1.12: Uninsured Population of North Dakota and the U.S., 2008-2024 (USCB, 2026c). The uninsured population in North Dakota remained relatively stable between 2008 and 2013 but showed a varied decline since 2013.

While the overall rates of uninsured populations declined from 2008 to 2024 the rates of uninsured populations in rural areas have remained higher than in metropolitan or micropolitan areas. In the U.S., the rates of uninsured in rural areas ranged from 1.4 to 2.4 percentage points higher than their metropolitan counterparts between 2008 and 2023. The rate of uninsured in rural areas of North Dakota ranged from 1.3 to 4.4 percentage points higher than their metropolitan counterparts between 2008 and 2019 but dropped to a difference of 1.7 percentage points in 2023. This indicates the gap between metropolitan and rural is closing in North Dakota and future trends should be monitored for further changes. Regarding the distribution of uninsured population, Figure 1.14 represents the rate of uninsured population by county in 2023. Those counties in white are at or below the statewide rate of 5.7%. Those in tan brown are above the statewide rate but below the national rate. The county in darkest blue is above the national rate. The distribution of counties above the statewide rate are geographically distributed throughout the state with an overrepresentation in the western part of the state.

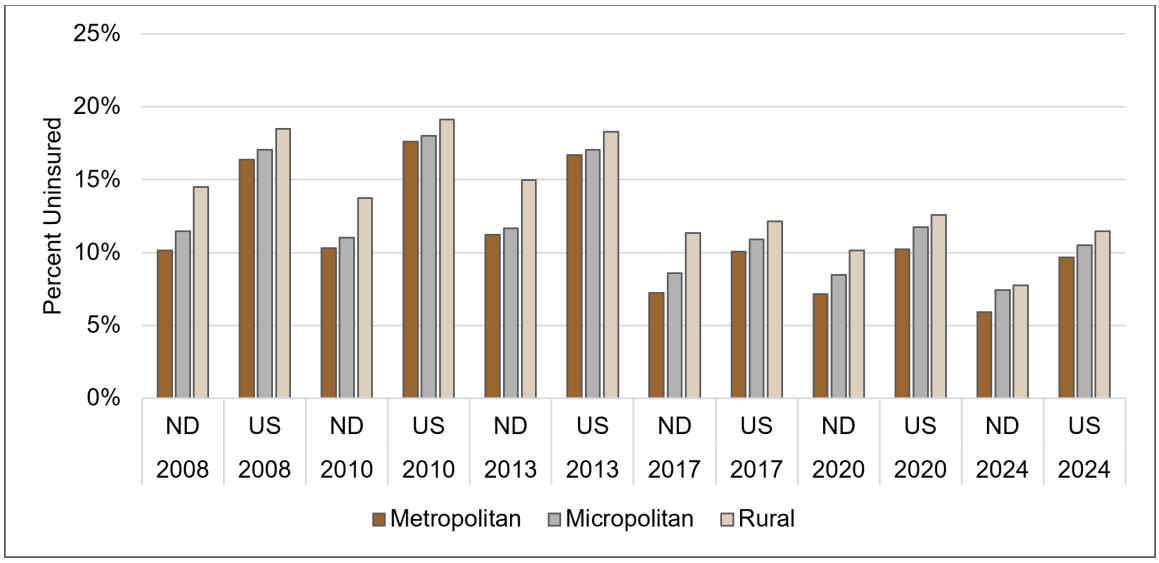


Figure 1.13: Percent of Population Uninsured by Metropolitan-Rural Status for North Dakota and the U.S., Selected Years 2008-2024 (USCB, 2026c). North Dakota's uninsured rate has remained below the U.S. rate across metropolitan, micropolitan, and rural areas since 2008. Rates for metropolitan areas were consistently lower than micropolitan and rural areas.

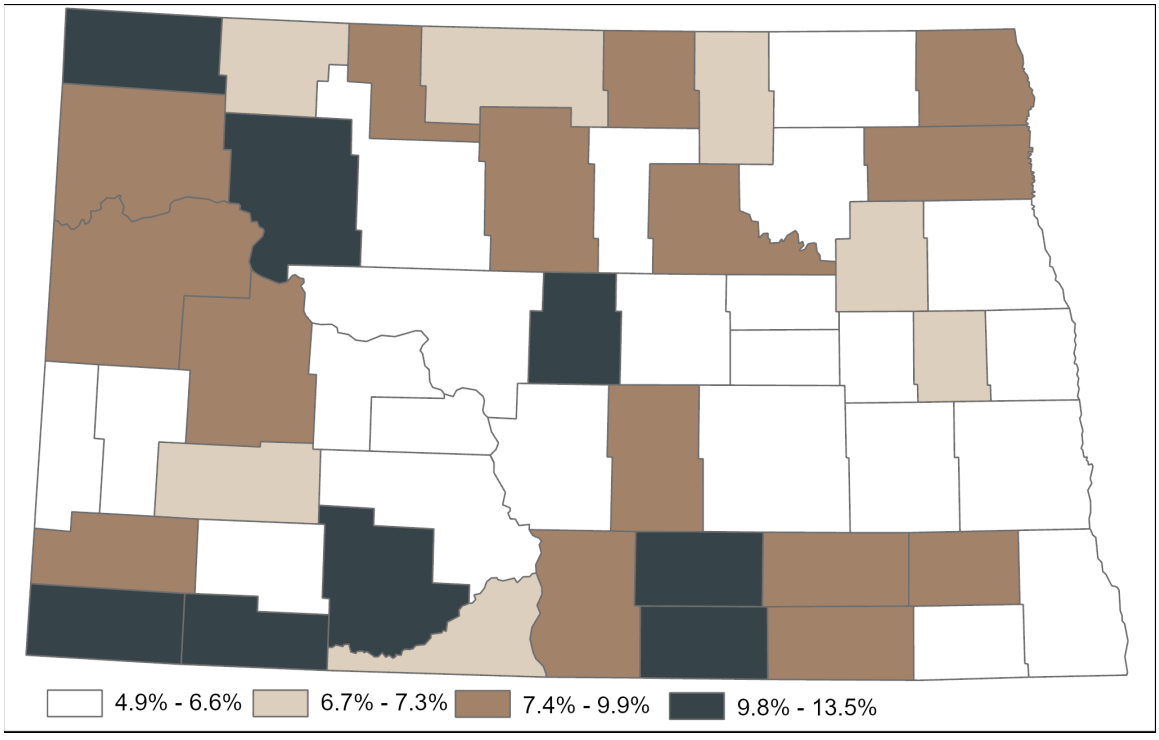


Figure 1.14: Population Uninsured by County, North Dakota, 2024 (USCB, 2026c). Rates of uninsured populations varied by county in 2024, with rural areas and the western half of the state disproportionately represented by higher rate of uninsured population.

DEMOGRAPHICS SUMMARY

Demographic characteristics contribute to health disparities and highlight the access-to-care and health status issues found in North Dakota. In general, those in the most rural areas of North Dakota are older, have a higher rate of population in poverty, and have less health insurance coverage than those in metropolitan and micropolitan areas (Table 1.1). Despite this, North Dakota has shown some promising trends in increasing the population, having more residents under age 65, less poverty, and higher rates of insurance when compared to the U.S. These factors have been shown to influence the ability of a person to seek healthcare when it is necessary, maintain a regular relationship with a physician or other health professional, better manage health conditions, and ultimately realize a higher status of health. Sociodemographic factors such as poverty, income disparity, insurance coverage, education, and culture, including rural culture, can serve as social drivers of health, which will be discussed in Chapter 2.

Table 1.1: Summary of Demographics of North Dakota's Population by Metropolitan, Micropolitan, and Rural Areas, 2024 (USCB, 2026c).

Category	Metro (N)	Metro (%)	Micro (N)	Micro (%)	Rural (N)	Rural (%)
Total Population	491,739	61.52%	119,054	14.89%	188,565	23.59%
Sex	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
Male	244,049	50.95%	60,524	52.15%	97,549	51.41%
Female	234,974	49.05%	55,530	47.85%	92,215	48.59%
Age	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
Under 20	125,915	26.29%	33,479	28.85%	49,922	26.31%
20-44	183,892	38.39%	40,796	35.15%	52,246	27.53%
45-64	98,021	20.46%	24,365	20.99%	46,351	24.43%
65-84	62,260	13.00%	15,165	13.07%	35,138	18.52%
85 and older	8,935	1.87%	2,249	1.94%	6,107	3.22%
Race	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
White	400,586	83.63%	98,772	85.11%	151,714	79.95%
Black	22,209	4.64%	3,355	2.89%	1,220	0.64%
AIAN	9,418	1.97%	2,617	2.25%	22,575	11.90%
Asian	10,449	2.18%	1,150	0.99%	1,463	0.77%
NHPI	636	0.13%	253	0.22%	91	0.05%
Other	6,821	1.42%	2,767	2.38%	2,222	1.17%
Two Or More	28,904	6.03%	7,140	6.15%	10,479	5.52%
Ethnicity	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
Hispanic Or Latino	20,829	4.35%	7,999	6.89%	7,747	4.08%
Not Hispanic or Latino	458,194	95.65%	108,055	93.11%	182,017	95.92%
Poverty	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
Yes	48,955	10.43%	10,976	9.61%	22,662	12.28%
No	420,229	89.57%	103,231	90.39%	161,868	87.72%
Uninsured	**Metro (N)**	**Metro (%)**	**Micro (N)**	**Micro (%)**	**Rural (N)**	**Rural (%)**
Yes	23,505	94.07%	7,143	92.59%	10,891	92.25%
No	373,122	5.93%	89,202	7.41%	129,702	7.75%

DEMOGRAPHICS SPOTLIGHT

Two specific population-based trends discussed in this chapter may provide additional context for the need for specific types of health care providers, facilities, and focus on access to care to ensure that population health needs are met for all populations. Those two areas are an identified maldistribution of both younger and older populations within North Dakota.

In 2024, the populations under age 20 and between 20 and 44 in North Dakota account for a larger proportion of the population than the age groups of 45 to 64 and 64 to 84 when compared to the U.S. as illustrated by Figure 1.6. This indicates an overall trend of a younger population. Figure 1.7 breaks down the North Dakota population by age and metropolitan status. Within the under age 20 category, the micropolitan population has a disproportionately higher percent of

population under age 20. This indicates a potential increased need for both pediatric providers as well as primary care providers that serve pediatric populations. Chapters 6, 7, and 8 explore physician, nursing, and other health care providers that serve the population of North Dakota and identify a high degree of concentration of pediatricians in metropolitan areas. This potentially results in micropolitan and rural area populations relying on non-pediatrician primary care providers for the care of pediatric populations. While this is an appropriate provider group to serve pediatric populations, the increased service need for younger populations must be considered when determining provider shortages.

In North Dakota in 2024, the age groups of 45 to 64 and 65 to 84 had lower proportions of population than the U.S., as illustrated by Figure 1.6. The age group of 85 and older had a slightly larger proportion of population than the U.S. In Figure 1.7, the population groups over age 45 were disproportionately higher in rural areas. In 2024, 24 of 53 counties (45%). had more than 25% of their population age 65 and older with 90% of those counties being classified as rural. This indicates a potential increased need for specialty care providers, ancillary health care services, and facilities equipped to serve older populations in rural areas. As mentioned above, later chapters will discuss the number and type of providers serving North Dakota. Chapter 9 will also discuss facilities that are focused on serving older adults including long-term care facilities and rehabilitation facilities. That chapter will also explore travel distance from home to points of care. The consideration of travel distance is important when considering service availability for older adults as travel limitations impact older adults.

While other scenarios of increased need exist within the state, these two areas highlight notable maldistribution of populations that have the potential to impact areas throughout the state that may create challenges for individuals to seek care in their local communities as well as create strain on health systems due to individuals needing to travel outside of their communities for care.

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CHAPTER TWO

Social Drivers of Health in North Dakota

HEALTH BEGINS IN OUR COMMUNITIES

Health is shaped by everyday conditions, including housing, food access, income, education, community support, and access to care. These conditions are called social drivers of health. Together, they influence health and quality of life for North Dakotans.

What Shapes Health?

These six social drivers work together to shape health outcomes and quality of life for North Dakotans.



Percent of North Dakota counties fully or partially designated as Health Professional Shortage Areas

62%	38%	91%
Primary Care	Dental Health	Mental Health

Source: Health Resources & Services Administration, 2026

INTRODUCTION

Various external factors, referred to as social drivers of health (SDOH), can affect health status and explain why some Americans are generally healthier than others. SDOH consider the various circumstances in which people are born, live, learn, work, socialize, play, and age which affect a range of health outcomes (Centers for Disease Control and Prevention [CDC], 2024b; Office of Disease Prevention and Health Promotion [ODPHP], 2025). Circumstances that may affect health outcomes of individuals include the current social structure, economic factors, and physical aspects of a person's environment. Environments include home, school, workplace, neighborhood, city, and other community settings where a person spends a significant amount of time. Resources that contribute to an enhanced quality of life for a given population are likely to have a significant influence on positive health outcomes of the population. Examples of quality-of-life enhancing resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local health services, and environments free from life-threatening toxins. Six factors are recognized as core social drivers of health. They are individuals' economic circumstances, their education, food access, the physical infrastructure of their environment, the social and community context in which they live, and their overall health and access to healthcare (ODPHP, 2025). There is little consensus on how much impact each factor has on an individual, but each does have some degree of influence.

As discussed in Chapter 1, population characteristics influence healthcare delivery systems and should inform local health policy. When the demographics or socioeconomics of an area change, it is also possible that the healthcare delivery system will change. For example, when an area experiences the aging of its population, one would more likely see increased demand for long-term care facilities, alternative housing options, transportation services, and home and community-based services. If an area were to experience depopulation, then it is likely those conditions would make it more difficult for the healthcare delivery system to maintain services in that area. The rurality of North Dakota is another factor that can influence healthcare delivery and local health policy. Most North Dakota counties are designated as rural and some healthcare services, such as specialty care services, may not be readily available in more rural areas of the state. All of these factors and more are a part of social drivers of health and can affect the health of North Dakota residents.

SOCIAL DRIVERS OF HEALTH

ECONOMIC STABILITY

Economic stability can encompass numerous factors when attempting to determine the economic health of an individual or population. These factors can include employment, poverty, wages/salaries, job opportunities in various industries, household income, and cost-of-living for an area.

The unemployment rate is often used as an indicator of an area's economic health, and an individual's employment status is a key indicator of their personal economic stability. According to the U.S. Bureau of Labor Statistics (BLS, 2026) the unemployment rate in North Dakota has remained low, around 2.6% or under, from 2022-2025. This indicates that a majority of the population in the state that is able to work is employed. So where are individuals employed in ND? In 2025, the top 5 largest employers by industry by average annual employment was

government (75,578) followed by health care and social services (65,808), retail trade (46,171), accommodation and food service (33,924), and construction (30,043). Another notable data point to consider when examining economic stability would be those industries with the highest wages. The mining, quarrying, and oil and gas extraction industry had the highest average annual wage of $134,775 in North Dakota in 2025. In comparison, the government sector, while the largest industry employer in North Dakota, had an average annual wage of $61,022 (North Dakota Job Service, 2026b).

Median household income is an influential economic indicator when examining economic stability. It allows for the examination of differences in income among states but also within states, as well as how income levels change over time. Figure 2.1 below demonstrates that in 2024, the median household income for North Dakota was estimated to be $76,657. This is slightly lower than the estimated median household income for the U.S. in 2024 which was $80,734. However, a decade earlier in 2014 the median household income in North Dakota was estimated to be $55,579 while for the U.S. it was $53,482. This demonstrates that there has been growth in median household income in both North Dakota and the U.S. however, the median household income in ND has demonstrated a 41% increase while the U.S. has demonstrated a 48% increase. Nationally there has been a larger increase in median household income compared to ND (U.S. Census Bureau [USCB], 2026b).

When individuals and families have household income below certain levels set forth by the federal government, they are designated as living in poverty. With limited income, this segment of the population may have a more difficult time being able to afford basic necessities such as housing, food, and healthcare. In North Dakota, 10.8% of the population was estimated to be living in poverty in 2024. This is below the U.S. percent in 2024 of 12.5%. There are certain groups within North Dakota that are a cause for concern when they are living in poverty due to limitations in the options for changing their economic circumstances. These groups include children (those under 18 years of age) and the elderly (those aged 65 or older). Of those living below the poverty level in North Dakota in 2024, 24.6% were children and 14.8% were elderly (USCB, 2026a). An established economic measure to consider is the Gini Index value, which is a summary value of income inequality. The Gini Index ranges from 0 to 1, with 0 indicating perfect income equality (everyone receives an equal amount) and 1 indicating perfect income inequality (one person or group receives all of the income) (USCB, 2024). North Dakota has a Gini Index value of 0.45 compared to the overall value in the U.S. of 0.48, indicating that there is more income equality in North Dakota than in the country as a whole (USCB, 2026c).

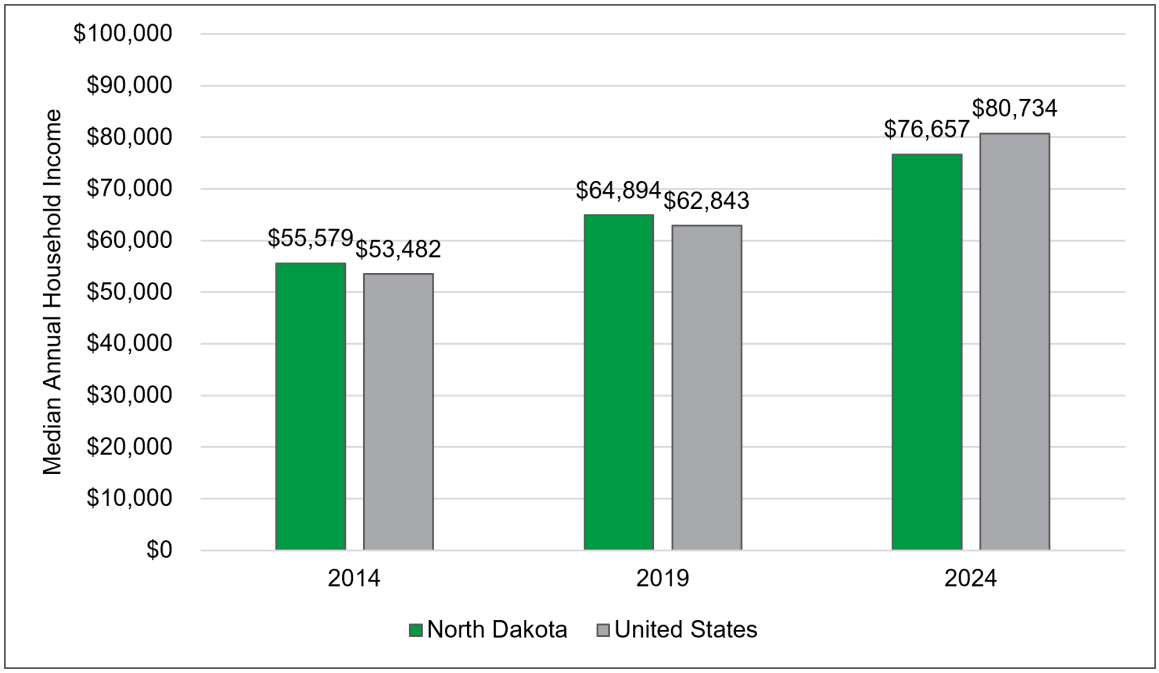


Figure 2.1: Median Annual Household Income for U.S. and North Dakota, 2014-2024 (USCB, 2026b).

It is important to consider the cost-of-living for an area when considering the economic stability of the population. In North Dakota in 2024, it was estimated that the cost of living for a single individual was about $24,817 per year, with housing being the largest expense. This indicates that if an individual makes the median household income for ND, then they can afford the average cost-of-living for an individual. Of course, for different household situations, the cost-of-living changes. For a family of four with two children in ND in 2024, it was estimated that the cost of living with only one full-time worker to be about $55,159 with housing continuing to be the largest expense, followed closely by food. However, if the same family of four had two full time workers, the cost-of-living increases to $74,885. The largest expense in this case comes in the form of childcare, followed by housing (North Dakota Job Service, 2026a).

EDUCATION

Education's tie to health outcomes may not be immediately obvious but obtaining an education can lead to increased job and economic opportunities, which can affect an individual's health and well-being. Some level of training or education is typically required for most jobs in today's market, and matching educational opportunities to the job market needs of an area can be beneficial.

K-12 Education

A majority of jobs, trade schools, and institutions of higher education within the U.S. require a base level of education, requesting that applicants have at least a high school diploma or a high school equivalency (HSE) certificate. As such, the K-12 education infrastructure and obtaining a high school diploma or HSE certificate can be key to allowing individuals to seek jobs and further their education. The K-12 education infrastructure not only provides a base level of

education, but depending on the available curriculum within a school, it also provides a space for students to explore different potential areas of interest for future careers. According to data from the North Dakota Department of Public Instruction (ND DPI, 2026) depicted in Figure 2.2, there were 116,365 students enrolled in public schools in North Dakota during the 2025-2026 school year. This is a 9.7% increase in the number of students enrolled in public schools since the 2015-2016 school year. During this same timeframe, there has been an increase in non-public school enrollment (17.9%) and a sharp increase in home school education enrollment (164.6%). The four-year cohort graduation rate for the 2024-2025 school year was 84% which is on par with previous years of data (Insights of North Dakota, 2026). It is also important to consider those that do not have a high school diploma. It is estimated that 3.6% of North Dakotans aged 25 or older went to high school for some amount of time but have no high school diploma, which is lower compared to the national percentage of 5.7% (USCB, 2026e).

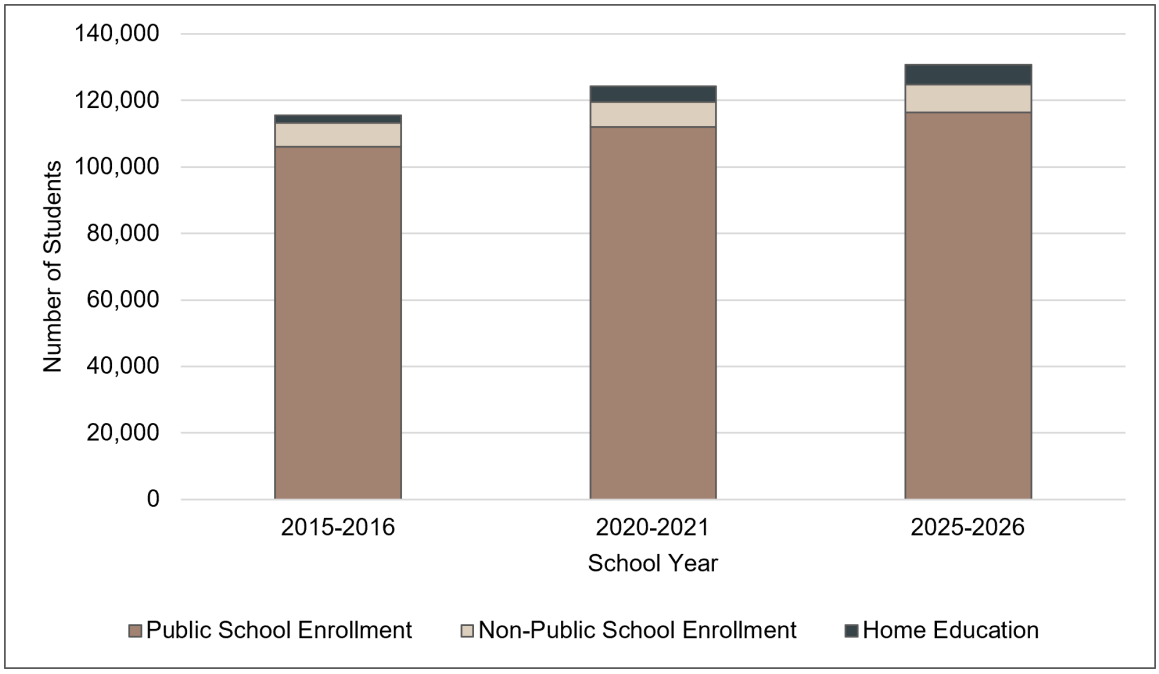


Figure 2.2: Annual School Enrollment in North Dakota by Public, Non-Public, and Home Education, 2015-2026 (ND DPI, 2026).

Career and Technical Education

Career and technical education (CTE) can prepare students for a wide range of careers that require varying levels of education. The various levels of education can include high school diploma and postsecondary certificates, apprenticeships, or two and four-year college degrees. The CTE opportunities in North Dakota are organized into career clusters. The career clusters for North Dakota are Agriculture, Food & Natural Resources; Architecture & Construction; Arts, A/V Technology & Communications; Business Management & Administration; Education & Training; Finance; Government & Public Administration; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law, Public Safety, Correction & Security; Manufacturing; Marketing; Science, Technology; Engineering & Mathematics; and Transportation, Distribution & Logistics. There are numerous courses for specific occupations and skills within each career cluster that individuals are able to take under CTE in North Dakota.

This provides a very wide range of educational opportunities for those exploring and seeking education for various careers. According to the 2024 Consolidated Annual Report from the North Dakota State Board for Career and Technical Education, there were 26,085 secondary students and 8,519 post-secondary students enrolled in a CTE course in North Dakota during the 2023-2024 program year. The Human Services career cluster had the largest number of secondary students (8,678) and the Business/Administration career cluster had the largest number of post-secondary students (2,446). Another benefit offered under CTE is work-based learning (WBL) experiences. During the 2023-2024 school year, 2,253 students were reported to have completed WBL experiences. There are also numerous career and technical student organizations with chapters in North Dakota that work with CTE and offer more career specific information and opportunities to students. Some of these include Future Business Leaders of America (FBLA), Technology Student Association (TSA), and HOSA that empowers students to become leaders in the global health community, along with numerous others (North Dakota Career and Technical Education, 2026).

Higher Education

Pursuing higher education can provide further opportunities within certain fields and professions, as well as allowing individuals to specialize within an area of interest and providing students with the most up-to-date techniques and information within their chosen field of study. Higher education provides the necessary skills and knowledge base for important occupations. Some examples of these occupations include teachers, social workers, counselors, nurses, physicians, lawyers, pilots, information technology professionals, and the various fields of engineering along with numerous others. In North Dakota, it is estimated that 35.2% of individuals aged 25 to 64 have obtained a bachelor's degree or higher. The percentage of individuals aged 25 to 64 who have obtained a bachelor's degree or higher has been increasing in North Dakota between 2014 and 2024. Data on employment status by educational attainment demonstrates that those with a bachelor's degree or higher have a high rate of employment in North Dakota with 90.4% of those individuals being in the labor force (USCB, 2026d). For individuals looking to pursue higher education in North Dakota, there are numerous options with a number of institutions of higher education that offer a variety of degrees and programs. There are five 2-year public colleges, four 4-year private colleges, five tribal colleges, four 4-year public colleges, and two research universities (National Center for Education Statistics [NCES], 2026). Overall, the North Dakota higher education system has a retention rate of 75% and graduation rate of 57% (North Dakota University System [NDUS] Resource Library, 2024). Community colleges can be a key component of the higher education system as they are a potentially more affordable way for individuals to receive higher education or start their journey into higher education. During the 2024-2025 school year, there were 27,658 students enrolled in community colleges across the state. Of those students, 15,236 were degree seeking, 1,053 were non-degree seeking, and 11,369 were taking non-credit courses (NDUS Resource Library, 2026).

FOOD ACCESS

Lack of access to fresh, healthy foods is associated with poor diets and higher levels of obesity, diabetes, and other negative health outcomes. Thus, access to healthy food and food security are important components of social drivers of health (Gregory & Coleman-Jensen, 2017; CDC, 2026). Referring to an individual or household as food insecure means they do not have the

resources to provide enough food to live a healthy and active life. If households or individuals are food insecure, there may be times when they are going hungry and not getting enough food. When individuals go hungry, this can have a negative impact on other aspects of their day-to-day life, making it difficult for them to focus on work or school. It can also become a source of stress when individuals do not know if they will be able to get food when they need it (Feeding America, 2026).

Food Assistance Programs

There are social programs designed to help families and individuals who are food insecure gain more stable access to healthy food. Ensuring food security for children can be very important as food insecurity may worsen the onset and persistence of adverse health conditions, such as developmental deficits, obesity, weakened immunity, and increased risk of serious illnesses. Programs that provide healthy, affordable food result in fewer negative health outcomes and chronic illnesses among the population, especially when targeted towards children in need (Cook et al., 2004). One program available for students is the Free/Reduced Price Lunch program in schools. In North Dakota, approximately 30.8% of students were eligible for a free/reduced price lunch during the 2022-2023 school year (NCES, 2023). Students were eligible for free lunches if their family was at or below 130% of the Federal Poverty Level (FPL) and they were eligible for reduced price lunch if their family was at or below 185% of the FPL (U.S. Department of Agriculture [USDA] Food and Nutrition Service, 2022). These income eligibility requirements are adjusted every school year as the FPL is adjusted. Children of individuals who receive Supplemental Nutrition Assistance Program (SNAP) benefits who attend school automatically qualify for free school meals (USDA Food and Nutrition Service, 2025b).

SNAP is a federal nutrition program helping individuals and families in need of access to healthy food. SNAP participation is associated with lower overall healthcare expenditures and Medicaid/Medicare costs for states. Early access to SNAP is also associated with improved birth outcomes and long-term health for children and adults (Carlson & Keith-Jennings, 2018). Based on 2024 data, 6.6% of households in North Dakota were receiving food stamps/SNAP benefits. Of the households that received SNAP benefits in the past 12 months, 45.2% had children under the age of 18 in the household while 31.4% had people aged 60 or older in the household (USCB, 2026h). Another federally funded program available in North Dakota is the Women, Infants & Children (WIC) Program which is funded through the U.S. Department of Agriculture (USDA). This is a nutrition and breastfeeding program designed to assist families through supporting healthy nutrition during pregnancy and supporting children from birth to age 5 by focusing on breastfeeding and childhood nutrition. The WIC program offers benefits that include access to free healthy foods such as fresh fruits and vegetables, nutrition education, breastfeeding support, and referrals to care that are beyond the scope of the WIC program. Eligibility for the WIC program is based on household size and pre-tax maximum income limits. In North Dakota in 2023, it was estimated that there were 20,400 residents eligible for the WIC program and 10,500 participants. This indicates that approximately 51.6% of eligible residents participated in the program in 2023 (USDA Food and Nutrition Service, 2025a).

PHYSICAL INFRASTRUCTURE AND BUILT ENVIRONMENT

The physical environment in which individuals live can also affect their overall health. Factors such as roads, sidewalks, air quality, safe and stable housing, and access to both outdoor and

indoor recreation can vary significantly between communities. There are also significant environmental differences between rural and urban areas, which are particularly salient to North Dakota, as a majority of the state is designated rural.

Built Environment

Housing is an important aspect of the built environment. It is estimated that there are 377,281 housing units in North Dakota with an estimated 87.7% being occupied and 12.3% being vacant. This percent of vacant housing units in the state is higher than the estimated percent for the U.S. of 10.1% (USCB, 2026f). If an individual or family becomes unsheltered, they may be forced to live out of vehicles, in temporary shelters, in accommodations that do not have kitchens or adequate plumbing facilities or even live outdoors without any shelter. All of these situations can have various impacts on health, including an increased risk of potential illness. The U.S. Department of Housing and Urban Development (HUD) released a report in 2024 on homelessness. According to their point-in-time report, they estimated that 865 people in North Dakota were experiencing homelessness, which is a 10.3% increase from the 2023 estimate and a 36% increase from the 2007 estimate. The report goes on to state that about 646 (75%) of those experiencing homelessness are individuals and 219 (25%) are people in families with children (U.S. HUD, 2024). It is important to note that this number represents only a point-in-time count taken once per year, it is difficult to reliably track over time and can vary drastically due to various economic factors. Beyond the risk of losing stable housing, maintaining adequate housing can be difficult, particularly for those who are struggling financially. High housing costs can lead to overcrowding in housing units, struggling with paying household bills, or struggling to pay other bills. One way to examine this is through the percentage of household income that is allocated towards housing costs. In North Dakota, it is estimated that 20.8% of housing units with a mortgage have 30% or more of the owner's monthly household income going towards housing costs and 38.8% of occupied rental units have the renter's spending 30% or more of their monthly household income on rent (USCB, 2026f) (Figure 2.3).

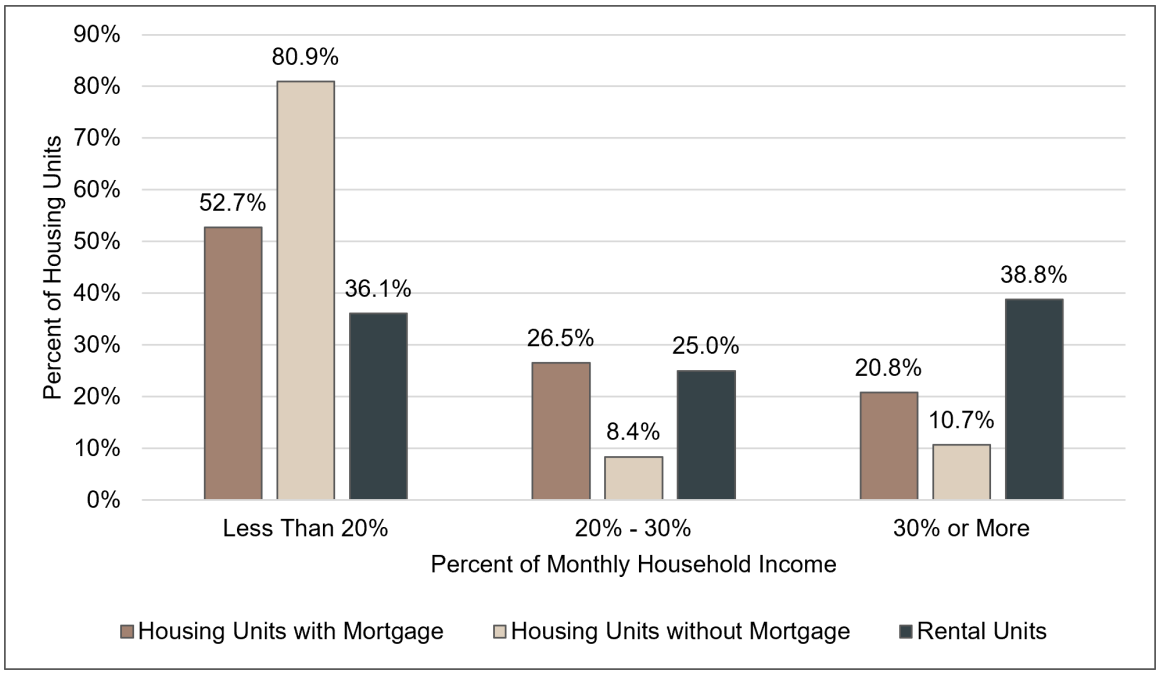


Figure 2.3: Percentage of Monthly Income Going Towards Housing Costs for Various Housing Types in North Dakota (USCB, 2026f).

Safety is another important aspect of the built environment: not only being safe from crime but also that the area is environmentally safe. Some examples of the topics considered when determining if an area is environmentally friendly are air pollution, water pollution, access to safe drinking water, and toxins present in the physical infrastructure. When considering toxins within the physical infrastructure, one common toxin often discussed is lead paint in older homes. According to the U.S. Environmental Protection Agency (EPA), older homes built before the year 1978 are more likely to contain lead-based paint (EPA, 2024a). Lead is a toxin that can cause neurological problems when individuals have prolonged exposure (CDC National Institute for Occupational Safety and Health, 2024). In North Dakota, it is estimated that 47.8% of occupied housing units were built prior to 1980, and 11.5% were built prior to 1940 (USCB, 2026f). With houses that may contain lead paint, it is important to test for the toxin and attempt to mitigate any potential exposure when possible, especially if the housing unit is undergoing renovations.

Often when individuals think of safety, they think about crime and the risk potential crime may pose to them. Individuals may look at crime rates in different neighborhoods or cities when considering where to live. The threat of crime is an important consideration when examining SDOH as it can affect stress of individuals who live in high crime areas, as well as how they utilize the physical infrastructure within their environments. For example, if crimes often occur within the neighborhood park, people may be less likely to use that park. In North Dakota, the Bureau of Criminal Investigation manages the state's Uniform Crime Reporting (UCR) program. This involves the collection and analysis of crime statistics reported by local law enforcement agencies in the state and is made available to the public through various forms, including an annual statewide crime report. On a statewide level, North Dakota has seen a 7.1% decrease of Group A offenses between 2023 and 2024. Group A offenses consist of crimes against persons, crimes against property, and crimes against society. Crimes against property accounted for 47%

of Group A offenses followed by crimes against persons at 26% and crimes against society at 25%. However, the rates of various types of crimes and how they have changed over time vary widely between jurisdictions throughout the state (North Dakota Office of Attorney General, 2025).

Access to Recreation

Accessing recreation can involve a number of factors such as access to safe outdoor spaces for walking, hiking, biking, etc. The physical infrastructure that lends itself to an area's being a safe space for walking is often referred to as "walkability." The EPA offers a nationally standardized Walkability Index (EPA, 2024b). Within this index, most areas of North Dakota are ranked as below-average walkability, with just a few census block groups within cities being rated with above-average walkability. However, the nationally standardized walkability index does not necessarily reflect the reality of recreation standards in North Dakota. There are opportunities for individuals to get outside and walk around their communities/areas even if those areas are not developed with sidewalks or designated walking trails/park areas. Just because an area is undeveloped for walking does not mean it is strictly un-walkable. While some walking-focused infrastructure does make certain areas safer for walkers, particularly in cities and along roads, some undeveloped areas can still be used for the fundamental recreation activity of walking.

Weather can be a hindrance to outdoor recreation activities. North Dakota typically experiences a variety of weather conditions throughout a given year. The state can experience extreme heat during the summer and extreme cold in the winter, as well as floods, blizzards, and droughts. Depending on weather conditions, individuals may not be able to enjoy outdoor activities and may need to use indoor recreational facilities for physical activities. One study found that fewer recreational facilities per capita was a predictor of obesity in non-metro settings (Ahern et al., 2011). Additional studies found associations between obesity and access to recreational facilities, as well as natural amenities that could facilitate outdoor recreation (Jilcott Pitts, 2013; Polyzou & Polyzou, 2024). Based on its 2020 population, North Dakota maintains about 1.4 recreational/fitness facilities per 10,000 persons (USCB, 2025). Some of these recreational facilities may require paid membership for use and not every community is able to support fitness gyms or larger recreational facilities. Smaller communities in North Dakota have a variety of ways of providing recreational opportunities in the community. They typically have postings about community recreation groups or classes (whether free or paid), or even open/extra hours at available recreational facilities such as high school gyms or a community pool. Announcements regarding recreational classes or events can often be found in the local newspaper, a town newsletter, town websites or social media pages, or on bulletin boards in community spaces such as at post offices, community centers, grocery stores, clinics, or city office buildings.

SOCIAL AND COMMUNITY CONTEXT

Access to community and social support influences an individual's overall health. Having access to social support, different community activities, and social groups/clubs/organizations can play a role in physical, mental, and emotional well-being. Studies have shown that loneliness and social isolation are associated with an increase in all-cause mortality. Social isolation has also been linked to cardiovascular disease. Lack of social supports not only affects physical health but also has been shown to affect mental health, as social isolation is associated with poorer

mental health outcomes (Leigh-Hunt et al., 2017). The Mayo Clinic and the American Psychological Association consider social support an important tool in mitigating stress and offer tips on how to build social networks, including being proactive through volunteering or community classes, as well as taking advantage of technology by staying in touch through text, email, or social network websites (American Psychological Association, 2024; Mayo Clinic, 2023).

Community Social Supports

Some communities work on building social networks for individuals living in their community. These efforts often take the form of community events such as annual summer community-wide celebrations and community days, social groups run through faith-based or civic organizations, recreational or organized sports teams and leagues, and various other opportunities for youth and adults. Many cities have event calendars or event announcements on their city websites or social media pages. For example, Devils Lake, Dickinson, and Garrison all have community event listings on their city websites, including listings for music events, camps for kids, boating events, and other activities. Some communities also work towards encouraging individuals and families to move to their town or city and offer support to new residents. One example is Carrington's New Resident Guide. This guide not only provides information on utilities and City Hall, but also has information on local realtors, telecommunications providers, employment opportunities, and local news media (City of Carrington, 2026).

Community Health Workers

There are several different ways to maintain the health and social connectedness of a community. One model that has been used more widely in the past decade is community health workers (CHWs). This model uses community members who work in conjunction with the local healthcare system and public health officials, providing support for individuals seeking healthcare. CHWs can help patients navigate the local healthcare system, connect people to healthcare and healthcare resources, provide culturally competent health education and information, serve as patient advocates, and provide numerous other services. A key benefit of the community health worker model is that these professionals provide services in a culturally competent manner. Typically, CHWs reside in the communities they serve and share the same language, similar socioeconomic status, ethnicity, and life experiences as patients (National Heart, Lung, and Blood Institute, 2025).

During the 2023 North Dakota Legislative session, lawmakers passed House Bill 1028 which created regulations for the certification of community health workers in North Dakota. The bill created these regulations within Century Code and created a community health worker task force. Specifically, the task force is directed to develop a data-driven plan for community health worker scope of work, education and training, certification and regulation, medical assistance reimbursement, including reimbursement to a federally qualified health center, and a North Dakota community health worker collaborative; provide to the Department of Health and Human Services a proposal for a Medicaid state plan amendment or waiver to include community health workers; provide the Department of Health and Human Services proposed administrative rules for the community health worker scope of work, education and training, certification and regulation, medical assistance reimbursement, and a North Dakota community health worker collaborative; and collaborate with existing clinical, public health, home, and community-based

systems (North Dakota Legislative Assembly, 2023). In 2024, the task force was able to provide recommendations to the legislature around adding CHWs to Medicaid in North Dakota, administrative rules for CHW training, certification and regulations, and finally a proposal for a CW Collaborative that would be able to continue the work of the task force to support the development, training, and technical assistance for the CHW workforce in the state (North Dakota Department of Health and Human Services [ND HHS], 2025). The state's Department of Health and Human Services did create administrative rules for CHWs around their scope of practice, competencies, certification requirements, supervision, and other areas to define their practice that went into effect on October 1, 2025 (North Dakota Legislative Assembly, 2025). Creating these regulations could allow for the opportunity to grow this type of workforce in the state with the long-term potential benefit of improving health outcomes within communities.

Recognizing Culture in Healthcare

Addressing culture in healthcare can be one way to alleviate healthcare disparities and improve healthcare outcomes within a health system. When individuals feel their cultural beliefs are recognized and respected by the healthcare system and healthcare professionals, they may feel more comfortable seeking care (Haynes, 2025). Some examples of cultural practices that can be recognized in the healthcare field include working alongside traditional healers, allowing healing or prayer circles, asking about cultural dietary preferences, or recognizing various living situations such as multigenerational households and how that might factor into care and healing. Practitioners can address culture respectfully in many ways, even by simply asking patients if they have any cultural beliefs or practices. One study examined the self-reported healthcare experiences of underrepresented Americans in a Mid-Western state. The study included individuals who identified as African American, Native American, Latino/a American, and Asian American. While the overall responses reported general satisfaction with their healthcare providers, it was found that poor experiences predicted lower levels of treatment satisfaction and racist experiences predicted being afraid of seeking conventional healthcare services (Shepherd et al., 2018).

One example of healthcare in North Dakota that includes cultural practices is the Good Road Recovery Center based in Bismarck, ND. Opened in December of 2018, the Good Road Recovery Center was established by the members of the Three Affiliated Tribes, also known as Mandan, Hidatsa, Arikara (MHA) Nation, whose members have been severely impacted by substance use and its effects. This facility is run by the MHA Nation and focuses on substance abuse treatment while incorporating traditional cultural practices into the treatment process. The MHA Nation's vision is to work towards providing a greater understanding of the healing capacity of its culture by instilling in its people the knowledge and desire to live in balance with themselves and the world around them. Good Road offers both outpatient and residential treatment services as well as intensive case management (Good Road Recovery Center, 2020).

Language Barriers

Language barriers can have impacts on an individual's ability to access resources and find a sense of community. Even though the population of North Dakota is fairly homogeneous from a demographic perspective, there are a variety of languages found within the state. In one of the largest school districts in the state, Fargo Public Schools reports that there are 87 languages spoken amongst their student population (Fargo Public Schools, 2026). It can be inferred that

the families of the students also speak a large variety of languages at home. So, language barriers for students and their families are a consideration for the education system within North Dakota. Language barriers in healthcare can lead to miscommunication between healthcare professionals and their patients. This can decrease the quality of care the patient receives and lead to dissatisfaction with their care (Al Shamsi et al., 2020).

Language barriers can mean more than just a disconnect between the languages spoken within a community. It can also mean that hurtful and inaccurate language may be used to describe certain populations within a community. Particularly in healthcare, using inclusive and respectful language can create a more comfortable environment for patients. When patients feel comfortable in a healthcare setting, they may be more likely to seek the care they need (Bluemel, 2023). If an individual feels that the healthcare environment is uncomfortable or hostile towards them in any way, they may choose not to seek care. Using updated and respectful terminology for all members of a community can lead to all community members feeling accepted and prevent feelings of hostility and isolation. The U.S. Department of Health and Human Services (U.S. DHHS, 2024) has also been working on expanding implementation of the National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care. This set of standards looks to improve the quality of services provided to all individuals in order to work towards reducing health disparities and achieving the goal of greater health equity within the U.S. Part of these standards includes a section on communication and language assistance within the healthcare setting to ensure that all individuals are able to access appropriate services and receive the care they need.

HEALTH AND HEALTHCARE

This category within social drivers of health may be the most obvious factor contributing to an individual's overall health, but it is influenced by all the other social drivers. Access to healthcare and healthcare resources can be affected by where an individual lives, their socioeconomic status, their ability to navigate the health system, and other social drivers. Access to and availability of healthcare resources and healthcare providers is an important aspect to consider when looking at an individual's overall health.

Access and Availability

The health of the population of North Dakota and the availability of various provider types are discussed in subsequent chapters of this report. However, another way to examine access to and availability of healthcare services and providers is through Health Professional Shortage Area designations or HPSAs. The HPSAs are designations defined by the Health Services and Resources Administration (HRSA) and indicate healthcare provider shortages for primary care, dental health, and mental health providers. These designations can be for a geographical area, a specific population within an area, or for a facility (HRSA, 2023). As of January 2026, approximately 62% of counties in North Dakota are fully or partially designated HPSAs for primary care, 38% of counties are fully or partially designated for dental health, and 91% of counties are fully or partially designated for mental health (HRSA, 2026). Individuals located in a HPSA may have increased travel time and distance to healthcare services and/or they may have to wait longer periods of time to access healthcare services.

When a facility is designated as HPSA, this indicates that the facility is likely to serve as a safety net facility and provides health services to underserved populations. As of January 2026, there

are 46 healthcare facilities in North Dakota designated for primary care, including 12 Indian Health Service, Tribal Health, and Urban Indian Health (Indian/Tribal Health) facilities, 4 Federally Qualified Health Centers (FQHCs) and their satellite locations, 28 Rural Health Clinics (RHCs), and 2 correctional facilities. There are 47 healthcare facilities designated for dental health, including 12 Indian/Tribal Health facilities, 4 FQHCs and their satellite locations, 28 RHCs, 2 correctional facilities, and one other facility not located in an already designated area. Finally, there are 50 facilities designated for mental health in North Dakota, including 12 Indian/Tribal Health facilities, 4 FQHCs and their satellite locations, 28 RHCs, 2 correctional facilities, the state mental health hospital, and three human service centers that are not located in an already designated area (HRSA, 2026).

DISPARITIES IN NORTH DAKOTA

Examining data related to social drivers of health in North Dakota reveals some areas where disparities and inequities become apparent. When the data is examined based on varying characteristics of the population, one can identify areas that need improvement. While the North Dakota population is limited in its diversity, it is becoming more diverse, with 26.6% of North Dakota children identifying as a race/ethnicity other than White. As the state has the potential to become more diverse, it is important to recognize when specific segments of the population are disproportionally affected by SDOH that could result in negative health outcomes. As an example, the percent of the North Dakota population that identifies as American Indian/Alaska Native population is 4.5%, but that racial group is disproportionally represented when it comes to various measures of SDOH and negative health outcomes. As an example, the AI/AN population represented 11% of diabetes-related deaths in North Dakota in 2024 (Kaiser Family Foundation [KFF], 2024).

Educational attainment is another area where notable disparities are evident in North Dakota. It is estimated that among the White population of North Dakota, 95.1% have a high school graduate education or higher and 33.5% have a bachelor's level education or higher. For the American Indian/Alaska Native population in the state, it is estimated that 85.1% have a high school graduate education or higher, and 16.1% have a bachelor's level education or higher (USCB, 2026g). It is important to understand why educational attainment is a key part of SDOH. Studies have found that educational attainment is correlated to lifetime earning potential for individuals in the U.S. According to data synthesized in 2024 by the National Center for Education Statistics, higher educational attainment was associated with higher median earnings in 25- to 34-year-olds who worked full-time and year-round. This pattern was consistent from 2012 through 2022. According to the 2022 data, the median income for those with a master's degree or higher was $80,200 while it was $66,600 for those with a bachelor's degree, $49,500 for those with an associate's degree, and $41,800 for those who completed high school (NCES, 2024) (Figure 2.4).

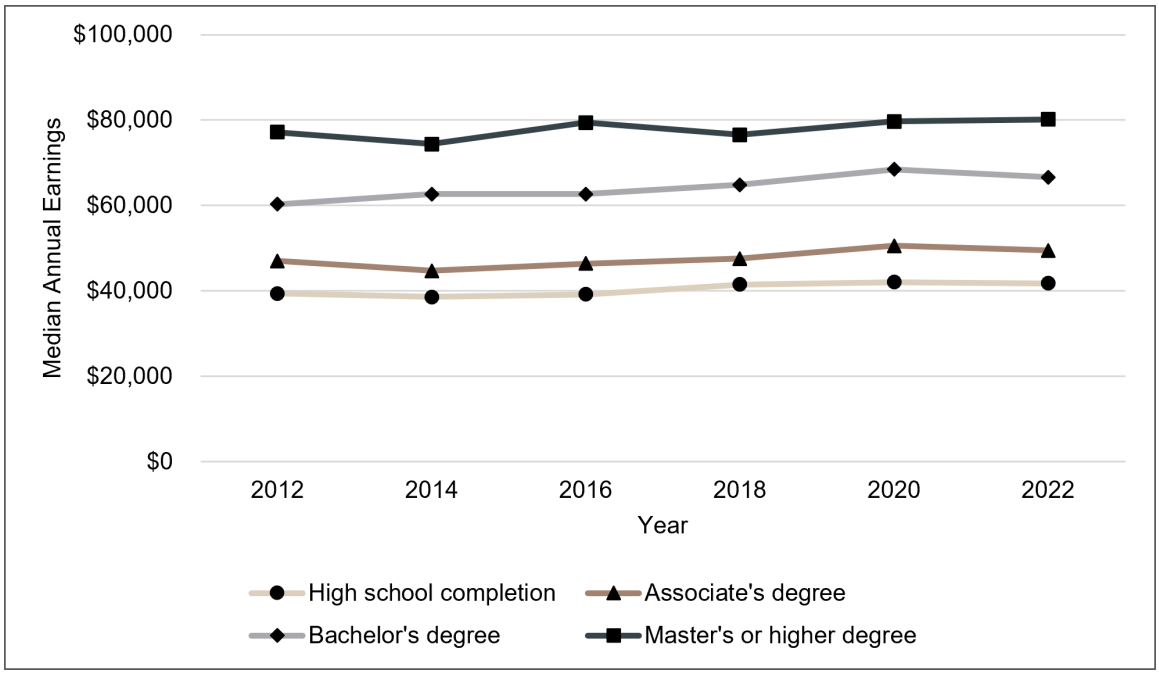


Figure 2.4: Median Annual Earnings by Educational Attainment, 2012-2022 (NCES, 2024).

Health insurance coverage is another major area when considering data related to SDOH. Whether or not someone has health insurance coverage in the United States can have a major impact on their access to healthcare. According to data on the rate of those who are not covered by health insurance in 2024 from the USCB Small Area Health Insurance Estimates (SAHIE), the uninsured rate for the nonelderly in North Dakota was 5.2% for those who are White and 14.1% for those who are American Indian/Alaska Native. This demonstrates a notable difference between racial groups when it comes to those who are covered by health insurance and those who are not. When comparing uninsured rates by gender, the uninsured rate for adult males in North Dakota was estimated to be 7.1% in 2024 and for adult females it was estimated to be 5.9%. When the data is broken down by poverty level, higher wage earners have a lower uninsured rate. For example, for those below 138% of the FPL in 2024 the uninsured rate was 12.2% and for those between 138% and 400% of the FPL the uninsured rate was 8.5 (USCB, 2026i). Since approximately 57.8% of people under age 65 in the U.S. and 64.8% of people under the age of 65 in North Dakota are estimated to receive healthcare coverage through an employer, there is a logical correlation between being unemployed and being uninsured (KFF, 2024).

A lack of health insurance coverage may lead to more expensive costs to receive medical care, which may lead to delays for uninsured individuals seeking the care they need. In some cases, the cost of healthcare may stop individuals from seeking care at all. According to data from the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System (BRFSS), compiled by the KFF, the percent of adults in North Dakota who reported not seeing a doctor in the past year due to cost, broken down by race/ethnicity, is 6.2% White, 23% Black, 19.4% Hispanic, and 18.8% of AI/AN. This data demonstrates a notable difference among racial groups for those who reported not having seen a doctor in the past year (KFF, 2024).

Insurance coverage for oral healthcare is another important aspect when considering individuals' access to healthcare services. A survey conducted at the beginning of 2023 found that approximately 27% of the adult population in the U.S. lacked dental insurance, which was almost three times higher than those who lack health insurance (9.3%). Adults who are living in rural areas were more likely to not have dental insurance compared to their counterparts living in urban areas (CareQuest Institute for Oral Health, 2023). The percentage of adults aged 18+ who visited a dentist or dental clinic in the past year increases as the level of education and level of income increase. In short, those of lower socioeconomic status (SES) are less likely to have visited a dentist or dental clinic in the past year. More women than men have visited a dentist or dental clinic in the past year (CDC Oral Health Data Systems, 2024).

In North Dakota, approximately half of enrolled kindergarteners have experienced tooth decay. There is a clear rural/urban divide among kindergarteners who experience oral health problems. Rural kindergartners are more likely to experience tooth decay, have untreated tooth decay, and require early or urgent dental care compared to urban kindergartners. Roughly one-quarter of middle and high school students in North Dakota had no dental visits in the past 12 months. With an average of 74.2% of children receiving preventive dental care visits in the last 12 months, North Dakota falls below the national average of 75.1%. One population that experiences inequities in oral health in North Dakota is the AI/AN population. Just over half (51%) of the AI/AN population in North Dakota have not seen a dentist in five or more years compared to 31% of the non-AI/AN population. The AI/AN population has three times as many emergency visits for tooth pain compared to those who are White. Some pregnant women in North Dakota also experience barriers to receiving dental care, with 27% lacking dental insurance, 15% being unable to afford to go to a dentist or dental clinic, and 7% being unable to find a dentist accepting Medicaid patients (Connor et al., 2022).

Beyond access to healthcare, other areas can be examined for disparities when looking into social drivers of health in North Dakota. Food deserts and lack of access to grocery stores selling a variety of healthy foods can have a significant impact on overall health. There are organizations throughout the country that are working to reduce the burden of food insecurity; in North Dakota, the organization focused on reducing food insecurity is the Great Plains Food Bank (GPFB). The GPFB serves several communities throughout the state and often partners with local community groups on several efforts. Approximately 54% of their partners are volunteer led, indicating that volunteers make up a notable portion of the workforce efforts around reducing food insecurity in North Dakota. The GPFB has also put together a report regarding food insecurity in North Dakota. According to their report, the AI/AN population faces hunger at seven times the rate of other population groups. It is estimated that 37% of the clients at GPFB are children, 17% are older adults (60 years old or older), 14% are Veterans, and 13% are single caregivers. GPFB also found that approximately 8% of their clients are grandparents who care for grandchildren. The organization's report also investigated other SDOH factors within community members' lives. Of the clients who answered their survey, GPFB found that 17% were unemployed, 32% experienced a lack of transportation, 27% lacked access to housing, 21% were experiencing poverty, and 27% had a chronic health condition. These data points paint a picture of a broad spectrum of individuals and their circumstances who are experiencing food insecurity in North Dakota. One of the most pronounced findings from the GPFB report is that individuals indicated they had to choose between paying for food or paying

for other essentials. These include things such as paying utility bills (43%), paying for transportation (41%), and paying for healthcare (18%) (Great Plains Food Bank, 2023).

Another organization looking into and addressing food insecurity at a national level is Feeding America. This organization created its own food insecurity map which indicates notable findings among ND counties. According to the Feeding America map, the counties of Benson, Golden Valley, Ramsey, Rolette, and Sioux have the highest rates of food insecurity in North Dakota. Some of these counties also have a significant AI/AN population and are associated with AI/AN reservations. Overall, their reporting indicates that 82,870 ND residents are food insecure, and the state had a food insecurity rate of 9.8% in 2023 (Feeding America, 2025).

Another area that can affect aspects of an individual's SDOH is whether they have been incarcerated or involved in the criminal justice system. Having a criminal record can make it more difficult for individuals to access safe and stable housing and become gainfully employed. This would affect their ability to afford healthy food and access quality healthcare. Involvement in the criminal justice system, in particular incarceration, is another area where there are noted disparities in North Dakota, particularly racial disparities. The North Dakota Department of Corrections and Rehabilitation (DOCR) provides data on the population within the state that is involved with the DOCR through a publicly available dashboard. The dashboard notes that there are racial disparities present in North Dakota when it comes to those under the control of DOCR, with people of color being overrepresented in prison, on probation, and on parole. Black citizens of North Dakota are 5.1 times more likely to be under DOCR control compared to their White counterparts, Latinos are 2.2 times more likely, and Native Americans are 7.1 times more likely (North Dakota DOCR, 2024).

SUMMARY

Together, all these social drivers affect an individual's health – the kind of work they do, the type of education they receive, their living situation, their economic stability, access to food, social norms, social support, and their access to healthcare services. All these factors are linked and influence one another. For example, a lack of access to healthy food may lead to a poor diet, which could contribute to other health concerns. Certain health concerns may require more frequent medical intervention and could include increased costs or even increased travel time depending on where an individual lives. Disparity in one area of the social drivers of health could affect other areas of an individual's life. Some of the goals when addressing social drivers of health include increasing health equity and reducing disease prevalence (CDC, 2024a). Health equity refers to everyone having the opportunity to achieve their full health potential and not face barriers to this possibility due to socially determined circumstances. Reducing disease prevalence includes making efforts towards reducing obesity, cardiovascular disease, diabetes, cancer, and other conditions, all of which can be influenced by social drivers of health (Brennan Ramirez et al., 2008).

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CHAPTER THREE

The Health of North Dakota

A LOOK AT NORTH DAKOTA'S POPULATION HEALTH

Understanding the health of North Dakotans requires looking at the conditions and outcomes shaping well-being across the state. Trends in chronic disease, obesity, mental health, preventive care, and death rates reveal areas of progress and ongoing challenges. An estimated 26.5% of North Dakota adults received mental health treatment in the past year, compared with 22.9% nationwide.

North Dakota Death Rates by County Type, 2000–2025

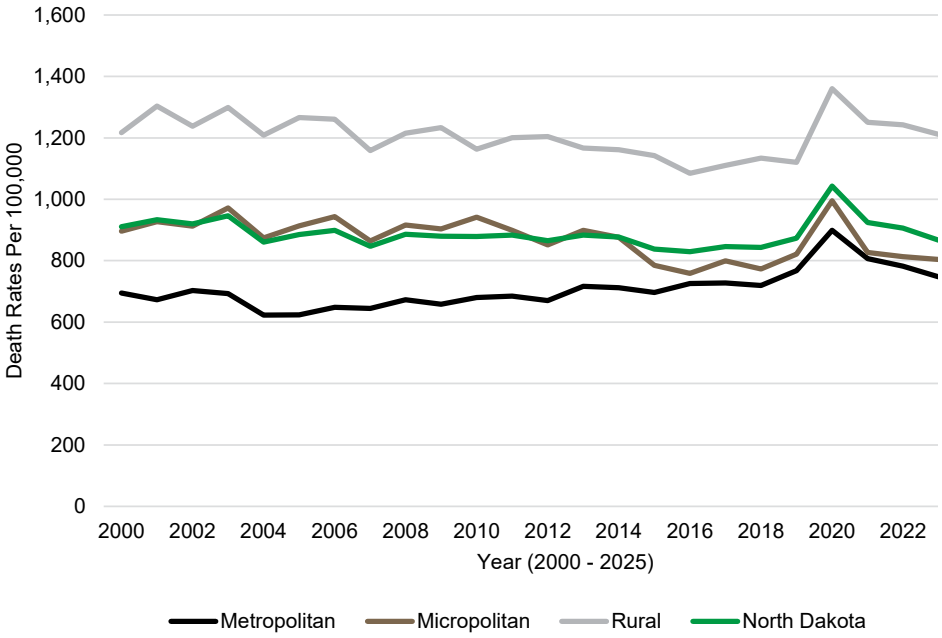


Figure 3.4. Death rates were consistently highest in rural areas and rose sharply across all three county groups in 2020.

Excess weight is a health risk, while death rates help describe the health of a population. Together, these measures illustrate North Dakota's health challenges and differences across communities.

NORTH DAKOTA SNAPSHOT

71.2% of North Dakota adults were overweight or obese in 2024.

INTRODUCTION

The condition of individual health is of concern to the individual, family, and community; however, the aggregate of health concerns for individuals and families has significant implications for the overall healthcare system and its ability to design a model of delivery to improve health status. When considering how to build a health system in a community that addresses the needs of the population, it is important to consider access to care, the cost of care, the quality of care, and the availability of healthcare providers. Access to care refers to the ability to gain entry into the health system. This can include the availability of health professionals and institutional access points such as hospitals, public health units, clinics, and services for emergency medical care, long-term care, behavioral and mental health, oral health, pharmacies, and other points of care. In North Dakota, natural barriers such as distance, weather, and road conditions are important considerations when it comes to access to care. The cost of care is another influence on individual health (The Commonwealth Fund, 2009). In 2025, North Dakota ranked 8th among all 50 states and Washington D.C. on health care access and affordability (The Commonwealth Fund, 2025). Even in a relatively low-cost state like North Dakota, cost has been and remains a concern within public policy discussions. In 2024, healthcare costs in the United States were highest compared to other advanced countries, accounting for about 17.2% of gross domestic product (GDP), a common and accepted measure of economic production and activity (Organization for Economic Cooperation and Development, 2021). In comparison, healthcare in Germany, the next most expensive country, accounted for approximately 12.3% of GDP. Moreover, United States residents spend more money on pharmaceuticals compared to residents of other Organization for Economic Cooperation and Development (OECD) countries (The Commonwealth Fund, 2026). In fact, the amount spent by U.S. residents is nearly twice as much as the OECD average.

The quality of care delivered in a healthcare system relates directly to population health. According to the Institute of Medicine, there are six principal aims to improve health that health systems should follow: safety, effectiveness, patient centeredness, timeliness, efficiency, and equity (Institute of Medicine, 2001). In general, by making improvements within each of these six aims, the healthcare system performs better by being more responsive to patients' needs, improving patient safety, basing care on the science of best practices in order to be more effective, reducing delays in the delivery of care, and increasing the degree of equity to provide adequate access and improved quality to patients regardless of socioeconomic status, geographical location, race, and gender. Additionally, it is important to consider the availability of healthcare providers as a driver for improved population health. The supply and demand of healthcare providers is fundamental to health improvement, especially in North Dakota where there is a long-standing maldistribution of most provider disciplines, particularly in medicine and particularly in rural areas. Along with these considerations for building health systems that strive to improve population health, it is important to understand the health concerns that impact the population. This chapter will discuss the health of North Dakota residents by examining health metrics using the most recent available data. Understanding the most impactful health indicators can provide direction on where to focus efforts when health systems are working towards improving the overall health of the population. Specifically, this chapter will look at issues associated with behavioral risk factors and population health. It is intended to help the reader better understand the issues that affect not only the population at hand but also to serve as a

general context for subsequent discussions of access to care, availability of providers, quality of care, and cost factors.

BEHAVIORAL RISKS

Examining the prevalence of behavioral risks and related issues in North Dakota is important for better understanding the health of the state as a whole. According to the National Survey on Drug Use and Health (NSDUH), in 2024, 60.8% of North Dakota adults age 18 years and older used alcohol in the past month and 27.1% of North Dakota adults engaged in binge alcohol use in the past month. Regarding cigarette use, an estimated 16.6% of North Dakota adults used cigarettes in the past month in 2024 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2025b). Table 3.1 shows the percentage of adults in North Dakota who reported the behavioral risk factors of smoking, drinking alcohol, binge drinking, drinking and driving, not wearing a seat belt, and not exercising at least moderately from 2020 to 2024. The percentage of adults who reported smoking showed an overall decreasing trend, whereas the rate of binge drinking remained relatively consistent (U.S. Centers for Disease Control and Prevention [CDC], 2024a). The percentage of persons who reported drinking alcohol was fairly stable; however, the number of DUI arrests have increased. This is evidenced by the 6.6% increase in the number of DUI arrests from 2023 to 2024 (4,329 to 4,614), according to the North Dakota Attorney General's office (Office of Attorney General, Bureau of Criminal Investigation, 2024).

BEHAVIORAL RISK TRENDS

Table 3.1: Percent of Adults Reporting Behaviors, 2024 (CDC, 2024a).

Behavior	2020	2021	2022	2023	2024
Smokes	16.7	14.4	14.5	13.3	12.3
Drinks Alcohol	56.2	55.2	54.3	58.8	56.1
Binge Drinks	19.7	19.3	21.2	21.2	19.4
Drinks & Drives	2.0	NA	NA	4.4	NA
Doesn't Always Wear a Seatbelt	25.1	NA	NA	25.2	NA
No Physical Activity/Exercise Other Than Job	24.6	25.5	23.9	21.5	21.7

NA = Not Available

Table 3.2 shows the percentage of youth risk behaviors in North Dakota in 2025. Overall, adolescent males in North Dakota have a generally poorer behavioral risk profile than do adolescent females (North Dakota Department of Health and Human Services [ND DHHS], 2025).

Table 3.2: Percent of Youth Risk Behaviors in North Dakota, 2025 (ND DHHS, 2025).

Behavior	Total	Female	Male
Smokes	6.1	4.9	7.3
Drinks	17.7	15.6	19.7
Drinks & Drives	3.9	2.4	5.2
Doesn't Always Wear a Seatbelt When Driving	24.5	17.9	30.6
Doesn't Always Wear a Seatbelt as a Passenger	43.1	41.4	44.7
Obese	15.7	12.4	18.9
Overweight	16.1	15.4	16.8

Behavioral risk factors are an important aspect of any health discussion. They have components that operate at the most basic individual, social, and global public policy levels. According to the World Health Organization, the 10 leading behavioral causes of death worldwide (factors such as high blood pressure, tobacco use, high blood glucose, physical inactivity/overweight, alcohol use, high cholesterol) account for 33% of all deaths. Global healthy life expectancy would be extended by 5 to 10 years if individuals, communities, health providers and health systems, and the private and public sectors initiated processes to better address, influence, and control global disease burden risk factors (World Health Organization, 2009).

GENERAL HEALTH

Table 3.3 shows the percentage of adults in North Dakota who have general health issues of overweight/obesity, fair/poor general health, and one or more days in the past month with poor health, poor physical health, and poor mental health. Additionally, it was found that about 12.0% of North Dakota residents have a disability. This is lower than the overall rate for the U.S. population which is 13.3% (U.S. Census Bureau [USCB], 2024, Table S1810). When reporting the prevalence of mental illness, the National Survey on Drug Use and Health distinguishes between any mental illness and serious mental illness. Any mental illness (AMI) is defined as “having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder” (SAMHSA, 2025b). Serious mental illness (SMI) is a subset of any mental illness in which the individuals experienced serious functional impairment. Among adults in North Dakota, an estimated 23.0% had any mental illness in the past year and 6.3% of adults had a serious mental illness in the past year. Furthermore, 8.9% of North Dakota adults had a major depressive episode in the past year. Around one quarter (26.5%) of adults in North Dakota received mental health treatment in the past year, which is higher than the national estimate (22.9%). Inpatient treatment may be necessary for someone with serious mental illness, but North Dakota struggles with a shortage of inpatient beds throughout the state (see Chapter 9: Healthcare Infrastructure and Access to Care in North Dakota for more information about that topic).

Table 3.3: Percent of Adults Reporting General Health Conditions, 2024 (CDC, 2024a).

Health Condition	2020	2021	2022	2023	2024
Overweight/Obese	64.3	63.2	64.5	71.3	71.2
General Health is Fair or Poor	12.1	13.0	14.3	15.3	15.2
1+ Days Poor Health	19.9	21.2	23.6	43.2	44.4
1+ Days Poor Physical Health	26.0	32.1	34.5	34.9	35.5
1+ Days Poor Mental Health	34.7	36.4	39.1	41.3	40.7

COMPARISON WITH NATIONAL BENCHMARKS

Compared to national data, North Dakotans are relatively healthier than the country as a whole on general health measures of fair/poor health, diabetes, and asthma. However, North Dakota was reported to have a higher number of people who are overweight and obese (71.2% versus 60.5% nationally), and a lower influenza immunization rate than the U.S. overall (40.7% versus 44.5%).

For both the state and the nation, the obesity rate is generally increasing; however, the rate for the country as a whole is increasing faster. Obesity/overweight status is a health problem that contributes to many health conditions, including cancer, diabetes, and heart disease. The percentage of North Dakotans viewing themselves as having only fair or poor health has remained consistent over the past two years: 15.3% in 2023 to 15.2% in 2024; the U.S. rate in 2024 (19.5%) was higher than the state rate (CDC, 2024a).

HEALTH CONDITIONS

Health conditions that are not directly tied to behavioral risk factors have shown varied trends from 2020 to 2024. It is likely that obesity is a common, but indirect, cause of many of these associations. For example, high cholesterol, high blood pressure, arthritis, and diabetes are all more common in obese patients. The American Diabetes Association estimates that 4,000 individuals are diagnosed with diabetes annually in North Dakota (American Diabetes Association, 2026). Thus, it should come as no surprise that many of these conditions show similar prevalence gradients as does overeating with obesity. Compared with national benchmarks, North Dakotans have a lower prevalence of various non-behavioral related health conditions than people in other states, no doubt contributing to our better state of overall health. In 2024, North Dakotans had a lower prevalence of asthma (13.7% compared with 15.7%) and diabetes (10.9% compared with 12.5%) than did the U.S. (CDC, 2024a). Table 3.4 shows the percentage of North Dakotans reporting various health conditions since 2020.

Table 3.4: Percent of Adults Reporting Chronic Health Conditions, 2024 (CDC, 2024a).

Chronic Health Condition	2020	2021	2022	2023	2024
High Cholesterol	NA	25.6	NA	35.1	NA
High Blood Pressure	NA	31.0	NA	32.4	NA
Arthritis	22.5	25.4	27.0	25.9	26.4
Asthma	11.8	12.5	14.8	14.6	13.7
Cardiovascular Disease	4.0	3.4	4.1	3.9	4.0
Diabetes	9.9	9.5	9.5	9.8	10.9

CHRONIC DISEASE

An important issue when examining the dynamics of health status is chronic disease. Chronic disease is commonly associated with aging, but people of all ages can experience it. Common chronic diseases include the following: cancer, heart disease, stroke, diabetes, chronic obstructive pulmonary disease (COPD), asthma, and arthritis (Boersma et al., 2020). Significant health risk factors include smoking, lack of physical activity, and poor nutrition. Engaging in healthful behavior reduces the risk for illness. Chronic disease causes 8 in 10 deaths each year in the United States (Hacker, 2024). About 129 million Americans (roughly half of all adults) live with at least one chronic condition and about 61 million Americans (nearly one quarter of all adults) live with two or more chronic conditions (Boersma et al., 2020). More than 86% of the cost of healthcare in the United States is related to chronic disease (Holman, 2020). More specifically, it is estimated that diagnosed diabetes costs $1.5 billion per year in North Dakota (American Diabetes Association, 2026).

Heart disease is the leading cause of death in both the United States and North Dakota. According to the CDC, 5.0% of U.S. adults have ever received a diagnosis of coronary heart disease. In 2024, the CDC reported 683,491 deaths due to heart disease in the United States and a mortality rate of 201.0 per 100,000 persons (CDC: National Center for Health Statistics, 2024). In North Dakota specifically, there were 1,576 deaths due to heart disease in 2023 and an age-adjusted mortality rate of 159 per 100,000 persons (CDC: National Center for Health Statistics, 2025).

High blood pressure, a risk factor for cardiovascular disease, is a highly prevalent condition that contributes to premature death, heart attack, stroke, diabetes, and renal disease (CDC, 2026). High cholesterol, a risk factor for cardiovascular disease, diabetes, and other diseases, can be controlled to some degree by diet, exercise, and weight loss. High blood pressure and high cholesterol found together in the same patient create more medical problems, placing that patient at even greater risk.

CANCER

Cancer is the second-leading cause of death among adults in the United States (second only to heart disease) and affects an estimated one in three individuals in their lifetime. Increasing innovations in medical technology have led to earlier diagnoses and improved treatment of many cancers, resulting in more people diagnosed with cancer surviving each year.

Approximately 18.6 million Americans with a history of cancer were alive in 2025 (American Cancer Society, 2026).

According to the American Cancer Society, about 19% of cancer cases are associated with smoking cigarettes. Furthermore, 8% of cancer cases are associated with excess body weight and 5% of cancer cases are associated with alcohol consumption. The American Cancer Society estimated that there would be approximately 2.1 million new cancer cases diagnosed in 2026 in the United States (American Cancer Society, 2026).

Age is a primary risk factor for most cancers, with 88% of all cancers diagnosed among individuals age 50 or older. Both men and women have a 39 out of 100 lifetime risk of developing cancer. Although virtually anyone can experience cancer, some groups are more likely than others to be diagnosed with certain types of cancer; cancer incidence varies by race and ethnicity (American Cancer Society, 2026).

According to the American Cancer Society, the disparities in the cancer burden among racial and ethnic minorities are the result of obstacles to prevention, early detection, and high-quality treatment. In addition, poverty is a serious factor. American Indian/Alaska Natives have the highest cancer mortality rate compared to other racial and ethnic groups. Hispanics have the lowest incidence and mortality rates for lung cancer; however, they have the second highest incidence of uterine/cervix cancer. African Americans have the highest prostate cancer incidence and mortality rates (American Cancer Society, 2026).

As the second-leading cause of death in the country, cancer and cancer control command a place in U.S. health objectives. Healthy People 2030 presents 20 separate cancer targeted objectives. For example, one objective is to reduce the overall cancer death rate by 10% (from 179.3 deaths per 100,000 to 161.4 deaths per 100,000) (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2026).

In North Dakota, females are less likely to develop cancer than men (Figure 3.1). Digestive system cancer is the most commonly diagnosed cancer in North Dakota (Table 3.5), followed by breast cancer. The risk of cancer incidence in North Dakota is lower than in the rest of the nation overall (Figure 3.1), although North Dakota rates per 100,000 residents are lower for prostate cancer among males (117.3 vs. 133.6) and breast cancer among females (124.7 vs. 136.5) compared to U.S. rates (Table 3.5). Compared to national rates, North Dakota has higher rates of lung bronchus cancer (46.3 vs. 43.7) and colorectal cancer (39.1 vs. 34.0) (University of North Dakota School of Medicine and Health Sciences [UND SMHS], 2022; U.S. National Cancer Institute, 2022).

It is noteworthy that North Dakota leads the nation in the incidence of some cancers. For example, the incidence of chronic lymphocytic leukemia (CLL), a disease of the elderly, is more common in North Dakota than in any other state. This is a particularly unusual occurrence because most cases of CLL are diagnosed “incidentally” during routine medical exams performed for other reasons. The shortages and maldistribution of healthcare professionals in North Dakota, discussed in subsequent chapters, may act to underestimate the true burden of CLL, which often is not the cause of death (and thus would not appear in mortality statistics). One possible reason for the high rates of CLL in North Dakota is the high exposure to radon. Radon, a naturally occurring gas, is a by-product of uranium, which is common in soils in the upper Plains, and is a cause of several types of leukemia. Research at the University of North

Dakota has shown that in many states (including North Dakota), CLL rates by county are positively correlated with levels of radon measured in homes (Oancea et al., 2017).

For reasons that are unexplained, North Dakota also has one of the highest incidences of colorectal cancer of any state and shows a three-fold variation in colorectal cancer rates among North Dakota counties. The cause of the majority of colorectal cancers is unknown. Because colorectal cancer is the third most common cancer in the U.S. in terms of incidence and mortality, a better understanding of colorectal cancer in North Dakota could improve the health of North Dakotans and of the U.S. overall (Schwartz et al., 2019).

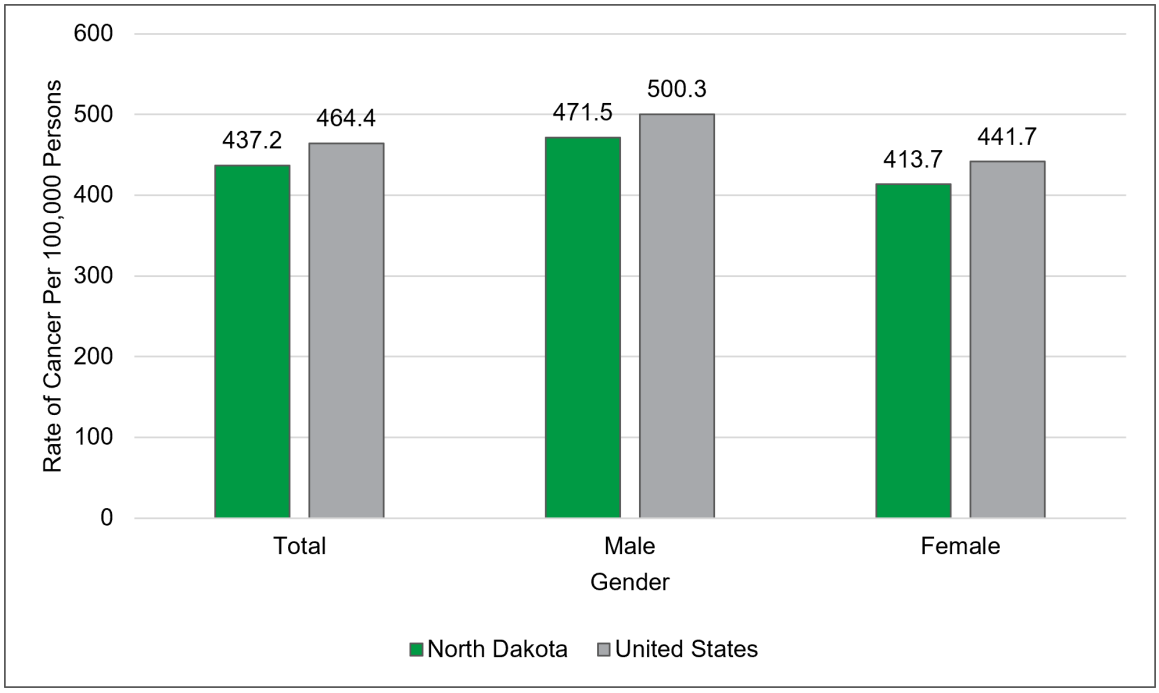


Figure 3.1: Rates of Cancer in North Dakota and the U.S. by Gender, 2022 (UND SMHS, 2022; U.S. National Cancer Institute, 2022).

Table 3.5: Most Common Cancer Rates per 100,000 Persons, 2022 (UND SMHS, 2022).

Cancer Type	ND Rate	ND Cases	ND Males Rate	ND Males Cases	ND Females Rate	ND Females Cases
Breast	62.6	547	NA	NA	124.7	541
Digestive System	79.9	726	96.0	432	64.1	294
Male Genital System	NA	NA	124.7	611	NA	NA
Prostate	NA	NA	117.3	583	NA	NA
Respiratory System	48.3	464	56.2	255	42.6	209
Lung Bronchus	46.3	445	52.7	240	41.9	205
Colon Rectum	39.1	344	42.6	188	34.8	156

SCREENINGS AND IMMUNIZATIONS

Table 3.6 shows the percentage of adults in North Dakota who have had screenings for high cholesterol (past five years), sigmoidoscopy/colonoscopy (ever), mammogram (ever), flu vaccine (past year), or pneumonia vaccine (ever).

Table 3.6: Screening Percentages, 2024 (CDC, 2024a).

Screening	2020	2021	2022	2023	2024
Cholesterol	NA	72.6	NA	95.3	NA
Sigmoid/Colonoscopy	5.3	NA	34.0	NA	72.5
Mammogram	59.2	NA	60.6	NA	62.0
Flu	48.3	44.5	42.4	39.2	40.7
Pneumonia	28.5	27.6	29.0	39.4	36.1

According to Healthy People 2030, people in the United States continue to develop diseases that are preventable. The increase in life expectancy (from about 49 years in 1900 to 78.8 years in 2012) is the result, in part, of a significant reduction in infectious disease mortality associated with the development of immunizations (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2026).

The development of a public health infrastructure has played a major role in improved life expectancy. The impact of public health programming is evident through focusing on water safety, infectious disease control, safer and more healthful foods, healthier mothers and babies, family planning, tobacco control, vaccinations, motor vehicle safety, more healthful and safer workplaces, and the decline in deaths from coronary heart disease and stroke (Welch et al., 2000).

Vaccines are among the most cost-effective clinical preventive services and are core components of any preventive service package. Childhood immunization programs provide a particularly high return on investment. According to the CDC, for children born between 1994 and 2023, routine vaccinations will have prevented an estimated 508 million illnesses, 32 million hospitalizations, and 1.1 million deaths (Zhou et al., 2024).

Health screenings are an important way to evaluate risk factors for diseases like cancer, cardiovascular, and diabetes. Baseline data are acquired that can assist physicians and other providers to track measures of blood pressure, cholesterol, blood sugars, weight and height, and body fat. The baseline risk factor data provides the evidence needed both for prevention and disease management. Health screenings also aid the patient in being more proactive in their own care, and adequate baseline data can spur heightened interest and involvement on the part of the patient.

Healthy People 2030 discusses the importance of various health screenings. For example, the monitoring and management of weight, blood pressure, and cholesterol can reduce adults' risk for heart disease and diabetes; routine screening can detect certain cancers (breast, colorectal, and skin) at earlier stages that are more treatable; and regular check-ups for adults 65 and older can help to screen for age-related conditions such as eye disease and hearing loss (U.S.

Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2026).

MORTALITY

Nationally, premature mortality is higher in rural areas than in urban areas and the difference has increased over time. In 1999, rural areas had an age-adjusted death rate that was 7% higher than urban areas. However, by 2019 the age-adjusted death rate in rural areas had jumped to 20% higher than in urban areas (Curtin & Spencer, 2021). In North Dakota, Figure 3.2 shows the expected number of deaths for each age group among metropolitan, micropolitan, and rural areas. The North Dakota data indicate that the state's mortality rates exceeded the national rates from 1999 until 2014. However, from 2015 to 2024, the North Dakota mortality rates vacillated between exceeding and falling below the U.S. mortality rates (Figure 3.3).

U.S. mortality rates have trended lower since the 1960s for both urban and rural areas, but since the 1990s, mortality rates in urban and rural areas have diverged somewhat. From 1999 to 2019, male rural mortality declined from 1,140 per 100,000 to 977, whereas male urban mortality decreased from 1,050 per 100,000 to 821. Over the same time period, female rural mortality declined from 760 per 100,000 to 704, whereas female urban mortality decreased from 728 per 100,000 to 584 (Curtin & Spencer, 2021).

Death rates from unintentional injuries, suicide, heart disease, and cancer were higher in rural areas than in urban areas. For example, the rural rate exceeded the urban rate by 21% for heart disease in 2019 (Curtin & Spencer, 2021).

Since 2016, there has been an increased awareness of the growing problem of opioid addiction and deaths (CDC, 2024c). Drug overdose is now the leading cause of accidental death in the United States, with the CDC reporting 54,045 drug overdose deaths involving opioids in 2024 (CDC: National Center for Health Statistics, 2026). In 2024, 7.8 million people aged 12 or older had misused opioids (heroin or prescription pain relievers) in the past year (SAMHSA, 2025a). In North Dakota, an estimated 2.6% of adults engaged in opioid misuse in the past year and an estimated 1.6% of adults had opioid use disorder in the past year (SAMHSA, 2025b). Research has established that the rural opioid problem is disproportionally higher. Some research indicates that rural adolescents are more likely to abuse prescription painkillers than urban adolescents (Monnat & Rigg, 2016). Other research studies have found the misuse of nonmedical prescription opioids is concentrated in states with large rural areas (Keyes et al., 2014). Nevertheless, despite the growth in opioid misuse, North Dakota has one of the lowest rates of drug deaths in the country.

In 2018, the United States' age adjusted suicide rate was higher in rural areas (19.4 per 100,000 persons) than in urban areas (13.4 per 100,000 persons). This trend has been consistent in the U.S. since the year 2000 (Pettrone & Curtin, 2020). In North Dakota, an estimated 5.4% of adults had serious thoughts of suicide in the past year, 2.0% of adults made suicide plans in the past year, and 0.9% of adults attempted suicide in the past year in 2024 (SAMHSA, 2025b).

The rural maternal mortality rate is higher than in urban areas. Likely contributing factors are the facts that rural women have less adequate prenatal care, are more likely to be on public health insurance or have no insurance, face more challenges with travel time and distance, and have less access to adequate primary care. The latter issue is related to the general lower supply of

rural-based primary care combined with less direct access to obstetricians because of fewer obstetricians practicing in rural areas – due in part to malpractice insurance and liability concerns (Agency for Healthcare Research and Quality, 2021; Harrington et al., 2023).

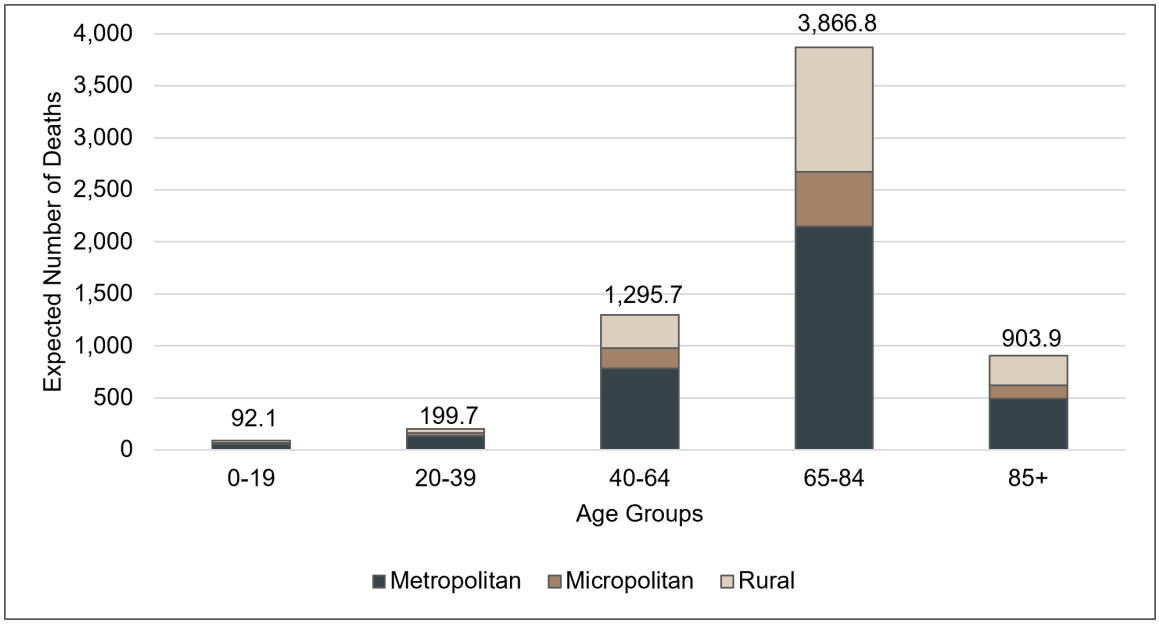


Figure 3.2: Expected Number of Deaths in North Dakota per Age Group After Adjusting for Demographic Factors Specific to Each Region, 2025 (ND DHHS, Vital Records, 2026; USCB, 2026).

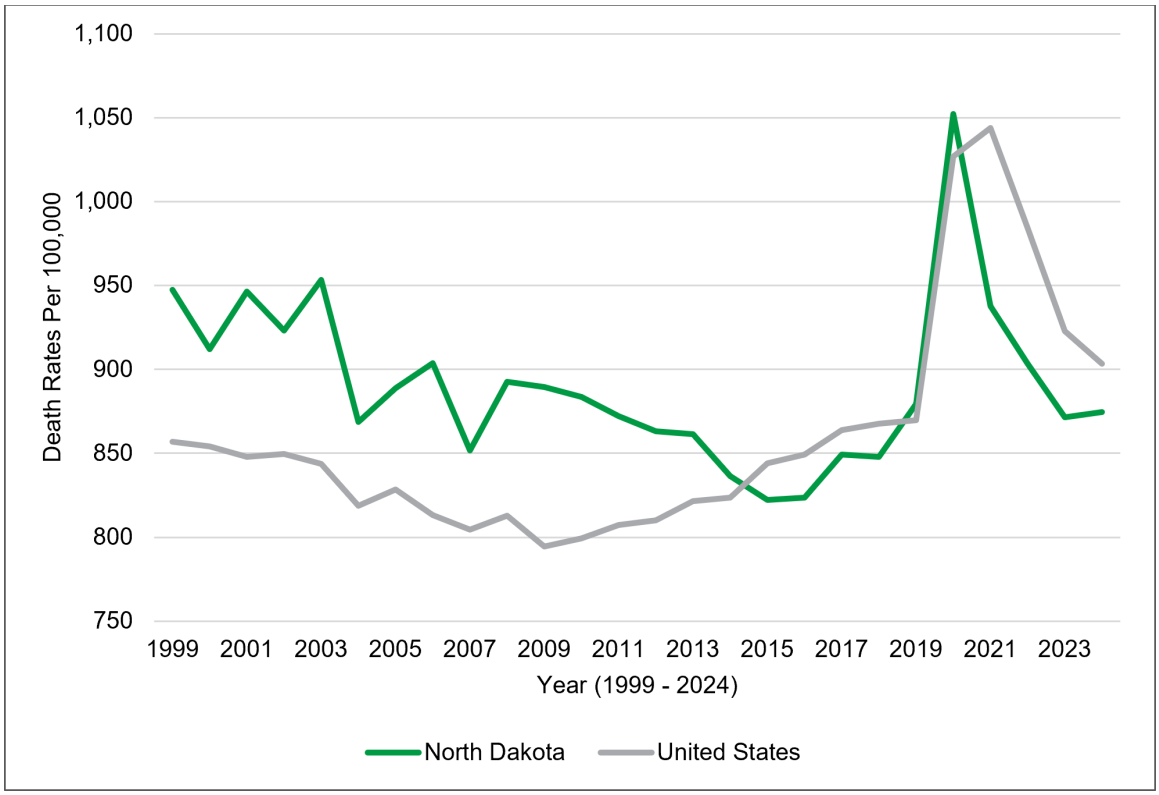


Figure 3.3: Changes in North Dakota Mortality Rates from 1999 to 2024 Compared with the United States, 2024 (CDC, 2024b).

CHANGES IN MORTALITY

United States mortality rates were relatively stable from 1999 until 2019, while North Dakota rates over the same period were more variable (Figure 3.3). The COVID-19 pandemic appeared in early 2020, substantially increasing the mortality rates for both the U.S. and North Dakota. The significant increase in recent mortality rates likely reflects the direct impact of the pandemic, along with the indirect effect of delayed care of other medical conditions. Figure 3.4 shows changes in mortality rates for metropolitan, micropolitan, and rural areas, as well as North Dakota overall.

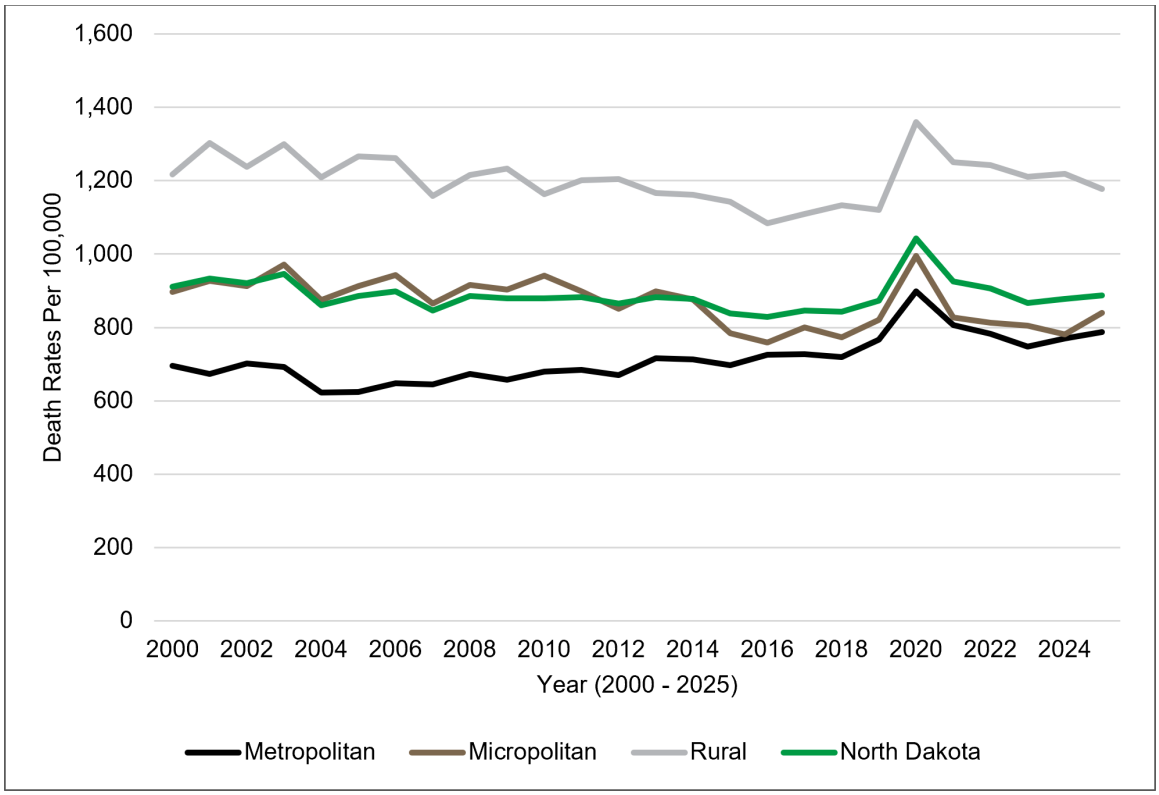


Figure 3.4: Changes in North Dakota Mortality Rates from 2000 to 2025 for Metropolitan, Micropolitan, and Rural Areas, 2025 (ND DHHS, Vital Records, 2025; ND DHHS, Vital Records, 2026; USCB, 2023; USCB, 2026).

NEURODEGENERATIVE DISEASES

Neurodegenerative diseases are a range of illnesses that cause the death of nerve cells. These include Alzheimer's disease (AD), Parkinson's disease, motor neuron diseases (the most common of which is amyotrophic lateral sclerosis), as well as relatively rare genetic disorders such as Huntington's disease. Statistics for most of these diseases are generally less reliable than those for cancer, as cancer is a reportable disease (a disease for which statistics on incidence and mortality are mandated by federal law), whereas mortality data for other diseases must rely on death certificates and other passive means of reporting. However, it is important to note that one in nine Americans suffers from AD (Alzheimer's Association, 2025a). This is both an important medical and financial issue as dementia care is among the most expensive conditions for society to manage. AD ranks fourth among the leading causes of death in North Dakota (Alzheimer's Association, 2025b). This is likely due, at least in part, to the fact that AD is strongly age-dependent, and that North Dakota ranks 8th in the nation for the proportion of seniors aged 85 and older. For reasons that are unknown, Midwestern and Plains states also have significantly higher mortality rates of amyotrophic lateral sclerosis, a progressively paralyzing disorder that is usually fatal within 3-5 years of diagnosis.

SUMMARY

Numerous factors that influence the health status of individuals and communities are tied to socioeconomics, geography, workforce supply, and health policy. These factors can contribute to behavioral risks, chronic conditions, preventive care, and mortality. In recent years, North Dakota has improved in the behavioral risk area of smoking; however, behavioral risks related to drinking have remained relatively consistent among North Dakota adults. The general health of North Dakotans has shown an increase in the percentage of individuals reporting fair or poor health. The percentage of adults reporting chronic health conditions has shown variability in recent years, with fluctuating trends showing similarities between 2020 and 2024. Children's risk behaviors in recent years have shown an increase in smoking and a decrease in alcohol use. North Dakota has higher incidence rates of lung bronchus and colorectal cancer when compared to the U.S. Health screenings have also shown variances in some areas in recent years. Lastly, although mortality rates in North Dakota have fluctuated, the rates between 2001 and 2018 were trending downward prior to the onset of the COVID-19 pandemic.

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CHAPTER
FOUR
Women's Health
in North Dakota

HEALTHY WOMEN MEAN A HEALTHIER NORTH DAKOTA

Women's health needs change throughout their lives, shaped by chronic disease, behavioral health, reproductive health, access to care, and other factors. In North Dakota, geography can further influence access to providers and services, particularly for women living in rural communities.

Women Have Distinct Healthcare Needs Throughout Their Lives



Heart disease is a leading cause of death among North Dakota women, while autoimmune diseases disproportionately affect women. For rural residents, distance to appropriate care can further affect health outcomes.

NORTH DAKOTA SNAPSHOT

72.5% of North Dakota women age 40 or older had a mammogram in the past two years.

INTRODUCTION

When examining the overall health and healthcare access of the population, it can be important to consider certain subgroups that may have healthcare needs that are notably different compared to other subgroups. In particular, women have some unique healthcare needs that should be taken into consideration when examining healthcare access and the health of a population. There are certain conditions that are more commonly found in women requiring specialty care and consideration of healthcare needs around pregnancy, childbirth, and postpartum care.

This chapter will explore a number of topics related to women's health, including health conditions that affect women, preventive care considerations, healthcare access for women, and reproductive care topics. This chapter utilizes both state- and national-level data to highlight issues impacting women and makes comparisons when appropriate. While it does not encompass the full picture of women's health and healthcare access in North Dakota, it does highlight current and germane topics to give an overview of women's health in the state.

WOMEN'S HEALTH STATUS

CHRONIC DISEASE AND HEALTH CONCERNS

While chronic health conditions are a concern for the entirety of the population, there are certain notable conditions that may affect women more than other segments of the population, or that are exclusive to women and may require specialized care. One example of this would be heart disease, which is the leading cause of death for women in the U.S. accounting for about 1 in every 5 female deaths in 2023 (Centers for Disease Control and Prevention [CDC], 2024). This is also true for North Dakota, where heart disease is the leading cause of death for women in the state (National Center for Health Statistics [NCHS], 2026b). Certain symptoms of heart disease and heart attacks are universal; however, some women may present with other symptoms that are not commonly associated with these conditions such as nausea, vomiting, and excessive or persistent fatigue/tiredness (CDC, 2024). Varying symptoms and misconceptions about how common the issue is among men versus women can contribute to missed or delayed diagnoses of heart disease for women, contributing to higher likelihood of adverse outcomes (Olsson, 2023). Autoimmune diseases are another set of conditions where women are disproportionately affected. While only about 8% of the U.S. population has an autoimmune disease, approximately 78% of this subset is female. While the reasons why women are disproportionately affected by autoimmune diseases is unclear, research is ongoing (Fairweather, Frisancho-Kiss, & Rose, 2008). Because of the large variety of autoimmune disorders, there are many different types of physicians that may be needed by women especially to effectively treat autoimmune disease. Such physicians include nephrologists, rheumatologists, endocrinologists, neurologists, and hematologists (Office on Women's Health, 2026). In North Dakota, it is not common to find such specialists in rural areas; providers specializing in autoimmune disease are more likely to be located within larger cities, leading to the potential for women to either need to travel farther for care, delay care, or even consider moving to where they are able to get the care they need.

Other chronic conditions that can affect women are endometriosis and Polyendocrine Metabolic Ovarian Syndrome (PMOS), also known by its former name Polycystic Ovary Syndrome

(PCOS) (Endocrine Society, 2026). Endometriosis, which affects about 11% of women in the U.S. between the ages of 15 and 44, is a condition where the inner lining that grows in the uterus starts growing in areas outside of the uterus (Office on Women's Health, 2025). This condition can cause significant pain and bleeding for those affected, as well as infertility (Mayo Clinic, 2024). Diagnosis of endometriosis can involve many tests, including a pelvic exam, ultrasound, MRI, and even laparoscopic surgery. Treatments for endometriosis focus on pain management through medication, hormone therapy, conservative surgery to remove endometriosis tissue, fertility treatment, and, as a last resort, a full hysterectomy. PMOS, which is estimated to affect 1 in 8 women in the U.S., is a hormone health condition with symptoms that can include irregular periods, male-pattern hair growth, severe acne, polycystic ovaries, and weight fluctuations. The name for this condition was recently changed to better reflect the fact that it is a complex, long-term hormonal or endocrine disorder (Endocrine Society, 2026). Along with the symptoms, PMOS also has some notable complications such as infertility, pregnancy complications, type 2 diabetes or prediabetes, or even nonalcoholic fatty liver disease. Similar to endometriosis, those who think they may have PMOS should work with a healthcare provider to discuss if their symptoms are indicative of PMOS (Mayo Clinic, 2026).

If providers are not knowledgeable about endometriosis and PMOS, or are dismissive of women's symptoms, there could be delays in care leading to poorer outcomes. With the varying types of exams, tests, and potential surgeries needed to address these conditions, it is very important to consider if women in North Dakota have adequate availability and access to healthcare services. In particular, rural women may have a more difficult time getting these types of conditions diagnosed and treated in their communities. The need to travel for diagnostic exams, tests, or even surgery may incur more cost due to travel, more time away from work, and the chance that care from a facility or provider outside of their insurance network with result in insurance denials. Appropriate diagnosis and treatment of these conditions can improve the overall health of women in North Dakota and contribute to an overall healthier population.

BEHAVIORAL HEALTH

Women are also subject to unique behavioral health needs. They are more likely to experience anxiety disorders, panic disorder, phobias, post-traumatic stress disorder, obsessive-compulsive disorder, and major depression when compared to men (American Psychiatric Association, 2017). They are also three times as likely to experience an eating disorder compared to men and are more likely to self-harm (Mental Health Foundation, 2026). It is also important to consider unique stressors women experience in their daily lives, particularly in rural areas. For rural women, there may be fewer opportunities to socialize outside of their home which can contribute to feelings of loneliness and isolation. Women staying home to raise children could also experience social isolation, particularly in rural areas that may have fewer family focused amenities and/or activities.

Other unique behavioral health concerns for women include those linked to pregnancy and childbirth, in particular post-partum depression, anxiety, and/or psychosis. In 2023 it is estimated that 15.6% of women in North Dakota with a recent live birth reported symptoms of postpartum depression (PPD) and 25.8% reported symptoms of postpartum anxiety (PPA). Both of these rates are higher than the estimates for the national rates of 11.6% for PPD and 20.3% for PPA (HRSA Maternal & Child Health Division, 2026). Data from the U.S. overall in 2022 found that

27.7% of pregnancy-related deaths were caused at least in part by a mental health condition, with 13.2% of pregnancy-related deaths being deaths by suicide (CDC, 2026).

One factor that can increase the risk of both depression during pregnancy and postpartum depression (PPD) is premature discontinuation of mental health medications (Tirmikçioğlu, 2025). There is reliable information and misinformation relating to the use of mental health medications during pregnancy and breastfeeding, and it's important to discuss individual circumstances with a licensed physician who specializes in prenatal care, such as an Ob/Gyn physician. While there are medications that carry a risk of fetal harm when used during pregnancy, in some circumstances the benefits of continuing the medication outweigh the potential risks to the baby. The research on impacts of psychiatric medications is varied and sometimes conflicts with what doctors see in day-to-day practice, so it's important to seek professional advice when navigating medication use during pregnancy and postpartum.

Treatment of PPD and other postpartum mental health concerns has its own unique set of challenges. For women there may be a lack of knowledge regarding postpartum mental health, negative beliefs around seeking help, difficulty in managing between seeking care and caring for an infant, and resistance to using pharmaceutical treatments. There may also be negative views or little awareness of PPD and other postpartum mental health concerns among family and friends, as well as a potential lack of healthcare providers that provide a safe space to discuss concerns about postpartum mental health symptoms, which reduces support for postpartum women seeking care (Place, et al., 2024).

Being aware of the unique behavioral health concerns for women is a key to addressing their behavioral healthcare needs. Unfortunately, the availability of behavioral health professionals in North Dakota is a concern because although the behavioral health workforce is growing in the state (see Chapter 8), demand for those services continues to increase. There is also the consideration for those situations that may require inpatient treatment. Over the years, there has been increased availability of inpatient mental health services in the state; however, such inpatient care may still require women to be far from their home and support systems. Continuing to expand this workforce will not only serve the overall health of the state, but also women's health in the state.

PREVENTIVE CARE AND HEALTH SCREENINGS

Preventive care is a key factor in maintaining health. Seeking preventive care services can help with monitoring ongoing health conditions and increase the likelihood of early detection for other health concerns that may arise. Certain screenings are a key part in preventive care, especially specific screenings for women's health conditions. In particular, mammograms and pap smears are essential for early detection of breast and cervical cancers respectively. With cancer being the second leading cause of death in North Dakota, substantial efforts should be made to ensure women of North Dakota have adequate resources and access to preventive medicine. According to the American Cancer Society, breast cancer is the most common cancer in women in the United States, aside from skin cancers, accounting for 30% of all new female cancers annually. Screening for breast cancer is important as women have a 1 in 8 chance of developing breast cancer with a median age at the time of breast cancer diagnosis of 62 years (American Cancer Society, 2026). The U.S. Preventive Services Task Force regularly adjusts its screening guidelines, with the most recent recommendation stating biennial screening mammograms

should be completed for women aged 40 to 74 years. Women are generally recommended to receive an annual mammogram screening starting at age 40, although this can vary based on personal risk factors (U.S. Preventive Services Task Force, 2024). Once a mammogram is obtained, the images can assess breast tissue for any abnormalities. According to the National Cancer Institute (2026), 72.5% of women in North Dakota 40 or more years old have had a mammogram in the past two years, which is slightly higher than U.S. rate of 72.2%.

Cervical cancer is another diagnosis that can be detected early with regular screening practices. As reported by the Centers for Disease Control and Prevention (CDC), cervical cancer was once the leading cause of cancer deaths among women in the U.S., yet human papillomavirus (HPV) vaccines and screening practices have now made it one of the most preventable cancers (CDC, 2025a). Screening recommendations include pap smears for women aged 21 to 29, which should begin with cytology alone every three years. Women aged 30 to 65 with normal pap smears can continue with the prior recommendation or utilize the FDA-approved primary high-risk human papillomavirus (hrHPV) testing alone every five years, depending on availability of either test. After age 65, no screening is required after adequate negative prior screening results (American College of Obstetricians and Gynecologists, 2026). Screening protocols can lead to early detection of cervical cancer and improve health outcomes. In North Dakota, 62% of women ages 21-65 received a pap smear in the past three years (National Cancer Institute, 2026). Routine pap smear screenings contributed to a 50% decline in cervical cancer incidence and deaths over the past 30 years (Ma & Richardson, 2022). Ensuring access to these preventive services helps detect cancers at early stages, significantly improving survival rates. Promoting regular screenings can save lives and reduce healthcare costs associated with late-stage cancer treatments.

Another example of preventive health is testing for sexually transmitted infections (STIs), which can be passed to a fetus during pregnancy. These include HIV, hepatitis B, herpes, HPV, chlamydia, gonorrhea, and syphilis. Sexually transmitted infections (STIs) are tested at every initial prenatal visit, but sometimes women don't receive prenatal care and end up passing an infection to their baby. For example, syphilis cases are on the rise in North Dakota, with an increase from 89 cases in 2020 to 130 cases in 2022 and 437 cases reported to North Dakota Department of Health and Human Services (NDHHS) in 2025 (NDHHS, 2026a). For the first time in over a decade, congenital syphilis was reported in North Dakota in 2020, with two more reported cases in 2022 (VanderBusch et al., 2023). Congenital syphilis occurs when the fetus acquires the syphilis bacteria from the mother before birth due to the mom not being diagnosed and/or treated appropriately (Leslie & Vaidya, 2024). Current guidelines recommend that pregnant women be tested for syphilis three times during pregnancy: once at the first prenatal visit, then at 28-32 weeks, and again at the time of delivery (VanderBusch et al., 2023). If left untreated, children born with congenital syphilis can develop rashes, severe anemia, failure to thrive, permanent bone and dental deformities, hearing loss, eye inflammation leading to blindness, and other symptoms. Syphilis can be treated with penicillin during pregnancy, ideally at least 30 days before delivery, to prevent the baby from acquiring the infection. After delivery, the baby can be treated with penicillin if the mother was not diagnosed and/or did not receive antibiotics before delivery (Leslie & Vaidya, 2024).

Fortunately, chlamydia and gonorrhea cases in North Dakota continue to decline relative to a decade ago (NDHHS, 2026a). These can both cause blindness if passed to newborns during

vaginal delivery in an untreated mother, which is why hospitals use a topical antibiotic on the neonate's eyes to prevent infection after birth (Balaji et al., 2023). Gonorrhea cases declined from 1,737 in 2021 to 575 cases reported to NDHHS in 2025. Individuals aged 15-34 years accounted for more than half of all reported cases. When broken down by sex, approximately half of all reported cases occurred among females. Chlamydia cases declined from 3,966 in 2021 to 2,822 cases reported in 2025. More than half of all reported cases occurred among individuals aged 15-34 years. Females also accounted for over 50% of all reported chlamydia cases (NDHHS, 2026a).

It is important to understand where there are barriers to receiving preventive care and screenings. Often, if an individual is uninsured they are less likely to receive preventive care and delay care due to high out-of-pocket costs. Delayed care or missed screenings could lead to worse health outcomes or concerns being discovered later than they would have been if the individual had routine care. When an individual delays mammograms or pap smears due to cost, they may see increased cost down the road due to potentially missing cancer diagnoses at earlier stages that may be less costly to treat. For some women, it is possible they don't physically have access to the providers or facilities required to get mammograms and pap smears. Women living in rural areas may have to travel further for mammograms which could be a barrier for them. Certain rural areas may not have consistency in providers. If there is a new local provider every few years or providers rotate through the area on a monthly basis, women may not feel comfortable getting pap smears from those providers due to the nature of how that screening is performed. There could also be a health literacy component interfering with prevention where women may not have been informed of how crucial these regular screenings are to their long-term health.

Attempts to address barriers to preventive care and screening for women in North Dakota are ongoing. A program called Women's Way was established and began offering screening services in 1997. In 2001, legislation was signed to allow uninsured Women's Way clients diagnosed with breast or cervical cancer to access treatment coverage through the North Dakota Medicaid Breast or Cervical Cancer Early Detection Program. North Dakota women ages 40 through 64 years (or ages 21 through 39 with breast symptoms or due for a pap test) with an insurance policy not covering these services or unable to meet their deductible, may be eligible for the Women's Way program dependent on household income. This program helps break financial barriers for women across the state to access screening and diagnostic procedures. In addition, this program may also provide transportation services to ensure timely access to care (NDHHS, 2025). There are also mobile mammography programs that have started in the state in an attempt to improve women's access to this type of screening, particularly in rural areas.

WOMEN'S HEALTHCARE ACCESS

PRIMARY CARE AND OB/GYN

One of the initial considerations for healthcare access is the types of providers needed to serve the population, as well as their availability based on location. When discussing women's health providers, it is important to acknowledge the key role that primary care providers serve as a part of healthcare access for women. Having a primary care provider not only provides needed preventive health services and health maintenance; it also serves as an access point for women

who need additional health services. Primary care providers can refer women to specialty providers when specific health concerns need to be addressed. Another important provider type within the scope of women's healthcare are obstetricians-gynecologists (Ob/Gyns). Ob/Gyns may have unique focus areas that can vary between individual specialists, but the primary focus of their practice is on women's reproductive health and gynecological care in addition to obstetric services.

There are 581 primary care physicians practicing in North Dakota as of 2025 (Medical Marketing Service, 2025; U.S. Census Bureau, 2026). Additionally, there are 65 Ob/Gyns practicing in North Dakota (Medical Marketing Service, 2025). The majority of primary care physicians (79.0%) and Ob/Gyns (86.2%) practice in metropolitan areas. Chapter 6 provides a more detailed breakdown of North Dakota's physician and primary care workforce. With a majority of these provider types being located in metropolitan areas, women living in rural areas might have difficulty reaching healthcare providers and finding specialized medical services. They may need to travel long distances to get healthcare services. These challenges can lead to delays in getting preventive checkups, reproductive health services, prenatal care, and other specialized treatments. Problems with transportation, taking time off work, caring for children, and bad weather may make it even harder to access the care they need.

BIRTH UNITS

Of the 53 counties in the state, there are 11 counties that have birth units (Interrante et al., 2026). Figure 4.1 provides a map of birthing unit and neonatal intensive care unit (NICU) locations in North Dakota demonstrating that the majority of birthing units in the state are aligned along the major highways. With the substantial distance between birth units and the modest number of hospital-based birthing units in North Dakota, there is potential that women who do not live in communities with the birthing units may face barriers to accessing obstetric care when needed. It is possible that if women cannot get to a hospital with a birthing unit in time, they may end up giving birth in other locations, including at a hospital without a birthing unit. It is possible that women may attempt to plan ahead for birth and try to temporarily relocate to a community with a hospital-based birthing unit ahead of giving birth, but this carries additional barriers, besides travel time and distance.

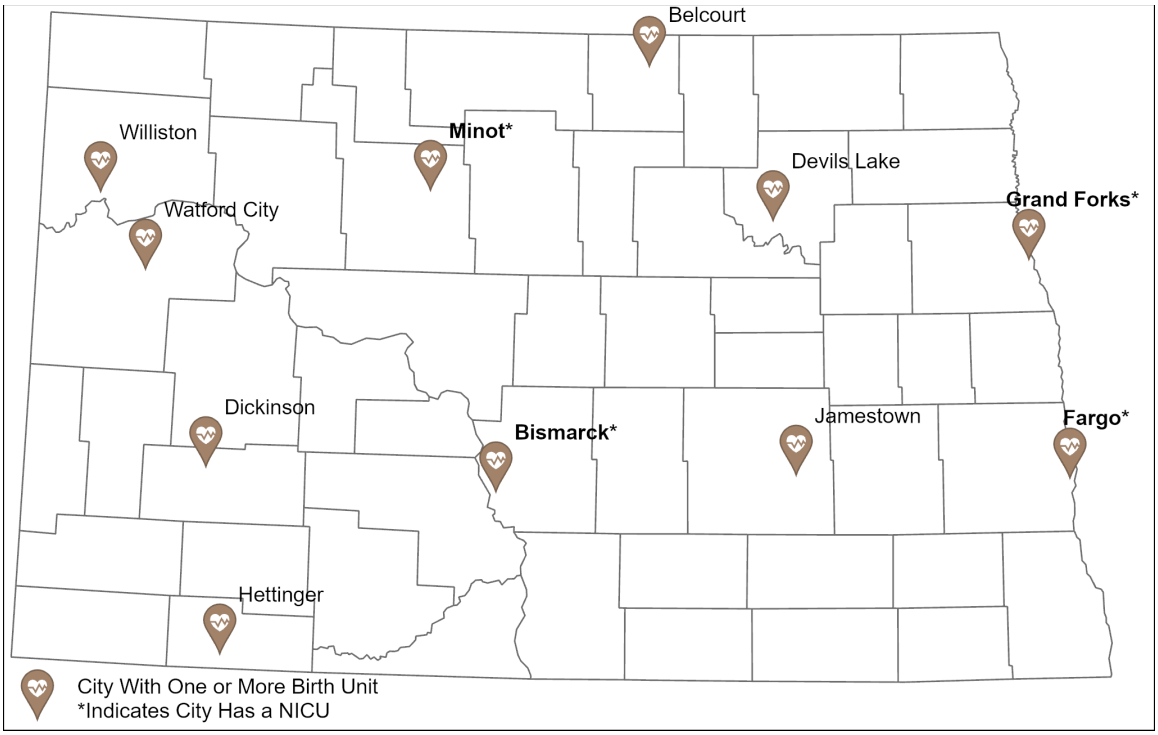


Figure 4.1: Cities in North Dakota With Birth Units and NICUs, 2026 (Interrante et al., 2026).

Beyond geographical barriers to accessing hospital-based birth units, women may also face certain economic barriers as well. If they live in a more rural or remote area but want to give birth in a hospital, they may wish to stay near the hospital in the days or weeks leading up to their birth. However, this may require time off from work, expenses for accommodations, as well as the cost of food and gas. Another barrier might be the cost of childbirth. On average in the U.S., the cost of pregnancy, childbirth, and post-partum care is over $20,000 (Winger, Rae, & Cox, 2025). With insurance, families may only have to pay a small percentage of that cost, but without insurance they may face a significant bill. The cost of childbirth varies widely by state, hospital, insurance coverage within or outside of the healthcare network if an individual has insurance coverage, and the type of delivery. There are also instances where healthcare costs for childbirth cannot be estimated based on certain situations such as complications during birth or if the baby requires more intensive care after birth and needs to spend time in a NICU.

MATERNAL CARE TARGET AREAS (MCTAs)

One method for examining areas that have a shortage of maternal care is through Maternal Care Target Areas (MCTAs). These designations were developed by the federal Health Resources & Services Administration (HRSA) Bureau of Health Workforce (BHW) as a nationally standardized definition for shortage of maternal care providers in specific geographic areas of the U.S. The purpose for developing the MCTAs was to allow for a more targeted approach to distribution of federal funds to areas that have a shortage of providers. The MCTAs were implemented in 2022 and can only exist within a Primary Care Health Professional Shortage Area (HPSA). This means that if an area is not designated as a Primary Care HPSA (indicating the area has a shortage of primary care providers) the area cannot have a MCTA designation. Along with meeting the Primary Care HPSA criteria, the MCTA designations are

scored using the following criteria: ratio of Ob/Gyns and Certified Nurse Midwives (CNMs)-to-female population age 15-44; percent of population at or below 200% of the federal poverty level; travel time and distance to the nearest accessible Ob/Gyn or CNM; fertility rate; prevalence of pre-pregnancy obesity; prevalence of pre-pregnancy diabetes; prevalence of pre-pregnancy hypertension; prevalence of cigarette smoking; prevalence of prenatal care initiation in the first trimester; and a behavioral health factor. The Social Vulnerability Index was included in the original MCTA scoring criteria, however the index was removed from the scoring criteria and the scoring points were reallocated effective August 15, 2026. MCTA scores range from 0 to 25, with a score of zero indicating there is no shortage and care is available while a score of 25 indicating there is a severe shortage with no easy access to care (HRSA, 2026; U.S. Department of Health and Human Services, 2022). North Dakota has a total of 26 Primary Care HPSAs covering 34 counties with MCTA scores ranging from 6 to 23. Those Primary Care HPSAs with the highest MCTA scores include Spirit Lake Nation, covering Benson, Eddy, Nelson, Ramsey, and Wells counties (19); MHA Nation, covering Dunn, McKenzie, McLean, Mercer, and Mountrail counties (22); Sioux County (22); and finally Rolette County (23) (HRSA, n.d.).

While MCTAs have their utility and serve as a good starting point for understanding shortages in certain types of care for various areas and population, they do not necessarily capture the full picture of shortages. Since HPSAs and MCTAs have nationally standardized definitions and criteria, there is very little room to take into account specific situations or nuances for certain areas and populations. An example of this would be if a local hospital or clinic in a rural area has a provider that takes appointments there once a week or once every other week. If the facility has a limited schedule during standard work hours, Monday through Friday, those who need services may have a hard time getting into see the provider due to work or other obligations. This may also lead to increased wait times for specific services. Another important consideration in North Dakota is weather, in particular winter weather. Adverse weather conditions can make travel difficult such that even though an area might not be considered as having a shortage of providers, because it is within a reasonable travel distance, it is not always safe for patients to travel. There are also very limited public transportation options in the state, resulting in heavy reliance on personal vehicles for travel.

REPRODUCTIVE OUTCOMES

FERTILITY AND BIRTH RATES

Over the last decade, notable declines in both the birth rate and fertility rate for North Dakota have been documented. The most recent peaks in these rates occurred in 2016, with a birth rate of 16.90 births per 1,000 North Dakota residents and a fertility rate of 88 births per females age 15-44 in North Dakota. In comparison, in 2024 the birth rate for North Dakota was 12.35 and the fertility rate was 63.46 (NDHHS, 2026b). This follows a national trend of declining fertility rates. The most recent peak for the U.S. was in 2007. Since that year, the general fertility rate has decreased by 22%. The decline for the U.S. rate has been somewhat more gradual compared to the North Dakota rate. Even though both have declined, North Dakota continues to have a higher fertility rate compared to the U.S. rate and more variability in how the rate has increased or decreased year to year. The most recent data shows that the U.S had a fertility rate of 53.8 in 2024, as demonstrated in Figure 4.2 which shows the fertility rate trend for both North Dakota and the U.S. from 2019-2024 (NCHS, 2026a).

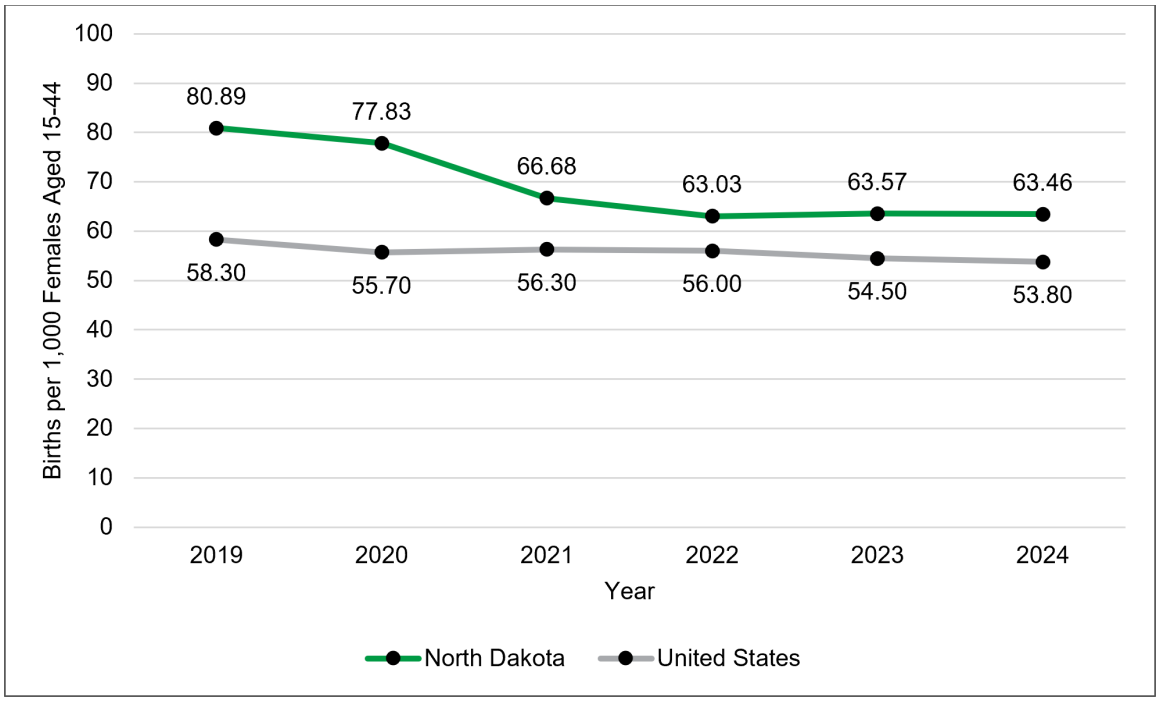


Figure 4.2: North Dakota and U.S. Fertility Rates, 2019-2024 (NCHS, 2026a; NDHHS, 2026b).

The best possible outcome for pregnancy and birth is a healthy mother and baby. However, when considering the health of women and their healthcare needs, it is important to acknowledge that the ideal outcome does not always occur. In some cases, a pregnancy may end in a stillbirth, defined as the death of a fetus before birth after 20 weeks of gestation and before birth. Stillbirth can be further broken down into early (a loss between 20 and 27 weeks), late (a loss between 28 and 36 weeks), and term (a loss at 37 or more weeks) (CDC, 2025b). Based on data from the CDC Wonder database, there are, on average, 54 babies stillborn in North Dakota every year. This is an average stillbirth rate of 5.33 per 1,000 live births (Count the Kicks, 2026). A pregnancy loss before 20 weeks gestation is referred to as a miscarriage. It is estimated that 10% to 20% of known pregnancies end in miscarriage but it is likely that the actual number is higher since many miscarriages can occur very early in a pregnancy before an individual knows they are pregnant. There are a variety of reasons that a pregnancy may end in a miscarriage, with one of the most common being genetic abnormalities of the fetus. While some miscarriages pass on their own, other cases may develop serious complications that could lead to a serious life-threatening infection. For complicated cases, medical intervention is required to preserve the health and life of the mother.

Proper and timely medical care with appropriate and knowledgeable providers can be key to lowering the risk of adverse pregnancy outcomes for both the mother and infant. While there often is no specific intervention that can prevent miscarriage, receiving prenatal care and taking care to be as healthy as possible during pregnancy can lower the risk (Mayo Clinic, 2023). Healthcare providers can play a key role in preventing stillbirths that are preventable through proper education for women on monitoring fetal movement during the latter months of pregnancy, especially in the third trimester (Count the Kicks, 2023). Overall, the timely care and

collaborative team approach to women's healthcare during pregnancy should be taken into consideration to increase the chance of positive pregnancy outcomes.

MATERNAL MORBIDITY AND MORTALITY

Additional concerns that need to be acknowledged related to women's health are maternal morbidity and mortality. Childbirth can result in severe complications and even death for the mother. There are also external factors within the mother's life that may lead to adverse outcomes immediately following childbirth.

The North Dakota Maternal Mortality Review Committee (MMRC) has been reviewing data regarding maternal mortality since 1954, but it was only in 2021 that the committee was written into the North Dakota Century Code with required reporting to the ND legislature. The most recent reporting available shows that from 2008 to 2022, North Dakota had a total of 86 maternal deaths with 36 occurring during pregnancy, 19 within the 42 days following a pregnancy, and an additional 31 occurring between 43 days to one year following a pregnancy. With a total of 173,745 births during that same time frame, a maternal mortality rate of 49.5 maternal deaths per 100,000 live births has been documented (North Dakota Legislative Assembly, 2024). There are different definitions and methods for calculating maternal mortality rates. For comparison, the CDC National Center for Health Statistics (NCHS) calculates the maternal mortality rate using the World Health Organization definition for maternal mortality which is, "the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes" (NCHS, 2024). Using this definition, the maternal mortality rate for North Dakota from 2008-2022 would be 31.7 maternal deaths per 100,000 live births.

The U.S. estimate for maternal mortality rate in 2022 from the CDC NCHS was 22.3 while the estimate from the World Health Organization (WHO) was 20.04 (NCHS, 2024; WHO, 2026). While these organizations provide different estimates, and the CDC NCHS has a more limited time frame of reports publicly available, there is consistency in the fact that both report an increasing trend in maternal mortality rates from the U.S. While both reported notable jumps in their estimated maternal mortality rate during the COVID-19 pandemic timeframe, there were still reported increases in the years prior to the pandemic. The U.S. does not have the worst maternal mortality rate globally, but it does consistently have a maternal mortality rate that is higher than other developed countries, which the U.S. is on par with from an economic perspective. Based on the 2023 data available from the WHO, the U.S. had a maternal mortality rate estimate of 16.63 maternal deaths per 100,000 live births. Other countries with similar maternal mortality rates in 2023 included Egypt (16.95), Bahrain (16.78), China (16.25), and Iran (15.48) (WHO, 2026).

The top three identified causes of maternal deaths in North Dakota from 2008 to 2022 were accidents, suicide, and hemorrhage (heavy or uncontrollable bleeding). On a national level, the top three leading causes of maternal deaths are mental health conditions, excessive bleeding (hemorrhage), and cardiac and coronary conditions (North Dakota Legislative Assembly, 2024). Identifying the causes of maternal deaths could lead to improving prevention efforts moving forward. Educating healthcare systems and providers working with pregnant and postpartum

women on the most common causes of maternal deaths can better equip them to work with pregnant and postpartum women.

It is important to acknowledge that there have been changes in reporting related to maternal deaths that have likely affected the numbers being reported and a potential reason for seeing increases in maternal mortality. However, with improved data capturing in this area, the previously lower rates could suggest the possibility of imprecise data capturing, indicating this was an underreported or underrecognized issue that was therefore improperly addressed. Now, with better data capture, it is possible to more accurately assess the true number of maternal deaths, examine the causes more closely, and increase work towards preventing maternal deaths

SUMMARY

Healthcare overall is complex and when considering specific populations with unique needs, additional considerations need to be taken into account. Women may need services ranging from preventive care, reproductive healthcare, and treatment of specific conditions that differ considerably from men. It is also important to consider that certain conditions manifest differently between men and women, and women may be at higher risk of certain conditions. While considering needed services for women's healthcare, it is also important to consider the unique provider types women may need for specific health situations and how accessible those provider types are, especially for women living in rural areas. Women's health may also affect infant health. In order to have a healthy population it is vital to account for women's health needs and understand how their health needs may affect a growing population.

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UNDERSTANDING AMERICAN INDIAN HEALTH IN NORTH DAKOTA

CHAPTER FIVE

Health Services, Care Access, And Health Outcomes For American Indians in North Dakota

American Indian communities in North Dakota experience significant health disparities, including higher rates of chronic disease and premature death. These outcomes are shaped by complex historical, social, economic, and healthcare factors. At the same time, Tribal Nations are building on the strength of culture, community, and tradition to advance health and well-being for future generations.

Median Age at Death in North Dakota, 2010–2019

American Indian		White American	
Male	Female	Male	Female
55 Years	62 Years	77 Years	85 Years



Closing gaps in health outcomes can mean more years of life, family and community.

NORTH DAKOTA SNAPSHOT

27% American Indian adults report fair or poor health, compared with 15% of non-Native adults.

DEMOGRAPHIC SNAPSHOT OF AMERICAN INDIAN POPULATIONS IN NORTH DAKOTA

North Dakota contains all or part of five federally recognized Tribes (North Dakota Legislative Branch, n.d.). This includes the Three Affiliated Tribes (the Mandan, the Hidatsa, and the Arikara); the Standing Rock Reservation, home of the Standing Rock Sioux Tribe; the Spirit Lake Reservation, home of the Spirit Lake Tribe; the Turtle Mountain Reservation, home to the Turtle Mountain Band of Chippewa Indians, and the Sisseton Wahpeton Oyate Tribe also exists in the southeastern corner of North Dakota with a small amount of Tribal trust land, although much of the Tribal trust land is in South Dakota (Figure 5.1) (North Dakota Indian Affairs, n.d.).

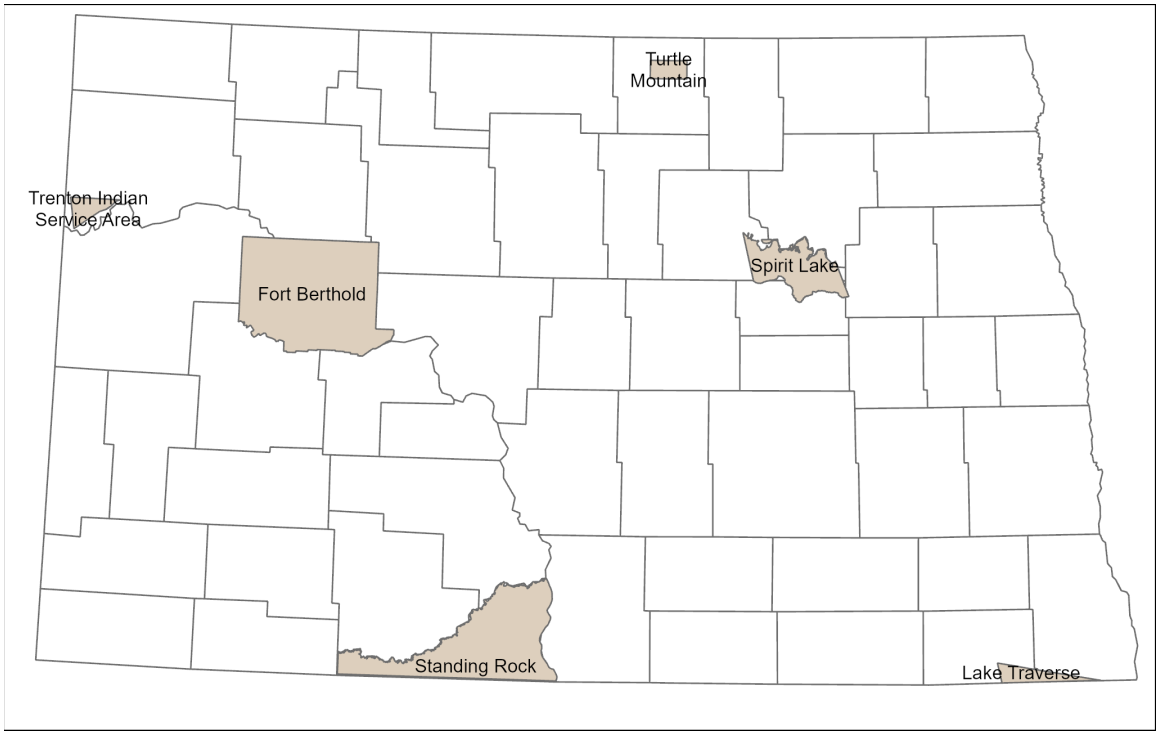


Figure 5.1: American Indian Tribal Lands Within North Dakota, 2026 (North Dakota Indian Affairs, n.d.).

North Dakota reports the sixth largest American Indian population in the United States with American Indians representing nearly 5.0% of the state population (31,329 people) (North Dakota Indian Affairs, n.d.). This is the largest subpopulation in North Dakota. Almost 60% of the American Indian population live on reservations in the state, and over 40% are under age 20 years. Of those who live off the reservation, a majority continue to live in counties near the reservation or in the nearest metropolitan county (Grand Forks and Bismarck predominately; Figure 5.2, Table 5.1) (MHA Nation, n.d; North Dakota Indian Affairs, n.d.; Spirit Lake Nation, n.d.).

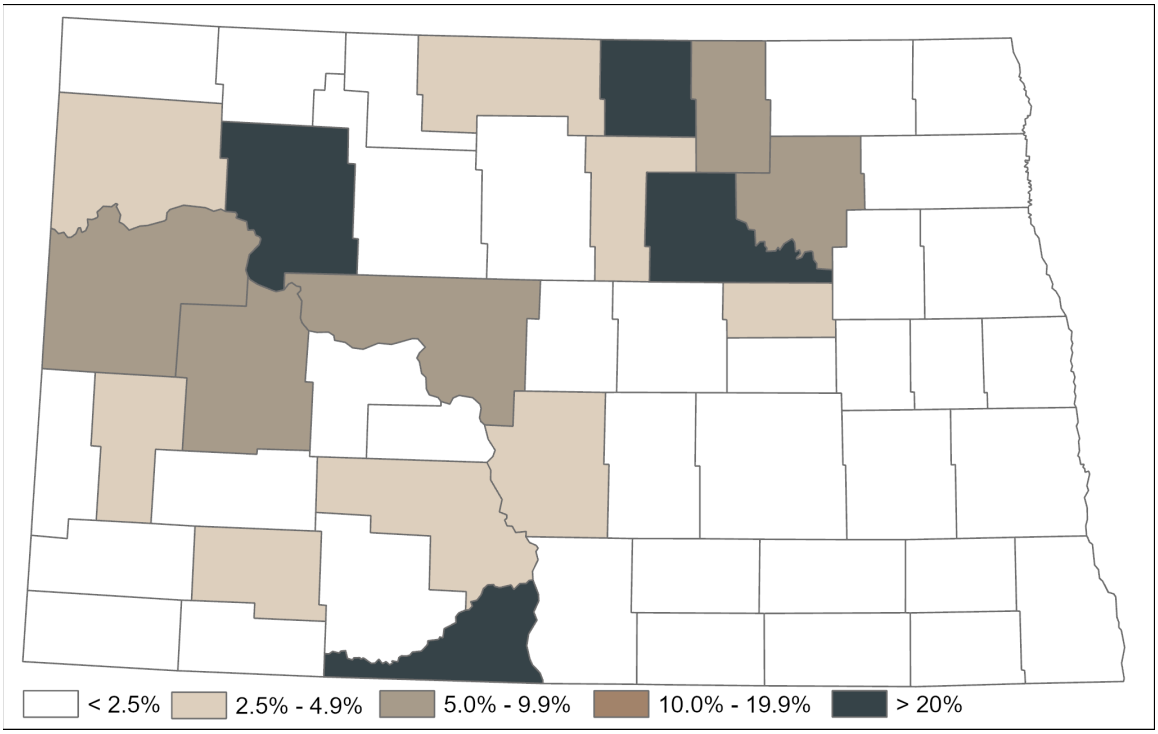


Figure 5.2: Percent American Indian Population by County in North Dakota, 2025 (North Dakota Indian Affairs, n.d.).

Table 5.1: Membership, Population, and Land Area of Tribal Nations in North Dakota (MHA Nation, n.d; North Dakota Indian Affairs, n.d.; Spirit Lake Nation, n.d.).

Tribal Nation	Enrolled Members	Population on or near the Reservation	Land Area in ND
Turtle Mountain Band of Chippewa	33,276	14,500	72 sq. miles
Three Affiliated - MHA Nation	17,788	5,461	~1 million acres
Standing Rock Sioux Tribe	16,102	NA	3,625 sq. miles
Spirit Lake Nation	7,933	3,949	405 sq. miles
Sisseton Wahpeton Oyate Nation	13,000+	NA	108,589 acres

SOCIAL DRIVERS OF HEALTH

A multitude of factors impact the overall health and well-being of American Indians in North Dakota. Rural and remote areas are often more isolated, lacking healthcare infrastructure and capacity, and American Indian individuals may sometimes delay seeking care in part because they do not trust non-Tribal organizations (Substance Abuse and Mental Health Services Administration [SAMHSA], 2018). Other factors that influence treatment include transportation, level of social support, perceived provider effectiveness, type of treatment setting, geographic location, and tribal affiliation (SAMHSA, 2018). Although more than 70% of American Indians live in urban areas nationally, many maintain strong ties to their home reservations. Individuals often travel back and forth between cities and Tribal lands, and some delay seeking healthcare until they are able to return home. According to the Office of Indian Affairs in North Dakota, nearly 60.0% of American Indians in the state live on reservations (North Dakota Indian Affairs,

n.d.). Despite demonstrating resilience, American Indians in the state still face persistent health disparities and systemic violence, with ongoing social, economic, and environmental factors exacerbating existing health inequities. There are also unique social and economic disparities that have historically impacted Tribal populations including colonization, forced migration, land loss, and cultural devastation (Walters et al., 2011).

American Indian communities experience a range of social drivers of health that shape wellbeing in both positive and negative ways. These drivers reflect the deep cultural, historical, and relational contexts within which Tribal Nations continue to sustain their citizens. Research demonstrates that self-determination and autonomy—having meaningful control over one's life and community—are associated with improved health outcomes among Indigenous peoples (Walters et al., 2011). Access to and utilization of traditional Land also profoundly influences health. When traditional economies and governance structures are disrupted, individual and community wellbeing are affected (Notah Begay III Foundation, 2015). Conversely, cultural connection to Land has been identified as a driver of positive physical, emotional, and spiritual health (Holt, 2026).

Historical trauma remains a significant social driver of health. Indigenous scholars describe historical trauma as the collective and intergenerational impact of events such as genocide, forced relocation, assimilation, and the purposeful destruction of Lands, languages, and cultural practices—experiences that continue to influence American Indian health today (Brave Heart et al., 2011). Race-based discrimination and social exclusion also contribute to adverse health outcomes, including mistrust of non-Native healthcare professionals and systems (Walters et al., 2011).

Culture and cultural continuity serve as powerful protective factors. Disregard for American Indian cultural beliefs regarding health and healing can negatively affect wellbeing and erode trust in healthcare systems. Growing research demonstrates that when American Indian cultures, languages, and healing practices are acknowledged or centered in healthcare delivery, health outcomes improve (Holt, 2026; Whalen et al., 2022). Together, these social drivers underscore the importance of culturally grounded, sovereignty-affirming approaches to public health that honor Tribal Nations' knowledge, values, and priorities.

Despite the persistent impacts of colonization and structural inequities, Tribal Nations in North Dakota continue to demonstrate strong community resilience (Holt, 2026). Cultural teachings, kinship systems, and community networks remain central sources of wellbeing (Holt, 2026). Tribal Nations have developed innovative programs in education, behavioral health, cultural revitalization, and youth leadership—initiatives that actively counterbalance the effects of historical trauma (Brave Heart et al., 2011) and strengthen long-term community health.

For more than five centuries, American Indian peoples have endured a series of traumatic events tied to colonization, including dispossession, forced relocation, cultural suppression, and systemic inequities. These collective and intergenerational experiences continue to shape the health and wellbeing of Tribal Nations in North Dakota. Indigenous scholars such as Brave Heart and colleagues describe the ongoing influence of these past events on present-day functioning as *historical trauma*, a framework that helps clinicians and researchers understand how the legacies of colonization remain embedded in contemporary health outcomes. Recognizing this context is essential for interpreting current disparities and for supporting Tribal

Nations' efforts to strengthen community health, cultural continuity, and healing (Brave Heart et al., 2011).

PROTECTIVE FACTORS

Culture and language have been recognized as protective factors for health outcomes such as heart disease, cancer, and diabetes (Whalen et al., 2022). These cultural strengths play a central role in shaping identity, supporting community cohesion, and reinforcing pathways to wellness across Tribal Nations. Public health measures should recognize the diversity and depth of American Indian cultures and, where possible, incorporate culturally grounded practices that support Tribal Nations' own approaches to health and healing. American Indian cultures are the product of shared histories and encompass values, beliefs, customs, traditions, institutions, relationships, and language. This cultural diversity is reflected in the more than 150 unique Indigenous languages spoken among American Indian and Alaska Native peoples in the United States, with many Tribal Nations maintaining distinct customs, beliefs, and linguistic traditions (Tavo & Sivulliuqti, 2022). Grounding public health strategies in respect for these cultural strengths is essential for advancing prevention efforts and improving health outcomes across Tribal communities.

It is important to create community solutions that make healthcare accessible, culturally safe, and relevant to the needs of the community to ensure that proposed solutions work effectively. Providers and administrators should work to understand the importance of historical trauma, holistic health, the role of culture and cultural identity, sovereignty, the significance of community, the value of cultural awareness, the importance of providing culturally responsive services, the significance of environment, and respecting that there are many paths to healing (SAMHSA, 2018). These recommendations are based on SAMHSA's Treatment Improvement Protocol (TIP) 61, which was developed through a structured, evidence-informed process. SAMHSA convened multidisciplinary expert panels, conducted comprehensive literature reviews, and engaged Tribal leaders, clinicians, and cultural practitioners to ensure the guidance reflected Indigenous knowledge systems, community priorities, and best practices in behavioral health. As a result, TIP 61 represents a consensus-driven, culturally grounded framework for improving behavioral health services for American Indian and Alaska Native communities (SAMHSA, 2018). Providers, administrators, and decision-makers who support and help American Indians maintain their ties to their native culture can help prevent and address a multitude of health-related conditions (SAMHSA, 2018). Due to historical and political impacts, many American Indians are working to reconnect to their communities and traditional healing practices by:

- Embracing and learning more about their Indigenous roots
- Getting back to their culture and traditions and learning traditional practices
- Taking part in community activities and events that reflect their culture
- Studying their native language, arts, history, and the current issues affecting their community (SAMHSA, 2018)

These protective factors are actively lived and strengthened across Tribal Nations. Investments in language revitalization, cultural education, traditional food systems, and community-based healing initiatives continue to expand. Tribal Nations lead efforts to restore Land-based practices, reinforce cultural identity, and promote holistic wellness. These strengths reflect the

ongoing vitality of Indigenous knowledge systems and their essential role in supporting health and resilience.

There are a multitude of influences and experiences that apply to American Indian populations because of the unique historical, social, and political factors impacting American Indians today. It is important for decision-makers to understand and address the impacts of historical trauma, the social drivers of health, and the unique Indigenous drivers of health. It is also important for decision-makers to understand the health, economic, and social disparities that continue to exacerbate existing health inequities. Understanding these factors and impacts is crucial for developing effective strategies to improve the health and well-being of American Indian populations, particularly American Indians living in rural Tribal regions of North Dakota. By working to prevent and address the health, economic, and social disparities impacting health inequities experienced by American Indians in North Dakota, decision-makers can work towards creating and streamlining an approach that is responsive to the population's overall needs and results in American Indians in North Dakota having access to much needed support and financial resources.

HEALTH STATUS AND DISPARITIES FOR AMERICAN INDIANS IN NORTH DAKOTA

American Indian populations in North Dakota experience health outcome disparities including but not limited to, diabetes, cancer, substance use disorder, heart disease, and unintentional injuries (North Dakota Department of Health and Human Services & North Dakota State University Center for Social Research, 2021). According to the CDC's 2024 Behavioral Risk Factor Surveillance System (BRFSS), American Indian adults are more likely than non-Native adults in North Dakota to report their general health as fair or poor (27% American Indian compared to 15% non-Native). See Table 5.2 for other self-reported health disparities experienced by American Indians in North Dakota when compared with non-Natives (CDC Behavioral Risk Factor Surveillance System, 2024).

Table 5.2: Health Disparities as Self-Reported by North Dakota Adults in the Behavioral Health Risk Factor Surveillance System by Race, 2024 (CDC BRFSS, 2024).

Health Concern	American Indian	Non-Native
Physical health was not good for 8 or more days in the past 30 days	16.6%	13.1%
Mental health was not good for 8 or more days in the past 30 days	28.6%	16.3%
Does not have a personal healthcare provider	24.8%	16.6%
Had a time in the past year when needed to see a doctor but did not because could not afford it	18.7%	7.8%
Last dental visit was 5 or more years ago	11.6%	9.7%
Ever had a heart attack	6.9%	4.4%
Ever had a stroke	3.3%	3.0%
Ever told you had asthma	19.3%	13.4%
Ever told you had COPD, emphysema, or chronic bronchitis	5.6%	5.4%
Ever told you had a depressive disorder	32.7%	21.1%
Ever told you had diabetes	20.1%	10.2%

While disparities remain significant, Tribal Nations have implemented numerous strengths-based approaches to improve health outcomes. Community health representative programs, culturally grounded chronic disease prevention initiatives, and Tribal public health departments that integrate Indigenous and Western knowledge systems demonstrate Tribal leadership in advancing community-driven solutions. These efforts underscore the capacity of Tribal Nations to lead health innovation within their communities. In addition to Tribal Nations' leadership in advancing community-driven health solutions, statewide institutions also play a critical role in strengthening Indigenous health capacity and supporting culturally grounded approaches to care.

ORAL HEALTH STATUS IN NORTH DAKOTA

Health of the mouth is directly related to overall health. Oral diseases like tooth decay (cavities) and periodontal (gum) disease affect North Dakotans of all backgrounds. They are also associated with many serious health problems like type 2 diabetes, heart disease, lung disease, stroke, dementia, low birth weight, and pre-term birth. Oral health also is linked to mental health. Promoting good habits (brushing teeth twice a day and flossing) and supporting oral health are essential components of advancing the overall health and wellbeing of all North Dakotans. Countless providers, dental teams, local public health units, clinicians, and programs in the state are doing important work to ensure a healthy North Dakota. However, there still are many opportunities to address the burden of poor oral health for the individual, the community, and the state, especially as it relates to the oral health status of American Indian populations. A snapshot of those needs, taken from the report on oral health in North Dakota, include (Connor et al., 2022):

- Tooth pain causes more frequent emergency room visits. American Indians experience three times as many emergency visits for tooth pain compared to those who are non-Hispanic White in North Dakota.
- More than two times as many American Indian kindergartners have rampant tooth decay compared to other kindergartners in North Dakota (Figure 5.3).
- Nine in ten American Indian kindergartners have experienced tooth decay.
- American Indian kindergarteners are 30% more likely to have untreated decay compared to their non-American Indian peers.
- Nine in ten American Indian third graders have experienced tooth decay (Figure 5.4).

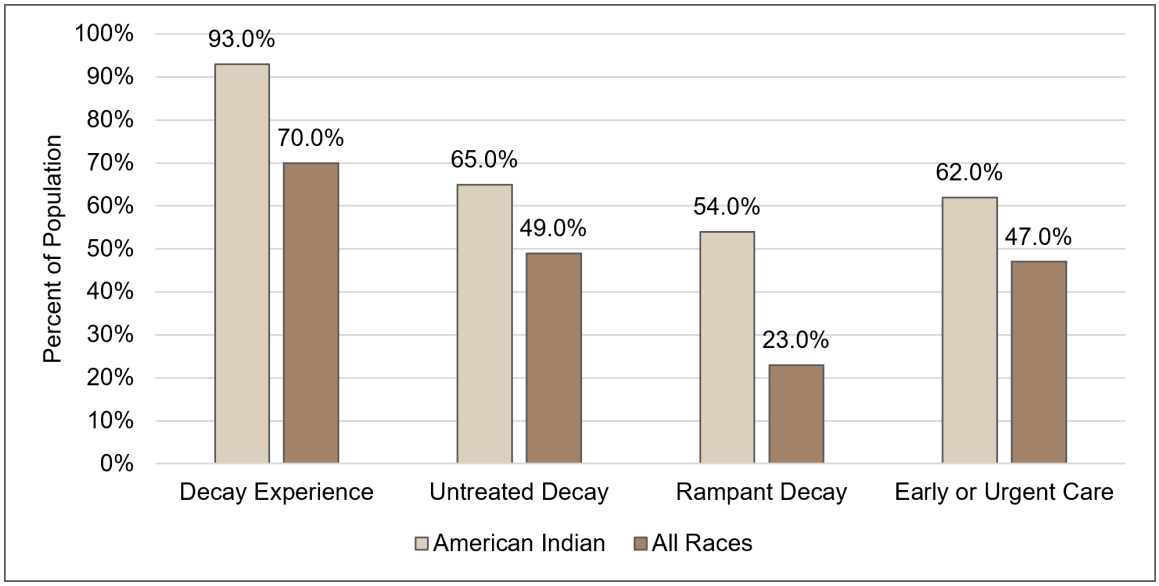


Figure 5.3: Experience With Oral Health Concerns Among North Dakota Kindergartners by Race, 2022 (Connor et al., 2022).

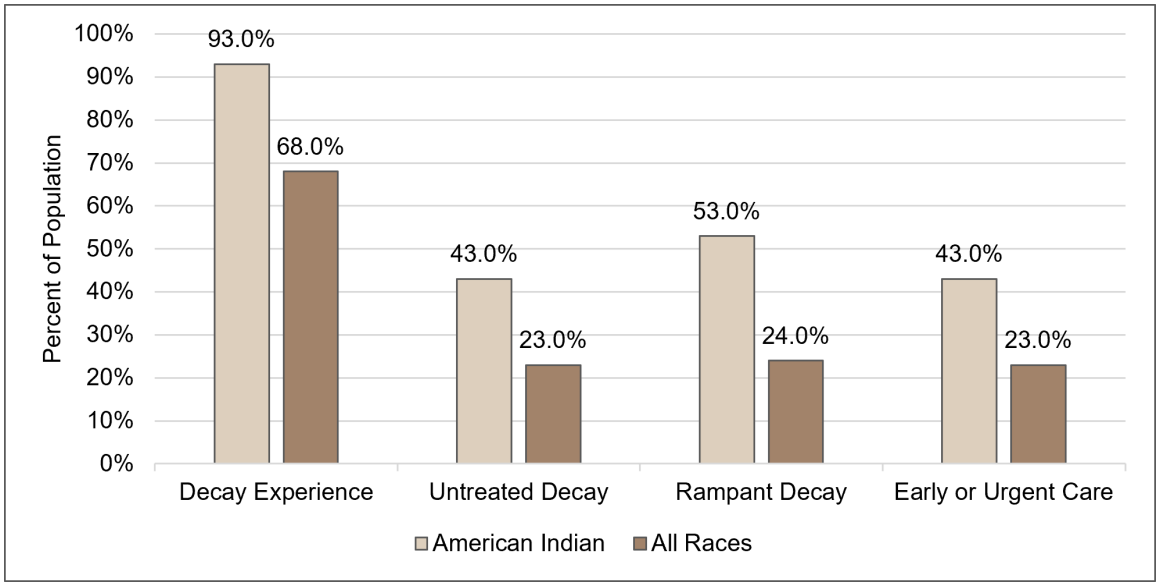


Figure 5.4: Experience With Oral Health Concerns Among North Dakota Third Graders by Race, 2022 (Connor et al., 2022).

PREGNANCY AND INFANT HEALTH

The state of North Dakota has significant and persistent racial/ethnic disparities in maternal and child health (MCH) outcomes, with American Indian communities being the priority population for efforts directed at reducing disparities.

Breastfeeding

The North Dakota MCH Priorities Report (2024) highlights that the American Academy of Pediatrics (AAP) recommends all infants (including premature and sick newborns) exclusively breastfeed for at least six months. This recommendation is based on the finding that human milk supports optimal infant growth and development by providing all required nutrients during that time (Hodur & Hukriede, 2025). One of the North Dakota MCH Priorities includes increasing the rates of breastfeeding initiation and exclusive breastfeeding through six months with an emphasis on the American Indian population (Hodur & Hukriede, 2025). As of 2024, 61.8% of American Indian mothers initiated breastfeeding, lower than other women in the state (Figure 5.5) (Health Resources and Services Administration [HRSA], 2026).

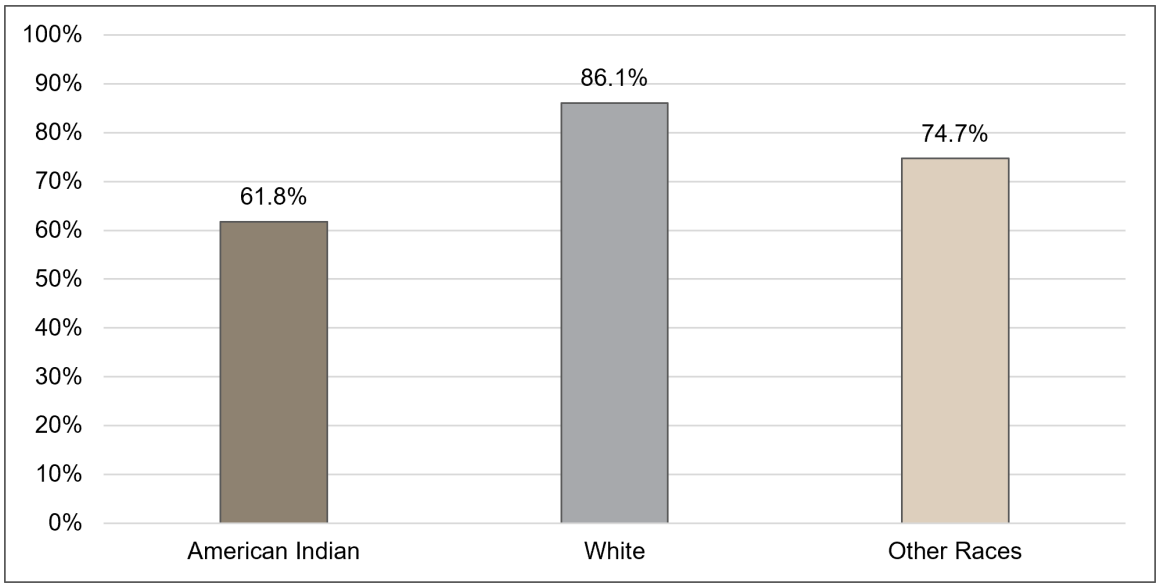


Figure 5.5: Initiation of Breastfeeding Rates by Race/Ethnicity in North Dakota, 2024 (HRSA, 2026).

Prenatal Care Access

American Indian populations have lower rates of initiation of prenatal care in the first trimester than other racial/ethnic groups for early and adequate prenatal care in the U.S. (U.S. Department of Health and Human Resources [DHHS], 2024). This disparity is persistent, with American Indian populations having 15-20% lower rates of early prenatal care access compared to White populations for much of the past 30 years (Johnson et al., 2010). Key drivers of disparities in obtaining prenatal care need to be further addressed, as American Indian women report higher rates of transportation issues, lack of childcare, and lack of timely appointments as reasons they were unable to initiate prenatal care in their first trimester (Sebens & Williams, 2022).

Perinatal Mental Health

Perinatal mental health conditions are a contributing factor in approximately one-third of maternal mortality cases in North Dakota. Data regarding determinants of postpartum

depression among American Indian populations are sparse, yet 20.8% of American Indian women experience postpartum depression, compared to 11.0% of White women (HRSA, 2026).

MENTAL HEALTH AND SUBSTANCE MISUSE

Mental health and substance misuse treatment of American Indian and Alaska Native people requires a tailored approach, recognizing the unique cultural values and practices of each Tribal nation. Defining wellness and prescribing suitable therapies for mental healthcare becomes challenging in view of the diversity among American Indian and Alaska Native people. While there is no universally accepted definition of "good" mental health, it is generally characterized as a state of emotional, psychological, and social well-being that positively impacts how people deal with stress and function productively in society (Fusar-Poli et al., 2020).

American Indian Mental Health and Substance Use Disparities in North Dakota

Research indicates that American Indian populations experience disproportionally high rates of mental health issues, including suicide, post-traumatic stress disorder, violence, and substance use disorders. Consequently, American Indian individuals report serious psychological distress at a rate 2.5 times higher than that of the general population within a one-month period (Indian Health Service, 2023). According to 2024 BRFSS data, 20.5% of American Indian respondents in North Dakota reported 14 or more days per month when they considered their mental state "not good" (CDC BRFSS, 2024). There is a correlation between mental and behavioral health concerns and substance misuse. For example, studies reveal a heightened propensity for substance misuse among individuals diagnosed with clinical depression or experiencing depressive symptoms, particularly within American Indian and Alaska Native communities (Soto et al., 2022).

Promoting Positive Mental Health and Healing Among American Indians in North Dakota

Views on addressing substance use and mental disorders among American Indian and Alaska Native populations differ significantly from mainstream perspectives. Healing and treatment methods need to include holistic aspects of spiritual, emotional, physical, social, and cognitive healing (SAMHSA, 2018). For generations, American Indian and Alaska Native communities have effectively utilized traditional ceremonial practices to foster resilience and healing from historical traumas. Such traditional ceremonies include sweat lodge rituals, drumming sessions, talking circles, naming ceremonies, and other spiritual practices specific to individual Tribal Nations. There is a growing trend towards interventions that integrate traditional ceremonies in conjunction with clinical methods that are typically employed by Western science to treat substance misuse (Chase-Begay et al., 2023). Connecting with culture, language, traditions, and heritage serves as a protective factor for mental health issues and substance misuse for many American Indian and Alaska Native people, helping them develop strength and resilience by increasing their cultural identity (Soto et al., 2022). However, substance use program administrators often face challenges when integrating culture with clinical care and these healthcare services often are excluded from reimbursement by public and private insurers (Chase-Begay et al., 2023). Most recently, in October 2024, the Centers for Medicare and Medicaid Services approved Section 1115 demonstration waivers in California, Arizona, New Mexico, and Oregon. These waivers allow the four states' Medicaid agencies to cover Traditional Healing as part of treatment for mental health concerns among American Indian and Alaska Native people (Centers for Medicare and Medicaid Services, 2024).

Tribal Nations continue to lead in developing culturally grounded behavioral health programs that integrate ceremony, community support, and Indigenous approaches to healing. Youth leadership programs, cultural camps, language revitalization, and community-based prevention initiatives serve as powerful protective factors that strengthen identity, reduce risk, and promote long-term resilience.

CHRONIC DISEASE

In 2018, the Centers for Disease Control and Prevention reported that most American Indian and Alaska Native Elders had been diagnosed with at least one of ten possible chronic diseases (89.7%). A large proportion (69.8%) reported two or more chronic diseases and just under half (45.2%) had three or more. The most common among American Indian and Alaska Native Elders were (and continue to be) high blood pressure, diabetes, and arthritis (Adamsen et al., 2018; Indian Health Service, 2019). The incidence of chronic diseases are not only reported disparately among American Indian and Alaska Native Elders; American Indian and Alaska Native adults ages 18 and older continue to die at higher rates than other Americans from many conditions, including chronic liver disease and cirrhosis, diabetes mellitus, and chronic lower respiratory diseases (IHS, 2019). According to the Behavioral Risk Factor Surveillance System, 6.9% of American Indians in North Dakota had a reported history of heart attack (myocardial infarction) compared to 4.4% of non-Natives (Figure 5.6) (CDC BRFSS, 2024). Similarly in North Dakota:

- 19.3% of American Indians have asthma compared with 13.4% of non-Native adults
- 5.6% of American Indians have chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis compared with 5.4% of non-Native adults
- 32.7% of American Indians report depressive disorder (including depression, major depression, dysthymia, or minor depression) compared with 21.1% of non-Native adults
- 20.1% of American Indians have diabetes compared with 10.2% of non-Native adults

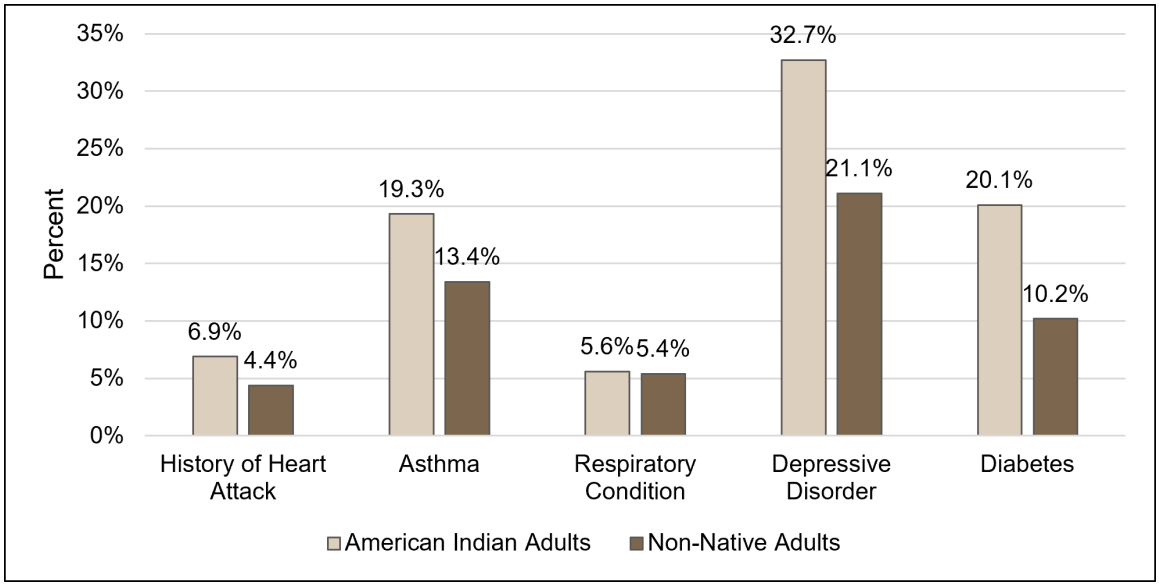


Figure 5.6: Prevalence of Chronic Diseases Among American Indian and Non-Native Adults in North Dakota, 2024 (CDC BRFSS, 2024).

Across North Dakota, Tribal Nations continue to expand chronic disease prevention and management programs, including diabetes education, nutrition and physical activity initiatives, and culturally informed behavioral health supports. These programs leverage community strengths—such as kinship networks, cultural teachings, and traditional food practices—to promote healthier lifestyles and improve disease management.

CAUSES OF DEATH AMONG AMERICAN INDIANS IN NORTH DAKOTA

American Indians' median age of death in North Dakota from 2010-2019 was 55 years for males and 62 for females, which is significantly lower when compared to the median age of death for White males (77) and White females (85) (Nadeau et al., 2025). The 10 leading causes of death (unadjusted for age) among American Indians in North Dakota from 2010 to 2019 were diseases of the heart, cancer, accidents, cirrhosis, diabetes, COPD, suicide, cerebral vascular disease, influenza and pneumonia, and septicemia (Nadeau et al., 2025). From 2017-2020, premature deaths (deaths prior to age 65) accounted for 57% of American Indian deaths in North Dakota compared to the premature death rate of other races (21%) in the state (ND DHHS & North Dakota State University Center for Social Research, 2021). Data show that the age-adjusted death rate for all North Dakotans has steadily declined since 1979; however, mortality remains higher for American Indians. American Indians in North Dakota experience the highest age-adjusted mortality rate of any state, with an age-adjusted death rate of 1,322 per 100,000 people for the years 2014-2016 and has remained consistently high between 2009-2016 (Figure 5.7). This is nearly double the age-adjusted death rate of 669.4 per 100,000 among White residents in North Dakota during the same time period (NCHS, 2017).

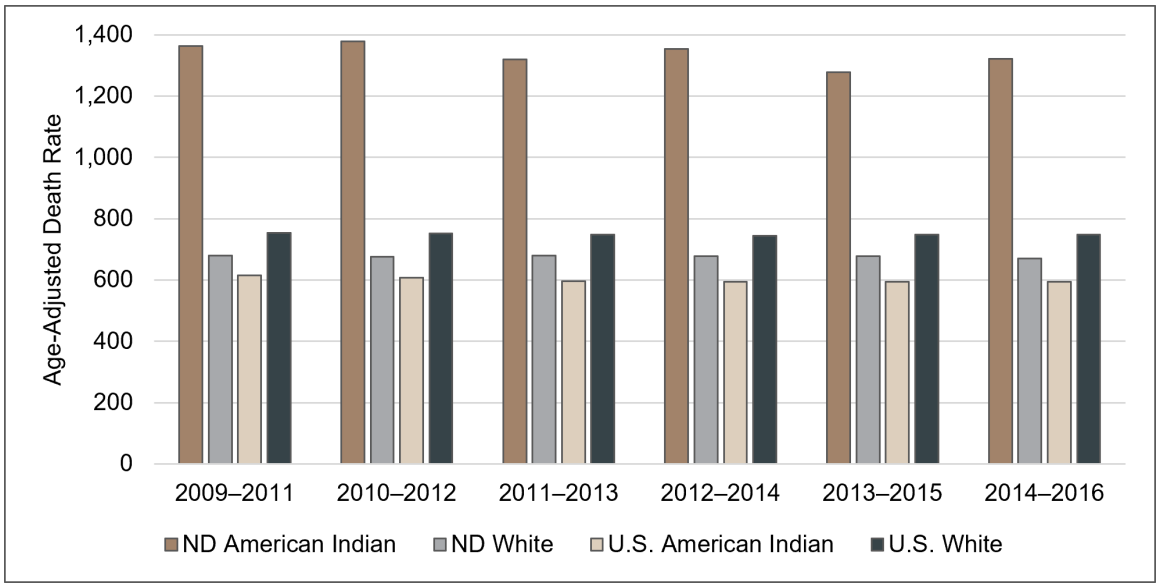


Figure 5.7: Age-adjusted Death Rates by Race for North Dakota in the U.S., 2009-2016 (NCHS, 2017).

HEALTHCARE ACCESS AND UTILIZATION: INDIAN HEALTH SERVICE (IHS)

In 2020, the number of people who identified as American Indian and Alaska Native nearly doubled from 5.2 million in 2010, to 9.7 million, which now accounts for 2.9% of all people living in the U.S. (Chavez & Kaur, 2021). These individuals are spread out across the U.S. both on

and off reservations. Due to federal practices of assimilation and removal, a vast majority of American Indian and Alaska Natives live in urban areas (Villarroel et al., 2020). In 2020, the 10 states with the largest percentage of American Indian and Alaska Native people were Alaska, Oklahoma, New Mexico, South Dakota, Montana, North Dakota, Arizona, and Wyoming (National Council on Aging, 2023). As noted, these populations continue to experience persistent health disparities, including higher rates of chronic disease (Graham & Stamler, 2010). Despite the fact that many American Indians and Alaska Natives are from working families, there are high rates of poverty that likely may be attributed to historical structural barriers and the ongoing effects of colonization (Artiga et al., 2017). A 2021 brief showed that despite a drop in the uninsurance rate, American Indians and Alaska Natives still have the highest uninsurance rate (approximately 28%) among all populations (U.S. DHHS, Office of the Assistant Secretary for Planning and Evaluation, 2021).

The Indian Health Service (IHS) is the main provider of primary healthcare and disease prevention services to over 2.7 million American Indians and Alaska Natives. The IHS is comprised of over 600 hospitals, clinics, and health stations on or near Indian reservations in 37 states across the U.S. (U.S. DHHS, 2023). The IHS consists of a so-called I/T/U system of care, meaning it provides medical and some limited dental services through the **I**HS (federally operated), through Tribal 638 compacts and contracts (**T**ribally operated), and through **U**rban Indian Health Programs. Additional services not provided directly at IHS, such as specialty care, may be obtained through the Purchased/Referred Care (PRC) program, but this program has limited funding (Walke, 2008). A listing of the IHS Service Areas is included in Figure 5.8.

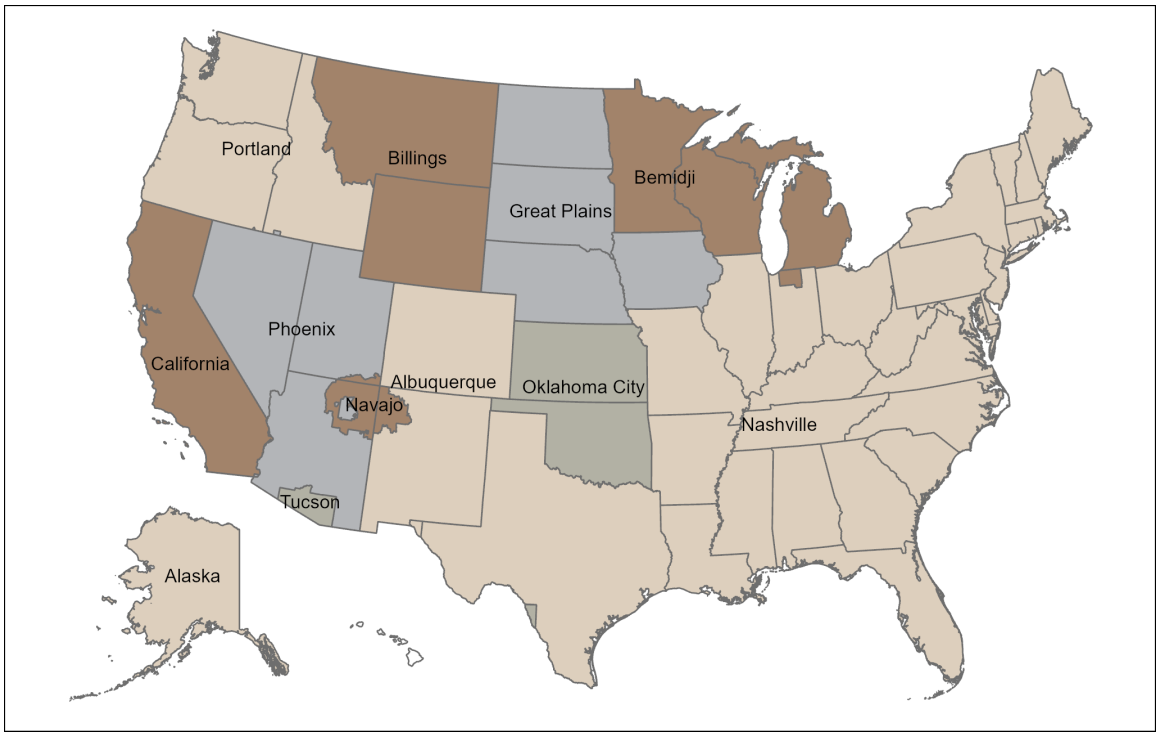


Figure 5.8: Indian Health Services Twelve Service Areas.

Access to the IHS differs from the general population as it is not an insurance program. Rather it is a federal treaty obligation to provide healthcare to Tribal Nations that maintain a nation-to-

nation relationship with the U.S. Despite legal authority and federal commitment to address health disparities for citizens of Tribal Nations, the IHS continues to be underfunded (Zhao et al., 2026). Among per capita expenditures, IHS spending was only $4,078 per user compared to a national average of $13,493 per person in 2022 (U.S. DHHS, IHS, 2024). IHS is a “payer of last resort” meaning it will first bill insurance before using funds appropriated to IHS by Congress each year (Taylor et al., 2024). Among third-party revenue at IHS, Medicaid represents the largest share with 62% of its $1.3 billion coming from Medicaid in 2017 (Artiga et al., 2017).

Medicaid is the largest single health insurance program in the United States, covering millions of the poorest individuals and families in the nation (Kaiser Family Foundation, 2013). Medicaid provides coverage to over one in four nonelderly (< age 65) American Indian and Alaska Natives that assists in filling gaps in employer-based insurance programs and those without insurance (Artiga et al., 2017; National Council on Aging, 2023). Medicaid enrollment is determined by federal law that requires states to cover certain individuals, including low-income families, qualified pregnant women and children, and individuals with disabilities. In North Dakota, Medicaid coverage among American Indians and Alaska Natives increased from approximately 13,030 (30.1%) in 2013 to 19,446 (39.0%) in 2023 as a result of Medicaid expansion (National Indian Health Board, 2025).

Medicaid expenditures typically are shared between the state and federal government at various Federal Medical Assistance Percentage (FMAP) rates that have a statutory minimum of 50% (Mitchell, 2020). The Medicaid expansion program anticipated and advocated that the federal government would cover most costs. It did so by assuming that spending and enrollment figures would save money or offset costs such as uncompensated care and increased economic activity. The program worked to streamline the enrollment process allowing multiple ways to enroll, a single application for multiple programs, electronic data to confirm eligibility, and a real-time determination of eligibility (Stephens et al., 2013). As of 2026, 40 states and Washington, D.C. have accepted this infusion of federal funding to expand Medicaid (HealthInsurance.org, 2026).

Medicaid is the largest source of third-party revenue for IHS, since the federal government covers 100% of Medicaid expenditures for American Indian and Alaska Native enrollees who seek care through IHS or a Tribal facility (Artiga et al., 2017). If Medicaid expansion were adopted in the remaining non-expansion states, approximately 55,000 more uninsured non-elderly American Indian and Alaska Native adults could be enrolled (U.S. DHHS, Office of the Assistant Secretary for Planning and Evaluation, 2021). Enrollment in Medicaid allows American Indians and Alaska Native patients the ability to access more services other than just those provided via IHS.

Despite chronic underfunding, Tribal Nations have built strong Tribal health systems through 638 compacts, expanded clinical services, and innovative partnerships with state and federal agencies (IHS, Office of Tribal Self-Governance**,** 2017). Tribal Nations continue to demonstrate leadership in health governance, workforce development, and culturally grounded care delivery—strengths that are essential to improving health outcomes and advancing Tribal sovereignty in healthcare (Holt, 2026).

Taken together, these data illustrate the persistent and deeply rooted health inequities experienced by American Indian people in North Dakota—inequities shaped by historical

trauma, structural barriers, and ongoing underinvestment in Tribal health systems. Indigenous scholars have documented how the collective and intergenerational impacts of colonization continue to influence present-day health and wellbeing (Brave Heart et al., 2011). Yet the narrative is not solely one of disparity; it is also one of resilience, cultural strength, and sovereign Nations working to protect the health and wellbeing of their citizens (Walter & Simon, 2002). As SMHS continues its partnerships with Tribal Nations, the findings in this chapter underscore the need for sustained, culturally grounded, and community-driven approaches that honor Tribal sovereignty, strengthen access to care, and expand prevention and treatment resources across rural and reservation communities. Advancing the health of Tribal Nations in North Dakota requires coordinated action, long-term investment, and a commitment to supporting Tribal Nations' own visions for health, healing, and future generations.

HEALTHCARE PROFESSIONALS SERVING AMERICAN INDIAN PEOPLE

Despite the focus of IHS and the growing number of people identifying as American Indian/Alaska Native, one of the most pressing challenges in Indian Country is a shortage of healthcare professionals. As of 2024, only 0.3% of 1,032,365 active physicians identified themselves as American Indian/Alaska Native (Association of American Medical Colleges, 2025). These figures translate into low numbers of American Indians/Alaska Natives on the medical student pathway where American Indians/Alaska Natives are underrepresented by more than 60% among applicants and medical school matriculants (Lett et al., 2019). American Indians/Alaska Natives also are underrepresented in other health professions, representing only 0.5% of registered nurses, 0.2% of physical therapists, 0.2% of physician assistants, 0.4% of advanced practice nurses, and 0.6% of medical assistants (Data USA, 2024a, 2024b, 2024c, 2024d; American Association of Nurse Practitioners, 2024). These shortages likely contribute to a lower life expectancy, lower quality of life, and greater incidence of chronic conditions faced by American Indian/Alaska Native persons across Indian Country (Adamsen et al., 2018; CDC, National Center for Chronic Disease Prevention and Health Promotion, 2018; Heron, 2018;). At the University of North Dakota, the Indians into Medicine (INMED) and Recruitment and Retention of American Indians into Nursing (RAIN) programs were specifically developed to address the underrepresentation of American Indian/Alaska Native persons in health professions to better combat health disparities in communities across Indian Country.

The National Academy of Medicine (formerly known as the Institute of Medicine), the National Institutes of Health, the American Medical Association, and other stakeholders have called for an increase in the representation of underrepresented minorities (URMs) in the health professions, including American Indians/Alaska Natives, as a means to address these health disparities. These calls are based on evidence indicating that American Indians/Alaska Natives and other URMs are more likely to practice in their communities and that racial concordance between providers and patients may increase patient adherence to treatment recommendations (Basco et al., 2010; Cooper-Patrick et al., 1999; LaVeist & Pierre, 2014). The Association of American Medical Colleges (AAMC) recognizes that American Indians/Alaska Natives are more likely to practice in rural areas or in medically underserved areas providing healthcare to marginalized communities where there is often a shortage of U.S. healthcare workforce (Association of American Medical Colleges, 2018).

CULTURALLY SENSITIVE HEALTHCARE SERVICES AND PREVENTION

Culturally sensitive healthcare services and prevention efforts are essential for improving health outcomes among American Indian communities in North Dakota. A central component of this work is the Indians Into Medicine (INMED) program, which was established to strengthen the American Indian health workforce and expand access to culturally grounded care across Tribal Nations. INMED's mission aligns directly with the needs identified throughout this chapter: preparing American Indian students for careers in medicine and allied health fields, supporting Tribal Nations in building a representative and culturally responsive workforce, and advancing prevention and treatment approaches that honor Tribal sovereignty, cultural identity, and community priorities. As Tribal Nations continue to lead efforts in culturally informed care delivery, INMED remains a critical partner in supporting long-term workforce development and improving access to high-quality, culturally safe healthcare services.

Studies indicate that physician training in providing culturally responsive healthcare can improve patient-centered care by reducing provider bias and improving patient-provider communication, thus increasing patient access to high-quality care (Jernigan et al., 2016). Culturally responsive healthcare helps to mitigate the consequences of previous negative healthcare encounters that may result in psychological barriers to seeking medical care (Flynn et al., 2019). Culturally responsive healthcare thus likely plays an important role in addressing health disparities and enhancing equity. There is a growing trend to also consider cultural sensitivity, a concept related to cultural competence. Cultural sensitivity is a concept that recognizes the ethnic, cultural, social, environmental, and historical factors that shape the experiences and living realities of a target population (Resnicow et al., 1999; Rice & O'Donohue, 2002). Although there isn't a universally accepted standard for delivering culturally sensitive medical education related to American Indian populations, efforts are underway to devise tools for use by American medical schools to assist in aligning their curricula with accreditation standards promulgated by the Liaison Committee on Medical Education (Jernigan et al., 2016).

AMERICAN INDIAN HEALTH WORKFORCE AND CAPACITY-BUILDING PROGRAMS

Department of Indigenous Health

Grounded in its mission to uphold Tribal health sovereignty, the University of North Dakota's Department of Indigenous Health works to expand the Indigenous health workforce and elevate Indigenous-led research in partnership with Tribal Nations. UND's doctoral degree in Indigenous Health—the first of its kind in the world—prepares students to address the complex health issues facing Indigenous populations through culturally grounded, community-driven, and evidence-based approaches. Students develop proficiencies in research and evaluation, policy, leadership, and Indigenous health frameworks, equipping graduates to serve as Tribal health directors, researchers, evaluators, faculty, policy analysts, program administrators, and consultants across Tribal Nations, universities, and health systems.

The Indigenous Health PhD program recently admitted its seventh cohort. Annually, the program admits an average of 12 doctoral students. As of Fall 2026, UND's PhD in Indigenous Health has matriculated 86 students from the first seven cohorts, resulting in the following outcomes: 48 (56%) are active in the program, 33 (38%) have graduated, and five (6%) have separated from the program for various reasons. To date, the program has retained 94% of the students who have matriculated. Nationally, about 43% of PhD candidates withdraw from their doctoral

programs, regardless of race or ethnicity (Hanson, 2025). Although only in its seventh year, the program boasts high retention rates and has at least 15 students planning to graduate in 2027.

This department's work directly aligns with the themes outlined throughout this chapter—historical trauma, social drivers of health, culturally grounded care, and Tribal Nations' leadership in health governance. The Department of Indigenous Health serves as a statewide and national resource for strengthening Indigenous health systems, advancing culturally responsive prevention and treatment strategies, and supporting Tribal Nations' visions for health and healing.

The University of North Dakota's statewide programs have long supported American Indian health and workforce development, and the Department of Indigenous Health further strengthens these efforts through its mission to advance Tribal health sovereignty and Indigenous-led research.

Indians Into Medicine (INMED)

The INMED Program at the University of North Dakota is ranked first in the nation for graduating American Indian/Alaska Native physicians. To date, this program has produced 284 American Indian doctors, and 350 additional graduates in other health-related fields. INMED is designed to increase awareness and motivation for health careers among American Indian/Alaska Native students by developing academic programs and recruiting and enrolling students in the various health career programs. INMED provides academic, personal, social, and cultural support for students in grades 7 through graduate studies. Each year, INMED enrolls an average of 100 medicine, pre-health, and health professions students in various academic programs. INMED assures that it addresses the needs and concerns of Tribal communities in its five-state region through the Tribal Advisory Board (TAB). The Tribal governments of all 26 Tribes in North Dakota, South Dakota, Nebraska, Montana, and Wyoming appoint representatives to TAB.

Recruitment and Retention of American Indians Into Nursing (RAIN)

The RAIN program provides academic support and assistance to American Indian students pursuing degrees in nursing, nutrition and dietetics, and social work. RAIN strengthens the nursing workforce across Tribal Nations and supports culturally responsive care delivery in rural and reservation communities.

Indians Into Psychology Doctoral Education (INPSYDE) Program

INPSYDE increases the number of American Indian psychologists and enhances cross-cultural competence among non-Native clinicians. The program recruits American Indian students for undergraduate and graduate study in psychology and provides academic, financial, personal, and cultural support. INPSYDE also develops culturally relevant coursework and field-based experiences in clinical psychology, strengthening behavioral health services across Tribal Nations.

Center for Biomedical Research Excellence (CoBRE) Indigenous Trauma and Resilience Research Center (ITRRC)

In 2021, the UND School of Medicine & Health Sciences Department of Indigenous Health received a $10 million, five-year award from the National Institutes of Health to establish the

world's first Indigenous Trauma and Resilience Research Center (ITRRC). The ITRRC advances Indigenous-led research on historical trauma, resilience, and health inequities using strength-based and culturally grounded approaches.

Completed studies include:

- *Stress and Health in American Indian Pregnancies*
- *Impact of Boarding School on Perceived Stress*
- *Allostatic Load and Resilience*
- *Historical Trauma and Resilience as a Biological State and its Association with the Effects of the Traditional Indigenous Food Chokeberry*

The ITRRC builds Indigenous research capacity and generates evidence to inform Tribal health systems and community-driven healing initiatives.

Together, the Department of Indigenous Health, INMED, RAIN, INPSYDE, and the ITRRC form a comprehensive, Indigenous-centered ecosystem that strengthens the American Indian health workforce, advances culturally grounded care, and supports Tribal Nations' visions for health and healing. These programs directly address the social drivers of health, historical trauma, and structural inequities outlined in this chapter, while elevating Indigenous knowledge systems and expanding access to culturally responsive prevention and treatment services across North Dakota.

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CHAPTER

SIX

Physician Workforce in North Dakota

THE RIGHT PHYSICIANS IN THE RIGHT PLACES

North Dakota's physician workforce varies significantly by geography. Metropolitan areas have more physicians relative to population, while rural communities have fewer, and some counties have no practicing patient-care physicians. Where physicians train also matters: residency location is one of the strongest predictors of eventual practice location.

Physician Distribution Varies Across North Dakota

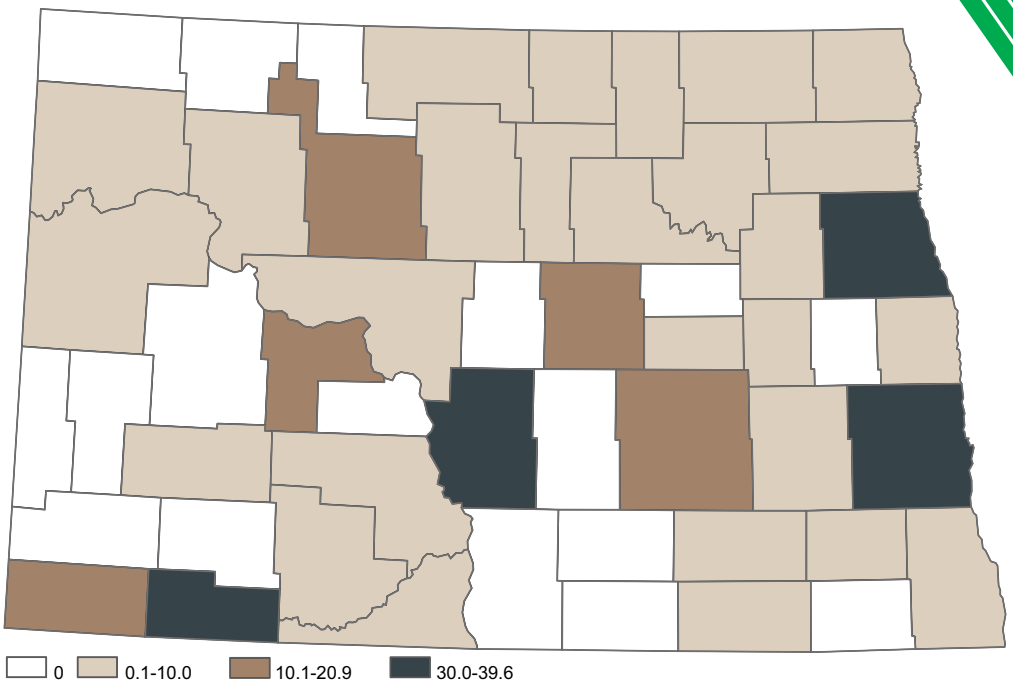


Figure 6.1. Rate of patient-care physicians per 10,000 North Dakota residents, 2025.

Training physicians here can help keep physicians here.

NORTH DAKOTA SNAPSHOT

50% of physicians practicing in North Dakota graduated from UND and/or completed a residency in the state.

PHYSICIANS IN NORTH DAKOTA

PHYSICIAN DISTRIBUTION

Physician distribution in North Dakota varies significantly by geography, with a lower physician-to-population ratio in rural counties than in counties with larger cities (Figure 6.1). Seventeen of North Dakota's 53 counties, with a combined population of 35,579 (4.7% of North Dakota's population), have no practicing patient-care physicians (Medical Marketing Service [MMS], 2025; U.S. Census Bureau [USCB], 2026).

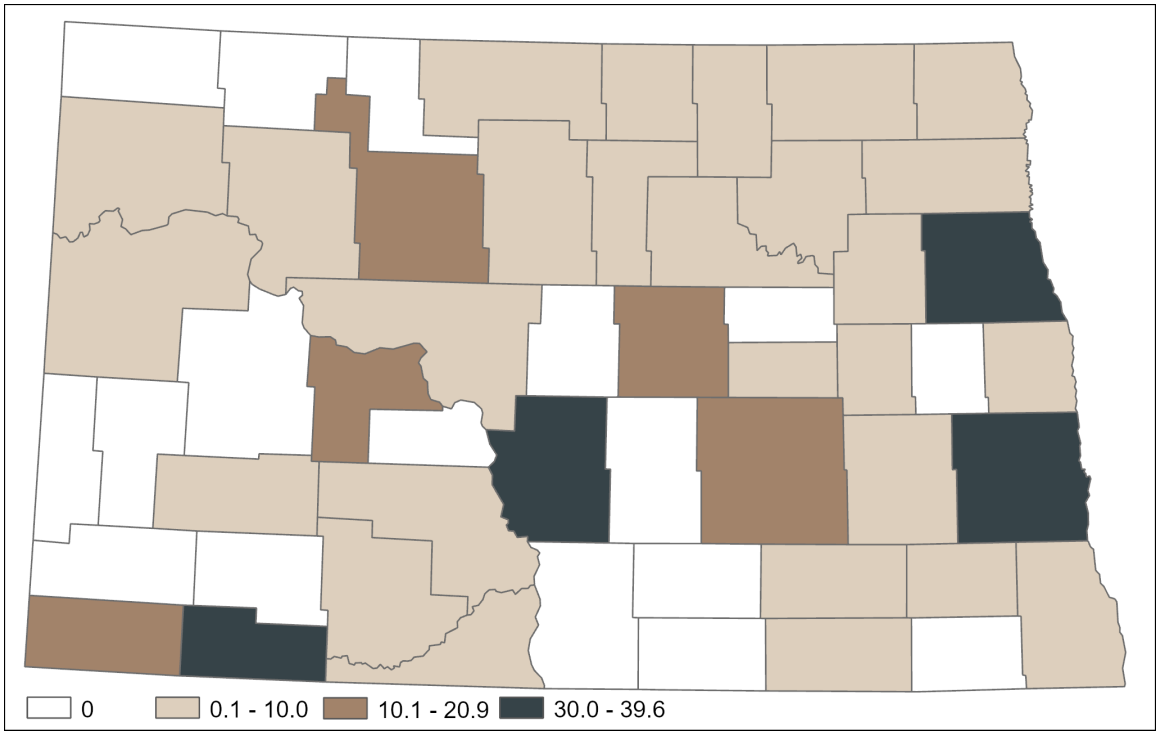


Figure 6.1: Patient-Care Physicians for All Specialties per 10,000 Population in North Dakota, 2025 (MMS, 2025; USCB, 2026).

Distribution of North Dakota Physicians Compared to the Upper Midwest and the Nation

When comparing the availability of physicians to provide healthcare services in North Dakota with regional and national benchmarks, it is important that the comparisons are of similar designations. There are a number of ways to select physicians for analyses, and analyses often are not clear about the criteria applied. The following are examples of the criteria that can be used for analysis: patient care, specialty, resident training status, age, Doctor of Medicine (MD)/Doctor of Osteopathy (DO) degree, federal/nonfederal status, practice location, gender, primary care status, patient-care status, practice type status, medical school of origin, and international medical school status.

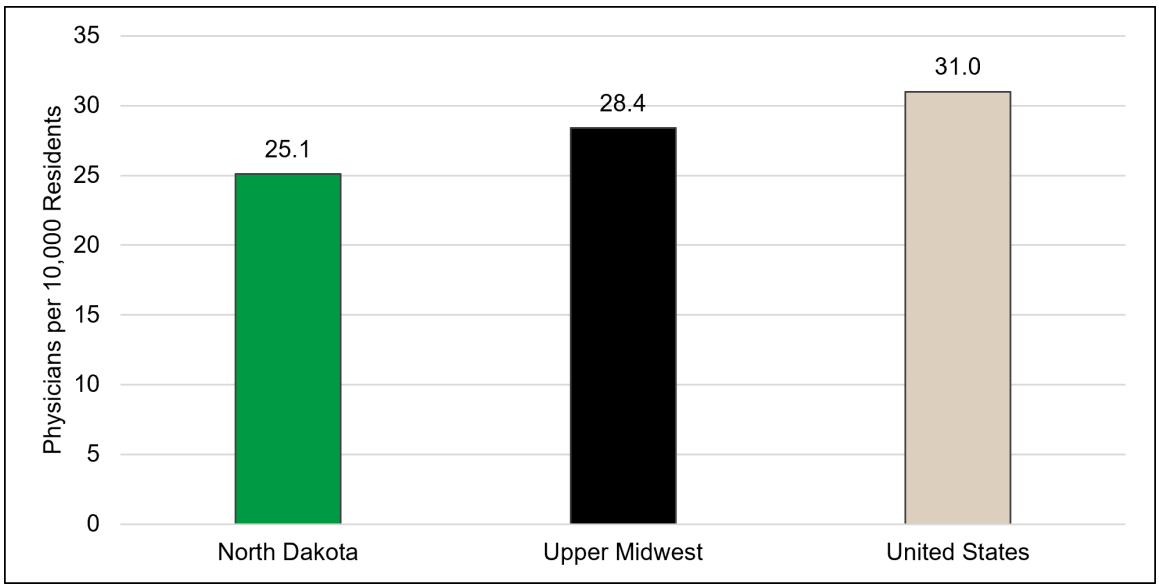


Figure 6.2: Physicians per 10,000 Persons for North Dakota, the Upper Midwest and the United States (Excludes Resident Physicians), 2023 (HRSA, 2025; USCB, 2026).

It often is challenging to reconcile differences between data from different sources. To minimize differences, data for this *Report* have been carefully gathered from the same source in an effort to be sure that the comparisons are as accurate as possible. The UND School of Medicine & Health Sciences purchases a physician licensure data set from the American Medical Association every other year to obtain the most timely and accurate information on physicians educated in, trained in, or practicing in North Dakota with the most recent purchase occurring in late 2025. As that data set is North Dakota specific, regional and national comparisons are not possible. To provide regional and national comparisons, data from the Health Resources Services & Administration (HRSA) are used to make comparisons. The data acquired from HRSA regarding physician workforce are supplied by the AMA, then summarized at a county level for specific key characteristics. The data used in this *Report* are from HRSA and 2023.

In 2025, North Dakota had 1,672 practicing patient-care physicians. Of those physicians, 50% graduated from the University of North Dakota (UND) School of Medicine and Health Sciences (SMHS) or from a UND residency program, or both (MMS, 2025). The difference in 2023 physician-to-population ratios per 10,000 persons is illustrated in Figure 6.2. North Dakota was 21.0% lower than for the United States as a whole and 12.3% lower than Upper Midwest states (Iowa, Minnesota, Montana, Nebraska, South Dakota, Wisconsin, and Wyoming) (Health Resources and Services Administration [HRSA], 2025; USCB, 2026).

Distribution by Gender

North Dakota had fewer female physicians per 10,000 persons than both the Midwest and United States in 2023 (Table 6.1). Although not as dramatic, the ratio of male physicians per 10,000 is also lower than both the Upper Midwest and the United States. The UND SMHS, like most medical schools in the country, currently graduates about equal numbers of men and women, so it is anticipated that the relative number of female physicians in North Dakota will increase over time (HRSA, 2025; USCB, 2023; USCB, 2026).

Table 6.1: Gender of Physicians per 10,000 Persons in North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2023; USCB, 2026).

Gender and MMR	North Dakota	Upper Midwest	United States
Women	**8.8**	**10.9**	**12.4**
Metropolitan	12.5	13.9	13.3
Micropolitan	3.7	5.4	4.3
Rural	2.1	2.7	2.1
Men	**16.4**	**17.5**	**18.6**
Metropolitan	23.5	21.7	19.6
Micropolitan	7.5	10.7	9.3
Rural	3.9	5.1	4.5

The overall ratio of female physicians in North Dakota in metropolitan areas (per 10,000 persons) is slightly lower than the Upper Midwest and the rest of the United States. The North Dakota male physicians per 10,000 persons ratio is higher in metropolitan counties than in the Upper Midwest and all U.S. counties. Regardless of gender, the ratio of physicians in rural areas is below that of the Upper Midwest and the nation (HRSA, 2025; USCB, 2023; USCB, 2026).

Distribution by Geography

Figure 6.3 shows that North Dakota has a higher ratio of physicians (per 10,000) in metropolitan areas than either the Upper Midwest or the nation. The ratio of North Dakota physicians in micropolitan areas is lower than the Upper Midwest and the rest of the United States. A similar trend can be observed in rural areas, where we fall behind both the Upper Midwest and the nation in the number of physicians per 10,000 persons (HRSA, 2025; USCB, 2023; USCB, 2026).

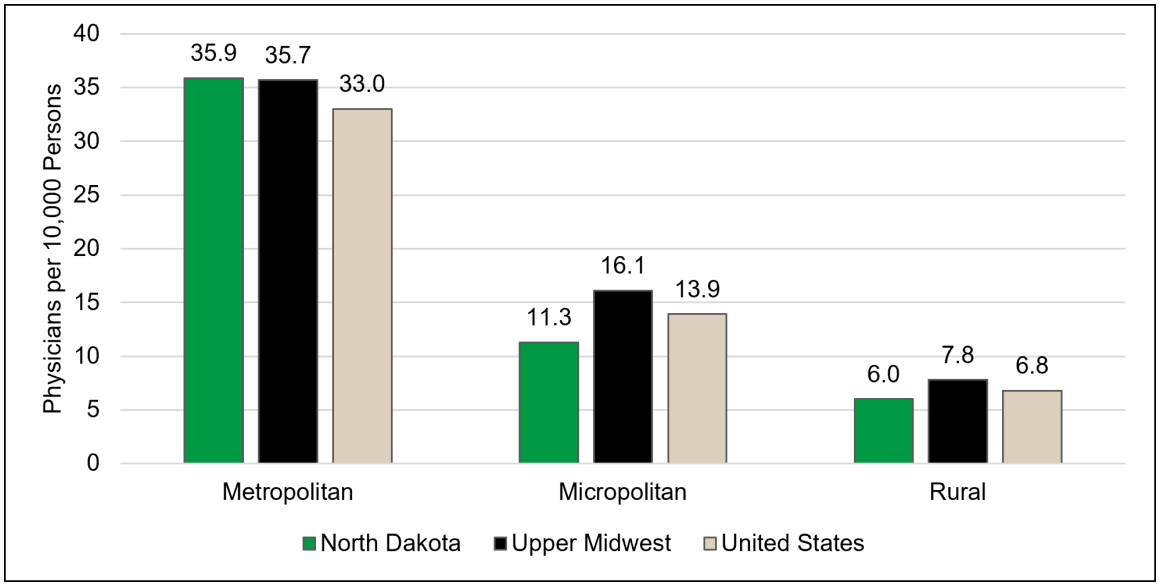


Figure 6.3: Physicians per 10,000 Persons for North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2023; USCB, 2026).

Table 6.2 shows the percent difference between the rate (per 10,000 persons) of office-based physicians in North Dakota, the Upper Midwest, and the United States as a whole. North Dakota has 15.0% fewer office-based physicians (per 10,000 persons) than the United States and 11.2% fewer office-based physicians than the Upper Midwest overall. Compared to Upper Midwest and U.S. rates, North Dakota has higher rates for metropolitan counties and lower rates in rural counties (HRSA, 2025; USCB, 2023; USCB, 2026).

Table 6.2: Physician Primary Practice per 10,000 Persons in North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2023; USCB, 2026).

	North Dakota	Upper Midwest	United States
Office	**16.0**	**17.9**	**18.6**
Metropolitan	22.5	21.9	20.2
Micropolitan	8.1	11.8	9.9
Rural	4.2	5.9	5.0
Hospital	**7.0**	**7.3**	**7.5**
Metropolitan	10.2	9.5	8.3
Micropolitan	2.5	3.3	3.1
Rural	1.4	1.5	1.3

Regarding hospital-based physicians, North Dakota metropolitan counties have more physicians per 10,000 persons than the Upper Midwest and United States. For micropolitan areas, North Dakota has fewer hospital-based physicians than the Upper Midwest and the nation as a whole. In rural counties, North Dakota has fewer physicians than the Upper Midwest per 10,000 persons, but slightly more than the U.S. as a whole. The data indicate that North Dakota

physicians in metropolitan counties are more likely to be in a hospital-based practice than the comparison groups (HRSA, 2025; USCB, 2023; USCB, 2026).

Distribution by Age

Table 6.3 shows that the North Dakota physician age structure is similar to the Upper Midwest states and U.S. comparison groups. It is important to note that North Dakota has the highest percentage of physicians in the 35 to 44 age group, which would suggest that they will be in the physician workforce for a good number of years (HRSA, 2025). Figure 6.4 shows that North Dakota physicians are less likely to be female than the Upper Midwest and U.S. The state has a greater percentage of international medical graduate (IMG) physicians and physicians working in hospital-based practices compared to the Upper Midwest and the U.S. (HRSA, 2025).

Table 6.3: Physician Percent by Age Category With Comparisons, 2023 (HRSA, 2025).

Age Categories	North Dakota	Upper Midwest	United States
<35	11.8%	13.0%	14.3%
35-44	24.9%	20.6%	20.0%
45-54	17.8%	18.3%	17.9%
55-64	16.4%	17.6%	16.7%
65-74	16.3%	16.9%	16.1%
>75	12.9%	13.6%	15.1%

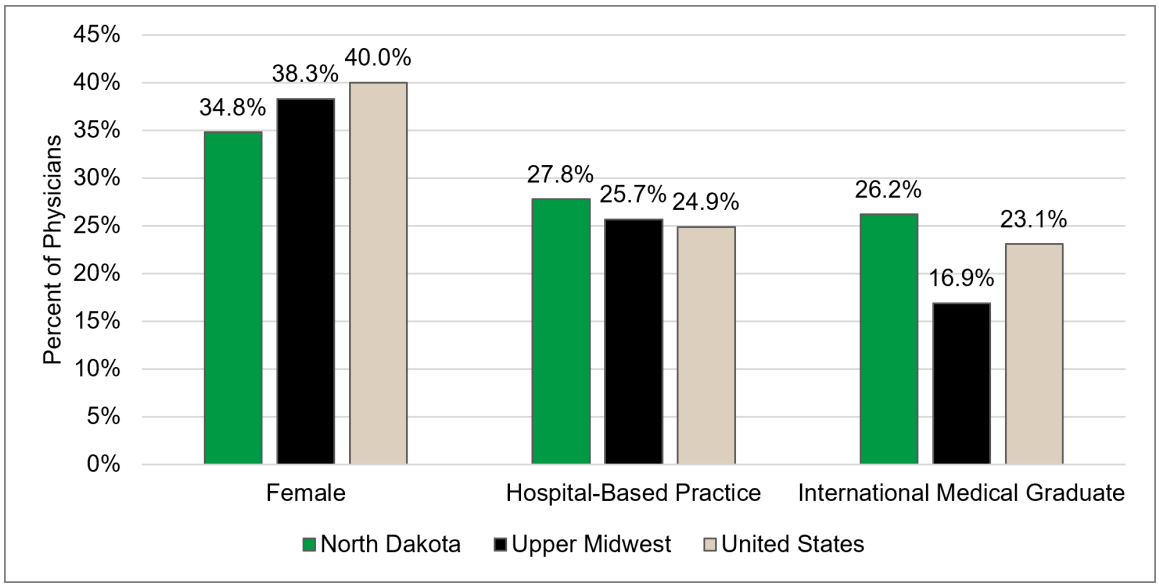


Figure 6.4: Select Physician Characteristics With Comparisons, 2023 (HRSA, 2025).

Distribution by Origin

Medical school graduates are dispersed widely across the nation with their location strongly influenced by factors such as the location of their residency training, specialty choice, opportunities, home origins, and their spouse's origins. The smaller or more specialized the medical residency training, the greater the nationwide market is for its graduates. For example,

the market for primary care physicians is more regional, while the market for neurosurgeons is more national and international.

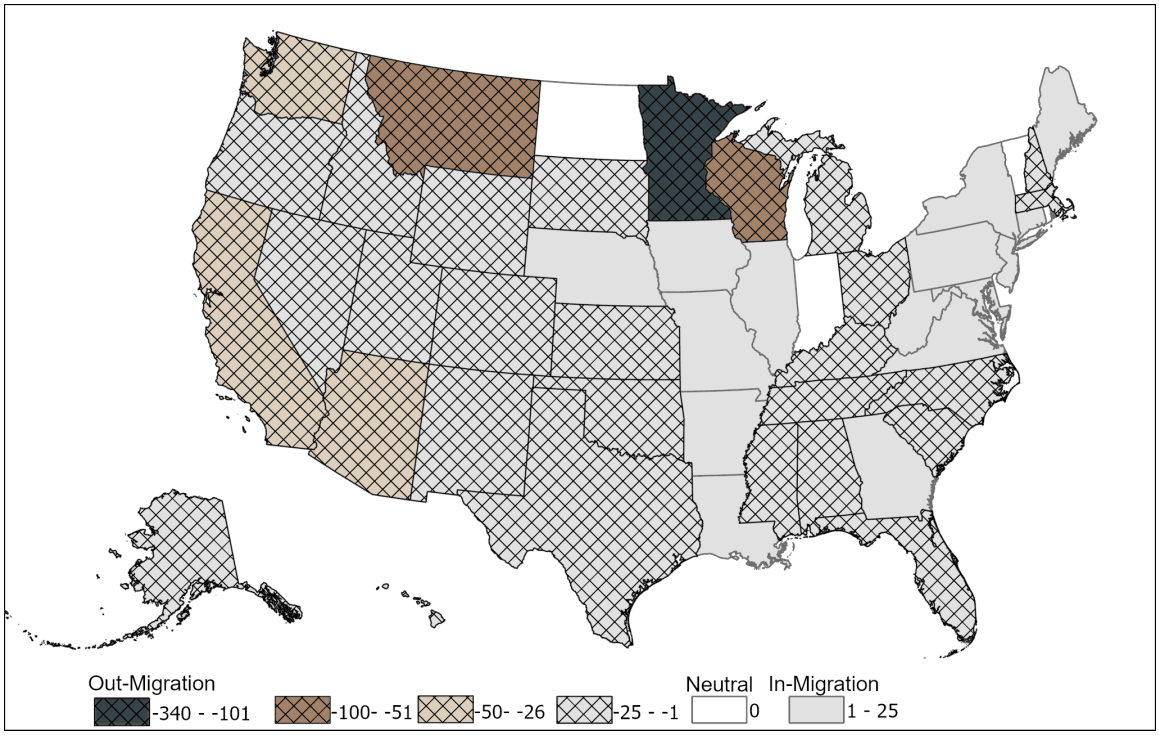


Figure 6.5: Medical School Balance of Trade, 2025 (MMS, 2025).

Figure 6.5 shows the medical school balance of trade in relation to North Dakota. North Dakota experiences the highest net loss of physicians to Minnesota, meaning there is a substantially higher number of UND SMHS graduates currently practicing in Minnesota compared to the number of physicians who graduated from medical school in Minnesota currently practicing in North Dakota. While North Dakota does not have net gains for positive physician migration from the western U.S. or its neighboring states, North Dakota does have net gains from multiple Northeastern states, as well as other Midwest and southern states (MMS, 2025).

In 2025, the balance of migration into and out of North Dakota by physicians based on medical school state location varied widely with respect to where the physicians were practicing. This can be thought of as an interstate balance of trade in medical school training and practice destination (excluding IMG graduates).

The out-migration can be partly explained by the fact that UND graduates over the years who wanted to specialize in any specialty other than family medicine, internal medicine, psychiatry, and general surgery had to go out of state for their residencies because the residency program they chose does not exist within North Dakota (for example, cardiology). In 2025, of the 1,222 U.S. medical school graduates practicing in North Dakota (excluding graduates from Canada and other countries), 585 or 47.9% graduated from medical schools outside of North Dakota. Overall, North Dakota benefits from the influx of physicians who trained in other parts of the nation (MMS, 2025).

In an effort to help reverse this trend, the UND SMHS partnered with area health providers to establish more residency and fellowship programs. The UND SMHS offers residency programs in family medicine, internal medicine, neurology, orthopedic surgery, pediatrics, psychiatry, and surgery. The UND SMHS offers fellowship programs in cardiovascular medicine, forensic pathology, geriatric medicine, hematology-oncology, and surgical critical care. These residency and fellowship programs are important because the strongest predictor of eventual practice location for physicians is where they obtain their residency training. Other predictors include location of medical school, where they grew up, and geographic origin of spouse when applicable. Many physicians, especially those in primary care, start practicing in the general vicinity of where they completed their post-medical school residency training. The beneficial effects of North Dakota residencies are readily apparent. The percentage of physicians graduating from those residencies who were practicing in North Dakota was 27% in 2017 and 34% in 2023, which is an increase of 27% (MMS, 2025).

Of the 1,672 physicians practicing direct patient care in North Dakota in 2025, 477 (28.5%) completed at least one residency within North Dakota while 1,195 (71.5%) did not (MMS, 2025).

Figure 6.6 shows the residency balance of trade in relation to North Dakota. Among current practicing physicians in North Dakota, the largest inward migrations come from physicians who completed residencies in Michigan and New York. In contrast, the current practice locations of physicians who completed at least one residency in North Dakota were also examined. It was found that North Dakota experiences the largest net loss of residency graduates to Minnesota.

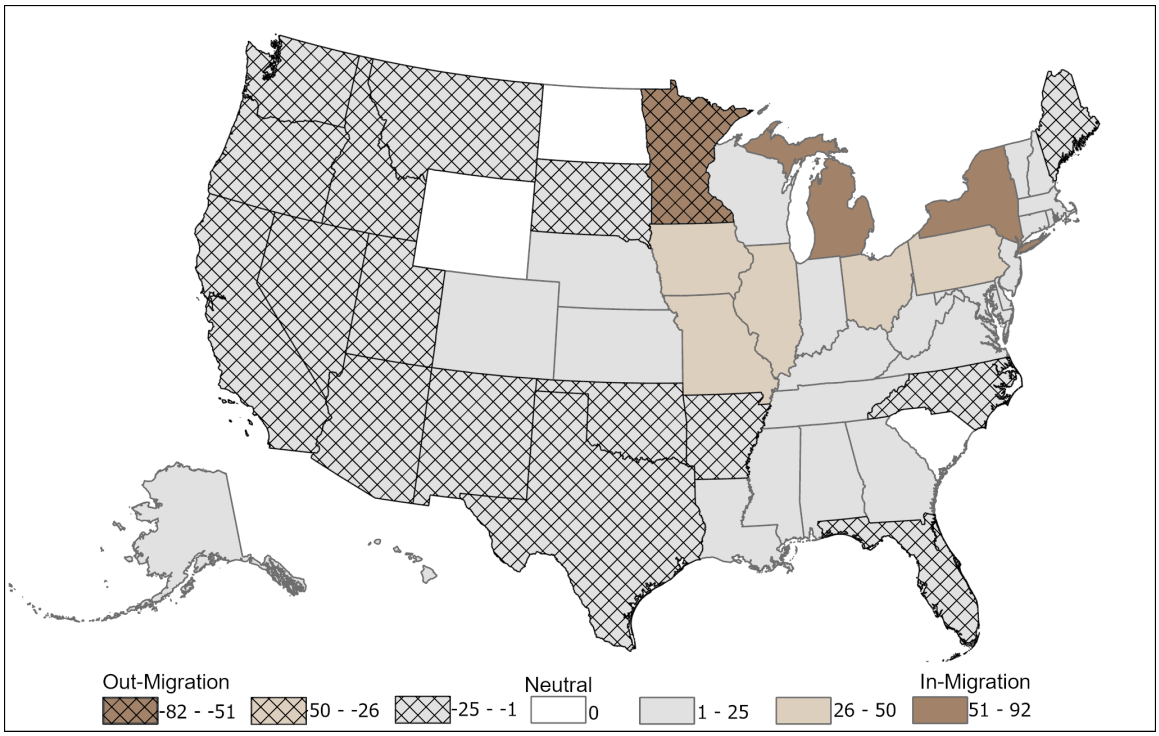


Figure 6.6: Residency Balance of Trade, 2025 (MMS, 2025).

North Dakota has a positive balance of physicians who completed their residency training in other states and who are now practicing in North Dakota. There are 1,195 physicians with no

North Dakota residency training currently practicing in North Dakota and 905 North Dakota residency graduates practicing out of state (MMS, 2025). This makes North Dakota a large net importer of other states' residency graduates.

One of the most important predictors of whether physicians establish a clinical practice in North Dakota is if the physician attends the UND SMHS and completes at least one residency in-state. Table 6.4 shows that most family medicine physicians practicing in North Dakota either graduated from UND SMHS and/or completed a residency in North Dakota. This same trend is also noted for other specialties (MMS, 2025).

Table 6.4: Percent of North Dakota Specialty Physicians Who Graduated From the UND SMHS and/or Completed at Least One Residency in North Dakota (MMS, 2025).

Area	2021	2023	2025
All Specialties	50%	49%	50%
Family Medicine	78%	79%	81%
Internal Medicine	44%	40%	39%
Obstetrics and Gynecology	69%	69%	72%
Pediatrics	45%	42%	38%
Psychiatry	48%	48%	45%

MEDICAL EDUCATION AND TRAINING IN NORTH DAKOTA

UND SCHOOL OF MEDICINE AND HEALTH SCIENCES

The University of North Dakota School of Medicine and Health Sciences (UND SMHS) was founded in 1905 and is the sole medical school in the state of North Dakota. As stated in North Dakota Century Code, the principal purpose of the UND SMHS is "to educate physicians and other health professionals for subsequent service in North Dakota and to enhance the quality of life of its people" (North Dakota Legislative Branch, 2026). The SMHS main campus is located in Grand Forks, with regional campuses located in Fargo, Bismarck, and Minot. The UND SMHS has several educational training programs to support current and prospective students who want to pursue careers in healthcare – rural healthcare in particular.

Rural Opportunities in Medical Education (ROME)

The Rural Opportunities in Medical Education (ROME) program is a 20-to-24-week interdisciplinary experience that takes place in a rural primary care setting (UND SMHS, 2026d). UND medical students in Phase 2 (near the end of their second year) are eligible for the ROME program. Students are supervised by physician preceptors while gaining first-hand experience living and training in a rural community. Each student's primary preceptor is board-certified in family medicine; however, students are also able to work with board-certified pediatricians, surgeons, internists, and other specialists in the community. The ROME program provides an opportunity for students to learn about primary care challenges experienced in rural areas.

Minot Integrated Longitudinal Experience (MILE)

Established in 2012, the Minot Integrated Longitudinal Experience (MILE) is a clerkship for third-year medical students training in the region of Minot, North Dakota (UND SMHS, 2026c). This program differs from a traditional clerkship in that students are able to work with preceptors in each of the UND SMHS clerkship specialty areas. MILE program students combine family medicine, internal medicine, neurology, pediatrics, surgery, obstetrics/gynecology, psychiatry, and one 4-week rotation in rural family medicine (University of North Dakota, 2026). Additionally, students follow a group of patients throughout the year in which they accompany them to consultant visits and procedures, as well as follow them through hospitalizations (UND SMHS, 2026c).

Indians Into Medicine (INMED)

The Indians Into Medicine (INMED) program supports American Indian and Alaska Native (AI/AN) students from 7th grade through graduate school who are preparing for careers in healthcare (UND SMHS, 2026a). This program was established in 1973 in response to three major concerns: 1) the lack of health professionals in AI/AN communities, 2) the lack of AI/AN health professionals, and 3) the substandard level of health and healthcare in AI/AN communities. The INMED program provides comprehensive assistance for students academically, personally, socially, and culturally with the goal of increasing awareness and motivation for careers in healthcare. On average, INMED enrolls 100 pre-health and health professions students in assorted academic programs per year. To date, this program has produced 284 American Indian doctors, with nearly 70% going into primary care.

INMED administers several educational programs for students including the Summer Institute, Med Prep, and CLIMB. The Summer Institute is a six-week academic enrichment program for AI/AN students in grades 7 through 12 with an interest in exploring careers in healthcare. Each year, up to 60 students are selected to participate in the program in which they take classes, complete coursework, participate in field trips, and learn about various healthcare careers (UND SMHS, 2026f). The Med Prep program provides support for AI/AN students as they prepare to take the Medical College Admissions Test (MCAT) and apply to medical school. Students in this program participate in admissions workshops, mock interviews, personal statement reviews, and meetings with current medical students (UND SMHS, 2026g). The Career and Life Instruction for Matriculation Building (CLIMB) program assists newly admitted INMED medical students in learning to navigate the rigors of medical school through educational activities and community building (UND SMHS, 2026g).

RuralMed

Open to UND SMHS medical students, the goal of the RuralMed program is to increase the number of physicians practicing in rural areas of North Dakota (UND SMHS, 2026e). Students accepted to this program receive tuition forgiveness in return for practicing in rural North Dakota for five years after completing their post-graduate residency training.

SMHS Residencies and Fellowships

The medical specialties with a residency program in North Dakota include family medicine, internal medicine, neurology, pediatrics, psychiatry, orthopedic surgery, surgery (preliminary), surgery (categorical) and transitional year. Transitional year residencies are a yearlong program

designed to introduce graduates to a wide range of medical and surgical specialties with the goal of building a broad foundation of clinical skills as a base for future training in a medical specialty. Several fellowship (post-residency) programs are available in cardiovascular medicine, forensic pathology, geriatrics, and hematology-oncology. Table 6.5 shows the current numbers of residents and fellows in the programs. It is important to note that the cardiovascular medicine fellowship was recently established, and thus data is not included in Table 6.5.

Table 6.5: Number of Residents/Fellows in ACGME-Accredited North Dakota Residencies/Fellowships and Number Who Completed Training in 2025-2026.

Residency/Fellowship	Number in Training 2025-2026 Academic Year	Duration in Years	Completed Training 2025-2026 Academic Year
Family Medicine	89	3 Years	28
Geriatric Medicine Fellowship	1	1 Year	1
Hematology & Med Oncology	6	3 Years	2
Internal Medicine	26	3 Years	8
Neurology	12	4 Years	3
Orthopedic Surgery	15	5 Years	3
Pediatrics	8	3 Years	N/A
Psychiatry	26	4 Years	8
Surgery (Preliminary)	3	1 or 2 years	3
Surgery (Categorical)	27	5 Years	6
Transitional Year	5	1 Year	5

PHYSICIAN SPECIALTY AND RURAL LOCATION

North Dakota's patient-care physicians practice in many different specialties. Of the direct patient care physicians practicing in North Dakota in 2025, the most prevalent physician specialties included family medicine at 377 (22.6%); general internal medicine at 179 (10.7%); general surgery at 114 (6.8%); emergency medicine at 100 (6%); radiology at 92 (5.5%); internal medicine specialties at 86 (5.1%); and anesthesiology at 83 (5%). These specialties account for more than half (61.6%) of the practicing physicians in the state. None of the remaining specialties account for more than 5% of North Dakota's practicing physicians (MMS, 2025).

INTERNATIONAL MEDICAL GRADUATES

International medical graduates (IMGs) play a crucial role in the U.S. healthcare system (Ranasinghe, 2015). They are defined as medical school graduates from any country outside of the United States and Canada. Currently, IMGs account for approximately 25% of the practicing physician workforce in the United States and that percentage is expected to grow in the future (Scholttman et al., 2018). They are expected to fill needed positions in family medicine, internal medicine, surgery, and pediatrics that are not being filled by U.S. medical graduates (USMGs).

Forty-four percent of practicing IMGs are in primary care disciplines, with family medicine having the highest number of IMGs.

IMGs make up about one-fourth of the North Dakota physician workforce. In 2021, 25.2% of all physicians practicing in North Dakota were IMGs. IMGs are a critically important component of the professional workforce in North Dakota and throughout the country. When interpreting data surrounding IMGs, it is important to note that IMGs include all individuals who received their medical education outside of the U.S. While this does include individuals who were born outside of the U.S., the data also includes individuals who were born in the U.S. who went to a medical school outside of the U.S.

The rate of IMG physicians per 10,000 persons in North Dakota is higher than the Upper Midwest and United States in metropolitan areas, but lower than or equal to the Upper Midwest and the U.S. in micropolitan and rural areas (Table 6.6). The distribution of IMG physicians in North Dakota is similar to the distribution of U.S. medical school graduates (USMGs) in that the highest density is in the metropolitan areas and lowest density is in rural areas (HRSA, 2025; USCB, 2026).

The demographic characteristics of IMGs compared to USMGs in North Dakota are similar. In 2025, the gender breakdown for IMGs compared to USMGs is 70% male compared to 65%, respectively. The average age of IMGs is 48.4 years compared to 52.5 years for USMGs. When examining physician specialty, IMGs are slightly more primary care-oriented than USMGs with 44.1% and 35.8% providing primary care (family practice, general internal medicine, and general pediatrics), respectively. IMG surgeons represent less than half the rate (number of physicians per 10,000 population) of USMG surgeons, representing 3.6% and 7.9%, respectively. IMGs practicing in internal medicine are found at twice the rate of USMGs (16.8% and 8.6%, respectively) (MMS, 2025).

Of the 422 IMGs in North Dakota, 186 practice in primary care with 71 (16.8%) practicing in general internal medicine. Of those 71 general internal medicine IMGs, 18 (25.4%) completed a general internal medicine residency in the state of North Dakota (MMS, 2025).

Table 6.6: Rate of IMGs and USMGs per 10,000 Persons With Comparisons, 2023 (HRSA, 2025; USCB, 2026).

	North Dakota	Upper Midwest	United States
IMG	**6.6**	**4.8**	**6.9**
Metropolitan	9.8	6.1	7.8
Micropolitan	2.3	2.9	3.0
Rural	1.0	1.0	1.2
USMG	**17.4**	**22.8**	**21.6**
Metropolitan	24.4	28.0	23.3
Micropolitan	8.5	14.2	11.8
Rural	4.9	7.7	6.3

The largest number of IMGs practicing in North Dakota come from India (79 physicians; 18.7%), followed by Barbados (33 physicians; 7.8%), and Grenada (West Indies) (27 physicians; 6.4%) (MMS, 2025).

PROJECTION OF PHYSICIANS IN NORTH DAKOTA

In 2011, the UND SMHS, in partnership with the North Dakota Legislative Assembly, initiated a program known as the Healthcare Workforce Initiative (HWI). The HWI's purpose is to reduce disease burden, as well as increase the provider workforce in the state and improve the efficiency of the healthcare delivery system. If not for the HWI, the combination of the aging of the state's population and increasing healthcare needs would have resulted in the demand for physicians outpacing the supply even more than it has. All other things being equal, if the population of North Dakota does not expand at an increased rate but at the slower historical rate, the rate of physicians per 10,000 persons will remain stable through 2045. The standard projection of population growth shows a relatively steady supply of physicians relative to the population, but only if the HWI measures continue to be implemented in full. Full and continuing implementation of the HWI will help ensure that adequate healthcare delivery teams will be available throughout the state.

One important variable in projecting the future supply of physicians in North Dakota is when they decide to retire. Recent projections by GlobalData Plc., in conjunction with the Association of American Medical Colleges, have shown a nearly 10% predicted difference in eventual workforce levels that occur if retirement is accelerated or delayed by as little as two years (GlobalData Plc., 2024). Because physician burnout and job dissatisfaction appear to be increasing, the frequency of early retirement may increase (Jung et al., 2025). In 2021, 17% of actively working physicians were at or above the traditional retirement age of 65 years old. Moreover, 25% of actively working physicians were between the ages of 55 and 64 years old. As such, it is possible that one-third (or even more) of active physicians may retire within the next decade. Additionally, results from the 2022 National Sample Survey of Physicians (NSSP) revealed that physicians plan to retire earlier than was reported in the 2019 survey (Association of American Medical Colleges, 2024). If this were to occur, it would exacerbate the existing physician shortage and distribution problem.

PRIMARY CARE AND SPECIALTY PHYSICIAN WORKFORCE IN NORTH DAKOTA

PRIMARY CARE PHYSICIANS

Primary care physicians are a foundational component of the North Dakota healthcare delivery system, and access to them by all of North Dakota's population is an important goal. Primary care physicians are defined as physicians in the specialties of family medicine, general internal medicine, and general pediatrics. Specialist physicians can provide some primary care services but focus on specific medical areas. The specialist physicians addressed in this chapter are psychiatrists, general surgeons, general pediatricians, and obstetrics/gynecologists.

Primary Care Physician Distribution in North Dakota

Distribution by Geography

The North Dakota population per primary care physician is shown in Figure 6.7. There are no primary care physicians in 19 counties (MMS, 2025; USCB, 2026). Counties with greater than 2,500 people per physician also may have primary-care-physician shortages. Even in counties with the lowest rates of population-per-primary-care-physician may see primary care physician shortages because of travel distances to alternative care and high needs for care.

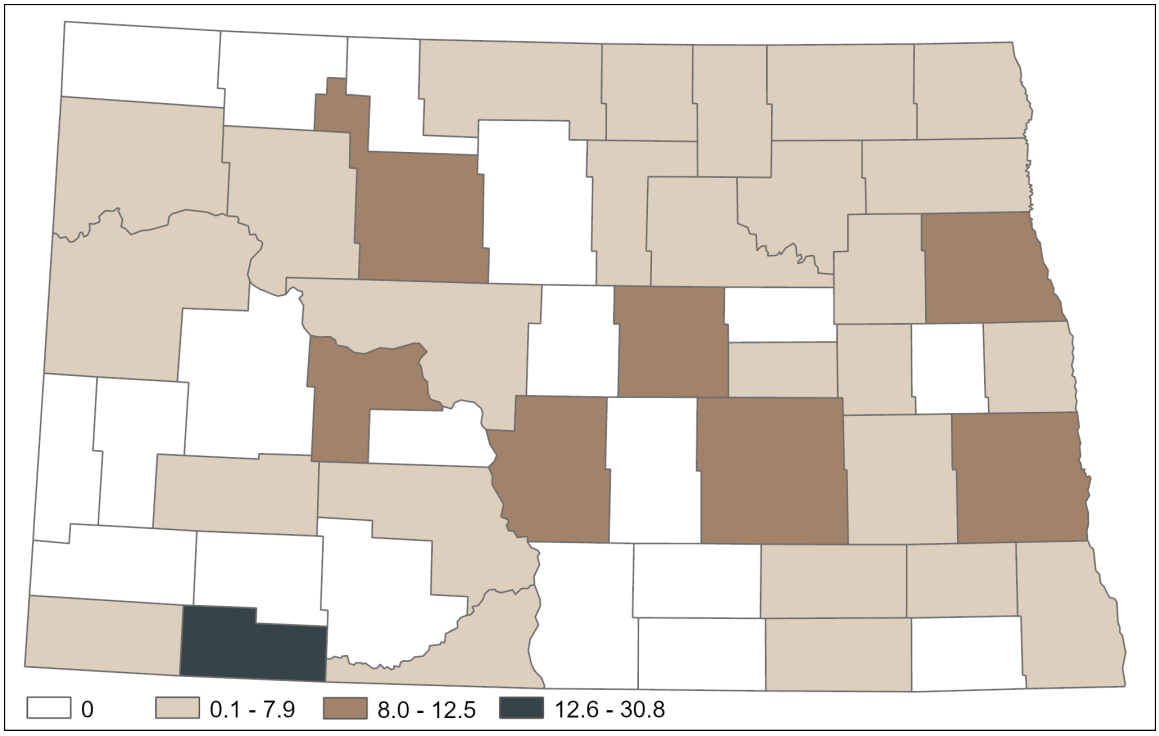


Figure 6.7: Primary Care Physicians per 10,000 North Dakota Residents, by County, 2025 (MMS, 2025; USCB, 2026).

Distribution of North Dakota Primary Care Physicians Compared to the Upper Midwest and the Nation

Distribution by Geography

The ratio of primary care physicians in North Dakota per 10,000 population is higher than the United States, but slightly lower than for the Upper Midwest (Figure 6.8) (HRSA, 2025; USCB, 2026).

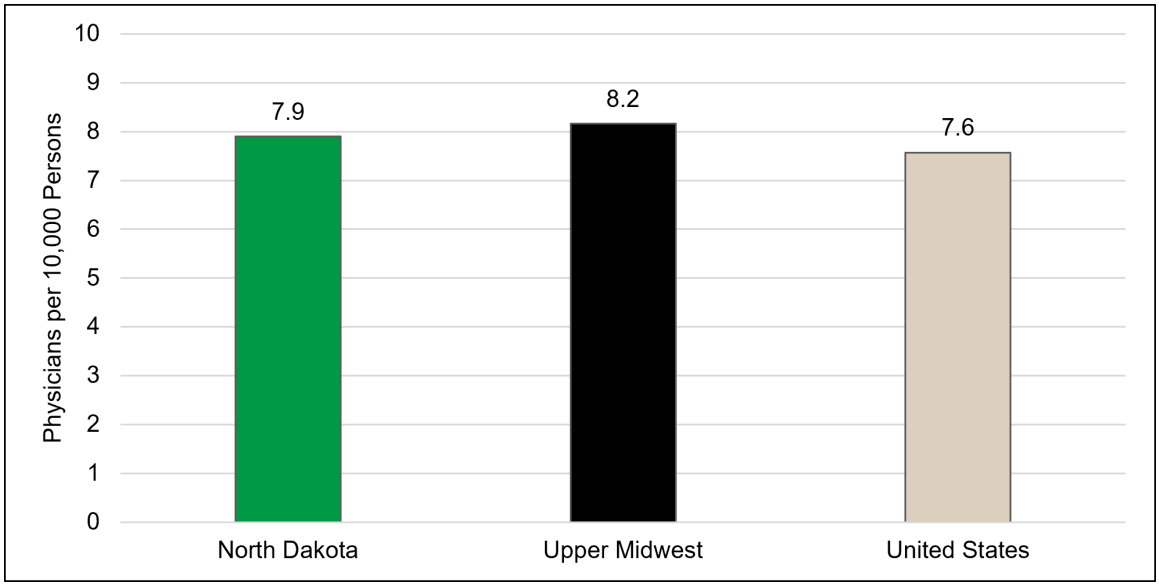


Figure 6.8: Primary Care Physicians per 10,000 Persons in North Dakota, the Upper Midwest, and the U.S., 2023 (HRSA, 2025; USCB, 2026).

Figure 6.9 shows that across North Dakota, the Upper Midwest, and the United States, the practicing-primary-care-physician-to-10,000-population ratios are lower for rural counties. For metropolitan counties, North Dakota's rate per 10,000 population is higher than for the Upper Midwest and for the United States. Regarding rural counties, North Dakota trails the Upper Midwest (4.1 versus 5.4) but is slightly higher than the rest of the United States (4.1 versus 4.0) in the number of physicians per 10,000 population) (HRSA, 2025; USCB, 2026).

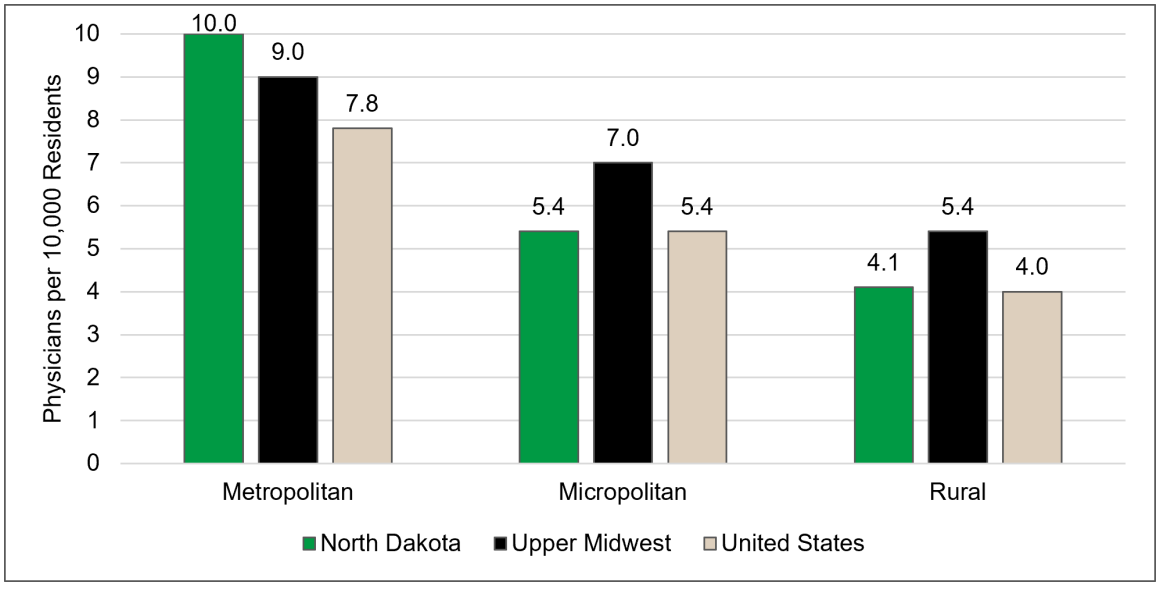


Figure 6.9: Primary Care Physicians per 10,000 Persons in North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2026).

Of the 627 primary care physicians practicing in North Dakota in 2023, 59.7% (374) were family physicians, 27.9% (175) were general internal medicine, and 12.4% (78) were general pediatricians (HRSA, 2025).

Distribution by Selected Characteristics

Table 6.7 shows the percentage of primary care physicians broken down by gender, hospital-based practice, and international medical graduate (IMG) status. Of the 581 primary-care direct patient care physicians practicing in North Dakota in 2025, 79.0% are located in metropolitan counties 9.1% in micropolitan counties, and 11.9% in rural counties. Rural counties have a higher percentage of physicians who are female than micropolitan counties (39.1% rural versus 30.2% micropolitan), but slightly fewer than metropolitan counties (43.1%). The percentage of hospital-based physicians in metropolitan areas is 15.7% versus 18.2% in rural counties. As shown in Table 6.7, the percentage of North Dakota physicians who are IMGs varies substantially by location status, with most working in metropolitan areas. In North Dakota, 28.1% of all primary-care physicians are IMGs (MMS, 2025; USCB, 2023).

Table 6.7: Percent of Primary Care Physicians in North Dakota who are Female, Have Hospital-Based Practices, and are International Medical Graduates, 2025 (MMS, 2025; USCB, 2023).

	Total (N)	Total (%)	Female (N)	Female (%)	Hospital-Based (N)	Hospital-Based (%)	IMG (N)	IMG (%)
Metropolitan	459	79.0%	198	43.1%	72	15.7%	146	31.8%
Micropolitan	53	9.1%	16	30.2%	7	13.2%	9	17.0%
Rural	69	11.9%	27	39.1%	11	18.2%	8	11.6%
Total	**581**	**100%**	**241**	**41.5%**	**90**	**15.5%**	**163**	**28.1%**

Distribution by Age

A comparison of the age structure of North Dakota's primary care physicians compared with those of the Upper Midwest states (Iowa, Minnesota, Montana, Nebraska, South Dakota, Wisconsin, and Wyoming) and the United States is depicted in Table 6.8. The percentage of North Dakota's primary care physicians between the ages of 35 and 44 is higher with respect to the comparison regions. The percentage of North Dakota's primary care physicians who are 45 and older is modestly lower with respect to the comparison regions (HRSA, 2025; USCB, 2023).

Table 6.8. Percent of Primary Care Physicians by Age for North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2023).

Age Categories	North Dakota	Upper Midwest	United States
<35	16.8%	14.8%	16.0%
35-44	28.5%	21.8%	20.5%
45-54	20.9%	23.4%	22.9%
55-64	18.4%	22.6%	21.2%
65-74	13.1%	15.1%	15.5%
>75	2.4%	2.3%	3.9%

The age distribution of North Dakota primary care physicians is shown by metropolitan status in Table 6.9. The percentage of primary care physicians in rural counties is higher for the 65–74 age category than for the micropolitan and metropolitan county categories (27.0% versus 22.1% and 10.8%, respectively). The vast majority of primary care physicians, regardless of county population densities, are between the ages of 35 and 64 years (HRSA, 2025; USCB, 2023).

Table 6.9: Percent of Primary Care Physicians in North Dakota by Age and Area, 2023 (HRSA, 2025; USCB, 2023).

MMR Classification	<35	35-44	45-54	55-64	65-74	>74
Metropolitan	18.9%	29.0%	21.8%	17.1%	10.8%	2.4%
Micropolitan	8.8%	35.3%	13.2%	20.6%	22.1%	0.0%
Rural	4.1%	17.6%	18.9%	28.4%	27.0%	4.1%

Table 6.10 shows that North Dakota has a slightly higher percentage of its primary care physicians practicing in office-based practice than in the Upper Midwest or the United States. North Dakota also has a slightly higher percentage of its primary care physicians practicing in hospital-based practice than in the two geographic comparison groups. For office-based settings, the ratios for all three groups are lower as the counties become more rural; while for hospital-based settings, the Midwest and U.S. as a whole follow a similar trend, whereas North Dakota has slightly more providers in rural areas compared to micropolitan areas (HRSA, 2025; USCB, 2023; USCB, 2026).

Table 6.10: Practice Base and Area of Primary Care Physicians per 10,000 in North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2023; USCB, 2026).

	North Dakota	Upper Midwest	United States
Office	**11.9**	**11.2**	**10.1**
Metropolitan	15.1	12.4	10.5
Micropolitan	8.1	9.2	7.1
Rural	6	7.6	5.5
Hospital	**1.9**	**1.8**	**1.4**
Metropolitan	2.4	2	1.4
Micropolitan	1	1.5	1.1
Rural	1.2	1.3	0.8

Distribution by Origin

Nearly 5 out of 10 (47.0%) primary care physicians in North Dakota graduated from the University of North Dakota (UND) School of Medicine and Health Sciences (SMHS) (Figure 6.10). Figure 6.11 shows that over half (52.0%) of North Dakota's primary care physicians obtained their residency training from a residency program based in North Dakota. Nearly 70% of North Dakota's primary care physicians completed their residency training in North Dakota and other upper Midwestern states (MMS, 2025).

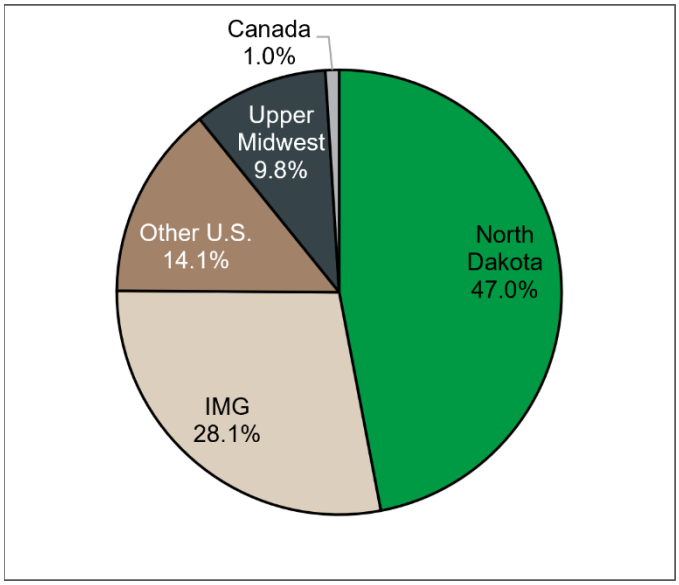


Figure 6.10: Locations Where North Dakota Primary Care Physicians Graduated From Medical School, 2025 (MMS, 2025).

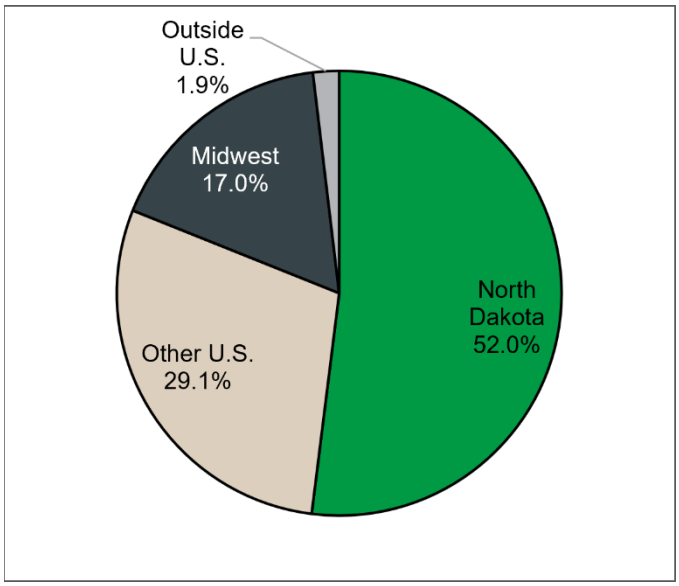


Figure 6.11: Locations Where North Dakota Primary Care Physicians Completed Their Residency, 2025 (MMS, 2025).

SPECIALTY CARE PHYSICIANS

Distribution by Geography

As can be seen in Figure 6.12, most of North Dakota's practicing specialists are located in Fargo, Bismarck, Grand Forks, and Minot. Given the specialist geographic distribution and the generally low numbers of specialists per population, a significant portion of North Dakota's population experiences long travel times to access their nearest specialist physician. Note that in this analysis, general pediatrics is considered a specialty and not part of primary care.

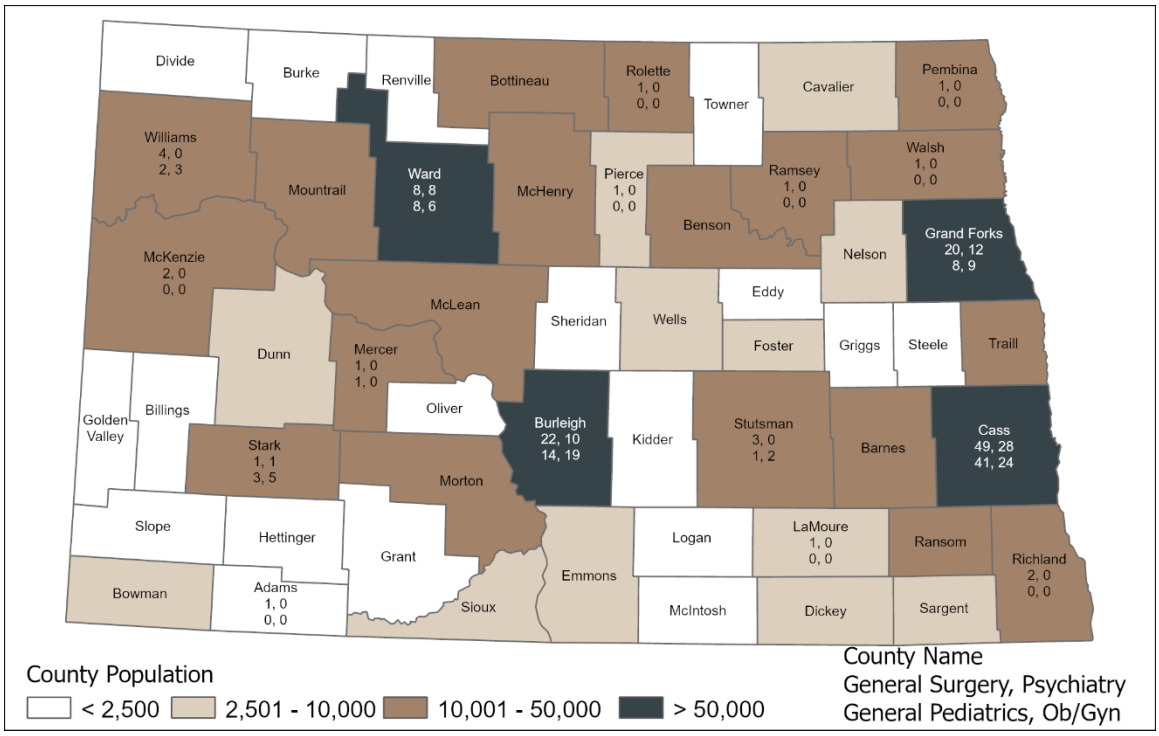


Figure 6.12: Locations of Specialty Physicians in North Dakota, 2025 (MMS, 2025; USCB, 2026).

Distribution by Selected Characteristics

Within North Dakota, rural counties have an extremely low number of specialty physicians (Table 6.11). Overall, the majority of obstetrics and gynecologist (Ob/Gyn) specialists in North Dakota are female (73.8%). In contrast, only about 20.6% of the general surgeons in North Dakota are female and about 60.0% of general pediatricians are female. Micropolitan counties have lower percentages of female specialists as do metropolitan counties for general surgery and psychiatry (i.e., less than 50% female). Micropolitan and metropolitan counties have higher percentages of female specialists for pediatrics and Ob/Gyn (i.e., greater than 50% female). For all four specialties, the number of rural county specialists is so few that meaningful comparisons with metropolitan and micropolitan areas are not prudent. Across the state, the vast majority of specialty physicians are domestically trained, rather than international medical graduates (IMGs) (MMS, 2025; USCB, 2026).

Table 6.11: Number of Specialist Physicians in North Dakota Who Are Female, Have Hospital-Based Practices, and Are International Medical Graduates, 2025 (MMS, 2025; USCB, 2026).

	N	Female (N)	Hospital-Based (N)	IMG (N)
General Surgery	**102**	**21**	**30**	**13**
Metropolitan	90	19	26	13
Micropolitan	7	2	-	-
Rural	5	-	4	-
Psychiatry	**58**	**23**	**16**	**22**
Metropolitan	53	23	15	21
Micropolitan	3	-	1	1
Rural	2	-	-	-
General Pediatrics	**75**	**45**	**11**	**13**
Metropolitan	69	41	10	12
Micropolitan	4	2	-	1
Rural	2	2	1	-
Ob/Gyn	**65**	**48**	**19**	**1**
Metropolitan	56	41	16	1
Micropolitan	8	6	3	-
Rural	1	1	-	-

Perhaps not surprisingly, the majority of specialty physicians are located in metropolitan areas and are male. While IMGs account for roughly a quarter of North Dakota's practicing physicians, they account for substantially lower percentages of general surgeons (12.7%), general pediatricians (17.3%), and Ob/Gyns (1.5%), but account for more psychiatrists (37.9%).

As illustrated in Figure 6.13, North Dakota's specialists per-10,000-population ratio for general pediatricians are lower than the Upper Midwest and U.S. ratios. North Dakota's specialists-per-10,000-population ratio for Ob/Gyns is equal to the Upper Midwest, but is slightly lower than the U.S. ratio. The North Dakota ratio for general surgeons is higher than the Upper Midwest and the United States, and the ratio for psychiatrists is lower than for the nation but higher than the Upper Midwest (HRSA, 2025; USCB, 2026).

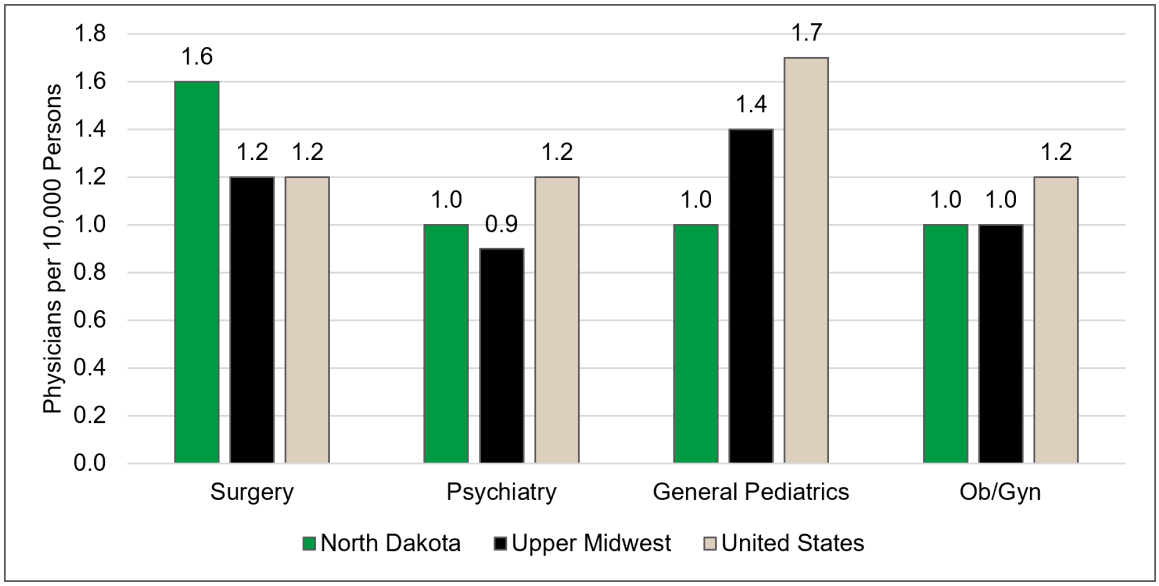


Figure 6.13: Surgeons, Psychiatrists, General Pediatricians, and Ob/Gyns per 10,000 Persons in North Dakota With Comparisons, 2023 (HRSA, 2025; USCB, 2026).

Table 6.12: Specialty Physicians per 10,000 Persons in North Dakota by Area With Comparisons, 2023 (HRSA, 2025; USCB, 2026).

	North Dakota	Upper Midwest	United States
Surgery	**1.6**	**1.2**	**1.2**
Metropolitan	2.2	1.4	1.3
Micropolitan	1.2	0.9	0.7
Rural	0.2	0.4	0.4
Psychiatry	**1.0**	**0.9**	**1.2**
Metropolitan	1.5	1.1	1.2
Micropolitan	0.2	0.4	0.4
Rural	0.2	0.2	0.2
General Pediatrics	**1.0**	**1.4**	**1.7**
Metropolitan	1.4	1.7	1.9
Micropolitan	0.5	0.8	0.8
Rural	0.2	0.2	0.3
Ob/Gyn	**1.0**	**1.0**	**1.2**
Metropolitan	1.3	1.2	1.2
Micropolitan	0.8	0.7	0.7
Rural	0.1	0.2	0.3

The specialists per-10,000-population ratios by rural or urban status for 2023 are shown in Table 6.12. Across North Dakota and for each specialty, the rural counties have lower ratios than the micropolitan and metropolitan counties (HRSA, 2025; USCB, 2026).

SUMMARY

The supply of physicians in North Dakota lags behind the nation, especially in rural counties (6.0 physicians per 10,000 persons compared with 7.8 in other Upper Midwest states and 6.8 for the United States). Aging of the current physician workforce is a problem because more than half of North Dakota's physicians (60.3%) are 45 to 74 years old. As the physician population in the state continues to age, a large number will be retiring and will need to be replaced. As the North Dakota population also ages, there will be an increased need for physician care.

Most of North Dakota's population is located within a federally designated shortage area for primary care. Primary care physicians in North Dakota are more likely to be male, located in metropolitan counties, and trained domestically (in the upper Midwest or North Dakota specifically) for medical school and residency. North Dakota has a slightly lower ratio of primary care physicians to population than other Midwest states but a slightly higher ratio than the United States when resident physicians are included in the comparison. About half of all primary care physicians in North Dakota graduated from the UND SMHS or completed a residency in North Dakota. It is critical that North Dakota continues to control its own fate by appropriately continuing to invest in and support the HWI to train healthcare professionals, including physicians, who will practice within North Dakota. Finally, it is important to continue to provide opportunities for young adult North Dakotans to enter pathway programs that eventuate in their training as physicians.

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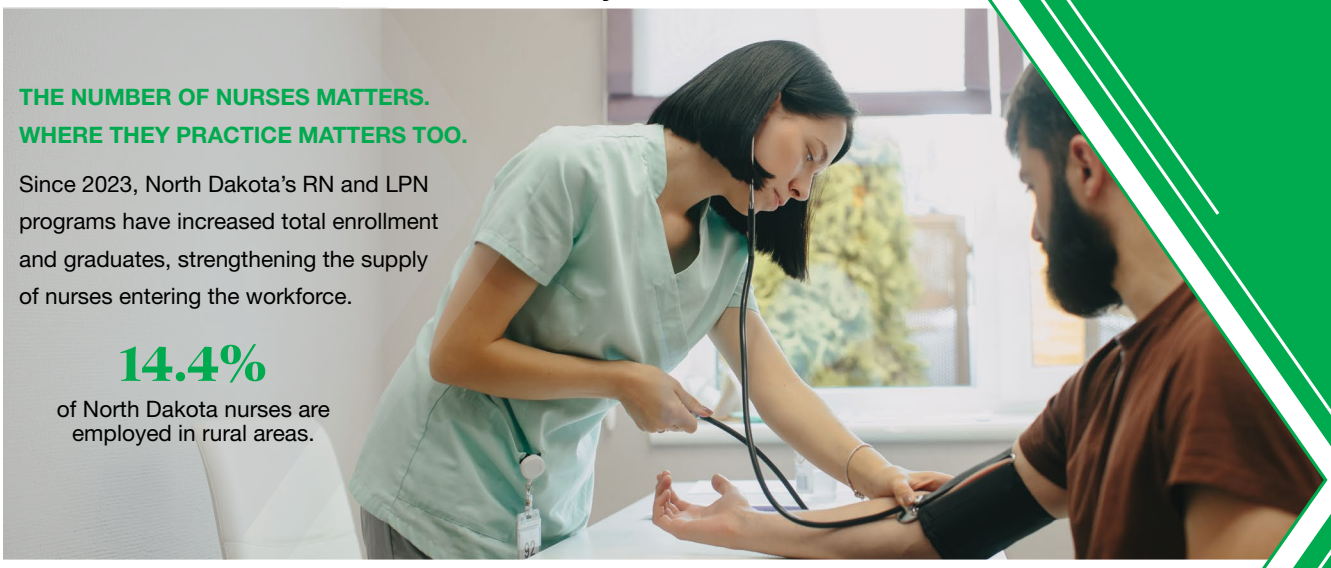
NORTH DAKOTA'S NURSING WORKFORCE

CHAPTER SEVEN

Nursing Workforce in North Dakota

North Dakota's nursing workforce includes licensed practical nurses (LPNs), registered nurses (RNs), and advanced practice registered nurses (APRNs), including nurse practitioners, certified registered nurse anesthetists, certified nurse midwives, and clinical nurse specialists. Nurses work across hospitals, clinics, long-term care, community settings, and other parts of the healthcare system. Where nurses practice, the roles they fill, and how they are educated and employed all shape North Dakota's healthcare workforce.

Nurses Serve Across the Healthcare System



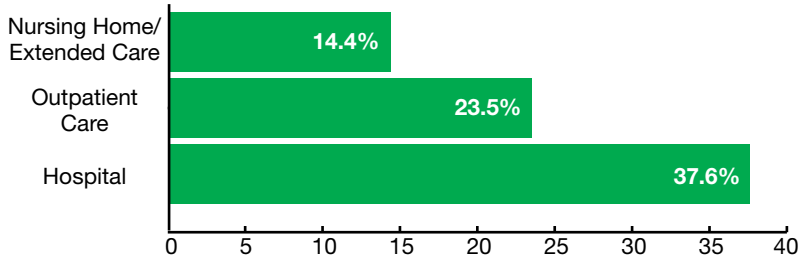
THE NUMBER OF NURSES MATTERS. WHERE THEY PRACTICE MATTERS TOO.

Since 2023, North Dakota's RN and LPN programs have increased total enrollment and graduates, strengthening the supply of nurses entering the workforce.

14.4%

of North Dakota nurses are employed in rural areas.

Where North Dakota Nurses Work*



* Among nurses with a reported practice setting.

NORTH DAKOTA SNAPSHOT

56.2% of North Dakota's licensed RNs received their nursing education in North Dakota.

INTRODUCTION

This nursing workforce chapter provides an updated assessment of North Dakota's nursing workforce and the education, employment, and practice patterns that shape its capacity to meet the state's healthcare needs. Developed through collaboration among the University of North Dakota (UND) College of Nursing and Professional Disciplines, UND School of Medicine and Health Sciences (SMHS), SMHS Advisory Council, and the North Dakota Board of Nursing (NDBON), the chapter recognizes that evolving and increasingly overlapping healthcare professional roles require workforce analyses that extend beyond simple counts of licensed nurses. This is particularly important in North Dakota (ND), where rural and geographically dispersed healthcare systems create both workforce challenges and opportunities for the innovative use of Licensed Practical Nurses (LPNs), Registered Nurses (RNs), and Advanced Practice Registered Nurses (APRNs).

The current chapter examines geographic distribution, license type and scope of practice, nursing education, practice setting and clinical area, position, and employment status. For example, the current data show that approximately 86% of nurses are employed in metropolitan or micropolitan areas despite 24% of the state population residing in rural areas. The chapter also examines important differences by license type, including the greater rural representation of LPNs and the contribution of nurse practitioners (NPs) to rural primary care. Data are drawn primarily from North Dakota Board of Nursing licensure records that include active licenses through May 15, 2026, supplemented by the most recent available nursing education data. Together, these analyses provide a more comprehensive picture not only of the number of nurses available in North Dakota, but also of where they practice, how they are employed, and how effectively the licensed nursing workforce is positioned to meet the state's current and future healthcare needs.

PRACTICE LOCATION

Despite ND being a rural state with only four areas encompassing six counties classified as metropolitan, about 86% of nurses licensed in North Dakota are employed in metropolitan or micropolitan areas, with only 14% employed in rural areas (Figure 7.1). These distributions have been relatively stable since the previous *Biennial Report*, with the largest shift being from the micropolitan area (-1.63%) to the rural (+0.4 %) and metropolitan areas (+1.24%). By comparison, the distribution of ND's general population is 76% metropolitan or micropolitan and 24% rural, indicating a relative maldistribution of nurses across the state (North Dakota Board of Nursing [NDBON], 2026c; U.S. Office of Management and Budget, 2021). The maldistribution issue has been a persistent concern for over a decade. These troubling trends continue to negatively affect healthcare access and quality, especially in North Dakota's rural areas.

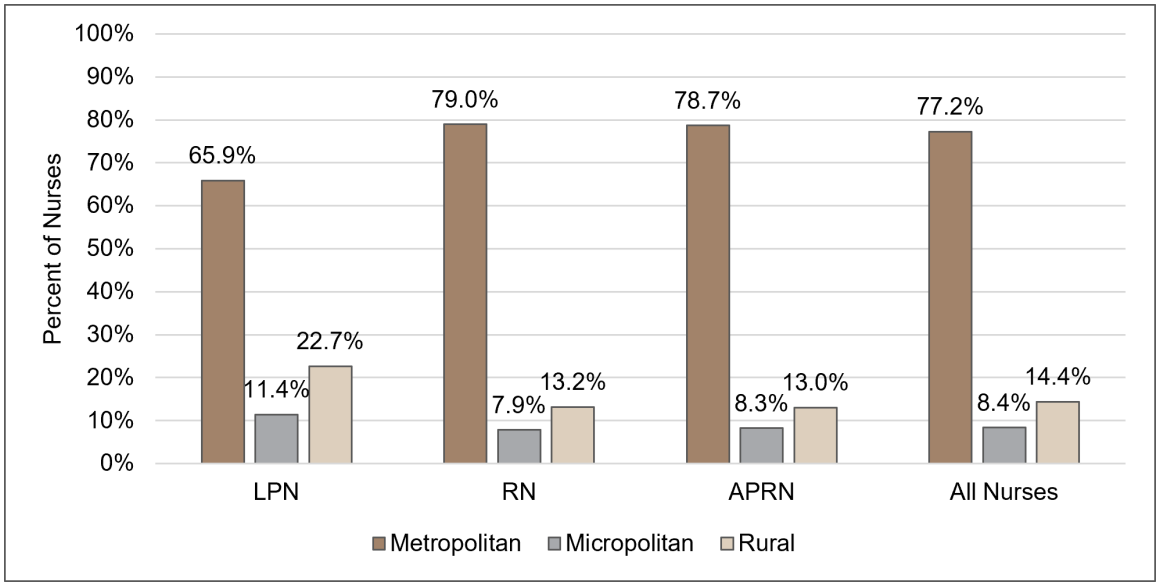


Figure 7.1: Percentage of Nurses in Metropolitan, Micropolitan, and Rural Areas of ND, Total and by Licensure (NDBON, 2026c).

When delineated by licensure type, a substantially higher percentage of LPNs (22.7%) work in rural areas than other license types (NDBON, 2026c). This could be due to rural healthcare employers relying heavily on LPNs for long-term care and primary care support. Rural communities rely heavily on LPNs across critical access hospitals, rural health clinics, and long-term care settings, with LPNs representing a proportionally greater component of the rural nursing workforce and being particularly concentrated in long-term care settings (NASM, 2021; RHI, 2026). RNs are most concentrated (87%) in metropolitan or micropolitan areas, likely due to the prevalence of available positions, as RNs have broad employment opportunities across inpatient, outpatient, public health, education, and administration settings. Specialty APRNs such as Certified Nurse Midwives (CNMs) (100%), Certified Registered Nurse Anesthetists (CRNAs) (95.4%), and Certified Nurse Specialists (CNSs) (86%) tend to work in metropolitan or micropolitan areas. While a large proportion of NPs also work in these areas (85%), more NPs than any other APRN type work in rural areas (NDBON, 2026c). This is likely due to the prevalence of Family NPs (FNPs) in North Dakota, who tend to work in primary care, with many in rural locations, staffing North Dakota critical access hospitals (CAHs) and rural health clinics (RHCs).

INVENTORY OF LICENSE TYPES AND SCOPE OF PRACTICE

NUMBER OF LICENSES BY TYPE

The information reported in this section includes the number and types of licenses held by the nursing workforce in North Dakota. ND nurses must possess ND and/or a compact license to practice in the state. ND nurses obtain a new license to practice at their respective licensure level and must renew it every two years. Analysis of the licensure data revealed that nurses can select more than one license type with their license renewal process. For example, a nurse will renew their license to practice as an RN and CNM. There are approximately 21,461 nursing licenses issued in ND, and 14,370 of those nurses are currently employed in ND (see Table 7.1

and Table 7.2). Further analysis revealed that 3,100 of the licensed nurses have retired or did not list an employment setting or employer. Approximately 70% of those who did not report an employer or employment setting are new graduates. Nurses may also indicate no employer or setting for various reasons, such as skipping the question, being on leave, or being between employers. (see Table 7.2) (NDBON, 2026c).

Nurses with RN licensure account for most licenses issued, followed by those licensed as NPs, LPNs, CRNAs, CNMs, and CNSs. Advanced Practice Registered Nurse (APRN) is a term used to refer to an individual who holds a current license to practice in this state as an APRN in one of the roles of NP, CRNA, CNM, or CNS. The licensure data presented in this section includes the highest licensure level required to practice in the specific nursing title, such as RN, LPN, CNM, CRNA, NP, or CNS (see Tables 7.1 and 7.2).

Table 7.1: Frequency of Highest Licensure Level for All Nurses Licensed in ND (NDBON, 2026c).

License Type	Number	Percentage
LPN	2,533	11.8%
RN	15,274	71.2%
NP	3,100	14.4%
CNM	39	0.2%
CNS	38	0.2%
CRNA	477	2.2%

Table 7.2: Frequency of Highest Licensure Level for Nurses Licensed in ND Excluding Nurses who are Retired, Indicated No Employment Setting and/ or No Employer (NDBON, 2026c).

License Type	Number	Percentage
LPN	2,120	11.6%
RN	13,516	73.6%
NP	2,257	12.3%
CNM	23	0.1%
CNS	29	0.2%
CRNA	416	2.3%

Scope of Practice by License Type

The ND Nurse Practice Act is the state law that governs the practice of nursing. A license to practice is a right and responsibility granted by the state of North Dakota to protect those who need nursing care. The ND Nurse Practice Act includes state laws that define the legal scope of practice for each practice level. Each licensure level differs in roles, responsibilities, and types of healthcare they are legally allowed to provide. As a result, each licensed nurse has a unique set of rules and regulations to follow. Nurses, depending on the type and highest license they hold, are allowed to perform the following roles and responsibilities:

Licensed Practical Nurses (LPNs)

To practice as an LPN, an individual must graduate from an approved practical nursing program (with a Certificate or Associate Degree), pass the National Council of Licensure Examination for Practical Nursing (NCLEX-PN) exam, and apply for licensure in North Dakota. LPNs are important members of the healthcare team, especially in rural areas, and have specific legal roles and responsibilities when providing care. The LPN practices nursing independently under the direction of the RN, APRN, or other licensed practitioner or provider, applying the nursing process and knowledge and executing diagnostic or therapeutic regimens prescribed by licensed practitioners or providers. The LPN's administration and management of nursing include assigning and delegating nursing interventions to certified nursing assistants (CNAs) or unlicensed assistive persons (UAPs) (North Dakota Century Code 12.1).

Registered Nurses (RNs)

Like LPNs, RNs work at North Dakota's various healthcare facilities, including hospitals, clinics, assisted living facilities, and long-term care facilities such as skilled nursing homes, intermediate care facilities, and basic care facilities. RNs are an important member of the healthcare team; however, they have unique roles and responsibilities that differ from those of LPNs. For example, they can legally practice caring for patients with more complex healthcare needs. To practice as an RN, an individual must graduate from an approved nursing program (with a Bachelor of Science in Nursing [BSN] or associate degree), pass the National Council Licensure Examination for Registered Nurses (NCLEX-RN), and apply for licensure in ND. After becoming licensed as an RN, they can pursue additional education necessary for their area of practice, such as earning a master's degree, Doctor of Philosophy degree (PhD), or Doctor of Nursing Practice (DNP) degree. Through the application of the nursing process (assessment, interventions, and evaluation), the RN practices nursing independently and interdependently. RNs also practice nursing dependently by executing diagnostic or therapeutic regimens prescribed by licensed practitioners. The administration and management of nursing by RNs include assigning and delegating nursing interventions that may be performed by others, such as LPNs, UAPs, and CNAs (North Dakota Century Code 12.1).

Nurse Practitioners (NPs)

NPs, also known as APRNs, have been recognized as providing patient care in the United States since 1965. Currently, NPs must have the following: a BSN, pass state RN licensing exams, have at least one year of experience as an RN, and complete either a master's degree or a DNP degree. Upon completion of this degree, the RN must pass a national certification exam to be licensed and practice as an NP. NPs also have additional practice standards to follow specific to their license. According to the American Association of Nurse Practitioners, NPs assess patients, order and interpret diagnostic tests, make diagnoses, and initiate and manage treatment plans, including prescribing medications. NPs can work in primary care, specialty care, inpatient and outpatient settings, and many other practice areas. NPs can work without a supervising or collaborating physician in many states, including North Dakota, and are a significant addition to interprofessional healthcare teams (American Association of Nurse Practitioners, n.d.). NPs function in one of the population foci as approved by the ND Board of Nursing. In North Dakota, NPs have full practice authority and can provide care as a provider like physician assistants and physicians (North Dakota Century Code 12.1).

Certified Nurse-Midwives (CNMs)

CNMs are licensed, independent healthcare providers in all 50 states and designated as primary care providers under state law. As with all APRN types, CNMs are licensed RNs, generally with a BSN degree, with additional didactic (Master's or DNP) and clinical education accredited by the Accreditation Commission for Midwifery Education (ACME) and pass a national certification exam by the American Midwifery Certification Board (AMCB) (AMCB, n.d.). CNMs can provide care during pregnancy, childbirth, and the postpartum period; provide sexual, reproductive, and gynecological care, and family planning services; provide primary care for the childbearing woman and adolescent throughout the lifespan; and care for the healthy newborn during the first 28 days of life, inclusive of all gender identities and sexual orientations. CNMs attend births in hospital settings, stand-alone birthing centers, and at home (AMCB, n.d.). In North Dakota, CNMs have full practice authority and can provide care similar to physicians (North Dakota Century Code 12.1).

Clinical Nurse Specialists (CNSs)

CNSs are APRNs and RNs who provide care to a specific patient population. Requirements to become a CNS vary by state but generally, they include an RN with a BSN degree who obtains a master's degree, DNP, or post-graduate certificate-level CNS program, and certification as a CNS from an approved national certifying body, such as the American Nurses Credentialing Center. Specific patient populations could include adult/geriatric, pediatric, or neonatal. CNSs diagnose, prescribe, and treat patients and specialty populations across the continuum of care. A CNS improves outcomes by providing direct patient care, leading evidence-based practice, optimizing organizational systems, and advancing nursing practice. CNSs work in a variety of settings and specialties, including hospitals, ambulatory care settings, clinics, palliative care, inpatient pediatrics, and psychiatry. In addition, they work in other healthcare settings such as skilled nursing homes, intermediate care facilities, and basic care facilities (National Association of Clinical Nurse Specialists, 2026). CNSs are considered providers in ND, such as physician assistants and physicians. In North Dakota, CNSs do not require collaboration agreements and can practice independently, making diagnoses and prescribing without other providers' approval. In addition, in ND, CNS practice approval must align with advanced education, national certification, and specialized training (North Dakota Century Code 12.1).

Certified Registered Nurse Anesthetists (CRNAs)

CRNAs are also recognized as APRNs in North Dakota. A CRNA is an RN with a BSN degree who has completed an approved Council of Accreditation of Nurse Anesthesia Education Program (COA) and passed the National Certification Examination (NCE) administered by the National Board of Certification & Recertification of Nurse Anesthetists (NBCRNA) (American Association of Nurse Anesthesiology [AANA], 2025). Prior to 2025, CRNAs could possess a master's degree to qualify for practice and take the national certification exam. As of 2025, CRNAs entering the field must have at least a DNP. CRNAs are considered providers and administer anesthetics to patients undergoing procedures needing anesthesia and/or pain management. These services include pre-anesthesia evaluation, administering the anesthetic, monitoring and interpreting the patient's vital signs, and managing the patient throughout procedures. CRNAs practice in multiple settings, including hospitals, ambulatory surgical

centers, and outpatient offices. CRNAs oftentimes are the sole anesthesia providers in rural settings.

COMPACT STATE LICENSES AND IMPLICATIONS

Effective January 1, 2004, North Dakota joined the Nurse Licensure Compact (NLC) and transitioned to an enhanced NLC on January 19, 2018 (NDBON, 2026d). Currently, 43 jurisdictions (42 states plus Guam) have enacted the NLC. The NLC allows multistate licensure (RNs and LPNs) for nurses to practice across compact states. Five states, including Delaware, Wyoming, North Dakota, South Dakota, and Utah, have enacted the APRN Compact. APRNs who qualify include CNMs, NPs, CRNAs, and CNSs. The APRN Compact is not yet active, as a minimum of seven states must pass legislation before it officially takes effect. There are many benefits for states joining the NLC and/or APRN Compact. The primary advantage is that it allows resident nurses to hold a single multistate license and practice across state lines without extra licenses, fees, or waiting periods. In addition, it provides all nurses with career flexibility to work in states other than their primary state of residence, including border states and travel nursing (National Council of State Boards of Nursing, 2026). The movement toward the NLC and APRN Compact can create a stronger nursing workforce and increase community access to quality patient care by allowing nurses greater autonomy to work across multiple states and/or employers and to fill nurse workforce vacancies.

NURSING EDUCATION

The North Dakota Board of Nursing (NDBON) is nationally recognized by the United States Department of Education as the State approval agency for nurse education in North Dakota. Therefore, all nursing education programs in ND must meet the requirements of the United States Department of Education and can be approved by the NDBON. NDBON-approved nursing education programs may voluntarily apply for regional or national accreditation. Standards for accreditation are established by the Commission of Collegiate Nursing Education (CCNE), the Accreditation Commission for Education in Nursing (ACEN), and the Commission for Nursing Education Accreditation (CNEA) (NDBON, 2026a). In North Dakota, LPNs, RNs, and APRNs can graduate from a variety of programs and earn a degree that qualifies them to take the NCLEX-LPN or NCLEX-RN exams. Only one ND academic institution, Mayville State University, does not have its nursing education programs approved by the NDBON; therefore, the education program data below does not reflect enrollments and graduates from its programs. Mayville State University's nursing education programs do have the necessary approval from the United States Department of Education with approval from national accrediting agencies, CCNE and ACEN. In fiscal year (FY) 2024–2025, North Dakota nursing programs produced 860 prelicensure PN and RN graduates. Of these, 666 (77.4%) were reported as licensed in North Dakota during the fiscal year, including 58.9% of PN graduates and 84.0% of RN graduates. Both proportions declined substantially from FY 2023–2024, when 73.2% of PN and 98.9% of RN graduates were licensed in North Dakota. North Dakota programs also produced 140 APRN graduates in FY 2024–2025; however, comparable data on the proportion subsequently licensed in North Dakota were not reported (NDBON, 2026a).

COLLEGE AND UNIVERSITY NURSING DEGREES IN NORTH DAKOTA

The number of available nursing programs in North Dakota for various nurse licensure levels has remained unchanged since 2024. The LPN, RN, and APRN programs are discussed below. Currently, ND does not offer any educational programs for individuals to pursue careers as CNMs or CNSs.

Licensed Practical Nursing Programs

North Dakota has eight LPN prelicensure nursing programs approved by the ND Board of Nursing. Graduates of these programs can apply and should be eligible to take the NCLEX-LPN exam, the passing of which is required to become an LPN. Four certificate programs at state colleges collaborate as part of the Dakota Nursing Program (Bismarck State College, Dakota College at Bottineau, Lake Region State College, and Williston State College). The two associate degree programs include one state university, Dickinson State University, and one Tribal college, Sitting Bull College. Another state college program that offers either a Diploma and/or Associate in Applied Science degree is North Dakota State College of Science (NDBON, 2026a; NDBON, 2026b). Overall, ND's NDBON-approved LPN programs have increased their total student enrollment and graduates since 2023 to help decrease the LPN nursing workforce shortage in ND. The data presented below does not include the 2025-2026 academic year because the NDBON Annual Education Report was not available at the time this *Report* was written (see Tables 7.3 and 7.4).

Table 7.3: ND Practical Nurse Program Enrollment and Graduation Trends (NDBON, 2026b).

Year	'23-'24	'24-'25	'24-'25	24-'25	'23-'24	'24-'25	'24-'25	'24-'25
Certificate Programs	**Total Enrollment of Students**	**Total Enrollment of Students**	**Enrollment Difference**	**% Change**	**Total Graduates**	**Total Graduates**	**Difference Graduates**	**% Change**
Bismarck State College	50	59	9	18.0%	40	54	14	35.0%
Dakota College at Bottineau	32	51	19	59.4%	29	17	-12	-41.4%
Lake Region State College	69	65	-4	-5.8%	52	50	-2	-3.9%
Williston State College	29	38	9	31.0%	19	27	8	42.1%
Nursing Dakota State College of Science (Diploma)	16	19	3	18.8%	N/A	47	N/A	N/A
Total	**196**	**232**	**36**	**18.4%**	**140**	**195**	**55**	**39.3%**

Table 7.4: ND Associate and Associate in Applied Science Degree Program Enrollment and Graduation Trends (NDBON, 2026b).

Year	'23-'24	'24-'25	'24-'25	24-'25	'23-'24	'24-'25	'24-'25	'24-'25
Certificate Programs	**Total Enrollment of Students**	**Total Enrollment of Students**	**Enrollment Difference**	**% Change**	**Total Graduates**	**Total Graduates**	**Difference Graduates**	**% Change**
Dickinson State University	50	0	-50	-100%	13	21	8	61.5%
North Dakota State College of Science (combined AAS and Diploma)	30	116	86	286.7%	23	47	24	104.4%
Sitting Bull College	3	1	-2	-66.7%	3	8	5	166.7%
Total	**83**	**117**	**34**	**41.0%**	**39**	**76**	**37**	**94.6%**

Registered Nursing Programs

North Dakota has 13 NDBON-approved RN prelicensure nursing programs. Graduates of these programs can apply and should be eligible to take the NCLEX-RN exam for licensure. Four associate degree programs in ND's state colleges collaborate and are part of the Dakota Nursing Program (Bismarck State College, Dakota College at Bottineau, Lake Region State College, and Williston State College), plus two other associate degree programs: North Dakota State College of Science (state) and the University of Jamestown (private). Seven Bachelor of Science degree programs include Dickinson State University, Minot State University, North Dakota State University in Fargo, with a second campus at Sanford Health, Bismarck, ND, University of North Dakota, which are state universities; and University of Mary, Rasmussen University, and University of Jamestown which are private universities. The University of Jamestown also offers a direct-entry master's degree RN program in which graduates are eligible to take and pass the NCLEX-RN exam (NDBON, 2026a). Overall, ND's NDBON-approved RN programs have increased total enrollment and graduates since 2023, in an attempt to help reduce the RN nursing workforce shortage in the state. The data presented below does not include the academic year of 2025-2026 because the NDBON Annual Education Report was not available at the time this *Report* was written (see Tables 7.5 and 7.6) (NDBON, 2026b).

Table 7.5: ND RN Associate Degree Program Enrollment and Trends (NDBON, 2026b).

Year	'23-'24	'24-'25	'24-'25	24-'25	'23-'24	'24-'25	'24-'25	'24-'25
Associates Degree Programs	**Total Enrollment of Students**	**Total Enrollment of Students**	**Enrollment Difference**	**% Change**	**Total Graduates**	**Total Graduates**	**Difference Graduates**	**% Change**
Bismarck State College	47	49	2	4.3%	44	47	3	6.8%
Dakota College at Bottineau	31	33	2	6.5%	26	31	5	19.2%
Lake Region State College	38	62	24	63.2%	37	59	22	59.4%
Williston State College	26	20	-6	-23.1%	25	18	-7	-28.0%
Nursing Dakota State College of Science	90	137	47	52.2%	26	35	9	34.6%
*University of Jamestown	N/A (0)	56	56	0.0%	N/A	N/A	N/A	N/A
Total	**232**	**357**	**126**	**53.9%**	**158**	**190**	**32**	**20.3%**

*Initial approval of the University of Jamestown ASN program granted April 2024; no students completed the program during FY 2024-2025 (NDBON, 2026b)

Table 7.6: ND RN Bachelor of Science in Nursing Program Enrollment and Trends (NDBON, 2026b).

Year	'23-'24	'24-'25	'24-'25	24-'25	'23-'24	'24-'25	'24-'25	'24-'25
Bachelor of Science in Nursing Degree Programs (Baccalaureate)	**Total Enrollment of Students**	**Total Enrollment of Students**	**Enrollment Difference**	**% Change**	**Total Graduates**	**Total Graduates**	**Difference Graduates**	**% Change**
Dickinson State University	26	13	-13	-50.0%	16	7	-9	-56.3%
Minot State University	106	110	4	3.8%	43	41	-2	-4.7%
North Dakota State University (Fargo and Bismarck)	562	582	20	3.6%	169	179	10	5.9%
Rasmusson University	64	32	-32	-50.0%	23	17	-6	-26.1%
*University of Jamestown	59	55	-4	-6.8%	17	24	7	41.2%
University of Mary	218	267	49	-22.5%	70	76	6	7.9%
University of North Dakota	292	288	-4	-1.4%	113	102	-11	-9.7%
Total	**1,327**	**1,347**	**20**	**1.5%**	**451**	**446**	**-5**	**-1.1%**

*Initial approval of the University of Jamestown ASAN and DEMSN Programs was granted in April 2024; student enrollment began during this reported FY (NDBON, 2026b)

Advanced Practice Nursing Programs

North Dakota offers a variety of nursing education programs (master's and DNP degrees) to help licensed RNs pursue an APRN career. Each APRN type requires additional education and passage of a specific national certification/licensure exam. The University of North Dakota (UND) – Grand Forks, North Dakota State University (NDSU) – Fargo and Sanford Health in Bismarck – and the University of Mary all offer NP (APRN) programs in which graduates receive a DNP degree and are eligible to apply for and take the Family Nurse Practitioner (FNP) national certification exam. The University of North Dakota (UND) offers a Certified Registered

Nurse Anesthetist (CRNA) Doctor of Nursing Practice (DNP) degree, and graduates are eligible to apply for and take the NBCRNA certification exam.

In addition, the University of North Dakota (UND) is the only nursing education program in North Dakota that offers Master's (MS) degrees in several APRN specialties, after which graduates are eligible to take specialty certification exams. MS specialty programs include the Adult Gerontological Acute Care Nurse Practitioner (AGACNP), Family Nurse Practitioner (FNP), and Psychiatric-Mental Health Nurse Practitioner (PMHNP). Students now have the option to also enroll in one of the new DNP programs in one of these APRN specialties (AGACNP, FNP, PMHNP). Please note that enrollment data (2025-2026) is not available for these newer UND DNP programs (NDBON, 2026a; NDBON, 2026b). Overall, the number of APRNs enrolled in ND's programs has increased (23.87%) since 2023 to meet the increased demand for licensed APRNs in ND. However, the overall number of APRN graduates from ND programs decreased by -23.9%. Reasons for the decline in the number of graduates may be attributed to the deletion of the Adult-Geriatric Primary Care Nurse Practitioner program along with curricular and program delivery adjustments at UND. NDSU and University of Mary demonstrated slight declines as well but impact on overall graduate numbers was minimal. The data presented below does not include the 2025-2026 academic year because the NDBON Annual Education Report was not available at the time this *Report* was written (see Tables 7.7 and 7.8).

Table 7.7: APRN Student Enrollment Numbers (NDBON, 2026b).

Master's (MS) & Doctor of Nursing Practice (DNP)Degree Programs	'23-'24 Total Enrollment	'24-'25 Total Enrollment	'24-'25 Difference	'24-'25 % Change
University of North Dakota – MS Family Nurse Practitioner	196	249	53	27.0%
University of North Dakota – MS Psychiatric & Mental Health Nurse Practitioner	58	83	25	43.1%
University of North Dakota – MS Adult Gerontology Primary Care Nurse Practitioner *	5	0	-5	-100%
University of North Dakota - BSN to DNP Nurse Anesthesia	66	88	22	33.3%
University of North Dakota – MS Adult Gerontology Acute Care Nurse Practitioner (new program Fall 2025)	N/A	N/A	N/A	N/A
Total (University of North Dakota)	**325**	**420**	**95**	**29.2%**
North Dakota State University (Fargo and Bismarck sites) - BSN to DNP Family Nurse Practitioner	56	52	-4	-7.1%
University of Mary – BSN to DNP Family Nurse Practitioner	63	78	15	23.8%
Total (all Programs)	**444**	**550**	**106**	**-23.9%**

*Note that UND's MS Adult-Gerontology Primary Care Nurse Practitioner Program was replaced with the Adult Gerontology Acute Care Nurse Practitioner Program and has not yet accepted the first cohort of students (NDBON, 2026b).

Table 7.8: APRN Student Graduation Numbers (North Dakota Board of Nursing Annual Trends, 2026).

Master's (MS) & Doctor of Nursing Practice (DNP)Degree Programs	'23-'24 Total Graduates	'24-'25 Total Graduates	'24-'25 Difference	'24-'25 % Change
University of North Dakota – MS Family Nurse Practitioner	85	64	-21	-24.7%
University of North Dakota – MS Psychiatric & Mental Health Nurse Practitioner	39	26	-13	-33.3%
University of North Dakota – MS Adult Gerontology Primary Care Nurse Practitioner *	5	0	-5	-100%
University of North Dakota - BSN to DNP Nurse Anesthesia - Nurse Anesthesia	17	19	2	11.8%
University of North Dakota – MS Adult Gerontology Acute Care Nurse Practitioner (new program Fall 2025)	N/A	N/A	N/A	N/A
Total (University of North Dakota)	**146**	**109**	**-37**	**-25.3%**
North Dakota State University (Fargo and Bismarck sites) - BSN to DNP Family Nurse Practitioner	15	13	-2	-13.3%
University of Mary -BSN to DNP Family Nurse Practitioner	23	18	-5	-21.7%
Total (all programs)	**184**	**140**	**-44**	**-23.9%**

*Note that UND's MS Adult-Gerontology Primary Care Nurse Practitioner Program was replaced with the Adult Gerontology Acute Care Nurse Practitioner Program.

OTHER NURSING PROGRAMS IN NORTH DAKOTA

RN-BSN Nursing Programs

The purpose of an RN to BSN degree program is to help RNs who have an associate degree or diploma upgrade their education to a BSN. The programs build on real work experiences to advance RNs' leadership, research, public health, and evidence-based care. A BSN degree provides opportunities for career advancement and usually takes 1-2 years to complete (AACN, 2012). Several ND universities offer these types of programs, which are flexible, with most required coursework completed online, including the University of North Dakota, Minot State University, Mayville State University, University of Mary, Rasmussen University, University of Jamestown, and North Dakota State University.

Post-Master's Nurse Practitioner Certificates

The University of North Dakota and North Dakota State University offer programs in which graduates receive a certificate for a specialized APRN role. Already practicing and certified nurse practitioners can complete programs in Adult Gerontology Acute Care Nurse Practitioner or Psychiatric-Mental Health Nurse Practitioner. Graduates must pass a national certification

exam to qualify them for practice in one of these specialty areas (North Dakota State University School of Nursing, n.d.; UND College of Nursing & Professional Disciplines, n.d.).

Post-Master's Doctor of Nursing Practice

The University of North Dakota and the University of Mary offer a DNP program that RNs with a master's degree can complete to advance and enter leadership roles in nursing education, administration, healthcare organizations, quality improvement, and safety. Some positions require a nurse to have a DNP (UND College of Nursing & Professional Disciplines, n.d.; University of Mary, n.d.).

PhD in Nursing

The University of North Dakota is the only university in ND to offer a PhD in nursing that provides an opportunity for nurses to advance in their career as a nurse educator or faculty at a college or university and/or pursue a role as a nurse scientist or researcher at a healthcare system or university (UND College of Nursing & Professional Disciplines, n.d.).

Currently licensed LPNs, RNs, and APRNs in North Dakota who received an initial license or renewed their license vary by the state in which they earned their nursing degrees. Most LPNs and RNs received their nursing education from ND, followed by Minnesota and multiple other states or countries (see Figure 7.2).

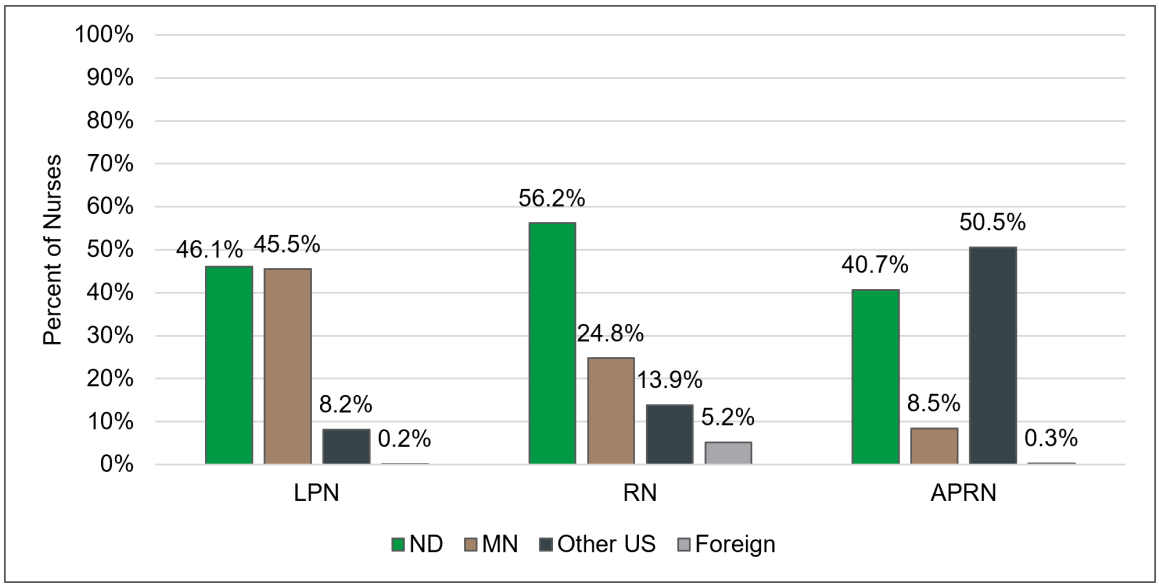


Figure 7.2: Location of Nursing Education Program for Licensed Nurses in ND, 2026 (NDBON, 2026c).

PRIMARY PRACTICE SETTING

Nurses in North Dakota reported employment across a wide range of practice environments, reflecting the diversity of roles within the nursing workforce. The original data included more than 35 individual practice-setting categories, many of which represented closely related clinical environments or relatively small numbers of nurses. To facilitate interpretation and allow meaningful comparisons across license types, these settings were consolidated into 10 broader

categories based on similarities in care delivery, patient population, and organizational structure: hospital, outpatient, nursing home/extended care, various community settings, government, self-employed or temporary agency, academic, non-clinical, psychiatric/mental health, and other settings. For example, ambulatory care, APRN and physician offices, pain clinics, and urgent care were incorporated into the outpatient category. Hospital settings included hospital, dialysis, and infusion therapy centers. Nursing homes, long-term care, assisted living, extended care, rehabilitation, home health, hospice, and related residential care settings were combined into nursing home/extended care. Community-based settings incorporated areas such as occupational health, public health, school health, and community health. This consolidation provides a more meaningful representation of where nurses deliver care while avoiding fragmentation across numerous small or overlapping categories.

Among the 17,659 nurses with an identified practice setting, hospitals represented the largest employment setting, accounting for 37.6% (n = 6,642) of the workforce. The predominance of hospital employment was driven primarily by RNs and CRNAs. Approximately 44.6% of RNs worked in hospitals, compared with 84.1% of CRNAs. The concentration of RNs in hospitals is consistent with the substantial nursing workforce required to provide continuous inpatient, emergency, procedural, and specialty services. CRNA practice was even more concentrated, reflecting the location of anesthesia and surgical services within hospital environments. In contrast, only 8.0% of LPNs and 14.6% of NPs practiced in hospitals. These differences demonstrate that hospital workforce needs are disproportionately dependent on specific nursing license groups, particularly RNs and CRNAs (see Table 7.9) (NDBON, 2026c).

Table 7.9: Distribution of North Dakota Nurses by Practice Setting and License Type (NDBON, 2026c).

Practice setting	All licenses n	All licenses %	LPN n	LPN %	RN n	RN %	CNP n	CNP %	CNM n	CNM %	CNS n	CNS %	CRNA n	CRNA %
Outpatient	4,156	23.5	687	34.9	2,348	18.1	1,060	47.5	13	56.5	5	18.5	43	10.4
Nursing home/ extended care	2,536	14.4	733	37.2	1,732	13.3	70	3.1	—	—	1	3.7	1	0.2
Hospital	6,642	37.6	158	8.0	5,798	44.6	325	14.6	6	26.1	7	25.9	348	84.1
Various community settings	749	4.2	87	4.4	574	4.4	86	3.9	—	—	1	3.7	1	0.2
Government setting	297	1.7	67	3.4	196	1.5	32	1.4	—	—	1	3.7	1	0.2
Self-employed or temporary agency	266	1.5	26	1.3	157	1.2	73	3.3	2	8.7	1	3.7	7	1.7
Academic setting	379	2.2	5	0.3	311	2.4	54	2.4	1	4.4	4	14.8	4	1.0
Nonclinical setting	678	3.8	18	0.9	655	5.0	5	0.2	—	—	0	0.0	0	0.0
Other	1,568	8.9	144	7.3	1,000	7.7	413	18.5	1	4.4	1	3.7	9	2.2
PMH	388	2.2	44	2.2	223	1.7	114	5.1	—	—	6	22.2	0	0.0
Total	**17,659**	**100**	**1,969**	**100**	**12,994**	**100**	**2,232**	**100**	**23**	**100**	**27**	**100**	**414**	**100**

Note. Percentages represent the proportion within each license type. Em dashes indicate that no value was reported for that practice setting. LPN = licensed practical nurse; RN = registered nurse; CNP = certified nurse practitioner; CNM = certified nurse-midwife; CNS = clinical nurse specialist; CRNA = certified registered nurse anesthetist; PMH = [define PMH].

Outpatient care was the second-largest practice category, representing 23.5% (n = 4,156) of all nurses, but this varied substantially by license type. Nearly half of NPs (47.5%) practiced in outpatient settings, as did 34.9% of LPNs, compared with 18.1% of RNs. The original outpatient-related categories included 3,007 nurses in ambulatory care alone, as well as nurses working in physician offices, APRN offices, urgent care centers, pain clinics, and other ambulatory settings (NDBON, 2026c). The size of this category illustrates that a substantial portion of nursing care in North Dakota occurs outside traditional inpatient facilities. The particularly high concentration of NPs in outpatient practice reflects their role as healthcare providers in primary, specialty, and ambulatory care, while the large LPN presence suggests that LPNs constitute an important component of the workforce supporting clinic-based care. In a geographically dispersed state such as North Dakota, this outpatient workforce may be especially important for maintaining access to routine, preventive, and chronic disease care.

Nursing home and extended-care environments constituted the third-largest practice category, employing 14.4% (n = 2,536) of nurses statewide. This category is particularly notable because of its reliance on LPNs. More than one-third of LPNs (37.2%) practiced in nursing home/extended-care settings, compared with 13.3% of RNs and only 3.1% of NPs. In the original data, nursing home/extended care and nursing home/long-term care alone accounted for 1,468 nurses, with additional nurses employed in assisted living, extended care,

rehabilitation, and related settings. When combined with outpatient practice, more than 70% of North Dakota's LPN workforce was employed in these two broad categories (NDBON, 2026c). This pattern suggests that LPN workforce availability may be particularly consequential for maintaining long-term care and ambulatory services. Changes in the supply of LPNs could therefore have disproportionate effects on nursing homes, extended-care facilities, and outpatient organizations rather than hospitals.

Several smaller categories represent nursing services delivered outside major institutional settings. Various community settings accounted for 4.2% (n = 749) of nurses and included practice environments such as home health, hospice, public health, school health, occupational health, and community health (NDBON, 2026c). Although individually these settings employ relatively small numbers of nurses, collectively they represent an important component of the state's healthcare infrastructure because care is delivered directly within communities rather than primarily through hospitals or clinics. These roles may be particularly relevant in rural areas, where nurses frequently serve geographically dispersed populations and where community-based services can reduce the need for patients to travel to larger healthcare centers.

Psychiatric/mental health (PMH) practice represented 2.2% (n = 388) of the nursing workforce. Although relatively small in comparison with hospital, outpatient, and long-term care employment, psychiatric/mental health practice was more prominent among NPs (5.1%) and CNSs (22.2%) than among RNs (1.7%) or LPNs (2.2%) (NDBON, 2026c). A caveat to this category is that PMH nurses may work in inpatient, outpatient, or community settings. The relatively small overall workforce in this category may warrant attention when considered in relation to behavioral health service needs, particularly in rural and underserved areas. However, these data describe the distribution of the existing nursing workforce and cannot independently determine whether the number of nurses practicing in psychiatric/mental health settings is sufficient to meet population need.

Academic settings accounted for 2.1% (n = 379) of the workforce. Although this represents a relatively small proportion of practicing nurses, the academic nursing workforce has importance beyond its numerical size because it supports the preparation of future nurses. Most nurses classified within academic settings were RNs (n = 311), with an additional 54 NPs and smaller numbers from other advanced practice groups (NDBON, 2026c). Consequently, workforce shortages within this comparatively small category could have downstream implications for the state's capacity to educate and expand its nursing workforce.

The remaining nurses were distributed across government settings (1.7%), self-employment or temporary agency work (1.5%), non-clinical settings (3.8%), and other settings (8.9%). The relatively large “other” category (n = 1,568) deserves consideration. It accounted for 18.5% of NPs and 7.7% of RNs, suggesting that established practice-setting categories may not fully capture the diversity of contemporary nursing roles (NDBON, 2026c). This may reflect employment in emerging, specialized, hybrid, administrative, or otherwise difficult-to-classify positions. Future workforce surveys may benefit from examining responses within this category to determine whether additional standardized practice-setting classifications are warranted.

Overall, the consolidated practice-setting categories demonstrate that North Dakota's nursing workforce is concentrated in three major sectors—hospital, outpatient, and nursing

home/extended care—which together employ approximately three-quarters (75.5%) of nurses with a reported practice setting (NDBON, 2026c). Importantly, however, the license composition of these sectors differs substantially. Hospitals rely heavily on RNs and CRNAs, outpatient care represents the predominant practice environment for NPs and a major employment sector for LPNs, and nursing home/extended care is particularly dependent on LPNs. Thus, statewide nursing workforce numbers alone provide an incomplete picture of workforce capacity. Nationwide comparisons are presented in Table 7.10 (AANA, 2025; AANA, 2026; Health Resources and Services Administration, Bureau of Health Workforce [HRSA BHW], 2025; HRSA BHW, 2026; National Association of Clinical Nurse Specialists, n.d.; U.S. Bureau of Labor Statistics [U.S. BLS], 2025a; U.S. BLS, 2025b; U.S. BLS, 2025c; U.S. BLS, 2025d). In comparing ND nursing distribution to nationwide statistics across hospital, outpatient/ambulatory care, and extended care, ND RNs are less hospital-concentrated and more represented in broader post-acute/extended-care settings. ND LPNs have particularly strong roles in non-hospital and ambulatory settings. Nurse practitioners in ND have broadly similar outpatient orientation, with ND somewhat less hospital-based compared to nationwide numbers. This may be attributed to the higher percentage of primary care NPs than acute care NPs in ND. ND CRNAs appear strongly hospital-centered, but employer classifications make direct comparison unreliable.

Table 7.10: North Dakota Work Setting Distribution of Nurses Compared to Nationwide Distribution.

License	North Dakota	National
RN	44.6% hospital	59% hospital
RN	18.1% outpatient	19% ambulatory
RN	13.3% extended care	6% extended care
LPN	8.0% hospital	16% hospital
LPN	34.9% outpatient	12% outpatient
LPN	37.2% extended care	37% extended care
NP	14.6% hospital	23% hospital
NP	47.5% outpatient	58% outpatient
CRNA	84.1% hospital	National employer-industry data show much more employment through physician/ anesthesia groups

*CNS and CNM were omitted due to low numbers leading to difficult comparisons to nationwide data (AANA, 2025; AANA, 2026; HRSA BHW, 2025; HRSA BHW, 2026; National Association of Clinical Nurse Specialists, n.d.; U.S. BLS, 2025a; U.S. BLS, 2025b; U.S. BLS, 2025c; U.S. BLS, 2025d).

PRIMARY CLINICAL AREA

Nurses are important members of the healthcare team, as they are licensed and possess the competencies and skill sets required to fulfill the roles and responsibilities of the specific clinical areas. ND's Scope of Practice guides all nurses based on their specific license type. The NDBON licensure data was analyzed, with certain clinical areas grouped into categories based on the authors' professional nursing knowledge. Nurses can select their primary clinical area

from 1 of 48 primary clinical areas when applying for their initial or renewal license. The percentages listed are estimates because nurses can select the clinical area they primarily work in based on their own interpretation, rather than on a specific definition. A definition for each clinical area is not included in the survey and should be considered in the future to enable detailed data analysis.

Licensed Practical Nurses (LPNs), also known as Licensed Vocational Nurses (LVNs) in some states, have a scope of practice and licensure in ND that allows them to fill certain healthcare team roles. In fact, according to the NDBON licensure data, clinics are the most common clinical area, with approximately 43% working in various clinics, including primary care, urgent care, dermatology, adult health, psychiatric/mental health/substance abuse, pediatrics, women's health, and orthopedics. Approximately 29.1% of LPNs currently work in geriatric/gerontology settings, such as skilled nursing homes, basic or intermediate care, and assisted living facilities. Clinical areas where LPNs are least common include administration at 0.46%, dialysis at 0.2%, and nurse education at 0.42% (NDBON, 2026c).

Registered Nurses (RNs) have a scope of practice and licensure in ND that allows them to fill certain healthcare team roles. Generally, their license allows them to practice in clinical areas that care for more acutely ill patients and require more advanced skills and competencies than LPNs. In fact, according to the NDBON licensure data, hospitals, critical care, and acute healthcare facilities are the most common areas where you will find approximately 61.02% of RNs. Approximately 8.5% of RNs work in geriatric/gerontology settings, such as skilled nursing homes, basic or intermediate care, and assisted living facilities. Followed by clinics, including primary care, urgent care, dermatology, adult health, psychiatric/mental health/substance abuse, pediatrics, women's health, and orthopedics, at approximately 8.36%. Also of interest is that more RNs work in Nursing Education (1.81%) and Administration (1.88%) than LPNs (NDBON, 2026c).

Nurse Practitioners (NPs) include Family Nurse Practitioners and Psychiatric-Mental Health Nurse Practitioners. NPs are independent healthcare providers in North Dakota and have full practice authority. Therefore, their roles, responsibilities, skills, and competencies related to patient care differ significantly from those of an RN or an LPN. Since NPs are classified as providers, they can address shortages and needs at clinics, hospitals, or other facilities for other providers (e.g., Physicians and Physician Assistants). In fact, according to the NDBON licensure data, approximately 77.89% of NPs' primary clinic areas include primary care, cardiology, dermatology, family care, women's health, and a few other specialty areas. Of interest to note is that approximately 11.70% of this group indicated they are working in psychiatric/mental health/substance abuse clinical areas. As a result, these NPs are valuable in fulfilling the need for behavioral health provider shortages in ND. Less than 10% of NPs (9.34%) work in hospitals, emergency, acute care, and critical care. Only 2.79% indicated they are working in areas caring for gerontology/geriatrics or rehabilitation patients, as well as in various skilled care, basic or intermediate care, and assisted living facilities (NDBON, 2026c).

Like NPs, Certified Nurse Midwives (CNMs) are independent healthcare providers in ND. CNMs may be utilized to address shortages among other providers, such as obstetricians and gynecologists. As explained earlier in this chapter, CNM scope of practice qualifies them to work primarily in women's health and obstetrics. The primary difference in scope between CNMs and Ob/Gyn physicians is the acuity level of patients. Ob/Gyn physicians can perform major surgical

interventions in both pregnant and non-pregnant women and care for high-risk pregnancies. CNMs typically handle lower risk pregnancies needing minimal intervention, and non-pregnant women not needing surgical intervention (AMCB, n.d.). According to the NDBON licensure data, the majority of CNMs (approximately 86.96%) reported working in women's health, maternal-child health, and obstetrics (NDBON, 2026c). ND's Universities should also consider developing nursing education programs for nurses seeking to pursue a CNM career.

CNSs are also independent practice providers in ND. CNSs' scope of practice qualifies them to work in a variety of clinical areas in place of other providers and can help address provider shortages. According to the NDBON licensure data, the most common clinical area where CNSs work is clinics, at approximately 75.86%, including medical/surgical, maternal-child/obstetrics, and psychiatric/mental health and substance abuse. Of interest to note is that approximately 44.83% of CNSs work specifically in psychiatric/mental health and substance abuse clinics. CNSs indicated that a few of them work in clinical areas of acute care/hospitals, nursing administration, nursing education, and geriatrics/gerontology (NDBON, 2026c).

CRNAs can also practice as independent healthcare providers in ND. CRNAs' scope of practice qualifies them to work primarily in surgery and in inpatient and outpatient settings to administer anesthesia. Based on the analysis of the NDBON licensure data, approximately 98.08% of CRNAs work in anesthesia at a hospital. Other clinical areas in which ND CRNAs work include pain management, other clinical/nonclinical, and psychiatric/mental health/substance abuse (NDBON, 2026c).

PRIMARY POSITION TITLE

The largest number of healthcare workers in North Dakota are licensed as RNs, LPNs, and/or APRNS. Nurses are valuable to the healthcare workforce since they are qualified to work in a variety of positions for many different types of employer settings. Nurses can select their primary position (the one where they work most of their hours) when applying for or renewing their license. These position descriptions from the NDBON data lack specific definitions and therefore responses are subject to the nurse's interpretation. Nurses are known to work in more than one position, such as educator and staff nurse, which this data analysis cannot determine. Most nurses work as staff nurses at multiple employers to provide community members with access to safe, quality care (see Table 7.11). For full definitions for each position role for nurses, please see Appendix B.

Table 7.11: Primary Positions for ND's Nurses (NDBON, 2026c).

Primary Position Title	LPN	RN	APRN
Administrator	3.4%	11.1%	1.1%
Advanced Practice Registered Nurse	0.0%	1.8%	94.8%
Case Manager	0.5%	5.8%	0.1%
Consultant	0.7%	1.5%	0.2%
Nurse Educator	0.5%	3.3%	1.9%
Nurse Researcher	0.1%	0.2%	0.1%
Office Nurse	8.8%	3.0%	0.1%
Other (Health Related)	3.7%	3.5%	0.3%
Other (Not Health Related)	0.5%	0.5%	0.1%
Public Health Nurse	0.8%	1.2%	0.0%
Quality Nurse	1.1%	3.0%	0.0%
School Nurse	0.6%	0.7%	0.0%
Staff Nurse	77.0%	62.2%	1.2%
Travel Nurse/Agency Nurse	2.4%	2.2%	0.1%

EMPLOYMENT STATUS

Employment data demonstrate a high level of participation in the nursing workforce among North Dakota licensees. Overall, 82.5% of licensed nurses reported active employment in nursing or in a position requiring a nursing license, including 70.4% employed full-time, 7.7% employed part-time, and 4.3% employed on a per diem basis (NDBON, 2026c) (see Table 7.12). Among nurses actively employed in nursing, approximately 85.4% were employed full-time, compared with 9.3% part-time and 5.3% per diem (NDBON, 2026c). Thus, the North Dakota nursing workforce is predominantly composed of nurses working in full-time positions rather than relying primarily on part-time or intermittent employment.

Table 7.12: Distribution of Employment Status by License Type for Those Employed in Nursing (NDBON, 2026c).

License	FT n	FT %	PT n	PT %	Per diem n	Per diem %	Total employed in nursing* n	Total employed in nursing* %
LPN	1,605	63.4	240	9.5	124	4.9	1,969	77.7
RN	11,046	72.3	1,223	8.0	731	4.8	13,000	85.1
NP	2,033	65.6	167	5.4	61	2.0	2,261	72.9
CNM	23	59.0	0	0.0	1	2.6	24	61.5
CNS	22	57.9	5	13.2	0	0.0	27	71.1
CRNA	386	80.9	18	3.8	15	3.1	419	87.8
All	**15,115**	**70.4**	**1,653**	**7.7**	**932**	**4.3**	**17,700**	**82.5**

*Total employed in nursing = full-time + part-time + per-diem employment in nursing or in a position requiring a nursing license. Percentages use the full license-group denominator (NDBON, 2026c).

Table 7.13: Distribution of Employment Status by License Type for Those Not Employed in Nursing (NDBON, 2026c).

License	Not working, seeking nurse role n	Not working, seeking nurse role %	Not working, not seeking nurse role n	Not working, not seeking nurse role %	Working in field other than nursing n	Working in field other than nursing %	Retired/ volunteer only n	Retired/ volunteer only %	Status Not Reported n	Status Not Reported %
LPN	88	3.5	23	0.9	45	1.8	37	1.5	351	13.9
RN	250	1.6	131	0.9	95	0.6	213	1.4	1,544	10.1
NP	19	0.6	4	0.1	2	0.1	15	0.5	798	25.7
CNM	0	0.0	0	0.0	0	0.0	1	2.6	14	35.9
CNS	3	7.9	0	0.0	0	0.0	0	0.0	8	21.1
CRNA	2	0.4	0	0.0	0	0.0	2	0.4	54	11.3
All	**362**	**1.7**	**158**	**0.7**	**142**	**0.7**	**268**	**1.3**	**2,769**	**12.9**

Percentages use the full license-group denominator (NDBON, 2026c).

Employment patterns varied across license types. CRNAs demonstrated the highest full-time employment rate, with 80.9% of all licensed CRNAs working full-time in nursing, followed by RNs at 72.3%. When only those actively employed in nursing are considered, approximately 92% of employed CRNAs and 85% of employed RNs were working full-time (NDBON, 2026c). These findings indicate particularly strong attachment to full-time employment among CRNAs and RNs and suggest that these license groups contribute substantial full-time workforce capacity to the state's healthcare system.

LPNs demonstrated a somewhat different employment pattern. Although nearly two-thirds (63.4%) of LPNs were employed full-time in nursing, 9.5% worked part-time and another 4.9% worked per diem. Overall, 77.7% of LPN licensees were actively employed in nursing. Among employed LPNs, approximately 81.5% worked full-time, 12.2% part-time, and 6.3% per diem (NDBON, 2026c). LPNs therefore had greater representation in part-time and per-diem employment than several other license groups.

NPs were predominantly employed full-time, with 65.6% of all NP licensees reporting full-time nursing employment, compared with 5.4% part-time and 2.0% per diem. Among NPs actively employed in nursing, approximately 90% were working full-time**.** The comparatively low overall nursing employment percentage of 72.9% should be interpreted with caution because 25.7% of NPs had an employment status classified as “not reported” (NDBON, 2026c). Consequently, the lower percentage cannot be interpreted as evidence that more than one-quarter of NPs are not participating in the workforce.

Smaller APRN groups require interpretive caution because small sample sizes can produce large percentage differences. CRNAs had the highest overall nursing employment rate at 87.8%, whereas 61.5% of CNMs and 71.1% of CNSs were actively employed in nursing. However, employment status was not reported for 35.9% of CNMs and 21.1% of CNSs. Among CNSs, part-time employment accounted for 13.2% of all licensees and 18.5% of CNSs identified as actively employed in nursing, suggesting a comparatively greater part-time component than observed among the other advanced practice groups. Because there were only 39 CNMs and 38 CNSs represented in the employment-status data, these percentages should not be interpreted independently of their underlying counts (NDBON, 2026c).

UNEMPLOYED NURSES AND POTENTIAL WORKFORCE CAPACITY

The distinction between nurses who were unemployed and seeking nursing employment and those who were unemployed but not seeking nursing employment provides useful information about potential workforce availability. Statewide, 362 nurses, or 1.69% of licensees, were unemployed and actively seeking nursing employment**,** compared with 158 (0.74%) who were unemployed but not seeking nursing employment. Thus, among the 520 nurses classified into these two unemployment categories, approximately 70% were actively seeking nursing work (NDBON, 2026c)**.**

This finding is important from a workforce perspective. Nurses who are unemployed but actively seeking nursing employment represent a potentially available labor pool and may reflect a mismatch between workforce supply and available positions. Such mismatch could involve geographic location, specialty, desired hours, compensation, experience requirements, or other characteristics of available positions. The data do not identify the reasons for unemployment; therefore, they should not be interpreted as evidence that nursing positions are unavailable statewide.

The pattern was particularly notable among LPNs. A total of 88 LPNs, representing 3.47% of LPN licensees, were unemployed and seeking nursing work—the highest rate among the nursing license groups. Another 23 LPNs (0.91%) were unemployed but not seeking nursing work. In comparison, 1.64% of RNs were unemployed and seeking nursing employment and 0.86% were unemployed but not seeking nursing employment. Although the percentage was lower among RNs, their much larger workforce size meant that 250 RNs were actively seeking

nursing employment, representing the largest number of potentially available nurses (NDBON, 2026c).

NP unemployment was comparatively uncommon: only 19 NPs (0.61%) were unemployed and seeking nursing work and four (0.13%) were unemployed but not seeking nursing work. CRNAs demonstrated an even smaller level, with two CRNAs (0.42%) seeking nursing employment and none classified as unemployed and not seeking nursing work. The 7.89% unemployment-and-seeking-work rate among CNSs appears striking but represents only three individuals, illustrating why both percentages and counts should be reported when describing small license groups (NDBON, 2026c).

To note, the data collection process contributes to a significant difficulty in painting a complete picture of the nursing workforce. Nearly 13% of the licensees did not report an employment status, with APRN percentages extremely worrisome with 25-35% not reporting. This could potentially be corrected with different data collection strategies upon licensure renewal.

SUMMARY

Taken together, these findings suggest that North Dakota has a highly active nursing workforce with strong full-time labor-force participation, particularly among RNs and CRNAs. However, the employment patterns also reveal potential areas for workforce planning. LPNs have both a greater part-time/per-diem component and a higher proportion of licensees unemployed but seeking nursing work than RNs or the larger APRN groups. This is particularly relevant given the concentration of LPNs in outpatient and nursing home/extended-care settings. The coexistence of workforce needs in these sectors with LPNs actively seeking employment could indicate opportunities to examine whether geographic, scheduling, compensation, or job-characteristic mismatches are limiting workforce utilization. Understanding where nurses practice—and which license groups comprise the workforce within each setting—is essential for identifying setting-specific vulnerabilities and developing workforce strategies appropriate to North Dakota's healthcare delivery system.

At the state level, the 362 licensed nurses actively seeking nursing work represent a relatively small but potentially important source of additional workforce capacity (NDBON, 2026c). Rather than viewing all licensed nurses who are not currently working as a reserve workforce, the distinction between those seeking and those not seeking employment provides a more realistic assessment. Nurses actively seeking employment are more immediately relevant to recruitment strategies, whereas nurses not seeking nursing employment may be less likely to re-enter the workforce without changes in personal circumstances or employment conditions.

One methodological issue deserves emphasis in reporting these findings: 12.9% of employment status was not reported overall and was especially high among NPs (25.7%), CNMs (35.9%), and CNSs (21.1%). Consequently, comparisons of overall employment percentages across license types should be interpreted cautiously. The full-time versus part-time distribution among nurses who are known to be actively employed provides a more stable description of work intensity, while percentages based on all licensees are useful for estimating each group's contribution to the overall licensed workforce. Approximately 70% of the ‘not reported’ licenses are new graduates, so an assumption might be made that these new licensees have not yet accepted employment, however, these percentages are still markedly elevated. There is need

for additional research into the ‘not reported’ phenomenon as the ND Board of Nursing captures more data to determine if this might be a first-round collection issue or if the phenomenon develops into a trend.

A limitation in interpreting nursing employment status is the lack of a standard definition of full-time employment, which may vary by employer, practice setting, and scheduling model. For example, full-time status may represent 40 hours per week in some settings but 36 hours for nurses working 12-hour shifts, while part-time and per-diem classifications may encompass substantial variation in hours worked. Consequently, employment status reflects workforce participation but does not directly measure the amount of nursing labor available. Full-time equivalent (FTE) measures provide a more precise estimate of workforce capacity by standardizing employment by hours worked and enabling meaningful comparisons across license types, settings, and geographic areas. Because scheduled hours, hours worked, and individual FTE status were not available in these data, the findings should be interpreted as measures of nursing workforce participation rather than actual workforce capacity. Future workforce data collection should include FTE or average weekly hours worked to more accurately estimate available nursing labor.

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HEALTHCARE TAKES A TEAM

CHAPTER
EIGHT
Behavioral Health and Non-Physician Healthcare Workforce

North Dakota's healthcare workforce includes professionals supporting behavioral health, rehabilitation, pharmacy, laboratory services, dentistry, nutrition, and other areas of care. Their education, training, scopes of practice, and geographic distribution influence how healthcare is delivered across the state. Understanding this broader workforce provides a clearer picture of the professionals and services supporting North Dakota communities.

How many health professionals practice in North Dakota matters. So does where they practice.



8.2
Physician Assistants per 10,000 North Dakota residents

14.1
Occupational Therapists per 10,000 North Dakota residents

Both rates are higher than the national rate.

NORTH DAKOTA SNAPSHOT

81.7% of physical therapists practicing in North Dakota graduated from a North Dakota school.

INTRODUCTION

This chapter addresses specific health occupations related to currently funded activities in the state as well as those health professionals trained within the state who are not addressed in other chapters. A majority of the data used here was obtained through the professional licensure boards in North Dakota.

DEFINING BEHAVIORAL HEALTH WORKFORCE

There are a variety of ways to define behavioral health workforce. The definition should include the providers who treat individuals with behavioral health disorders and should examine their education, scope of practice, and level of independence in the treatment environment. In North Dakota, a simple method for defining the behavioral health workforce is to utilize the tiered classification system established in 2017 by the North Dakota Legislature. This classification system for mental health professionals was based on a thorough review of education and statutory guidelines along with scope of practice, to ensure that professionals are being fully utilized within their scope of practice (Bauman et al., 2020). The colleges and universities located within North Dakota offer a variety of degrees within the behavioral health field. The types of degrees available at North Dakota institutions range from associate degrees in human and/or social services all the way to a medical degree and a psychiatry residency program available in the state. With such a wide range of degrees in behavioral health available in the state, North Dakota residents have several educational opportunities that would facilitate entry into work in the field.

THE TIERED SYSTEM

Determining which professions are included in the behavioral health workforce is challenging due to varying education requirements, scopes of practice, and levels of responsibility. A broad definition of behavioral health workforce includes providers of substance abuse and mental health services, as well as those providing services in supportive roles. Established in 2017 by the North Dakota Legislature, the tiered classification system is a simple way of defining the behavioral health workforce. This system classifies the various professions based on the required level of education and scope of practice. A full detailed description of the tiered system can be found in the *7th Biennial Report* (University of North Dakota School of Medicine and Health Sciences Advisory Council, 2023).

PSYCHOLOGISTS

Psychologists are licensed mental health professionals who can treat mental illnesses through therapy, as well as administer and interpret psychometric tests/assessments to assist in diagnoses. Psychologists hold a doctoral degree in clinical or counseling psychology, usually a PhD or PsyD, from an American Psychological Association (APA) or Canadian Psychological Association (CPA) accredited program to be eligible for licensure in North Dakota. There are no other approved accrediting bodies. To be licensed in North Dakota, psychologists must adhere to the standards and ethics of the APA, complete at least two years of supervised professional experience, and complete written and oral examinations (Bauman et al., 2020). There are 294 psychologists licensed in North Dakota or about 3.7 psychologists per 10,000 residents (North Dakota State Board of Psychologist Examiners [NDSBPE], 2026).

EDUCATIONAL PROGRAMS IN NORTH DAKOTA

The University of North Dakota (UND) is the only institution in North Dakota with psychology training programs accredited by the APA. UND offers doctoral programs in both clinical and counseling psychology. These programs allow North Dakota to fully train psychologists in state and prepare individual practitioners for licensure after program completion (Bauman et al., 2020).

PRACTICE CHARACTERISTICS

Psychologists in North Dakota have been licensed for an average of 15.2 years (NDSBPE, 2026). The majority of psychologists who are licensed in North Dakota are in a metropolitan area (n = 188, 83.6%) (Figures 8.1 and 8.2). The metropolitan areas in North Dakota include Burleigh, Cass, Grand Forks, McHenry, Morton, Oliver, Renville, and Ward counties.

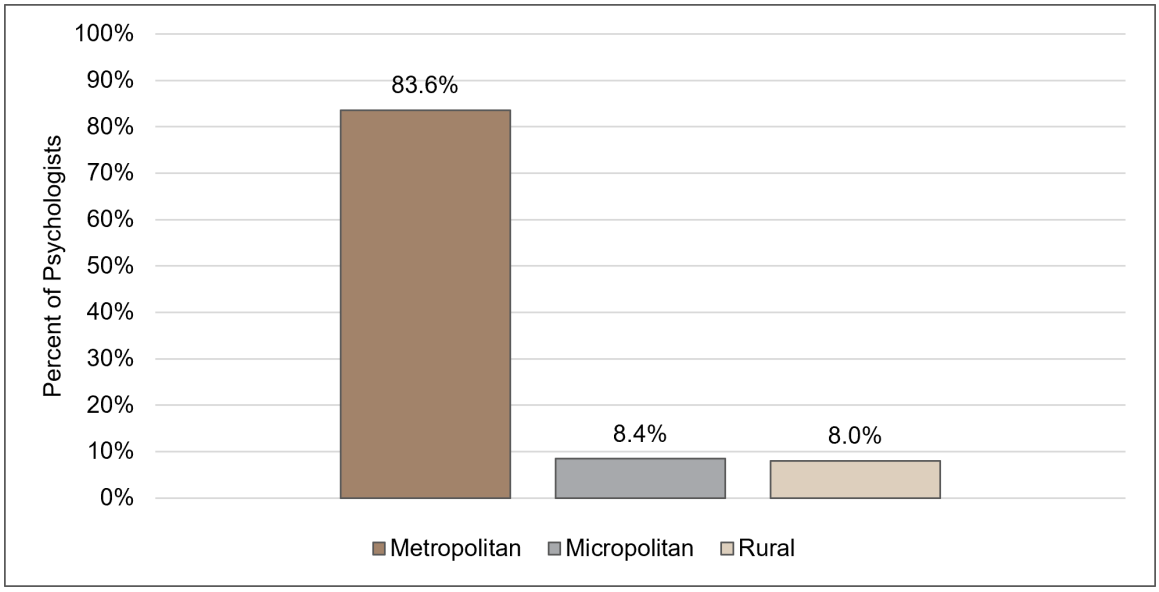


Figure 8.1: Number of Psychologists in North Dakota by Metropolitan-Rural Designation (North Dakota State Board of Psychologist Examiners [NDSBPE], 2026). Data used for this graphic represents those psychologists with a valid location in North Dakota.

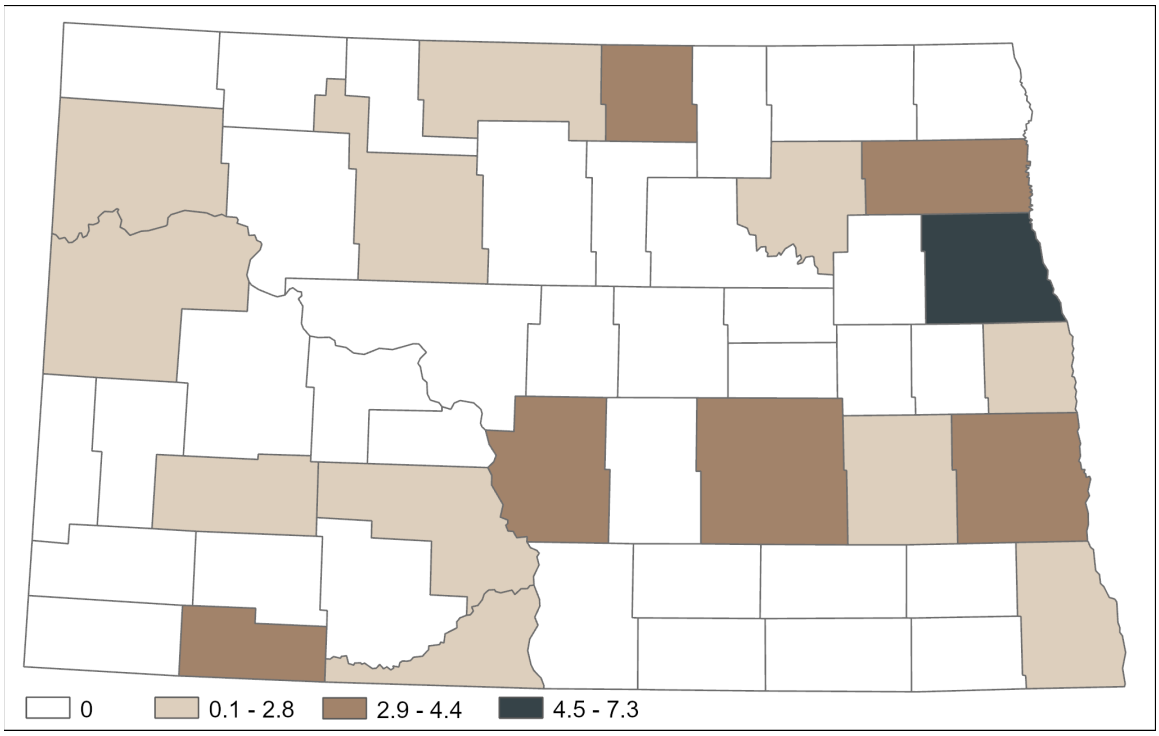


Figure 8.2: Rate of Psychologists per 10,000 North Dakota Residents, by County, 2026 (NDSBPE, 2026).

COUNSELORS

Counselors are licensed behavioral health professionals who treat behavioral health conditions through individual, family, or group therapy. Counselors provide assessments, diagnoses, and therapeutic interventions to individuals, couples, families, and groups to achieve more effective emotional, mental, and social development and adjustment (Bauman et al., 2020). There are 893 counselors licensed in North Dakota, including 148 licensed associate professional counselors (LAPC), 215 licensed professional counselors (LPC), and 530 licensed professional clinical counselors (LPCC; North Dakota Board of Counselor Examiners [NDBCE], 2026).

EDUCATION

Counselors are required to obtain a master's degree or higher within the field of counseling from an accredited school to be eligible for licensure in North Dakota. North Dakota State University (NDSU) offers a master's degree in clinical mental health counseling and one in school counseling. The Council for Accreditation of Counseling and Related Educational Programs (CACREP) approved accreditation for both programs at NDSU. The University of North Dakota, University of Jamestown, and University of Mary also offer master's degrees in counseling. UND offers four areas of specialization for the MA counseling degree including addiction counseling, community mental health counseling, child adolescent counseling, and rehabilitation. The clinical counseling program at the University of Jamestown is an online program. The University of Mary also offers areas of specialization including addiction counseling, clinical mental health counseling, and school counseling. The master's level programs at UND, University of

Jamestown, and University of Mary are not listed with any accreditation bodies for counseling education (Bauman et al., 2020).

LICENSURE REQUIREMENTS

LAPC and LPC

To receive LAPC licensure in North Dakota, counselors must have a master's degree in counseling from an accredited institution that meets the standards of the Board of Counselors Examiners, provide documentation stating they will adhere to the standards of the profession, and write a plan to acquire supervised experience. LAPC is the preliminary licensure that is given before obtaining the full LPC licensure, and these professionals must acquire experience supervised by an LPC or LPCC. After obtaining at least two years of experience (and at least half of that being supervised), licensure as an LPC in North Dakota requires that the counselor write a statement of professional intent to practice in the state and the proposed use of the license, the intended population, and the procedures they intend to use, as well as complete an examination prescribed by the board (Bauman et al., 2020).

LPCC

To receive LPCC licensure, in addition to the requirements of the LPC, the counselor must complete: a total of 60 graduate semester credits, 12 of which may be obtained in documented training, clinical experiences, or courses consistent with the North Dakota Century Code clinical education guidelines; graduate clinical coursework, including abnormal psychology and psychopathology, appraisal and diagnostic evaluation, and clinical counseling skills; 700 hours of training in supervised practical and/or internships relevant to the practice of counseling; two years or 3000 hours of post-master's supervised clinical experience in a clinical setting, 100 hours of which must include supervision by a licensed professional clinical counselor; and a passing score on the National Clinical Mental Health Counseling Examination (Bauman et al., 2020).

PRACTICE CHARACTERISTICS

The overall rate of licensed counselors (LAPCs, LPCs, and LPCCs) employed in North Dakota is 8.0 per 10,000 population, including 1.5 LAPCs, 1.5 LPCs, and 4.9 LPCCs per 10,000 population (NDBCE, 2026). Most counselors in North Dakota are located in the metropolitan areas, with 81.8% of LPCCs (n = 320), 82.0% of LPCs (n = 100), and 74.0% of LAPCs (n = 91) practicing in metropolitan areas (Figures 8.3 and 8.4; NDBCE, 2026).

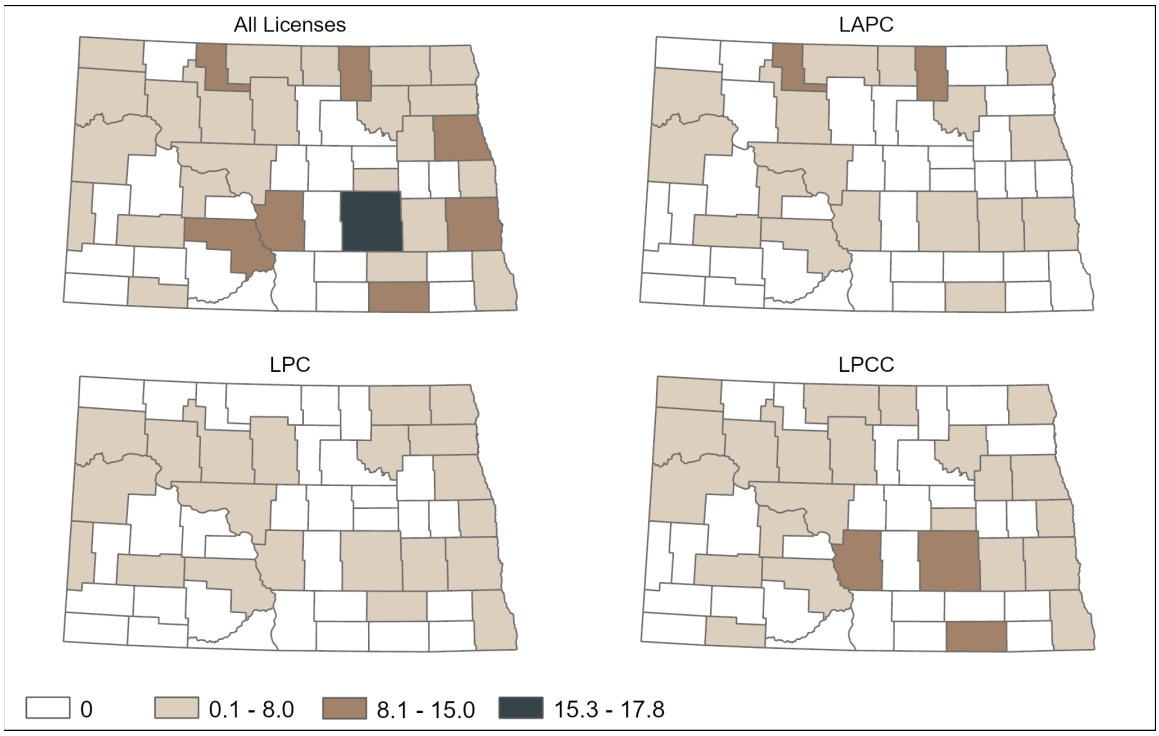


Figure 8.3: Rate of Counselors per 10,000 North Dakota Residents, by License Type and by County, 2026 (North Dakota Board of Counselor Examiners [NDBCE], 2026).

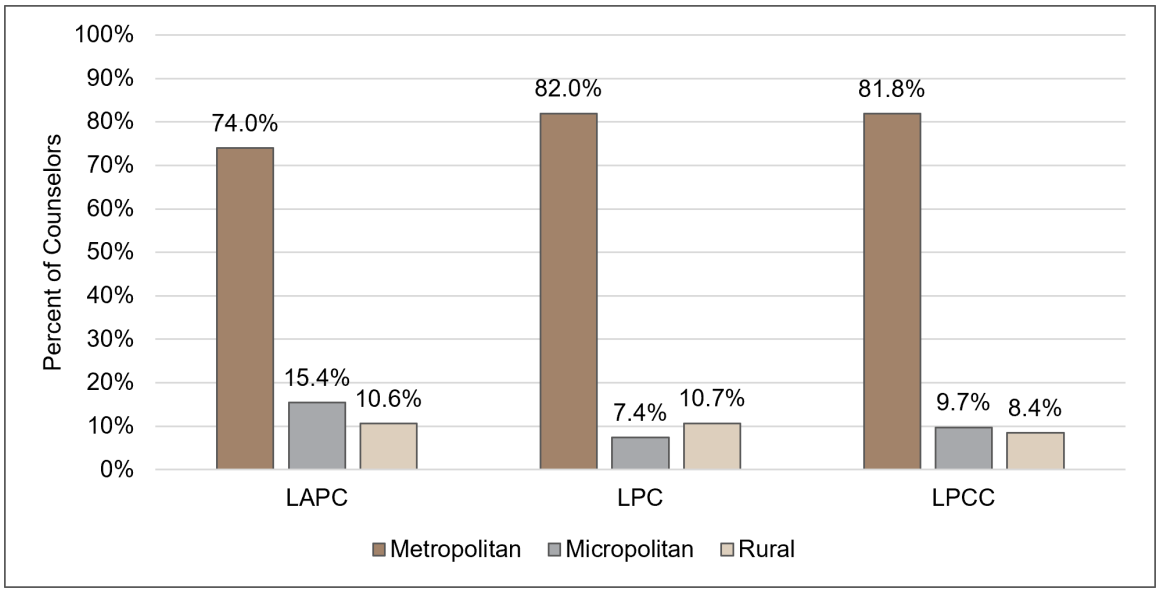


Figure 8.4: Number of Counseling Professionals in North Dakota by Metropolitan-Rural Designation in 2026 (NDBCE, 2026). Data used for this graphic represents those counselors with a valid location in North Dakota.

LICENSED ADDICTION COUNSELORS

Licensed addiction counselors (LAC) are behavioral health professionals who specialize in assessing and counseling individuals with substance-related or addictive disorders through individual and/or group therapy. To be licensed as an LAC in North Dakota, one must have a bachelor's or higher degree in addiction studies, complete course work set forth by the North Dakota State Board of Addiction Counseling Examiners, complete written and oral examinations, complete a clinical training program, and adhere to the code of ethics (Bauman et al., 2020). There are 444 addiction counselors licensed in North Dakota, which is equal to 5.5 LACs per 10,000 North Dakota residents (North Dakota Board of Addiction Counseling Examiners [NDBACE], 2026). The majority of licensed addiction counselors in North Dakota are located in metropolitan areas (n = 280, 72.0%), while similar proportions are located in micropolitan areas (n = 57, 14.7%), and rural areas (n = 52, 13.4%; Figures 8.5 and 8.6).

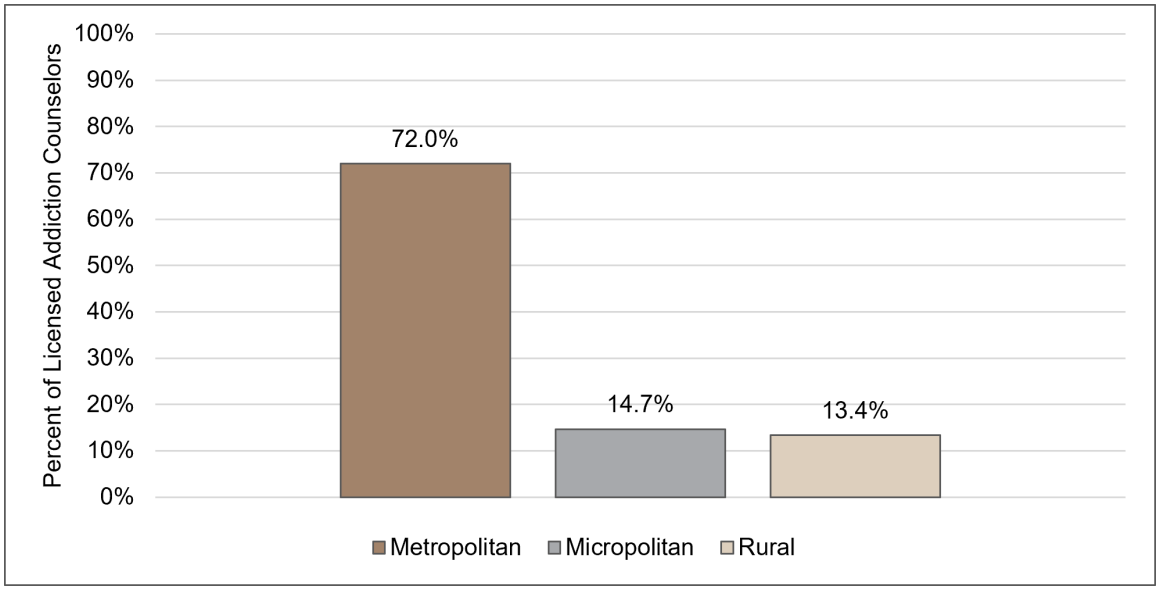


Figure 8.5: Number of Licensed Addiction Counselors in North Dakota by Metropolitan-Rural Designation, 2026 (North Dakota Board of Addiction Counseling Examiners [NDBACE], 2026). Data used for this graphic represents those licensed addition counselors with a valid location in North Dakota.

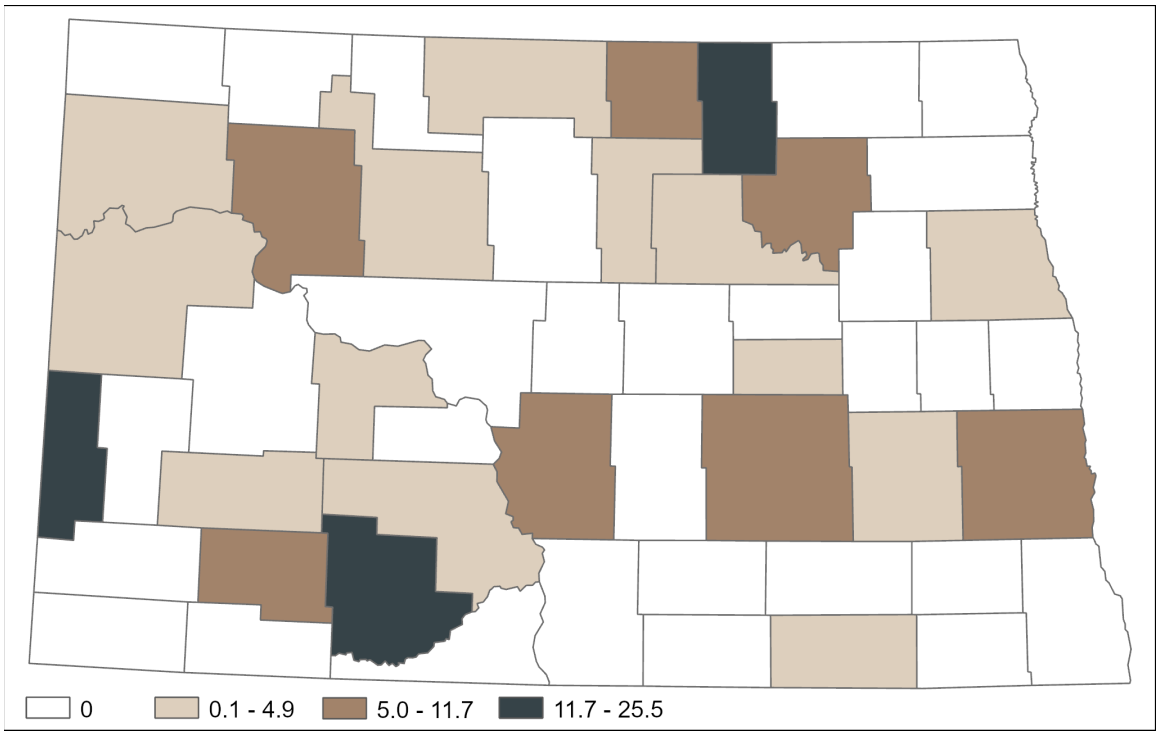


Figure 8.6: Rate of Licensed Addiction Counselors per 10,000 North Dakota Residents, by County, 2026 (NDBACE, 2026).

EDUCATIONAL PROGRAMS IN NORTH DAKOTA

In North Dakota, four institutions of higher education offer degrees or classes focused on addiction studies. The University of North Dakota offers a specialization in addiction counseling within the Master of Counseling program and the Department of Social Work also offers a chemical dependency minor. The University of Mary offers a bachelor's degree in addiction counseling as well as a minor in addiction counseling that can be combined with other degree programs they offer, such as a degree in social work, psychology, or their Master of Clinical Mental Health Counseling degree program. Minot State University offers a bachelor's degree in addiction studies and the National Addiction Studies Accreditation Commission (NASAC) accredits this program. In addition, the University of Jamestown offers a bachelor's degree in psychology with a concentration in addiction counseling (Bauman et al., 2020).

LICENSED MARRIAGE AND FAMILY THERAPISTS

Marriage and family therapists (LMFT) are behavioral health professionals who specialize in marriage and family systems. They diagnose and treat mental and emotional disorders within couples or families. Licensed associate marriage and family therapist (LAMFT) is the preliminary licensure before the full licensure of LMFT. To be eligible for licensure in North Dakota, these practitioners must have a master's degree from an educational program approved by the licensing board. There are no colleges or universities in North Dakota that currently have degree programs accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) but there are a variety of degree programs in psychology and counseling available in the state (Bauman et al., 2020). LAMFTs have the same

capabilities as LMFTs, except LAMFTs are supervised by LMFTs. Currently, there are 6 LAMFTs and 54 LMFTs with active licenses in North Dakota. There also are 8 supervisors approved by the North Dakota Marriage and Family Therapy Licensure Board, four of whom are in North Dakota. Three of the other four supervisors are in Minnesota and one is in New York. Those LMFTs with active licenses in North Dakota have been licensed for an average of 9.1 years (North Dakota Marriage and Family Therapy Licensure Board, 2026).

SOCIAL WORKERS

Social workers are licensed professionals who work in a variety of fields related to human services with the aim of helping individuals and families improve their lives through the restoration or enhancement of biopsychosocial functioning. The three licensures obtainable in North Dakota are licensed clinical social worker (LCSW), licensed master social worker (LMSW), and licensed baccalaureate social worker (LBSW), with LCSWs having the most autonomy in practice and LBSWs having the least. LBSWs can do assessments, interventions, and case management or supervision, as well as educate and develop policies, programs, and activities. LMSWs have the same capabilities as LBSWs but have specialized knowledge and more advanced skills in these areas of practice. LCSWs have the same capabilities as LBSWs and LMSWs but have specialized clinical knowledge and training in the areas of practice, and can also diagnose and treat mental, emotional, and behavioral health disorders, conditions, and addictions. During the 2019 legislative session in North Dakota, the titles for licensed social workers changed. LCSWs previously were called licensed independent clinical social workers; LMSWs previously were licensed certified social workers; and LBSWs previously were licensed social workers.

There were 2,941 social workers licensed in North Dakota in 2026, which is equal to 36.8 licensed social work professionals per 10,000 North Dakota residents. Of those who are licensed in North Dakota, most were LBSWs (n = 1,453, 49.4%), followed by LCSWs (n = 977, 33.2%), and LMSWs (n = 511, 17.4%) (Figure 8.7). The licensure level breakdown for licensed social workers in North Dakota was equal to 18.2 LBSWs, 6.4 LMSWs, and 12.2 LCSWs per 10,000 North Dakota residents (North Dakota Board of Social Work Examiners [NDBSWE], 2026).

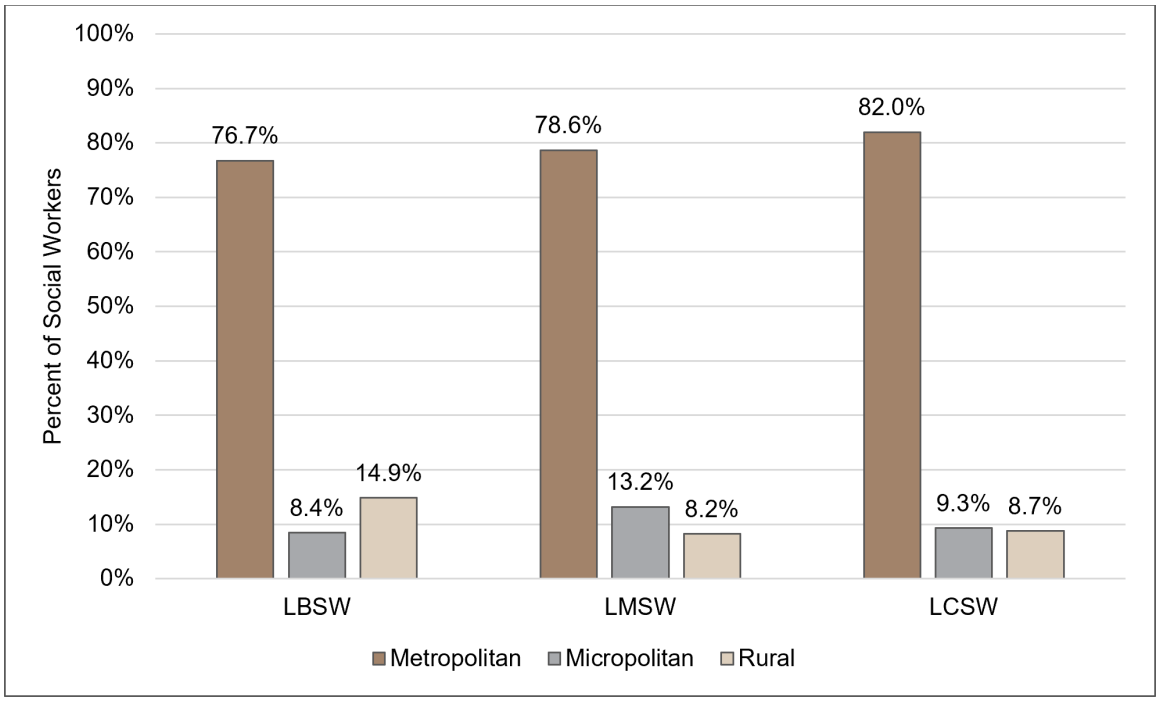


Figure 8.7: Percent of Social Workers by Metropolitan-Rural Designation and Licensure Type, 2026 (North Dakota Board of Social Work Examiners [NDBSWE], 2026).

EDUCATION

There are different educational and training requirements for the different social work licensures. To be licensed in North Dakota, LBSWs must have a baccalaureate degree in social work from a program accredited by the Council on Social Work Education (CSWE), pass an examination approved by the North Dakota Board of Social Work Examiners, and adhere to the code of social work ethics adopted by the North Dakota Board of Social Work Examiners. Graduates from Canadian institutions with social work programs that are accredited by the Canadian Association for Social Work Education are also eligible for licensure in North Dakota at the undergraduate and graduate levels. LMSWs have similar requirements as LBSWs, except they must obtain a master's degree in social work from a CSWE accredited program and obtain a passing score on the Association of Social Work Boards (ASWB) master's level exam. LCSWs have the same requirements as LMSWs and LBSWs, but they must complete an additional 3,000 hours of post-master's clinical social work experience under the supervision of an LCSW. On average, social workers in North Dakota have been out of school for approximately 16.5 years.

The University of North Dakota, the University of Mary, Minot State University, and Sitting Bull College all offer bachelor's degree programs in social work that are accredited by the Council on Social Work Education (CSWE). UND also has a master's degree program in social work that is accredited by the CSWE. The University of Mary has started a master's degree program in social work, which is seeking accreditation by CSWE. North Dakota State University (NDSU) offers a dual degree program in partnership with Minot State University. The dual degree program allows students the option to take all classes at NDSU and earn a bachelor's degree in human development and family sciences from NDSU as well as a bachelor's degree in social

work from Minot State University. Cankdeska Cikana Community College, Nueta Hidatsa Sahnish College, and the North Dakota State College of Science all offer associate degree programs in social work. This degree option is designed for students who are planning to pursue a bachelor's degree in social work once their associate's degree program is completed. It offers a cost-effective way for students to begin their education in social work.

PRACTICE CHARACTERISTICS

Location information was determined for those social work professionals with an active license and working for a North Dakota based employer. There were a total of 2,030 licensed social workers working for a North Dakota based employer which is equal to 69.0% of the total number of social workers licensed in North Dakota. Data were analyzed to determine the specific metropolitan-rural designation for the various social work professionals in North Dakota. The analysis indicated that 1,592 (78.4%) of the social work professionals in North Dakota are in metropolitan areas, followed by those in rural areas (n = 245, 12.1%), and micropolitan areas (n = 193, 9.5%). The results, categorized by licensure level, indicate that 873 (76.7%) of LBSWs, 287 (78.6%) of LMSWs, and 432 (82.0%) of LCSWs are in metropolitan areas indicating that most social work professionals are in a metropolitan setting as shown in Figure 8.7. Additionally, data were analyzed to create maps of the rate of social workers per 10,000 population by North Dakota county for all licensed social work professionals as well as broken down by each license type which is displayed in Figure 8.8 (NDBSWE, 2026).

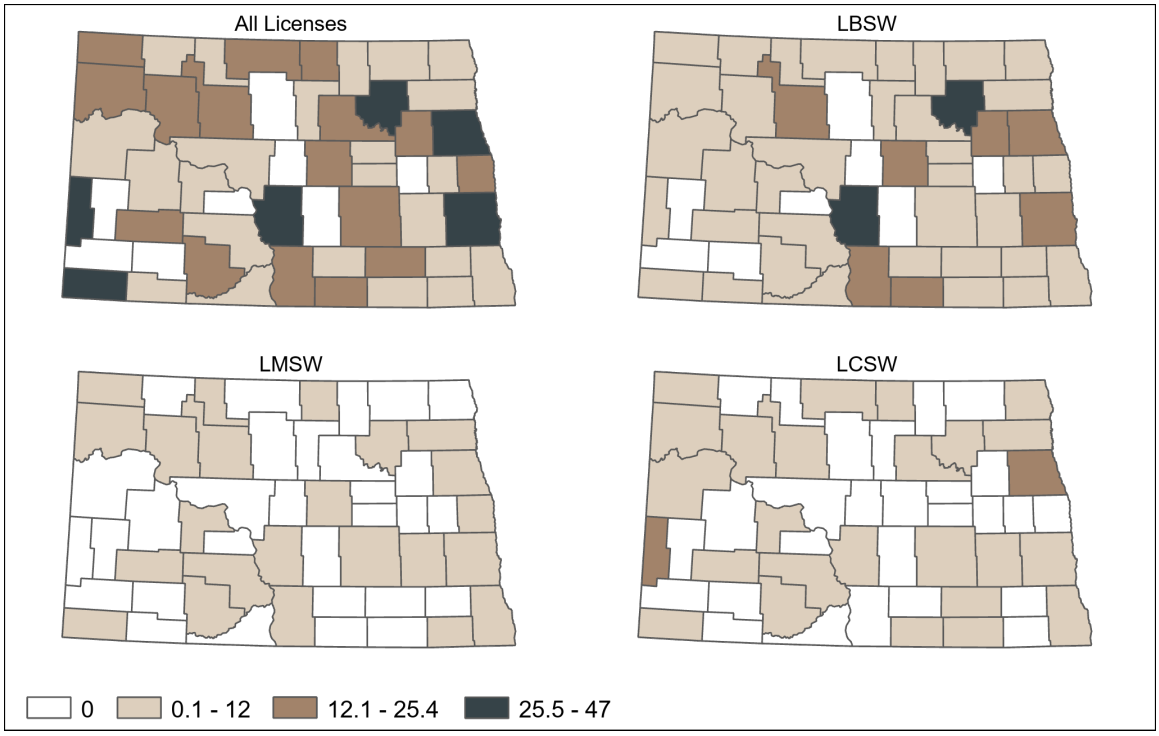


Figure 8.8: Rate of Social Workers per 10,000 North Dakota Residents, by License Type and by County, 2026 (NDBSWE, 2026).

UNIVERSITY OF NORTH DAKOTA SOCIAL WORK PROGRAM

The Department of Social Work at UND is home to undergraduate and graduate programs in social work, both of which are accredited by CSWE. The department offers both degrees on-campus and online (synchronous) in full-time and part-time formats. Students in the graduate program choose from one of two specializations: advanced generalist practice or clinical social work. The department offers two interdisciplinary undergraduate minors: gerontology and substance use and addiction. The department is also home to the Children and Family Services Training Center, the primary training agency for child welfare services in North Dakota (University of North Dakota Social Work Department, 2026).

OCCUPATIONAL THERAPY PROFESSIONALS

Occupational therapy practitioners focus on helping clients gain/regain skills that allow them to live independently and engage in meaningful occupations. Settings where occupational therapy practitioners are found include, but are not limited to, acute care hospitals, rehabilitation centers, nursing homes, outpatient clinics, and/or school systems. Occupational therapists (OTs) also are qualified behavioral health professionals who provide evaluation and intervention for individuals at risk of psychiatric, addiction, behavioral issues, and cognitive disabilities. OTs provide therapy for individuals with the purpose of building and enhancing skills, and developing habits, routines, and roles so individuals are successful in their everyday lives. To be licensed as an occupational therapist in North Dakota, one must obtain a degree from an occupational therapy educational program accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), complete a period of supervised fieldwork experience, and pass an examination approved by the National Board for Certification in Occupational Therapy (NBCOT) (Bauman et al., 2020). Currently, there are 1,125 occupational therapy practitioners licensed in North Dakota, 906 occupational therapists (OTs) and 219 occupational therapy assistants (OTAs) (North Dakota State Board of Occupational Therapy Practice [NDSBOTP], 2026). Based on the population of North Dakota, there are 14.1 occupational therapists per 10,000 North Dakota residents and 2.7 occupational therapy assistants per 10,000 North Dakota residents. The rate of OTs in North Dakota is higher than the national rate. In the U.S. there are 162,450 OTs which is equal to 4.8 OTs per 10,000 U.S. residents (Bureau of Labor Statistics, Occupational Employment and Wages, Occupational Therapists, 2025). On average, occupational therapy professionals (OTs, OTAs) have been in practice in North Dakota for 11.8 years. Broken down by profession, occupational therapists have been practicing on average, for 11.9 years and occupational therapy assistants have been practicing, on average, for 11.6 years NDSBOTP, 2026).

PRACTICE CHARACTERISTICS

The majority of the occupational therapy professionals (OTs, OTAs) in North Dakota (n = 711, 78.5%) are located in metropolitan areas, while similar proportions are located in micropolitan areas (n = 94, 10.4%), and rural areas (n = 101, 11.1%). Of the OTs working in North Dakota, 584 (80.7%) are located in metropolitan areas, 74 (10.2%) in micropolitan areas, and 66 (9.1%) in rural areas. For OTAs, 127 (70.0%) are located in metropolitan areas, 20 (11.0%) in micropolitan areas, and 35 (19.2%; Figures 8.9, 8.10 and 8.11) in rural areas (NDSBOTP, 2026).

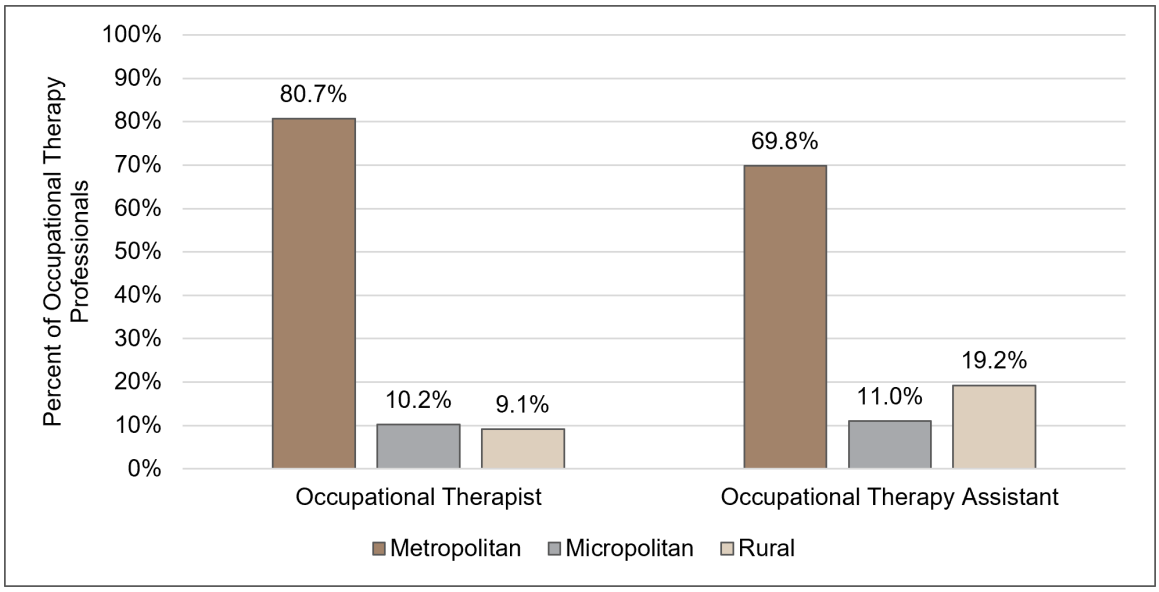


Figure 8.9: Number of Occupational Therapy (OT) Professionals in North Dakota by Metropolitan-Rural Designation, 2026 (North Dakota State Board of Occupational Therapy Practice [NDSBOTP], 2026). Data used for this graphic represents those occupational therapy professionals with a valid location in North Dakota.

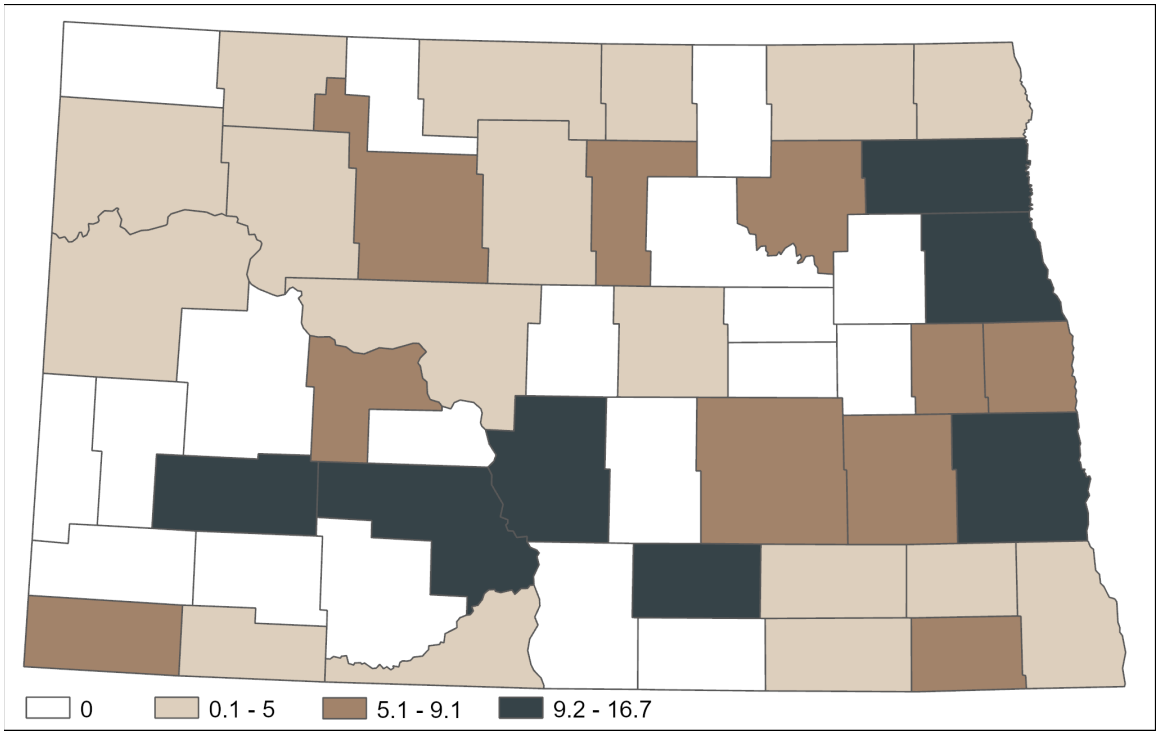


Figure 8.10: Rate of Occupational Therapists per 10,000 North Dakota Residents, by County, 2026 (NDSBOTP, 2026).

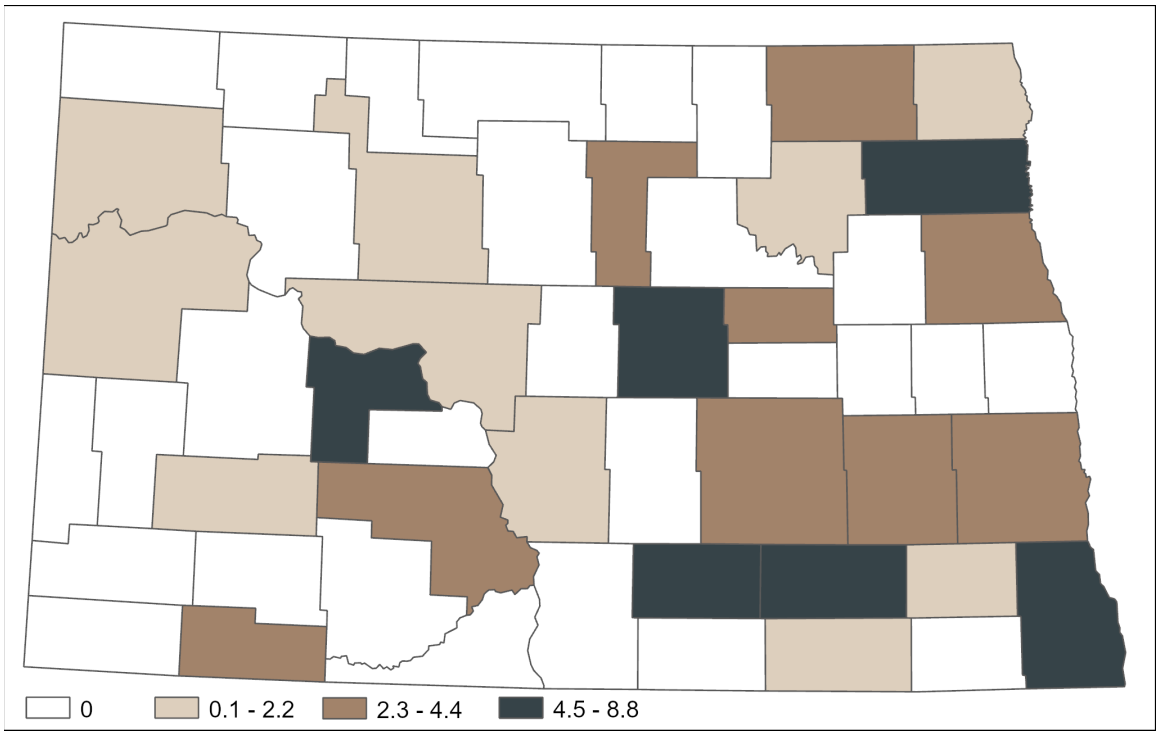


Figure 8.11: Rate of Occupational Therapy Assistants per 10,000 North Dakota Residents, by County, 2026 (NDSBOTP, 2026).

UNIVERSITY OF NORTH DAKOTA OCCUPATIONAL THERAPY PROGRAM

In 2025, UND OT graduated its fourth cohort of Occupational Therapy Doctorate (OTD) students. Of the 2025 OTD cohort, 24 of 45 completed the new graduate survey (5 months after graduation) for a response rate of 53%. The identified home states of the 2025 graduates were Colorado (n = 2), Minnesota (n = 9), North Dakota (n = 7), Wyoming (n = 3), Ohio (n = 1), Montana (n = 1) and Michigan (n = 1). Of the 24 respondents, 100% reported on their student debt and their annual anticipated entry-level salary projections for the upcoming year. Note that questions involving graduates' "satisfaction" with the OTD program are now assessed on the postgraduate survey delivered 1 year and 5 months after graduation, when graduates have approximately one full year of experience (University of North Dakota School of Medicine and Health Sciences UND Occupational Therapy Department [UND Occupational Therapy Internal Program Data], 2026).

Student loans reported by 2025 OTD graduates were: Less than $10,000 (n = 3), $10,000-$19,999 (n = 1), $20,000-$29,999 (n = 0), $30,000-$39,999 (n = 2), $40,000–$49,999 (n = 1); $50,000–59,999 (n = 2); $60,000-$69,999 (n = 3), $70,000-$79,999 (n = 1); $80,000–$89,999 (n = 2), $90,000–$99,999 (n = 0), $100,000–$149,999 (n = 8), and More than $150,000 (n = 1).

At the time of this survey, respondents reported their primary state of employment as: Minnesota (n = 10), North Dakota (n = 8), Wyoming (n = 6), Nebraska (n = 4), Montana (n = 2), Arizona (n = 1), South Dakota (n = 1), California (n = 1), Colorado (n = 1), Idaho (n = 1), New Mexico (n = 1), and Wisconsin (n = 1) (UND Occupational Therapy Internal Program Data, 2026).

For the OTD Class of 2025, 96% (n = 23) of respondents were working as occupational therapists and of those, 22 (96%) were employed in a full-time capacity, while 1 (4%) was working in a per diem position. One respondent did not answer, but this may have been due to a missed question as 24/24 responded to the employment setting questions. Respondents reported on their primary reason for selecting their current position, which were as follows practice setting (n = 11), location (n = 3), salary/wage (n = 5), other (n = 3), and benefits (n = 2). Employment settings for these respondents were as follows: 33% (n = 8) hospital setting, 25% (n = 6) free-standing outpatient clinic, 8% (n = 2) rehabilitation settings, 8% (n = 2) long-term care setting/skilled nursing facility, 8% (n = 2) in other settings, 4% (n = 1) early intervention, 4% (n = 1) home health, 4% (n = 1) mental health, and 4% (n = 1) school setting (UND Occupational Therapy Internal Program Data, 2026).

Those surveyed reported their full-time projected annual salary as follows: $50,000–$59,999 (n = 1); $60,000-$69,999 (n = 3), $70,000-$79,999 (n = 14); $80,000–$89,999 (n = 1), $90,000–$99,999 (n = 2), and $100,000–$149,999 (n = 3), No responses for: Less than $40,000–$49,999 (n = 0) and More than $150,000 (n = 0) (UND Occupational Therapy Internal Program Data, 2026).

The UND program expanded to Casper College in 1993 and became the first occupational therapy program in the nation to operate across state lines. Currently, UND and the University of Wyoming are collaborating to transfer the program to the University of Wyoming. Over its 33-year partnership with the Casper community and Casper College, the UND OT program has graduated nearly 400 occupational therapy alumni, who now make up approximately 40% of Wyoming's practicing occupational therapists.

OTHER EDUCATIONAL PROGRAMS

Beyond the OT program available through UND, there are two other higher education institutions in North Dakota that offer degree programs accredited by ACOTE. North Dakota State College of Science offers an OTA associate degree program. Additionally, the University of Mary offers doctoral and master's degree programs in occupational therapy. Both programs are fully accredited by ACOTE.

BEHAVIOR ANALYSTS

Behavior analysts are professionals who use experimental and applied analysis of behavior and statistics to develop techniques and treatments that facilitate the evaluation and modification of behavior, especially when the behavior is maladaptive (Bauman et al., 2020). For example, in North Dakota behavior analysts work with children who have been diagnosed with autism and help develop treatment plans and adaptive strategies. According to the North Dakota Century Code (43-64), there are two licensure levels in North Dakota: the licensed assistant behavior analyst (LABA) and the licensed behavior analyst (LBA). These are licensure titles approved by the North Dakota legislature during the 2019 legislative session. Licensed behavior analysts used to be referred to as licensed applied behavior analysts, and licensed assistant behavior analysts used to be referred to as registered applied behavior analysts. To obtain these licenses, applicants must complete education, examination, and experience requirements established by the State Board of Integrative Health Care, such as certification from the Behavior Analyst Certification Board (BACB); have the physical, mental, and professional

capability for practice of applied behavior analysis; and have a history free of any disciplinary action by the board (Bauman et al., 2020). There are 160 licensed behavioral analysts in North Dakota, 119 (74%) are practicing within the state (North Dakota Board of Integrative Healthcare, 2026).

BEHAVIOR TECHNICIANS

Behavior Technicians are paraprofessionals who practice under the supervision of either an LBA or LABA. They are responsible for the direct implementation of behavior analytic services. To be a behavior technician in North Dakota, an individual must meet requirements of the BACB, including at least a high school diploma or equivalent degree, passing a background check, 40 hours of training, completion of a competency assessment and the registered behavior technician (RBT) examination (Bauman et al., 2020).

MENTAL HEALTH TECHNICIANS/CASE AIDES

Mental health technicians and case aides are entry-level paraprofessionals with a basic understanding of mental illness and treatment that provide direct care services in inpatient facilities and outpatient agencies. To be certified as a mental health technician in North Dakota, applicants must have a high school degree, training in cardiopulmonary resuscitation (CPR), first aid, crisis intervention, Health Insurance Portability and Accountability Act (HIPAA), and confidentiality, as well as medication module training and mental health certificate training (Bauman et al., 2020).

PEER SUPPORT SPECIALISTS

Peer support specialists are individuals with behavioral health experience who use this experience to serve as a pro-social model, offer insight to an individual's care team, and provide support focused on advocacy, coaching, and mentoring. The only education required is a weeklong training course through the Health and Human Services North Dakota Behavior Health Division (Bauman et al., 2020).

PHYSICIAN ASSISTANTS

PRACTICE CHARACTERISTICS

North Dakota has a total of 658 physician assistants (PAs) licensed in the state, which is equal to 8.2 PAs per 10,000 North Dakota residents (North Dakota Board of Medicine, 2026). This rate is higher than the national rate. In the U.S. there are 162,700 PAs which is equal to 4.8 PAs per 10,000 U.S. residents (Bureau of Labor Statistics, Occupational Employment and Wages, Physician Assistant, 2025). The majority of physician assistants in North Dakota work in metropolitan areas (n = 365, 72.6%) followed by rural areas (n = 83, 16.5%), and micropolitan areas (n = 55, 10.9%). (Figures 8.12 and 8.13).

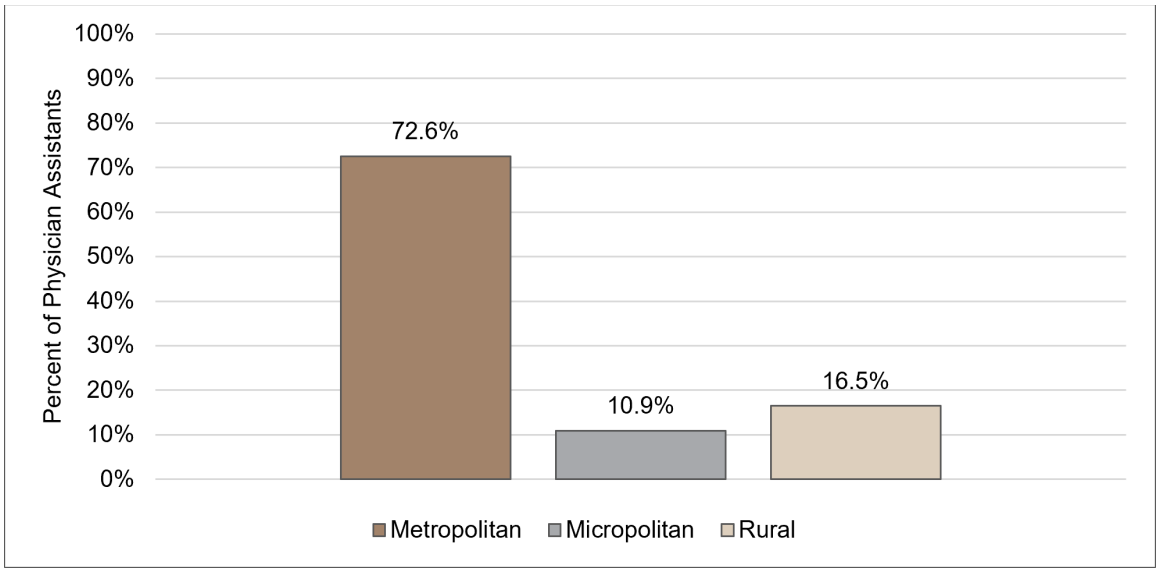


Figure 8.12: Number of Physician Assistants in North Dakota by Year and Metropolitan-Rural Designation, 2026 (North Dakota Board of Medicine, 2026). Data used for this graphic represents those physician assistants with a valid location in North Dakota.

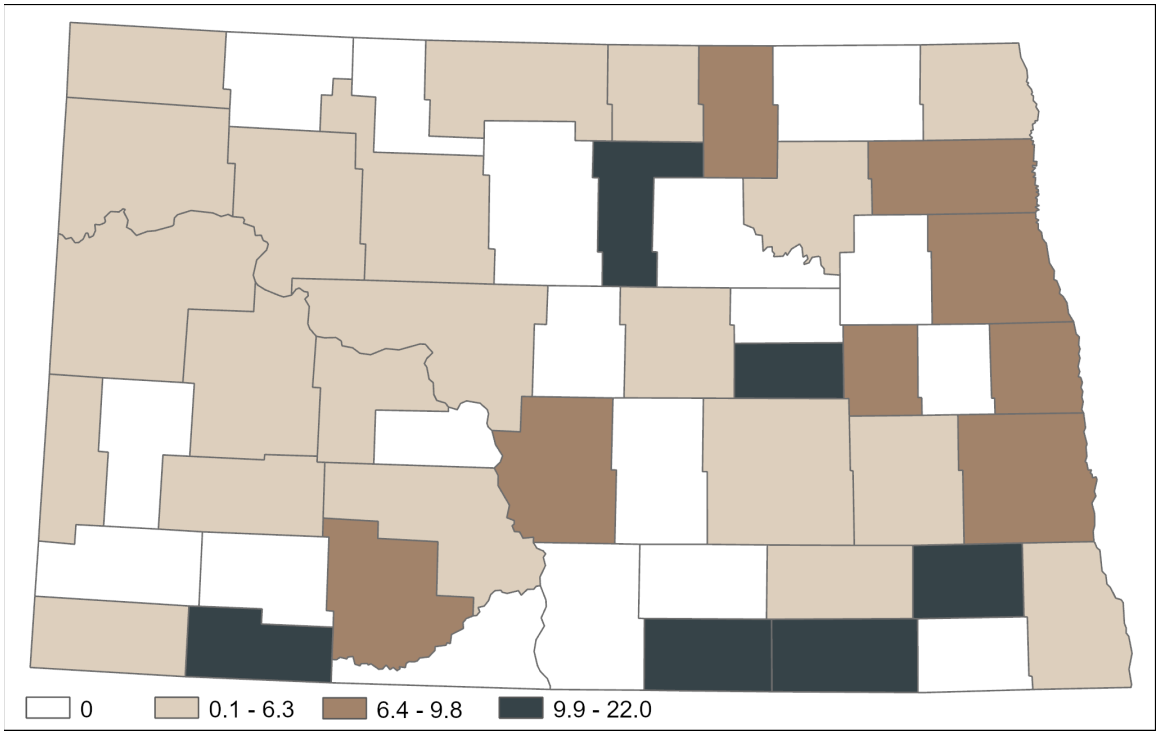


Figure 8.13: Rate of Physician Assistants per 10,000 North Dakota Residents, by County, 2026 (North Dakota Board of Medicine, 2026).

UNIVERSITY OF NORTH DAKOTA PHYSICIAN ASSISTANT PROGRAM

The University of North Dakota Department of Physician Assistant Studies graduated 32 students in May 2025. The workforce data summarized below are based on responses from the 19 graduates (59.4%) who completed the workforce survey between April and May 2026 (University of North Dakota School of Medicine and Health Sciences Department of Physician Assistant Studies, 2026).

Home states of graduates eligible for state licensing and employment include Minnesota (n = 10, 52.6%), North Dakota (n = 7, 36.8%), Montana (n = 1, 5.3%), and Indiana (n = 1, 5.3%). When the survey was conducted, all respondents who reported employment status (n = 19, 100%) had secured full-time positions. The majority of graduates (n = 17, 89.5%) reported working in their home state. Those working outside their home state are employed in a neighboring state (North Dakota or Minnesota). By practice location, 10 are working in Minnesota, 7 in North Dakota, and one each in Montana and Indiana. Of the 19 respondents, 18 (94.7%) still reside in the same city or town where they lived at the time of graduation. Eighteen of 19 respondents (94.7%) reported holding a single PA position, one (5.3%) reported holding two positions, and 6 of 19 (31.6%) are employed by the same health system in which they completed the majority of their clinical training.

Nearly half of the employed graduates reported working in a primary care setting (n = 9 of 19, 47.4%). Among those in non-primary care roles, employment settings include surgical specialties, cardiothoracic surgery, orthopedics, and neurosurgery (n = 3), as well as cardiology, ENT, hematology/oncology, critical care, urgent care, and wound care (n = 2).

In terms of care for rural areas, 3 of 19 responding graduates (15.8%) practice in communities of fewer than 10,000, and an additional 8 (42.1%) practice in micropolitan communities of 10,000–49,999 for a combined 11 of 19 (57.9%) practicing outside a metropolitan area. Seven of 19 respondents (36.8%) practice in a federally designated underserved settings, including Critical Access Hospitals, Rural Health Clinics, Medically Underserved Areas/Populations, Federally Qualified Health Centers, HPSAs, and National Health Service Corps sites. Five of 19 (26.3%) are working in rural/underserved primary care. Six graduates (31.6%) spend all or part of their time in a practice setting where a physician is not physically present the majority of the time.

The starting salary range for graduates of the Physician Assistant Studies program at the University of North Dakota is $108,000–$210,000, averaging $129,959 per year (n = 17; median $124,000). Excluding a single outlying response of $210,000, the average is $124,956. Regarding educational debt, the PA professional degree students reported a mean debt of $67,667 and a median debt of $72,500 (n = 18). In comparison, the undergraduate degree students reported a mean debt of $12,438 and a median debt of $2,000 (n = 16).

PHYSICAL THERARY PROFESSIONALS

Physical therapists are healthcare professionals who examine individuals with mechanical, physiological, and developmental body structure impairments or activity limitations and/or participation restrictions in movement and alleviate the impairments through designing and implementing therapeutic interventions. To be licensed in North Dakota, one must graduate from a professional physical therapy education program accredited by a national accreditation

agency approved by the North Dakota Board of Physical Therapy and pass the examination approved by the board. The most recent licensure data for physical therapists (PTs) and physical therapist assistants (PTAs) were obtained from the North Dakota Board of Physical Therapy in early 2026 (North Dakota Board of Physical Therapy [NDBPT], 2026). The complete data set contained 1,350 licensed providers, including 1,149 PTs and 201 PTAs. Of the 1,149 PTs, 962 (83.7%) were employed, 92 (8.0%) were self-employed, and 29 (2.5%) reported a combination of self-employed and employed. The remaining 66 (5.7%) PTs were unemployed. Of the 201 PTAs, 176 (87.6%) were employed as PTAs, 2 (1.0%) were self-employed, and 1 (0.5%) reported a combination of self-employed and employed. The remaining 22 (11.0%) PTAs were unemployed. In North Dakota, 1,149 PTs is equal to 13.6 PTs per 10,000 North Dakota residents. This rate is higher than the national rate of 7.8 PTs per 10,000 U.S. residents with a total of 267,330 PTs in the U.S (Bureau of Labor Statistics Physical Therapist, 2025).

DEMOGRAPHICS

The demographic data of gender revealed 70.0% of providers were women, 28.7% were men, and 0.3% preferred not to respond. Among the license types, 69.5% of PTs and 79.6% of PTAs reported being women. For race/ethnicity, the vast majority of licensees (n = 1,282, 95.0%) reported being white (non-Hispanic); with 94.9% of PT and 95.5% of PTA providers reported as white (non-Hispanic).

EDUCATION

Physical therapists graduate with a Doctor of Physical Therapy (DPT) degree. The DPT, first introduced in North Dakota in 2006, has become the required entry-level degree nationally for physical therapists as of 2015. The majority of PTs practicing in North Dakota have a Doctor of Physical Therapy degree (73.7%), followed by a master's degree (17.2%), and bachelor's degree (8.5%) (Physical Therapy Class of 2025 Graduate Workforce Survey Results, 2026). An associate degree is the entry-level degree for physical therapist assistants and nearly all (98.0%) PTAs in North Dakota have this degree (Table 8.1). A majority (73.6%) of all practicing PTs and PTAs in North Dakota graduated from a North Dakota school. Specifically, 81.7% of physical therapists obtained their degree from a North Dakota school, 6.0% graduated from a Minnesota school and 13 individuals were educated in another country. The PTAs practicing in North Dakota included 27.4% educated in North Dakota and 49.8% educated in Minnesota (NDBPT, 2026).

Table 8.1: Educational Attainment for North Dakota Physical Therapists and Physical Therapist Assistants, 2026 (NDBPT, 2026).

Degree	PT (N)	PT (%)	PTA (N)	PTA (%)	All (N)	All (%)
Associate's	0	0.0%	197	98.0%	197	14.6%
Bachelor's	98	8.5%	3	1.5%	101	7.5%
Certificate	6	0.5%	1	0.5%	7	0.5%
Master's	198	17.2%	0	0.0%	198	14.7%
Doctor of Physical Therapy	847	73.7%	0	0.0%	847	62.7%
Total	**1,149**	**100%**	**201**	**100.0%**	**1,350**	**100%**

PRACTICE CHARACTERISTICS

Multiple practice settings were identified for PTs and PTAs in the data set. The majority of PTs practice in an outpatient setting (55.4%), while a majority of PTAs practice in an extended care setting (36.8%), followed by the outpatient setting (33.8%) (Figure 8.14). PTs and PTAs in North Dakota work with a multitude of individuals with various diagnoses, injuries, or conditions, meaning most do not work solely with individuals requiring only one type of care. Thus, the following percentages do not total 100%. Most PTs see individuals with orthopedic/sports conditions or injuries (63.4%), followed by individuals with neurological conditions or injuries (57.3%). A majority of PTAs see individuals with neurological conditions or injuries (70.0%) followed by individuals with cardiovascular or pulmonary injuries or conditions (48.4%) and orthopedic/sports injuries or conditions (47.5%) (Figure 8.15). The majority of PTs (80.2%) reported providing care to adults age 20-64 years and 73.1% reported providing care to adults age 65+. A majority of PTAs (83.2%) reported providing care to adults age 65+ and 52.5% reported working with adults ages 20–64 (Figure 8.16; NDBPT, 2026).

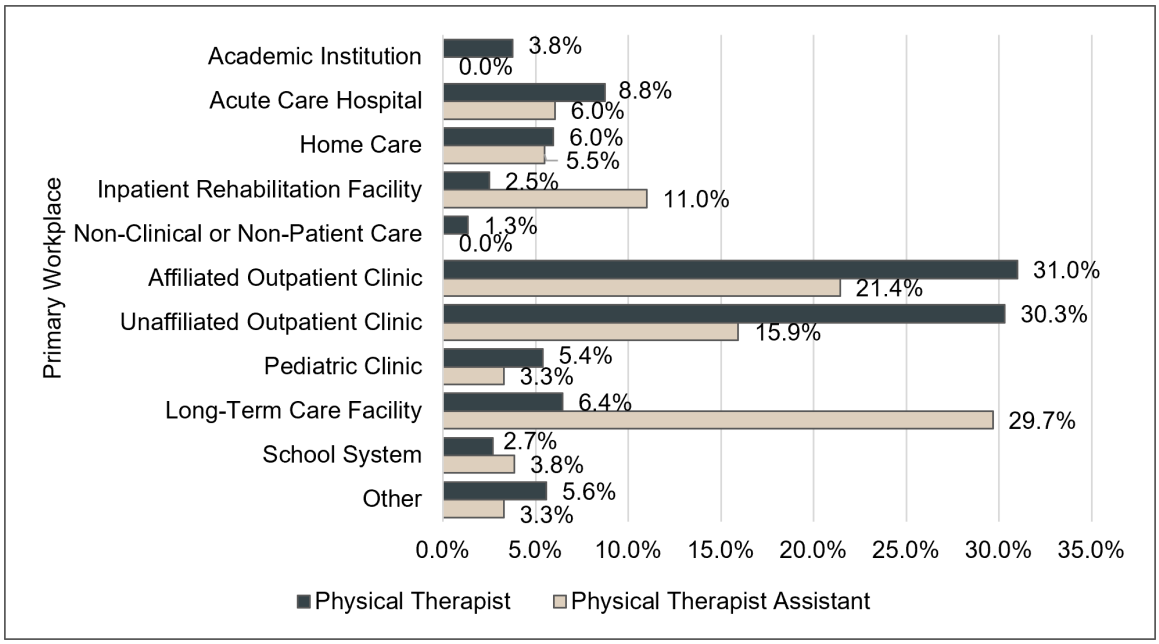


Figure 8.14: Primary Workplace Setting for North Dakota Physical Therapists and Physical Therapist Assistants, 2026 (NDBPT, 2026).

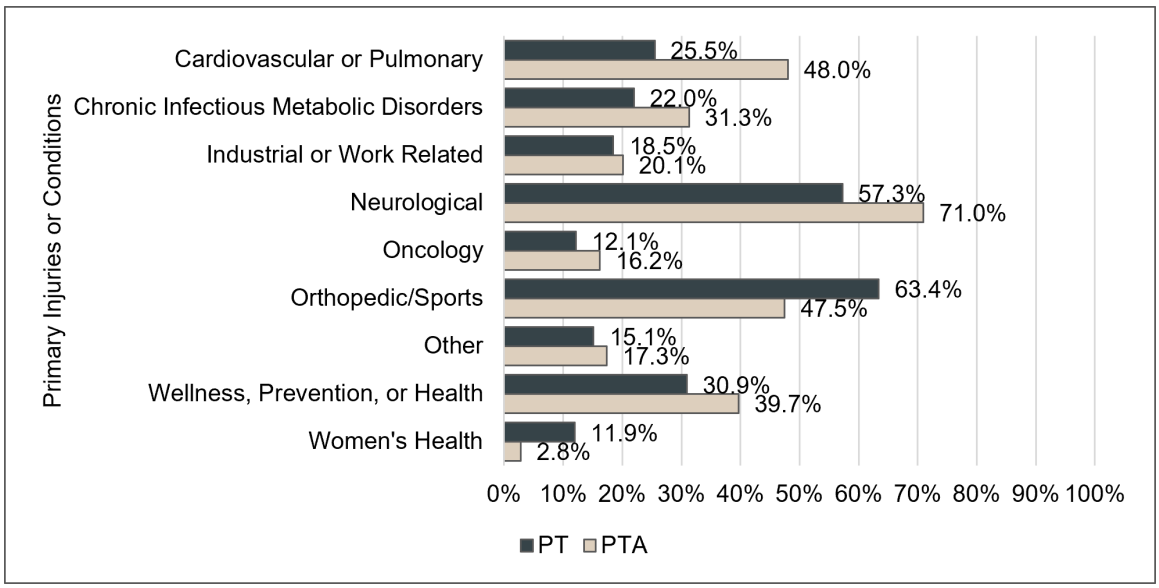


Figure 8.15: Primary Injuries or Conditions Treated by North Dakota Physical Therapists and Physical Therapist Assistants, 2026 (NDBPT, 2026).

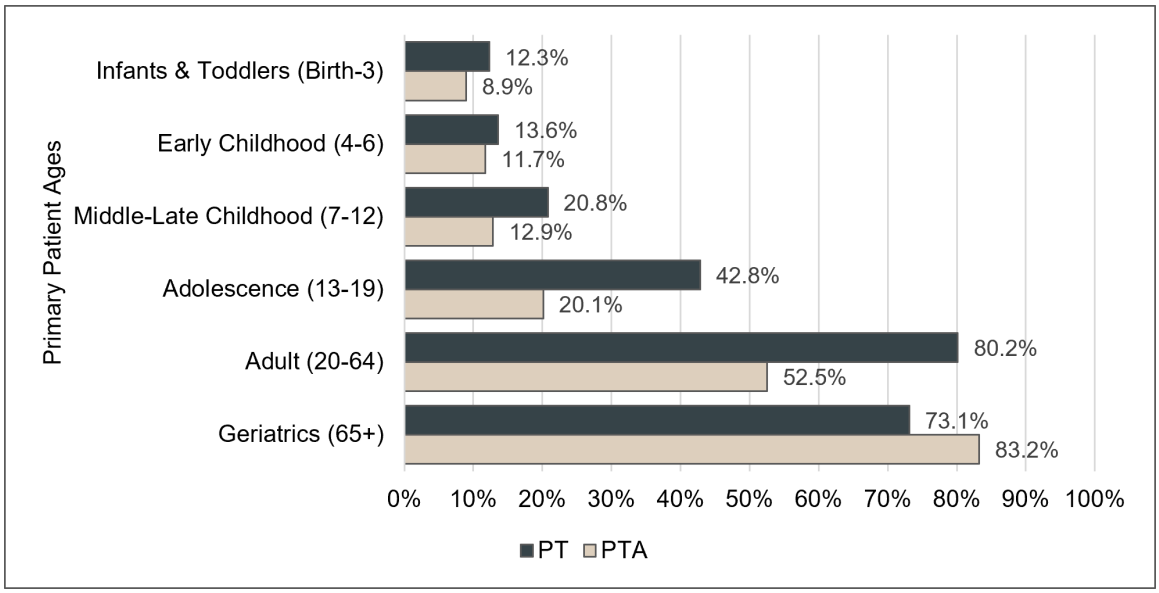


Figure 8.16: Primary Patient Ages for North Dakota Physical Therapists and Physical Therapist Assistants, 2026 (NDBPT, 2026).

A majority (72.9%) of PTs practicing in North Dakota do so in a metropolitan area, and just over half (66.4%) of PTAs practice in a metropolitan area as well (Figures 8.17 and 8.18). A majority of PTs (86.9%) reported no planned changes to their state of practice in the near future; some (4.4%) expected to decrease their hours or leave the field of physical therapy; and 3.1% expected to increase their hours of physical therapy or direct patient care. A majority of PTAs (88.1%) reported no planned changes, 6.5% expected to increase their hours of physical therapy or direct patient care, and 2.5% expected to decrease their hours or leave the field of physical therapy (Table 8.2; NDBPT, 2026).

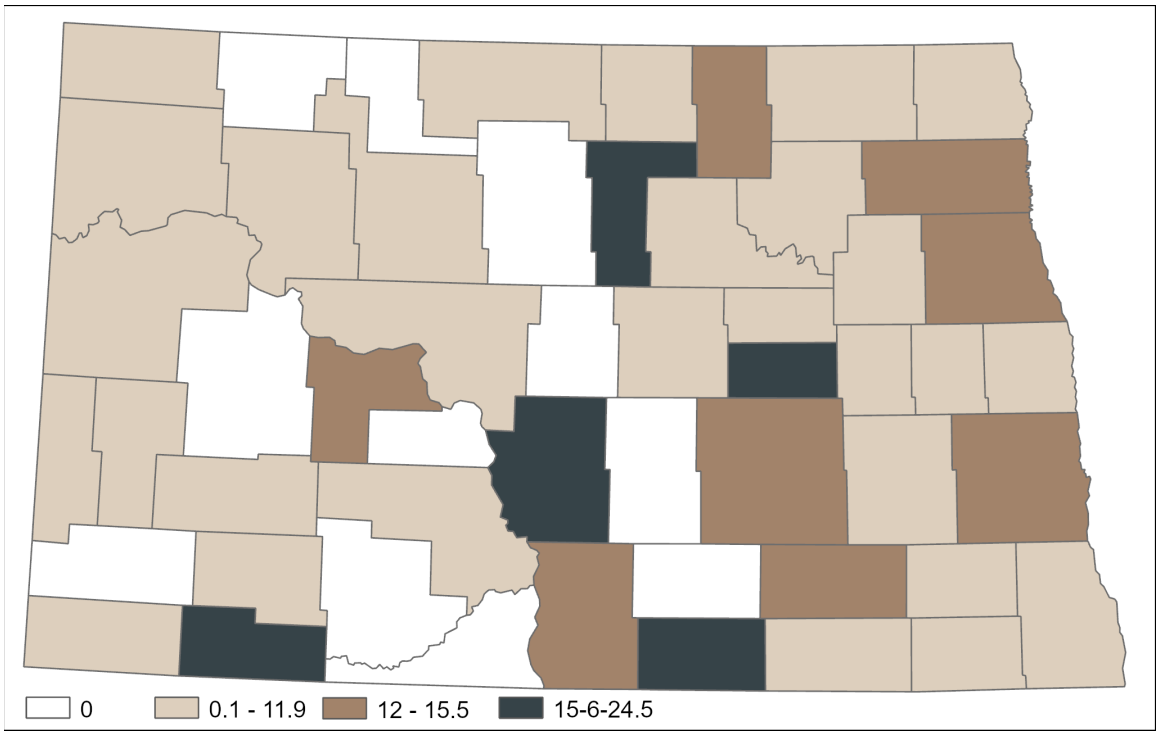


Figure 8.17: Rate of Physical Therapists per 10,000 North Dakota Residents, by County, 2026 (NDBPT, 2026).

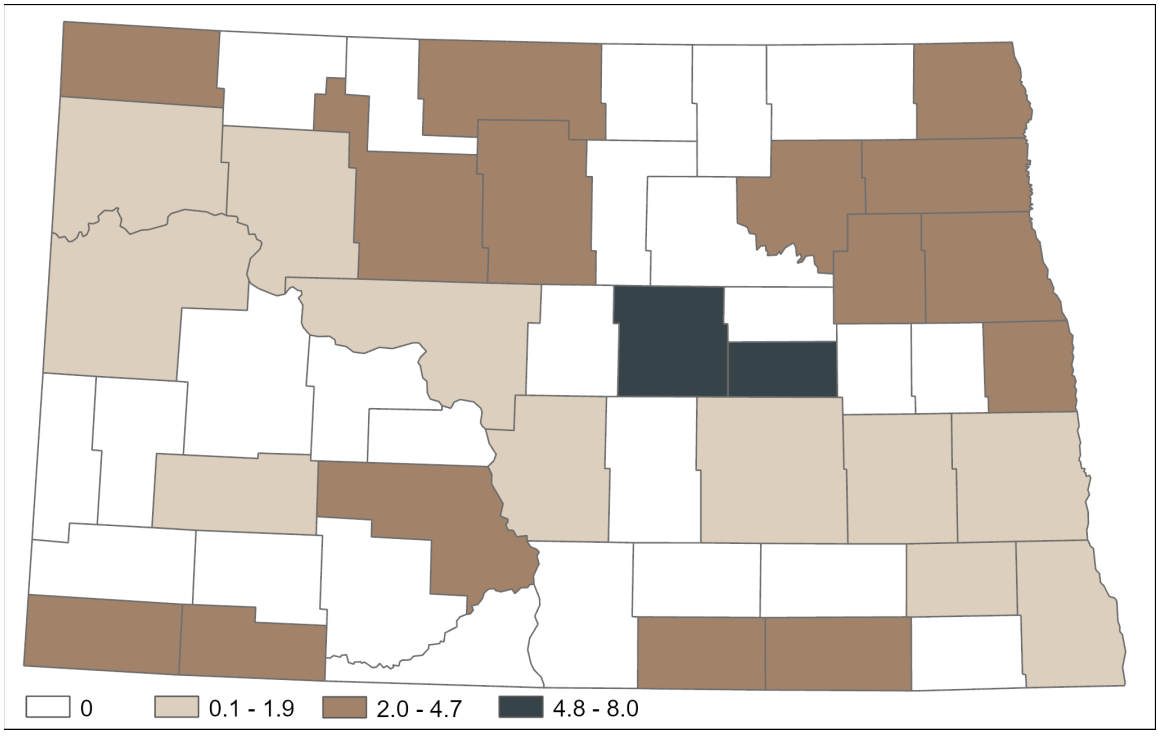


Figure 8.18: Rate of Physical Therapist Assistants per 10,000 North Dakota Residents, by County, 2026 (NDBPT, 2026).

Table 8.2: Future Plans for North Dakota Physical Therapists and Physical Therapist Assistants, 2026 (NDBPT, 2026).

Future Plans	PT (N)	PT (%)	PTA (N)	PTA (%)	All (N)	All (%)
Decrease my hours in the field of physical therapy	50	4.4%	5	2.5%	55	4.1%
Decrease my hours of direct patient care	35	3.0%	1	0.5%	36	2.7%
Increase my hours in the field of physical therapy	36	3.1%	13	6.5%	49	3.6%
Increase my hours of direct patient care	19	1.7%	3	1.5%	22	1.6%
No planned change	998	86.9%	177	88.1%	1,175	87.0%
Stop working in the field of physical therapy	11	1.0%	2	1.0%	13	1.0%
Total	**1,149**	**100%**	**201**	**100%**	**1,350**	**100%**

UNIVERSITY OF NORTH DAKOTA DOCTOR OF PHYSICAL THERAPY PROGRAM

The UND School of Medicine and Health Sciences Doctor of Physical Therapy program graduated 50 individuals in May 2025. An electronic survey was distributed to these graduates approximately one year after graduation. A total of 16 grads responded to the survey for a response rate of 32.0% (University of North Dakota School of Medicine and Health Sciences Physical Therapy Department, 2026). The original class included 25 (48.1%) students from North Dakota, 17(32.7%) from Minnesota, and the remaining students were from other states (19.2%). All 16 (100%) of the respondents were employed as physical therapists in a full time (93%) or per diem/as needed (7%) position. There were 6 (40%) employed in North Dakota, while the remainder of the respondents reported employment in Minnesota (20%) or Arizona, Montana, Texas, and Wisconsin (40%). The primary area of practice for the graduates was an outpatient clinic (60.0%). The majority of respondents (66.0%) reported an initial yearly salary between $65,001 and $85,000.

OTHER EDUCATIONAL PROGRAMS

Additional higher education institutions in North Dakota that offer Doctor of Physical Therapy degrees accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE) include the University of Mary and the University of Jamestown. Currently there are no physical therapy assistant programs in North Dakota that are accredited by CAPTE.

NUTRITIONISTS AND DIETICIANS

LICENSED REGISTERED DIETITIANS

In North Dakota, there are 728 licensed registered dietitians. Currently there are 9.1 licensed registered dietitians per 10,000 North Dakota residents. Licensed registered dietitians in North Dakota have been practicing for an average of 9.7 years (North Dakota Board of Dietetic Practice, 2026).

Of the 728 dietitians who are licensed to practice in North Dakota, 325 (44.6%) work for a North Dakota based employer. The majority of licensed registered dietitians working in North Dakota work in metropolitan areas (n = 246, 75.7%), followed by rural areas (n = 49, 15.1%), and micropolitan areas (n = 30, 9.2%).

LICENSED NUTRITIONISTS

In North Dakota, there are 25 licensed nutritionists. That amounts to 0.3 licensed nutritionists per 10,000 North Dakota residents. Licensed nutritionists in North Dakota have been practicing for an average of 11.2 years (North Dakota Board of Dietetic Practice, 2026).

Of the 25 nutritionists who are licensed to practice in North Dakota, 14 (56.0%) work for a North Dakota based employer. The majority of licensed nutritionists working in North Dakota work in metropolitan areas (n = 10, 71.4%), followed by rural areas (n = 3, 21.4%), and micropolitan areas (n = 1, 7.1%).

PHARMACY PROFESSIONALS

PHARMACY TECHNICIANS

There are 926 licensed pharmacy technicians, of whom 838 working in North Dakota (Figure 8.19) (North Dakota Board of Pharmacy, 2026). Most pharmacy technicians work in metropolitan areas (n = 577, 68.9%), followed by rural areas (n = 175, 20.9%), and micropolitan areas (n =86, 10.3%). The pharmacy technician rate in North Dakota is 10.5 per 10,000 residents. Pharmacy technicians in North Dakota have been licensed for an average of 11.2 years.

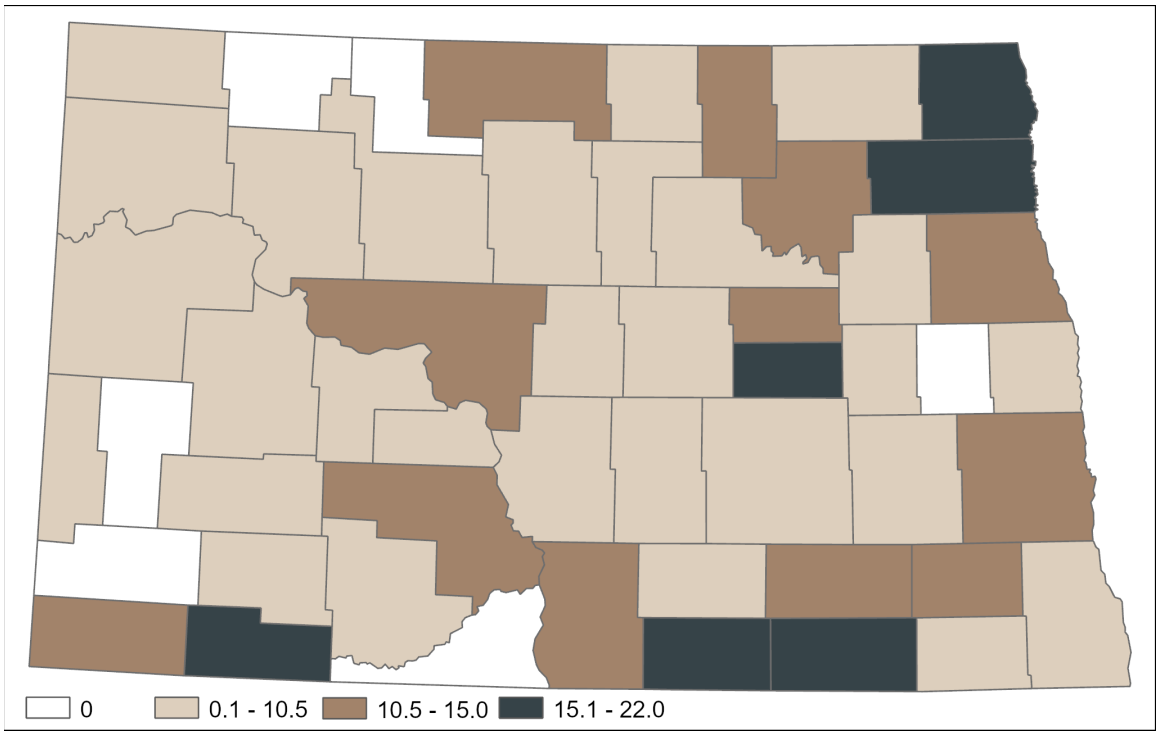


Figure 8.19: Rate of Pharmacy Technicians per 10,000 North Dakota Residents, by County, 2026 (North Dakota Board of Pharmacy, 2026).

PHARMACISTS

There are 1,352 active licensed pharmacists, of whom 1,009 are employed in North Dakota (Figure 8.20). Most pharmacists in North Dakota are in metropolitan areas (n = 780, 77.3%). The next most common area where pharmacists are located is in rural areas (n = 142, 14.1%), followed by micropolitan areas (n = 87, 8.6%; Figure 8.21). The pharmacist rate in North Dakota is 12.6 per 10,000 residents. Pharmacists in North Dakota have been licensed for an average of 17.5 years (North Dakota Board of Pharmacy, 2026).

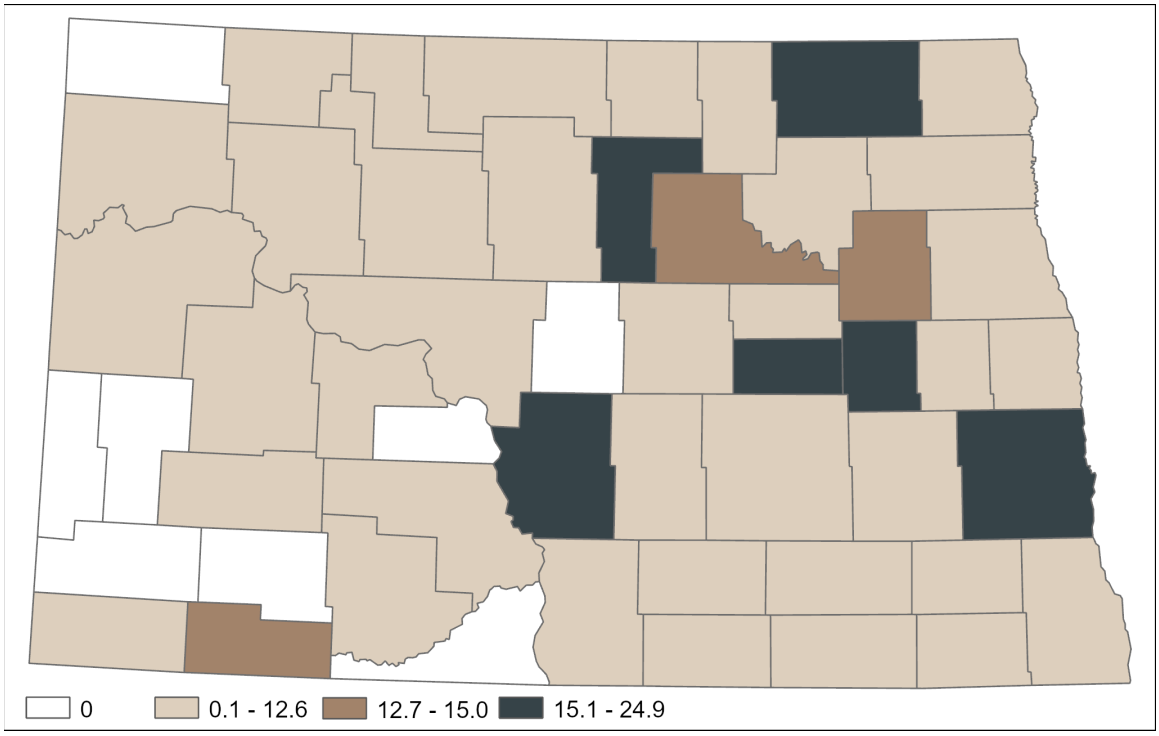


Figure 8.20: Rate of Pharmacists per 10,000 North Dakota Residents, by County, 2026
(North Dakota Board of Pharmacy, 2026).

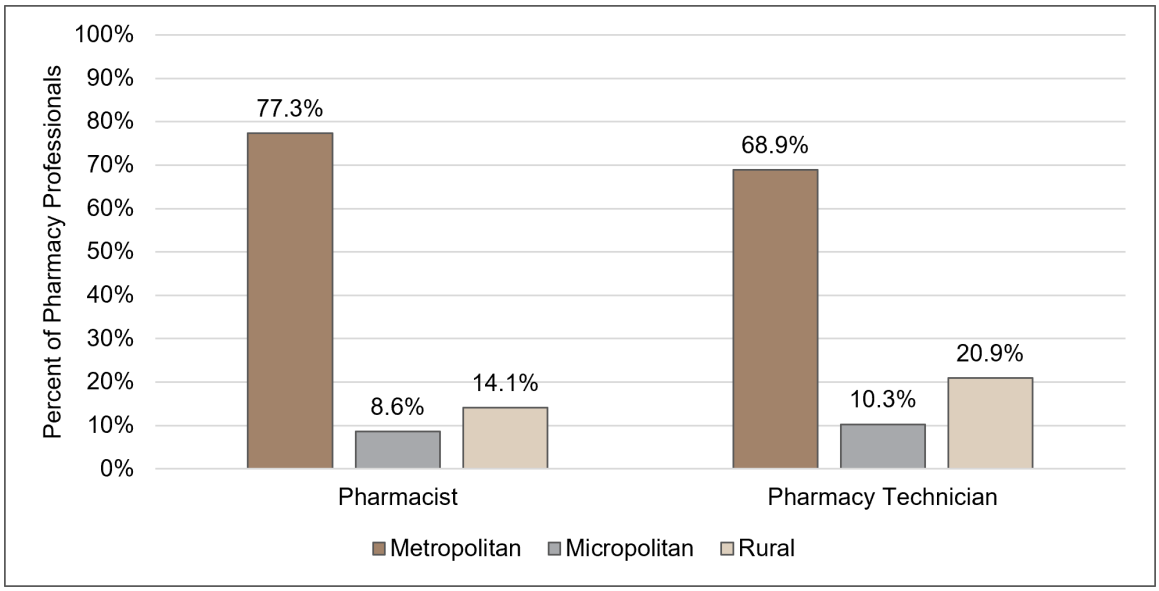


Figure 8.21: Number of Pharmacy Professionals in North Dakota by Year and Metropolitan-Rural Designation, 2026 (North Dakota Board of Pharmacy, 2026). Data used for this graphic represents those pharmacy professionals with a valid location in North Dakota.

MEDICAL LABORATORY PROFESSIONALS

There are 1,124 medical laboratory professionals licensed in North Dakota (North Dakota Board of Clinical Laboratory Practice [NDBCLP], 2026). Medical laboratory professionals are licensed in two categories: as scientists/technologists or technicians. Most are licensed as medical laboratory scientists/technologists (n = 874, 77.6%) followed by clinical laboratory technician/medical laboratory technician (n = 250, 22.2%). There are approximately 10.9 medical laboratory scientists/technologists and 3.1 clinical laboratory technicians per 10,000 North Dakota residents. The rate of medical laboratory scientists in North Dakota is slightly higher compared to the average for the U.S. In the U.S. there are 351,200 clinical laboratory technologists/technicians which is equal to 10.2 clinical laboratory technologists/technicians per 10,000 U.S. residents (Bureau of Labor Statistics, Clinical Laboratory Technologists and Technicians, 2025). Of the 1,124 clinical laboratory professionals licensed in the state, there are 904 (80.4%) who are currently employed within North Dakota (NDBCLP, 2026).

PRACTICE CHARACTERISTICS

Medical laboratory scientists/technologists working in North Dakota have been in practice, on average, for 11.8 years. Medical laboratory technicians have been in practice, on average, for 17.2 years. Most medical laboratory professionals working in North Dakota work in metropolitan areas (n = 620, 68.6%), followed by those working in rural areas (n = 200, 22.1%), and micropolitan areas (n = 84, 9.3%; Figures 8.22 and 8.23).

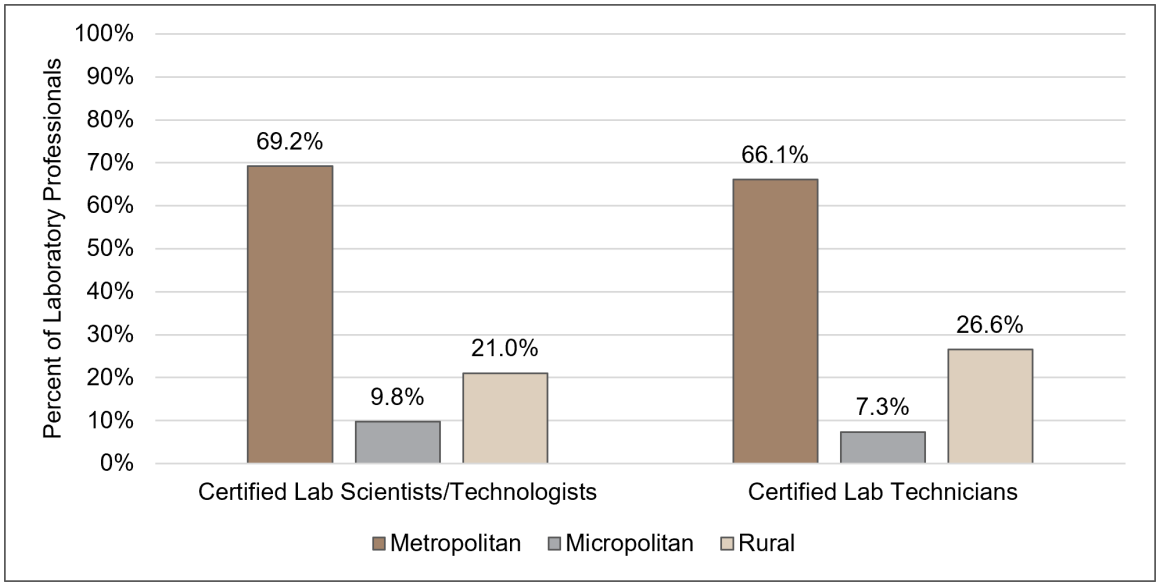


Figure 8.22: Percent of Medical Laboratory Professionals Practicing in North Dakota with Metropolitan, Micropolitan, and Rural Comparisons, 2026 (North Dakota Board of Clinical Laboratory Practice [NDBCLP], 2026).

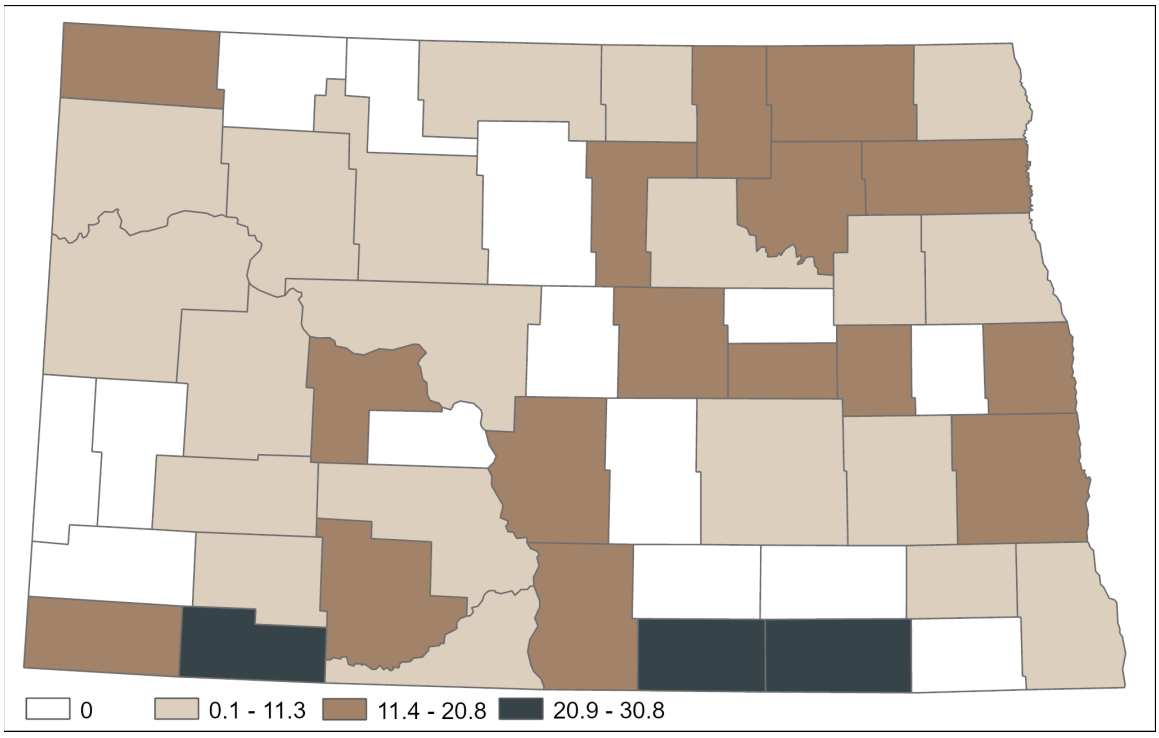


Figure 8.23: Rate of Medical Lab Professionals per 10,000 North Dakota Residents, by County, 2026 (NDBCLP, 2026).

UNIVERSITY OF NORTH DAKOTA MEDICAL LABORATORY SCIENCE UNDERGRADUATE PROGRAM

The UND School of Medicine and Health Sciences Department of Medical Laboratory Science (MLS) graduated 73 students eligible for MLS certification through traditional (n = 51) and non-traditional (n = 22) undergraduate routes during the academic year of 2024-2025. An electronic survey seeking employment information was distributed to these graduates, and complete responses were received from 43 individuals (58.9%) who indicated residency in North Dakota (36.6%), Minnesota (36.6%), Arizona (9.8%), Colorado (4.9%), Wisconsin (4.9%), Illinois (2.4%), Montana (2.4%), and South Dakota (2.4%) (University of North Dakota School of Medicine and Health Sciences Department of Medical Laboratory Science, 2026). Two survey respondents (4.7%) indicated plans to pursue further education in areas outside of MLS (Medicine and Physician Assistant). Of the remaining 41 respondents seeking MLS-related employment, 100% reported finding employment within a year of graduation.

Reported employment locations were North Dakota (24.4% overall; 58.8% for North Dakota residents), Minnesota (31.7%), and other states (43.9%), including Arizona, Colorado, Illinois, Montana, North Carolina, Ohio, South Dakota, Tennessee, and Wisconsin. For those respondents reporting employment outside of North Dakota, 26.7% indicated they could be incentivized to accept future employment in North Dakota with higher pay (62.5%), housing/relocation assistance (62.5%), sign-on bonuses (50.0%), and tuition assistance (25.0%). Respondents indicating they could not be incentivized into future employment in North Dakota primarily indicated reasoning related to weather and/or location (90.9%).

The primary sites of employment for respondents were laboratories within a hospital of <100 beds (14.6%), 100-300 beds (26.8%), 300-500 beds (9.8%), >500 beds (26.8%), or a laboratory within a clinic, doctor's office, or reference lab (22.0%). Respondents reported an average starting salary of $31 per hour, and 65.9% indicated that their position included work as a generalist (in all areas of the laboratory).

DENTAL PROFESSIONALS

Dental professionals such as dentists, dental hygienists, and dental assistants are important healthcare providers in North Dakota. According to the most recent licensure data there are 482 licensed dentists in North Dakota, which amounts to 6.0 dentists per 10,000 North Dakota residents (Figure 8.24). Licensed dentists have been practicing, on average, for 15 years. Additionally, there are 892 registered dental hygienists, and 933 registered dental assistants in North Dakota, totaling 2,307 dental professionals in the state (North Dakota Board of Dental Examiners, 2026).

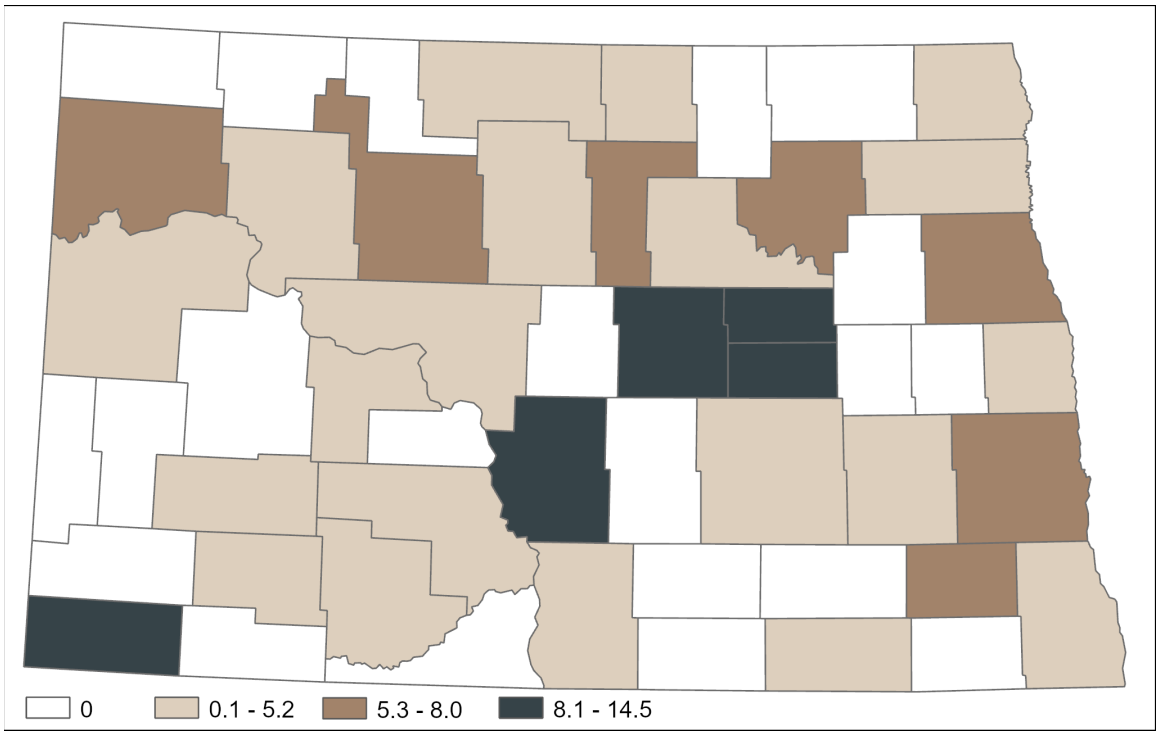


Figure 8.24: Rate of Dentists per 10,000 North Dakota Residents, by County, 2026 (North Dakota Board of Dental Examiners, 2026).

PRACTICE CHARACTERISTICS

A total of 19.3% of the dentists in North Dakota reported working in specialty areas; of these, 29 (6.0%) reported oral and maxillofacial surgery, 23 (4.8%) reported orthodontics, 18 (3.7%) reported pediatric dentistry, 13 (2.7%) reported endodontics, five (1.0%) reported periodontics, three (0.6%) reported prosthodontics. Most licensed dentists working in North Dakota are located in metropolitan areas (n = 305, 73.7%), while similar proportions are located in micropolitan areas (n = 55, 13.3%), and rural areas (n = 54, 13.0%). This trend also holds true for dental hygienists (metropolitan = 71.9%, micropolitan = 13.3%, rural = 14.8%) and dental assistants (metropolitan = 77.6%, micropolitan = 11.8%, rural = 10.6%) in North Dakota (Figure 8.25) (North Dakota Board of Dental Examiners, 2026).

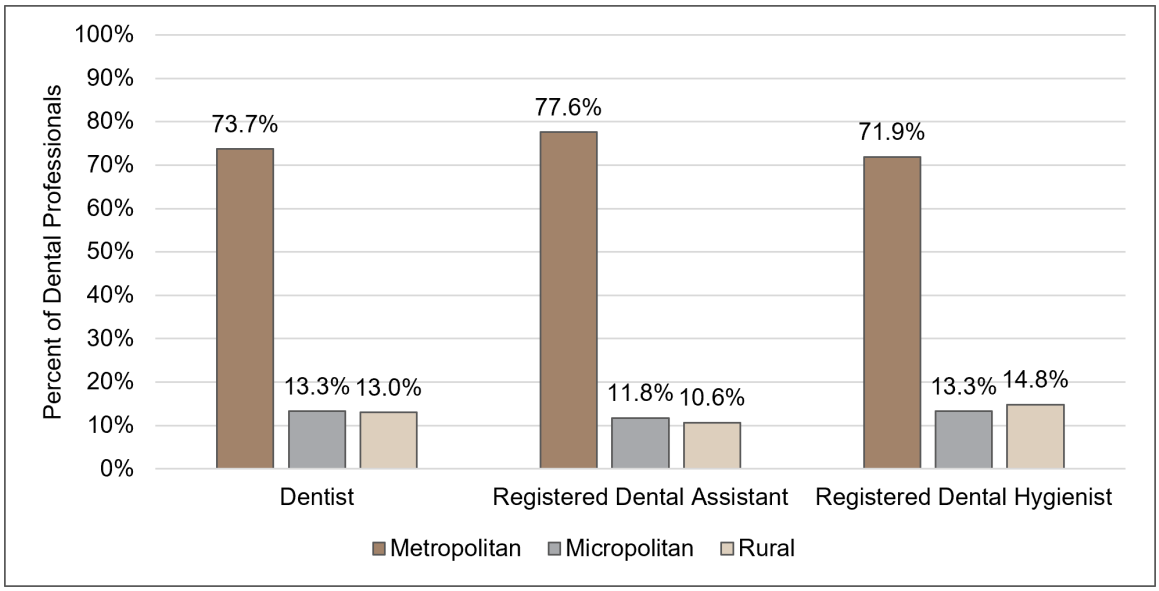


Figure 8.25: Number of Dental Professionals in North Dakota by Metropolitan-Rural Designation, 2026 (North Dakota Board of Dental Examiners, 2026). Data used for this graphic represents those dental professionals with a valid location in North Dakota.

ATHLETIC TRAINING PROFESSIONALS

There are approximately 260 certified athletic trainers in North Dakota, which is equal to about 3.3 athletic trainers per 10,000 North Dakota residents (North Dakota Athletic Association, 2026). In the U.S. it is estimated that there are 30,500 athletic trainers which is equal to 0.9 athletic trainers per 10,000 U.S. residents (Bureau of Labor Statistics Athletic Trainers, 2025).

UNIVERSITY OF NORTH DAKOTA ATHLETIC TRAINING PROGRAM

The athletic training program at UND is a master's level degree program within the Department of Sports Medicine. The University of North Dakota has had an athletic training program since 1990. The master's program began in 2022 and the first graduates from the master's program graduated in the spring of 2024. The master's program prepares students for entry-level positions within the field of athletic training as well as prepares them to take the national certification exam to become certified athletic trainers, which is mandated to obtain licensure in each the 50 U.S. states. Over the past three academic years (2024-2026), the athletic training program has graduated 8 students and 7 (87%) of those graduates passed the certification exam. Of the graduates from the past three academic years, 7 (87%) are employed as athletic trainers (University of North Dakota School of Medicine and Health Sciences Athletic Training Department, 2026).

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A STATEWIDE NETWORK OF CARE

CHAPTER NINE

Healthcare Infrastructure and Access To Care in North Dakota

North Dakota's healthcare system includes hospitals, clinics, emergency medical services, long-term care facilities, pharmacies, public health, and behavioral health services supporting communities across the state. Access varies, however, depending on the care needed. Distance, weather, road conditions, emergency situations, and workforce distribution can create additional challenges for North Dakotans seeking care.

Hospitals Across North Dakota

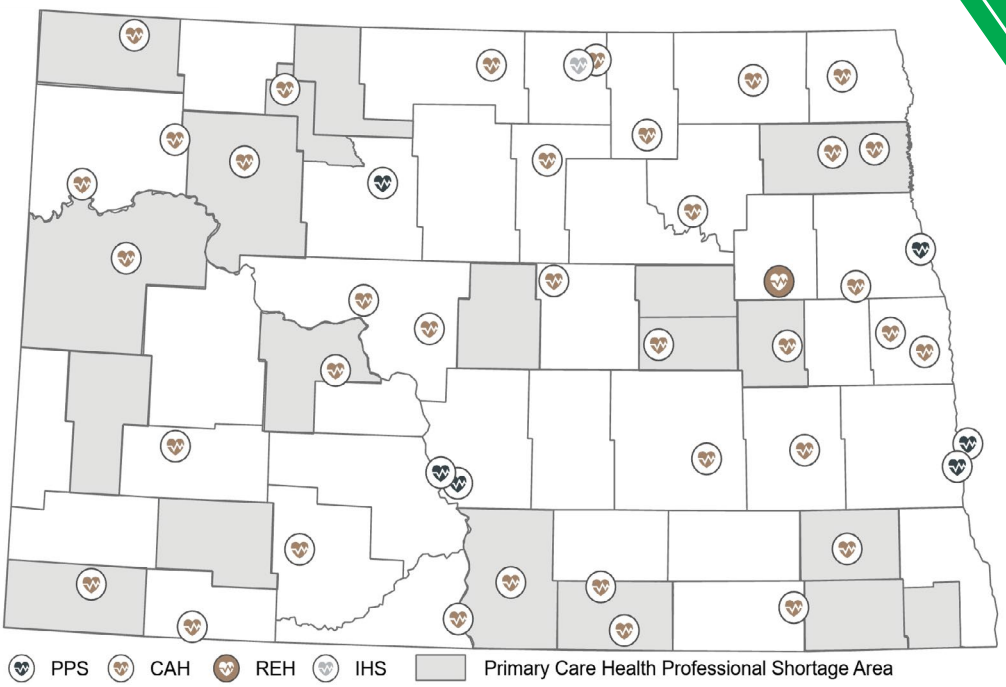


Figure 9.1. North Dakota has 52 hospitals statewide, including 36 Critical Access Hospitals.

38.9%

of North Dakota's more than 250 pharmacies are located in rural areas.

NORTH DAKOTA SNAPSHOT

Approximately 300 primary care and specialty clinics serve communities across North Dakota.

HOSPITALS AND HEALTH SYSTEMS

A health system is a broad organizational structure composed of one or more hospitals, clinics, habilitation/rehabilitation services, pharmacies, long-term care facilities, and other in- and outpatient services. There are a variety of different hospital categories that may be components of a health system. In North Dakota there are 52 hospitals in the state. Of these 52 hospitals, there are 36 Critical Access Hospitals (CAHs), one Rural Emergency Hospital (REH), six general acute Prospective Payment System (PPS; tertiary) hospitals, two psychiatric, two long-term acute care, two transplant-designated hospitals, two rehabilitative hospitals, and one Indian Health Service (IHS) hospital (North Dakota Department of Health and Human Services, 2026b). This summary, however, requires further clarification. The two transplant hospitals in the state are not freestanding transplant hospitals but instead are components of two tertiary centers. Additionally, there are tertiary hospitals that operate in more than one location in the same city, such as Fargo. For the purposes of this *Report*, those are only counted once per city.

The distribution of North Dakota hospitals is displayed in Figure 9.1 along with the counties that are federally designated as primary care health professional shortage areas (HPSAs). The tertiary hospitals, sometimes called referral hospitals, are located in the four largest cities in the state, and the CAHs supplement the six largest hospitals (Altru Health System in Grand Forks, Trinity Health in Minot, Sanford Health in Bismarck and Fargo, Catholic Health Initiatives [CHI]-St. Alexius Medical Center in Bismarck, and Essentia Health in Fargo) by providing hospital coverage elsewhere. Tertiary hospitals imply the third level of care as primary and secondary hospitals make referrals to tertiary hospitals that offer specialty care services.

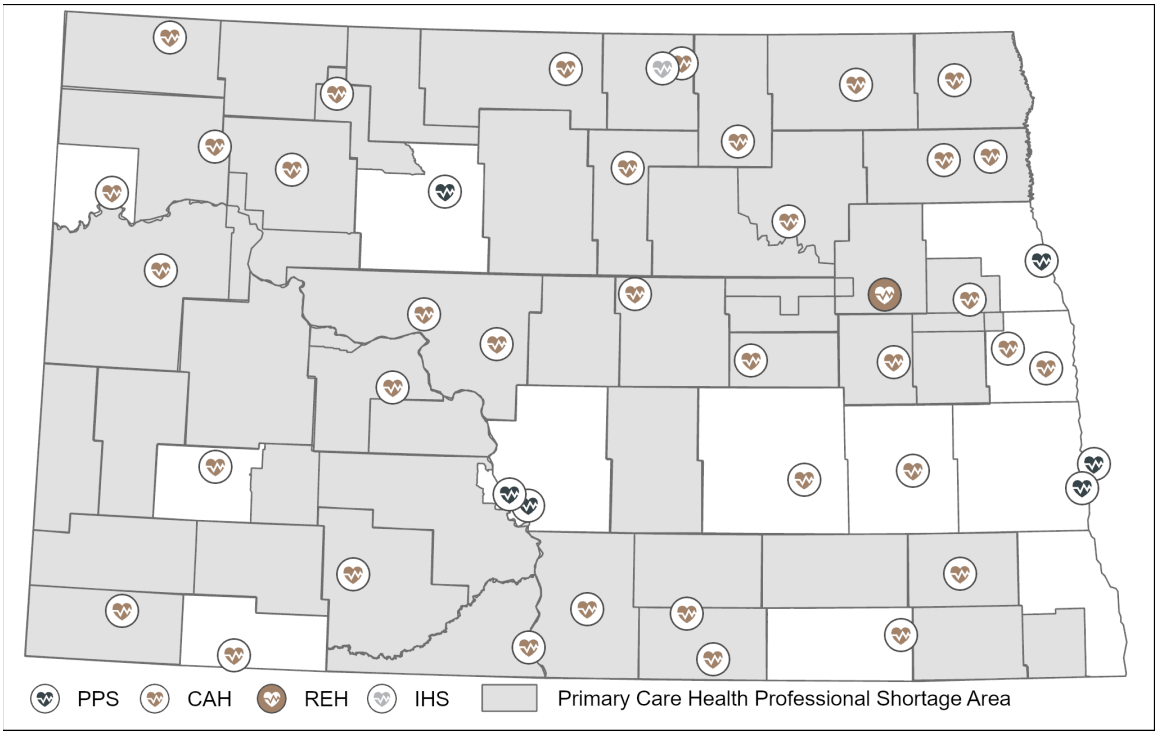


Figure 9.1: North Dakota Hospitals and Health Professional Shortage Areas, 2026 (ND DHHS, 2026b).

The United States Department of Veterans Affairs (VA) and its Veterans Health Administration operates a federally funded hospital for veterans in Fargo, ND, that is similar to and complements the six larger hospitals in the state. Outpatient care through the Fargo VA Hospital is provided by eight associated community-based outpatient clinics (CBOC) that are located throughout the state. The CBOCs are found in Bismarck, Devils Lake, Dickinson, Grafton, Grand Forks, Jamestown, Minot, and Williston (North Dakota Veteran's Affairs, 2026). The VA also operates four Vet Centers with one each in Bismarck, Fargo, Grand Forks, and Minot. According to the VA, Vet Centers 'offer confidential help for Veterans, service members, and their families at no cost in a non-medical setting.' Vet Centers offer counseling services for depression, post-traumatic stress disorder, and the psychological effects of military sexual trauma (North Dakota Veteran's Affairs, 2026).

CAHs are rural hospitals that must meet the following specific federal guidelines: cap of 25 acute-care beds, an average length of stay of 96 hours or less, located at least 35 miles from another hospital, and reimbursement on an allowable-cost basis as opposed to a PPS, which is used by the tertiary hospitals (Rural Health Information Hub, 2026a). Rural Emergency Hospitals were a designation established in 2020 in response to the loss of essential healthcare services in rural areas due to hospital closures. REHs are designed to maintain access to emergency and outpatient services and are required to provide 24-hour emergency and observation services and other outpatient services. However, they cannot have inpatient beds that are not part of a distinct unit designated as a skilled nursing facility (RHI Hub, 2026c). All rural hospitals in North Dakota, except for the single IHS hospital, and REH, are CAHs and are not-for-profit.

AMBULATORY CARE

There are approximately 300 primary care and specialty clinics in the state that operate as independent clinics, part of a larger healthcare network, or as federally designated facilities. There are 54 federally certified Rural Health Clinics (RHCs) in the state that serve as primary care clinics (Figure 9.2) (NDDHHS, 2026c). CAHs own and operate most of the RHCs as provider-based RHCs with the remaining RHCs being either owned by a tertiary provider or operated as independent clinics generally owned by a physician or group practice. All of the North Dakota provider-based clinics are owned by hospitals, primarily CAHs, which are nonprofit entities in this state; therefore, the provider-based RHCs are nonprofit. Under federal law, both provider-based and independent RHCs, can be for-profit or not-for-profit, public, or private (RHI Hub, 2026d).

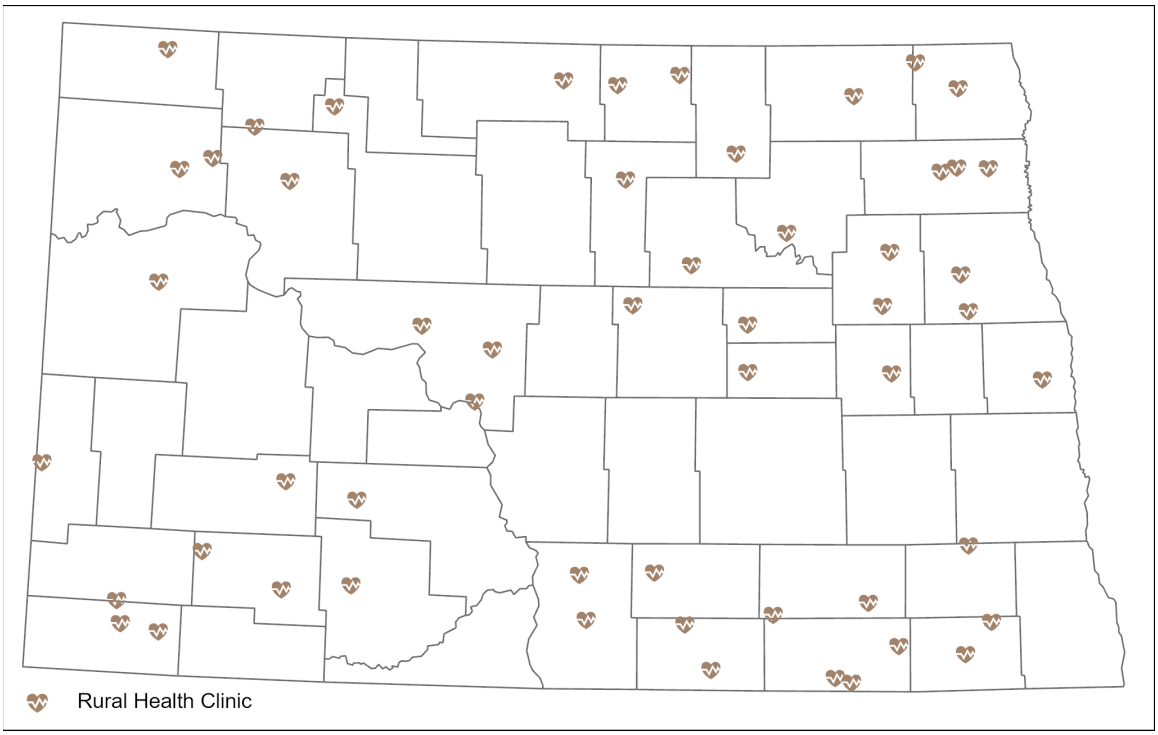


Figure 9.2: Rural Health Clinics in North Dakota, 2026 (NDDHHS, 2026c).

There are five Federally Qualified Health Centers (FQHCs) in North Dakota, with the most common type being the community health center (CHC) model. The five centers (four CHCs and one migrant health center) operate in 17 communities (Figure 9.3) (Community Health Care Association of the Dakotas, 2026). Thirteen of the communities are rural and five are metropolitan (Bismarck, Fargo, Grand Forks, Minot, and West Fargo).

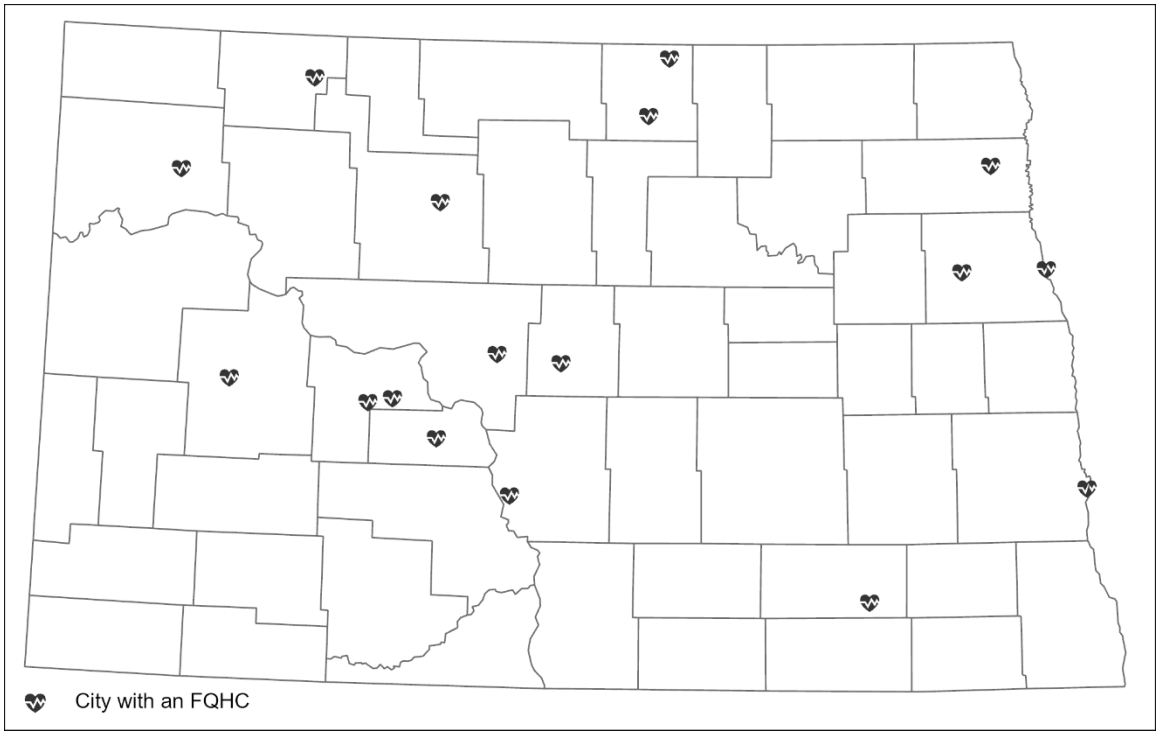


Figure 9.3: Federally Qualified Health Centers in North Dakota, 2024 (Community Health Care Association of the Dakotas, 2026).

EMERGENCY MEDICAL SERVICES

Emergency medical services (EMS) are a fundamental service and health delivery function. EMS commonly refers to emergency medical care for people who have had a sudden or serious injury or illness, or who have suffered major trauma (RHI Hub, 2026b). North Dakota infrastructures include advanced life support systems, basic life support systems, and quick response units, and employ paramedics in both rural and urban areas. Figure 9.4 illustrates the ambulance service areas located within North Dakota. The locations of the services were not available for visualization but are expected to be centrally located within the service areas.



Figure 9.4: Ambulance Service Areas in North Dakota, 2026 (North Dakota GIS Hub, 2026a).

TRAUMA SYSTEM AND CENTERS

Trauma, according to the North Dakota Century Code, means “tissue damage caused by the transfer of thermal, mechanical, electrical, or chemical energy, or by the absence of heat or oxygen” (North Dakota Century Code, 2010). In the United States, unintentional injuries resulting in trauma were estimated to be responsible for more than 197,000 deaths in 2024, with an estimated death rate of 5.8 per 10,000 persons (U.S. Centers for Disease Control and Prevention, 2026). Unintentional injuries, including opioid overdoses (unintentional poisoning), motor vehicle crashes, and unintentional falls, were the leading cause of death for people 45 years of age or younger in 2024 (CDC, 2026).

All acute care hospitals, including all 36 CAHs and the single IHS hospital, are designated as trauma centers (Figure 9.5). Verification of trauma center status is based on nationally-recognized standards set by the American College of Surgeons Committee on Trauma. The standards include hospital organization, clinical capabilities, facility and equipment availability, quality improvement processes, prevention and public education, trauma research, continuing education, trauma service support personnel, and transfer agreements.

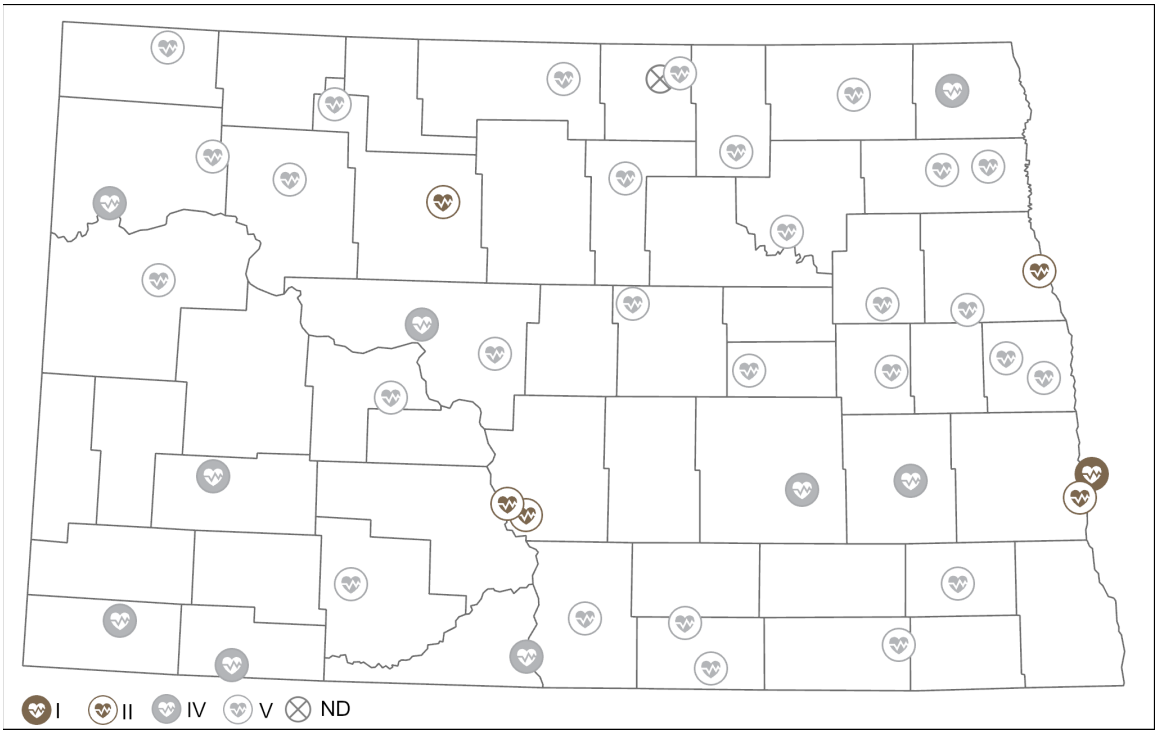


Figure 9.5: Trauma Centers in North Dakota, 2026 (Trauma Center Association of America, 2026a).

There are five trauma center levels (Trauma Center Association of America, 2026b). Level I is a comprehensive regional resource. There is one Level I trauma center in Fargo that offers 24-hour immediate coverage by a variety of practitioners from various specialties, including general surgery, orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, and critical care. The Level I center is also a referral resource for communities in nearby regions that provides leadership in prevention and public education for surrounding communities, provides continuing education, incorporates a comprehensive quality assessment program, operates an organized teaching and research effort for innovation in trauma care, screens for substance abuse and patient intervention, and meets an annual minimum volume of trauma patients (TCAA, 2026b).

A Level II facility is able to initiate definitive care to all injured patients. It offers 24-hour immediate coverage by general surgeons, including orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, and critical care. North Dakota has five Level II trauma centers; the remaining five tertiary hospitals are so designated (TCAA, 2026b).

North Dakota does not have any Level III trauma centers. This level can provide prompt assessment, resuscitation, surgery, intensive care, and stabilization of injured patients. Level IV trauma centers provide advanced trauma life support before transfer of patients to a higher-level trauma center (TCAA, 2026b). This level provides evaluation, stabilization, and diagnostic capabilities for injured patients. Nine CAHs have the Level IV designation.

Level V trauma centers are the most common in North Dakota with 27 CAHs and one REH having this designation. A Level V trauma center provides initial evaluation, stabilization, and

diagnostic capabilities and prepares patients for transfer to higher levels of care (TCAA, 2026b). All CAHs have transfer agreements for patients requiring more comprehensive care at a Level I through Level III trauma center.

LONG-TERM CARE AND AGING SERVICES

Like the rest of the country, North Dakota must contend with an aging population that has a corresponding effect on policy decisions at both the state and federal level as it relates to health infrastructure, health status, education, housing, transportation, and economic development. Long-term care (LTC) services are a function of healthcare that are directly affected by population factors, particularly the aging of the population. In North Dakota, long-term care facilities include assisted living, basic care, and nursing care. Each is a different type or level of care with corresponding services. North Dakota has 72 skilled nursing facilities, 52 assisted living facilities, and 54 basic care facilities (Figure 9.6) (North Dakota Long-Term Care Association, 2026).

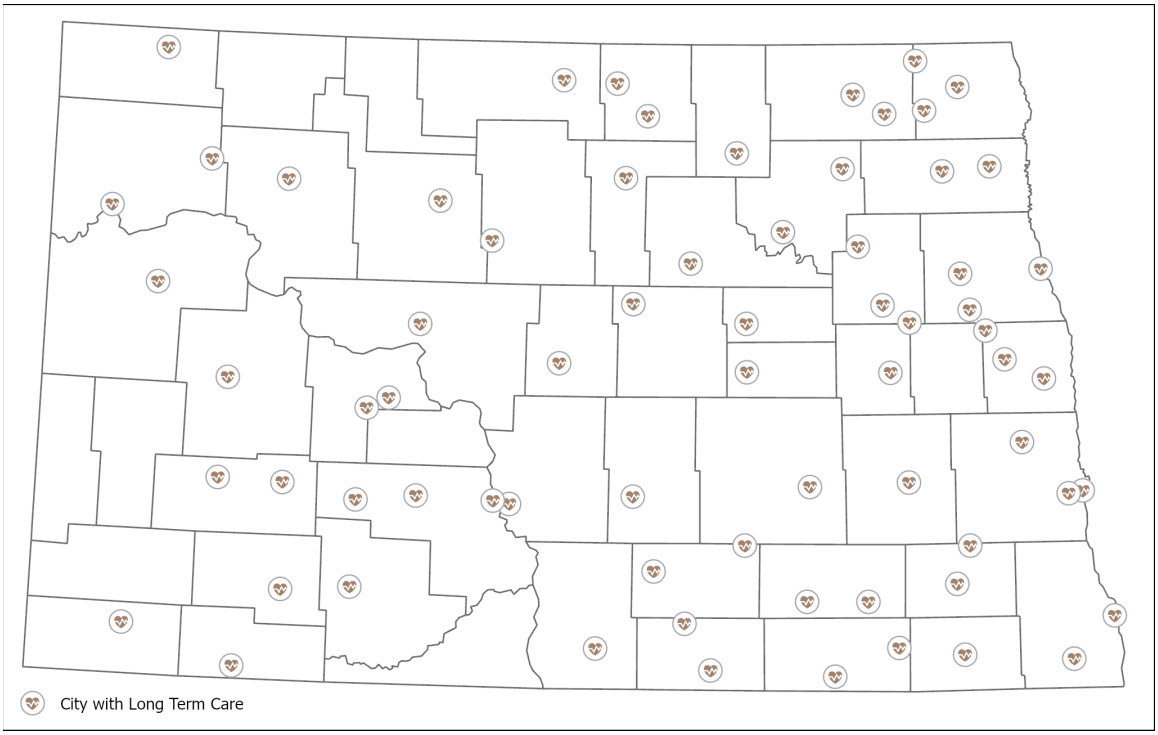


Figure 9.6: Long-term Care Facilities in North Dakota, 2026 (NDLTCA, 2026).

At the state level, the Aging Services Division of the North Dakota Department of Health and Human Services administers programs and services that enhance the quality of life and help elders and people with physical disabilities live independently in their homes and communities. The Division provides a number of services, including dementia care services, adult family foster care licensing, Older Americans Act supportive services, Older Americans Act nutrition services, payment for the establishment of guardianship services, LTC ombudsman program, senior community service employment program, telecommunications equipment distribution program, and vulnerable adult protective services (NDDHHS, 2026a).

PHARMACIES

North Dakota has more than 250 pharmacies with 98 (38.9%) located in rural areas (Figure 9.7) (North Dakota Board of Pharmacy, 2026). A majority of pharmacies in North Dakota are outpatient pharmacies, accounting for 59% of all pharmacies in the state. This is followed by telepharmacies (36%) and hospital pharmacies (21%).

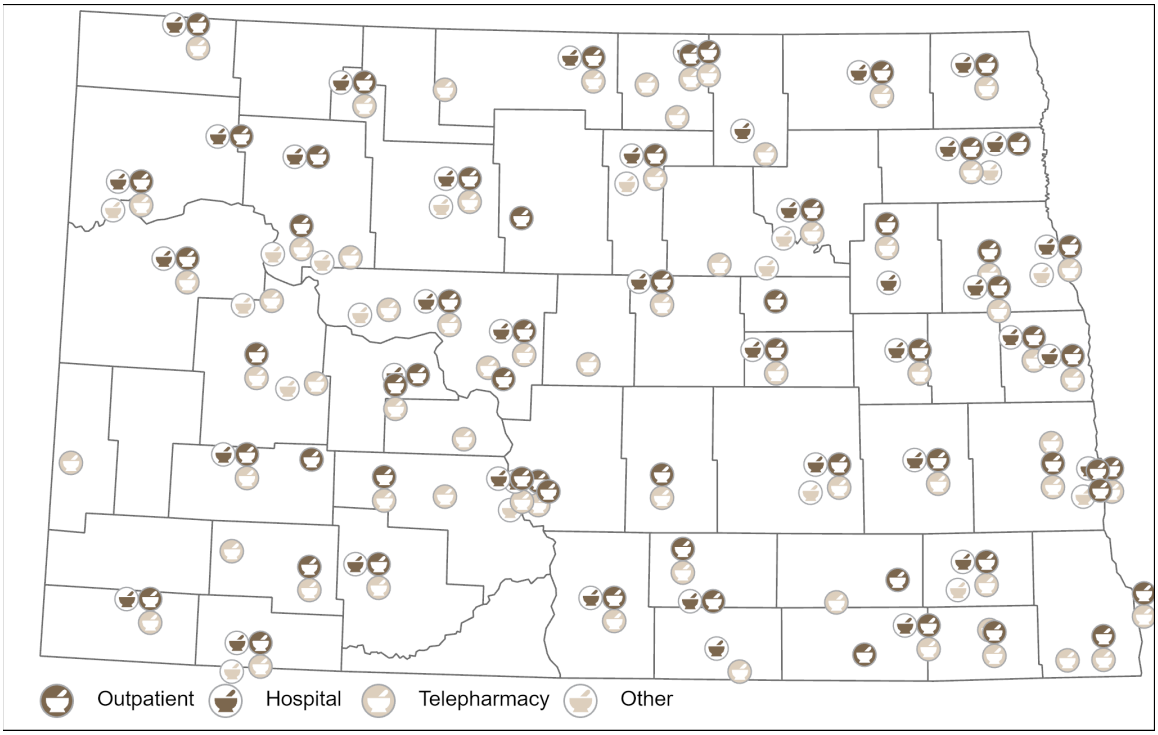


Figure 9.7: Pharmacies in North Dakota, 2026 (North Dakota Board of Pharmacy, 2026).

PUBLIC HEALTH

The organization of public health delivery in North Dakota is decentralized with 28 independent local public health units (LPHUs) working in partnership with North Dakota Health and Human Services (NDDHHS, 2026f). These LPHUs are organized into single or multicounty health districts, city/county health departments, or city/county health districts. Seventy-five percent of the local health units serve single county, city, or combined city/county jurisdictions, while the other 25% serve multicounty jurisdictions. The majority of the multicounty jurisdictions are located in the western part of the state. In this decentralized approach, the units are required to meet state standards and follow state laws and regulations, but they can exercise their own powers and have administrative authority to make decisions to meet their local needs. Figure 9.8 demonstrates the location and type of the various LPHUs in the state.

The structure of each LPHU directly impacts the governance of the unit. In general, departments are governed by city or county commissions, and districts are governed by boards of health. The three city/county health departments (Bismarck-Burleigh, Fargo Cass, and Grand Forks) are governed by boards that are appointed positions with two departments identified as operating in an advisory capacity only. The only city/county health district, City-County (Barnes),

is governed by the district board of health for city and county issues. The six single county health departments (Foster, LaMoure, Pembina, Ransom, Richland, and Steele) are governed by boards that are appointed by county commissioners and include at least one county commissioner and a practicing physician as the health officer for the county. The seven multi-county health districts (Central Valley, Custer, First District, Lake Region, Nelson-Griggs, Southwestern, and Upper Missouri) are governed by boards of health. The 11 single county health districts (Cavalier, Dickey, Emmons, Kidder, McIntosh, Rolette, Sargent, Towner, Traill, Walsh, and Wells) have their own governing boards not appointed by a city or county commission and county commissioners can serve on those boards (North Dakota Association of Counties, 2023).

In addition to the 28 units discussed above, there are six Tribal health jurisdictions in or overlapping with North Dakota. The North Dakota Century Code (NDCC) specifies that 'an Indian nation that occupies a reservation the external boundaries of which border more than four counties may form a health district or public health department' (NDCC, ND). The NDCC further specifies that 'a tribal public health unit and bordering public health units shall collaborate the provision of public health services' (NDCC, ND). The six Tribal health jurisdictions are Spirit Lake Sioux Nation, Standing Rock, Three Affiliated Tribes, Turtle Mountain Chippewa, Trenton Indian Health Service, and Sisseton Indian Health.

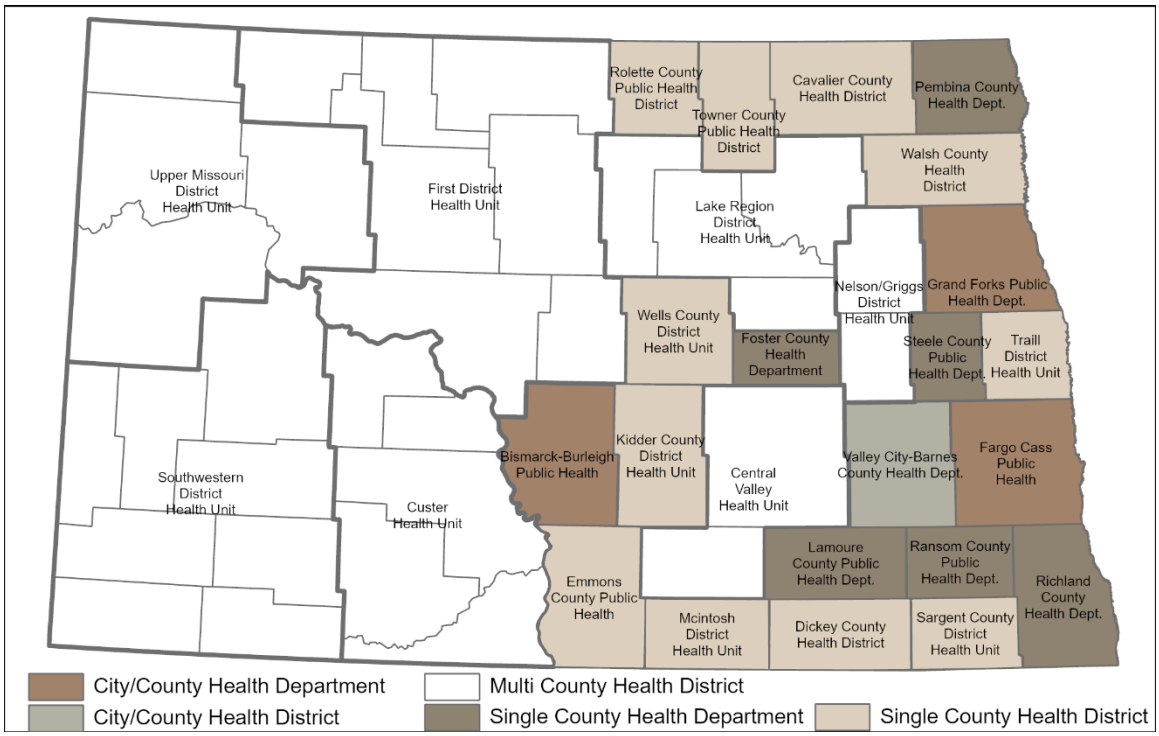


Figure 9.8: Local Public Health in North Dakota, 2026 (North Dakota GIS Hub, 2026b).

BEHAVIORAL HEALTH FACILITIES

Behavioral health as a broad concept includes mental health and substance use disorders, life stressors and crises, and stress-related physical symptoms. In terms of care, behavioral health care refers to the prevention, diagnosis, and treatment of these conditions (American Medical

Association, 2022). North Dakota's Department of Health and Human Services (DHHS) oversees multiple access points for individuals to seek behavioral healthcare services. The state organizes behavioral healthcare delivery into eight regions that break the state into service areas around the eight largest populated areas. This includes eight Behavioral Health Clinics (BHCs) with locations in Bismarck, Devils Lake, Dickinson, Fargo, Grand Forks, Jamestown, Minot, and Williston. Five of the eight BHCs operate satellite or outreach locations with one in Region I (Watford City), two in Region II (New Town and Rugby), one in Region III (Rolla), one in Region IV (Grafton), and one in Region VI (Valley City) (NDDHHS, 2026g).

In addition to the operation of the BHCs and satellite/outreach locations, North Dakota DHHS also operates a State Hospital located in Jamestown. The State Hospital offers comprehensive behavioral health services for adults, including acute inpatient psychiatric care, substance abuse treatment, intermediate psychosocial rehabilitation, forensic evaluations, and safety net services (NDDHHS, 2026e). For individuals requiring residential addiction treatment, the Tompkins Rehabilitation Center serves male and female clients within the hospital's continuum of care (NDDHHS, 2026e). North Dakota DHHS also operates the Life Skills and Transition Center (LSTC) in Grafton. The LSTC is a state-operated, comprehensive support agency serving people with intellectual and developmental disabilities (NDDHHS, 2026d).

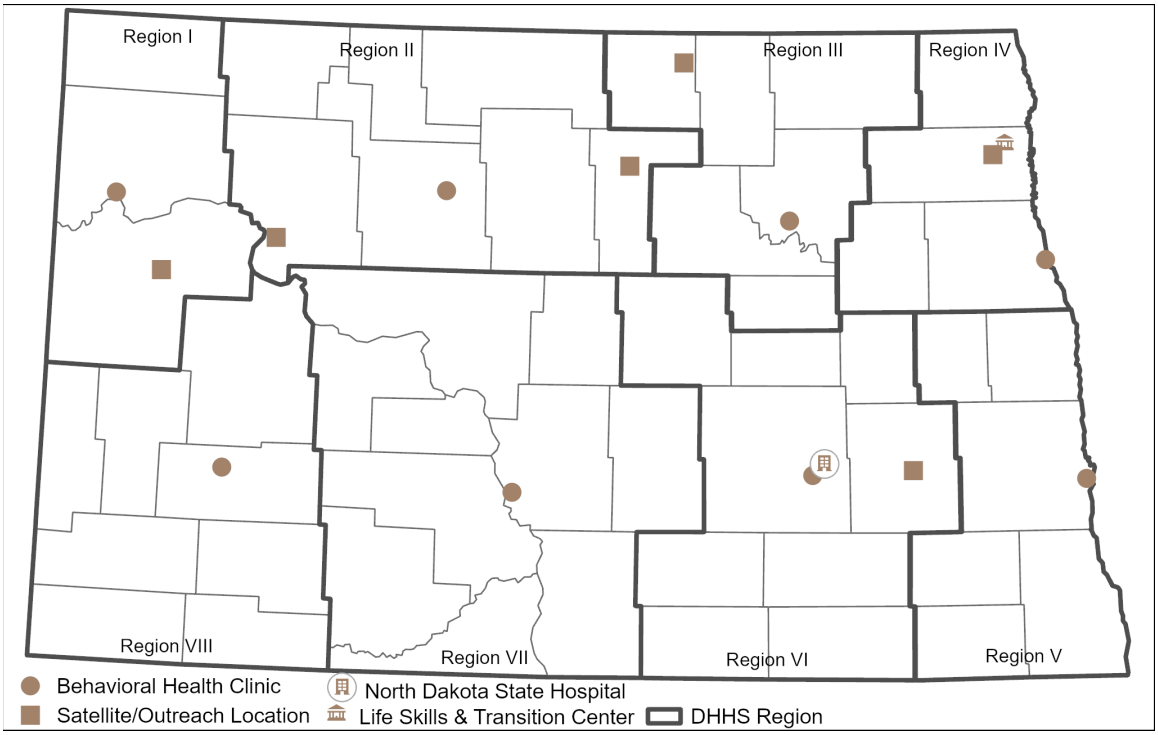


Figure 9.9: Human Service Locations in North Dakota, 2026 (NDDHS, 2026d,e,g).

GEOGRAPHIC ACCESS TO CARE

The U.S. Centers for Disease Control and Prevention developed the Social Vulnerability Index (SVI). The SVI utilizes data for substate geographies including Zip Code Tabulation Areas [ZCTAs], counties, or census tracts to develop four theme ranking variables (Centers for Disease Control and Prevention, 2026). The variables include: socioeconomic status, household

characteristics, racial and ethnic minority status, and housing type and transportation. The most recent year of data available for the SVI at the time of development of this *Report* was 2022. As the CDC/ATSDR published the SVI methodology for 2022, the calculations for the SVI were applied to the 2024 U.S. Census Bureau's American Community Survey's 5-year data to create an experimental SVI for 2024.

While all areas of the SVI relate to access to care, geographic access to physical locations in terms of travel time and distance most closely relate to the Housing Type and Transportation (HT/T) theme. The data elements that make up that theme include the number of multi-unit housing structures, number of mobile homes, crowding, households that lack access to a vehicle, and persons in group quarters. Crowding is further defined as households with more people than number of rooms. "Group quarters" is defined as individuals not living in housing units (houses, apartments, mobile homes, or rented rooms) but instead living in institutional settings such as correctional facilities or nursing homes, or in non-institutional settings such as group homes, shelters, military barracks, or college dormitories.

Figure 9.10 illustrates the HT/T theme of the SVI with North Dakota CAH, PPS, REH, and IHS hospitals overlaid. The darkest colors in the map indicate the areas with the highest proportional amount of crowding, housing insecurity, and lack of access to a vehicle compared to the lighter colors. These factors present additional challenges for the population being able to access service locations such as the hospitals displayed on the map.

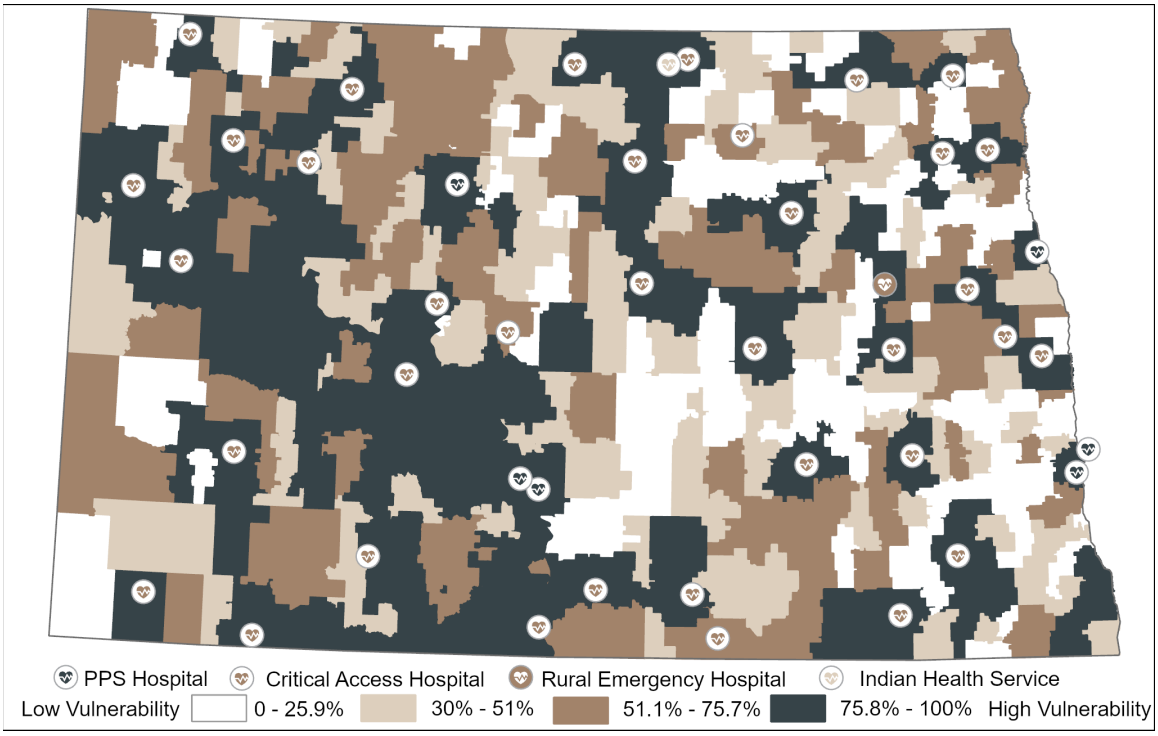


Figure 9.10: Social Vulnerability Index (SVI) Housing Type and Transportation by ZIP Code and North Dakota Hospitals, 2024.

A more comparable geographic analysis evaluating access to care is the use of service area buffers around service delivery locations. Figure 9.11 illustrates the same hospitals used for

Figure 9.10 and overlays a travel distance buffer of 30, 60, and 90 miles (NDDHHS, 2026b). These buffers utilize a road network with an associated hierarchy to simulate actual travel distance using the least restrictive routes. The routing method is similar to what one might expect from the mapping applications on a mobile device. In examining geographic access to hospitals using only travel distance, a large amount of the state is within 30 miles of the closest hospital. A lesser area is between 30 and 60 miles, with a small portion being between 60 and 90 miles. This analysis does not consider hospitals in bordering states that may be a closer geographic option for some of the border areas.

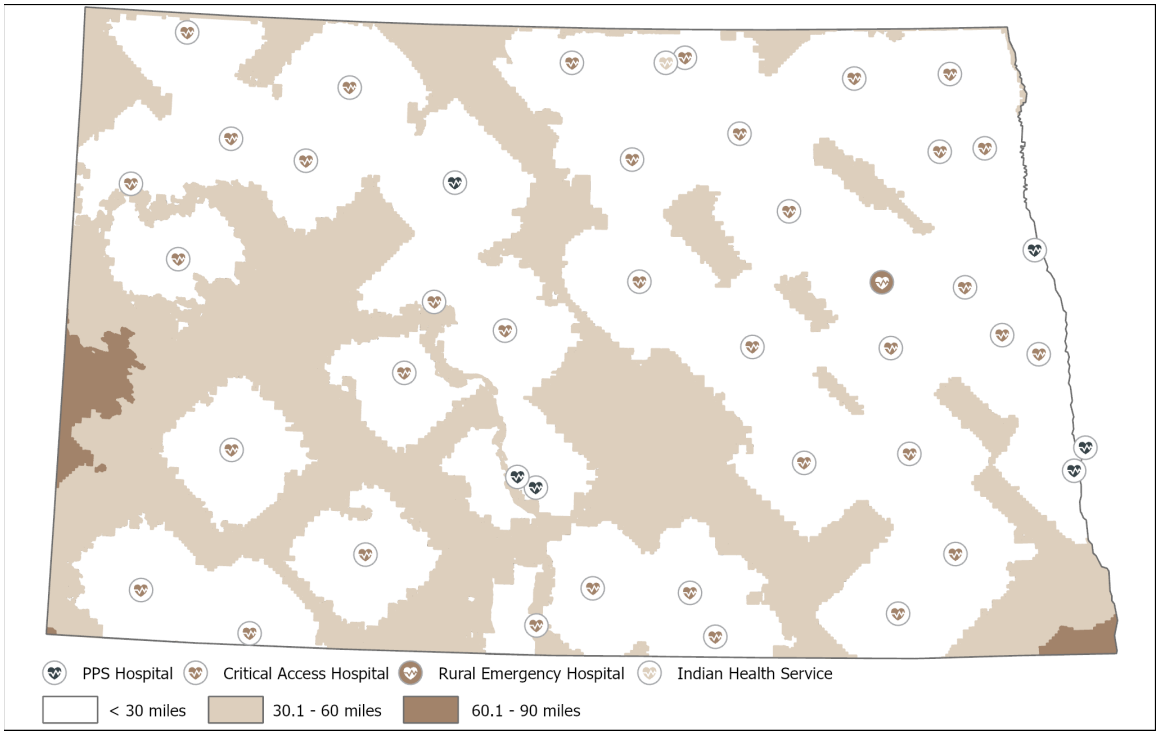


Figure 9.11: North Dakota Hospital Distance Buffers for Access to Care, 2026 (NDDHHS, 2026b).

There is reasonable geographic access to short-term general hospitals in the state. However, geographic access hospitals with specialty care availability are more problematic. Figure 9.12 illustrates the cities with a birth unit, which was initially presented in Chapter 4. This figure presents those same cities with the same travel distance buffer of 30, 60, and 90 miles, but also includes an additional buffer of 90 to 120 miles as there are areas of the state that are further than 90 miles from a city with a birth unit. Travel distance creates many challenges for expectant mothers as the time between the onset of labor and the time of delivery are varied and emergent situations may arise rapidly. An additional factor related to living on the northern plains is adverse winter weather that may make travel conditions difficult or impossible.

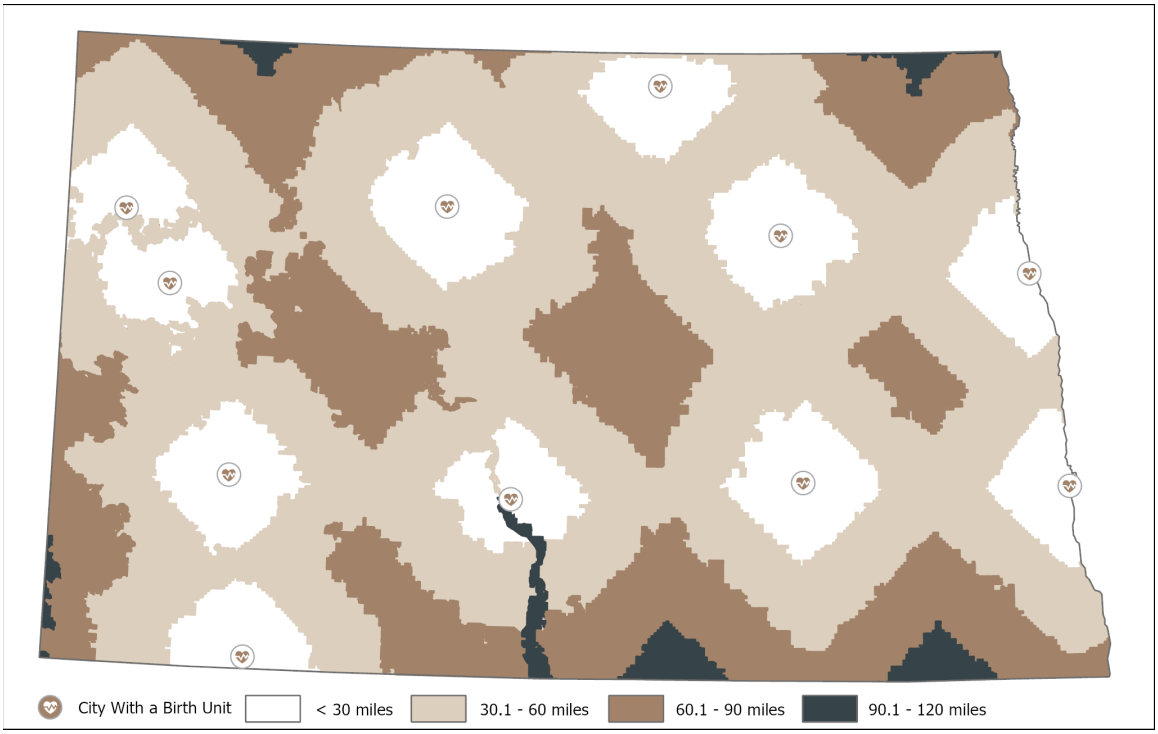


Figure 9.12: North Dakota Cities With a Birth Unit and Associated Distance Buffers, 2026 (NDDHHS, 2026b).

An additional specialty care access scenario relates to hospitals with inpatient psychiatric care beds and is illustrated in Figure 9.13. This figure uses the same travel distance buffers of 30, 60, 90, and 120 miles but adds additional buffers of 150, 180, and 210 to 270 miles as there are areas of the state that are further than 120 miles from a hospital with inpatient psychiatric beds. The geographic access presented here shows a much larger proportion of the state that is more than 60 miles from a hospital with inpatient psychiatric beds. In the case of hospitals with inpatient psychiatric beds, travel distance is compounded by challenges of emergent situations arising rapidly, the limited number of beds in some hospitals, and challenges in transporting individuals in crisis situations.

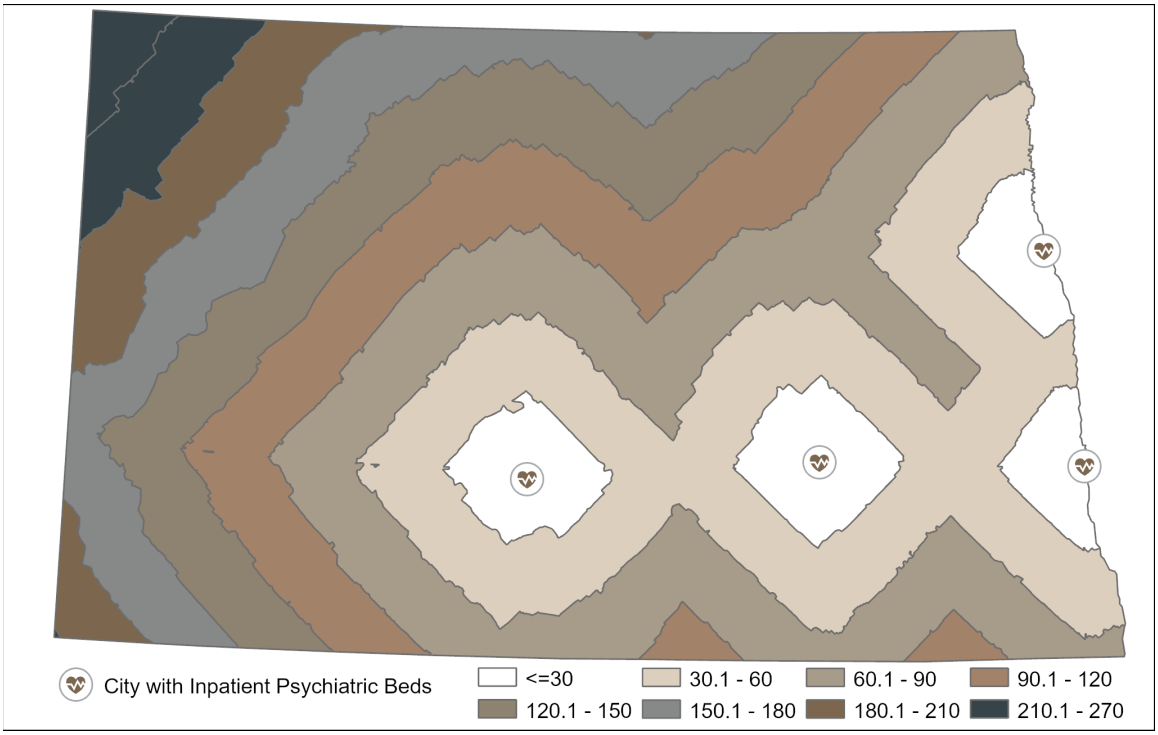


Figure 9.13: North Dakota Hospitals With Inpatient Psychiatric Beds and Associated Distance Buffers, 2026 (NDDHHS, 2026b).

SUMMARY

Healthcare in North Dakota is delivered through more than 300 ambulatory care clinics, 52 hospitals, 72 skilled-nursing facilities, 54 basic-care facilities, and 52 assisted-living facilities, supported by an array of EMS providers, trauma centers, and pharmacies. Behavioral health services delivered via the state system include eight Behavioral Health Clinics and six outreach/satellite locations, the State Hospital, and a Life Skills and Transition Center. Geographic access to care varies widely depending on the type of services being sought. Confounding factors include seasonal weather and road conditions, the unpredictability of emergency situations, and the influence of timely access on outcomes. Additional limitations addressed in Chapter 2 tie the social drivers of health with access challenges. Chapters 6-8 address workforce shortages and maldistribution which also contribute to access to care issues.

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MEASURING WHAT MATTERS IN HEALTHCARE

CHAPTER TEN

Quality and Value of Healthcare

Healthcare quality is about more than a single measure. Safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity all contribute to a high-performing healthcare system. Measures of access, affordability, outcomes, patient experience, and spending provide a broader picture of healthcare performance—showing where North Dakota is making progress and where opportunities for improvement remain.

Quality Care Is More Than a Number



The Commonwealth Fund State Scorecard for 2025 ranked North Dakota 22nd overall, improving from 28th in 2023.

Understanding where we are today helps identify where healthcare can improve.

NORTH DAKOTA SNAPSHOT

North Dakota ranked 8th among the 50 states and Washington, D.C., for healthcare access and affordability in 2025.

Previous editions of this *Report* have presented data obtained from various sources on the quality and value of healthcare with final selections being the result of careful consideration of data collection methods, the most recent year of data, and overall fit for accurately representing North Dakota using neighboring states and the U.S. as comparisons. Since the publication of the *Eighth Report*, several data sources have been discontinued or have data lags that have been determined not to meet the needs of the analytic timeframe of this ninth edition. As such, this chapter contains a selection of the most current data from those sources identified as providing the most relevant and accurate information possible.

NATIONAL OVERVIEW

The quality and safety of care delivered in a healthcare system is directly associated with improving and maintaining the overall health status of the served population. In a complex healthcare system, there are a number of concerns that can negatively impact quality and safety, such as the availability of providers; patient access to care, health services, and technology; and the financial dimensions of affordability and payment. Each of these is a contributing factor in the overall strategy to be considered when reforming or redesigning a healthcare system. In addition, the quality of care provided to the population and the patient outcomes produced are equally important facets of reform. This chapter will focus on two areas: quality of care, and health reform in North Dakota.

The National Academy of Medicine's (NAM, formerly The Institute of Medicine [IOM]) six principal components to improving health – safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity – are the cornerstones for improving health status and system performance in a period of transformative change (IOM, 2001). The NAM, along with other organizations, has called for a modernized or modified healthcare system predicated on openness, responsiveness, and shared responsibility. The federal Agency for Healthcare Research and Quality (AHRQ) applies these six aims in its nationwide analysis and assessment of health quality, which is called the National Quality Strategy (NQS) (U.S. Department of Health and Human Services [DHHS], 2016).

To help achieve these aims, the NQS established six priorities to help focus the efforts of public and private partners:

1. Making care safer by reducing harm caused in the delivery of care.
2. Ensuring that each person and family are engaged as partners in their care.
3. Promoting effective communication and coordination of care.
4. Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease.
5. Working with communities to promote wide use of best practices to enable healthful living.
6. Making quality healthcare more affordable for individuals, families, employers, and governments by developing and sharing new healthcare delivery models (U.S. DHHS, 2011).

The six NQS priorities show the continuing development of thought relative to a transformative approach to the healthcare delivery system. The six NAM principles of safety, patient-centeredness, effectiveness, efficiency, timeliness, and equity have served as guiding pillars for reform. There is a continuing movement to foster greater transparency, inclusion, patient-centeredness, and communication; to call for enhanced accountability from providers and the overall healthcare system to individuals, families, payers, employers, and communities; to focus on prevention, health promotion, care coordination, and greater patient knowledge and involvement; to emphasize that better health and better care can arise from a responsive healthcare system that recognizes that efficiency in organizational performance can produce better health and medical outcomes; and to initiate new healthcare delivery approaches to associate patient outcomes with provider payment structures in order to ensure a more equitable distribution of healthcare services.

To achieve greater value through a more optimally performing healthcare system, the NAM supports strategies to: 1) capture the opportunities present in technology, industry, and policy; 2) develop pathways to a continuously learning healthcare system; 3) engage patients, families, and communities; 4) achieve and reward high-value care; and 5) create a new culture for care.

A recent report emerged from discussions involving national experts on payment strategies to support high-quality care (Agency for Healthcare Research and Quality, 2022). The focus was on people with serious health conditions such as cancer, chronic obstructive pulmonary disease, and heart disease. A range of ideas was discussed, including the following: 1) incorporating more social services as an integrated approach; 2) changing Medicare to better incentivize care coordination; 3) relying less on an acute care model where reimbursements "trickle down" and instead use more community-based networks; 4) supporting delivery system reform that more adequately connects social services, long-term services, and support structures to the patient; 5) including a hospice and palliative care benefit in integrated financing and delivery; and 6) encouraging more health systems and state and local governments to lead in innovation for quality, accessibility, and affordability (AHRQ, 2022).

ASSESSMENT OF HEALTH QUALITY IN NORTH DAKOTA

OVERALL ASSESSMENT

There are different public and private organizations that analyze state-specific quality data. Such analysis can be instructive for state and local officials, providers, employers, payers, and individuals who are interested in understanding effective interventions and healthcare status. Such data can serve to guide both public policy and local programs' responses. The amount of quality-relevant data; the number and type of measures; and the number of health organizations and providers collecting and using quality-related measures grow each year. Both the scientific knowledge and the policy directives that guide and shape the incorporation of data metrics and evidence-based principles become more refined and pronounced over time. The recognition on the part of policymakers and health advocates of the importance in understanding how healthcare systems and providers intervene to promote optimal health, and the actual collection and analysis of health outcome data are fundamental factors in a transformative U.S. healthcare system. The following content will explore some of the various healthcare assessments/quality reporting data that are available.

Commonwealth Fund Assessment

The *Commonwealth Fund State Scorecard* for 2025 showed North Dakota ranked 22nd out of 51 states, which is an improvement from its position of 28th in 2023 (The Commonwealth Fund, 2026a). The Commonwealth Fund used subcategories to analyze quality and performance: access and affordability; prevention and treatment; avoidable hospital use and cost; healthy lives; income disparity; and racial and ethnic health equity. The rankings associated with each measure are presented in Table 10.1 for 2020, 2022, 2023, and 2025.

Since a metric like "access" is so pivotal in understanding health, it is helpful to review some specific findings from the *Commonwealth Fund State Scorecard*. North Dakota has seen an improvement in the number of children with health insurance, the number of adults ages 19 to 64 with health insurance, a reduction of individuals under age 65 having high out-of-pocket medical costs in relation to their household income, the employee total potential out-of-pocket medical costs as a share of state median income, and the number of people with medical debt in collections (The Commonwealth Fund, 2026a).

The report found that North Dakota performed best on adults who report fair or poor health and children with a medical home. The report also identified indicators that had worsened in North Dakota such as alcohol deaths, primary care spending as a share of total spending for those age 65 and older, and nursing home residents with an antipsychotic medication (The Commonwealth Fund, 2026a).

Table 10.1: North Dakota Rankings Associated With the Commonwealth Fund State Scorecard, 2025 (The Commonwealth Fund, 2026b).

Category	2020	2022	2023	2025
Access and Affordability	23rd	23rd	24th	8th
Prevention and Treatment	20th	38th	30th	30th
Avoidable Hospital Use and Costs	11th	16th	19th	15th
Racial and Ethnic Health Equity	11th	32nd	43rd	42nd
Healthy Lives	15th	25th	21st	17th
Income Disparity	-	11th	25th	5th

Hospital Consumer Assessment of Healthcare Providers and Systems

Another option for exploring healthcare quality data is the Hospital Consumer Assessment of Health Providers and Systems (HCAHPS) data. In analyzing the HCAHPS data for North Dakota in 2023, North Dakota's critical access hospitals (CAHs) ranked 24th in state rankings of CAH reporting rates for inpatient quality measures (The Critical Access Hospital Measurement and Performance Assessment System [CAHMPAS], 2026). State rankings of CAH reporting rates are based on the percentage of CAHs per state reporting on quality measures, thus if multiple states have 100% of CAHS reporting on a given metric those states will tie for the 1st ranked position. Minnesota ranked 22nd and South Dakota ranked 1st, tied with 20 states with 100% of CAHs reporting inpatient quality measures. For state rankings of CAH reporting rates for outpatient quality measures for 2023, North Dakota, Minnesota, South Dakota, and 11 other states tied for the 1st ranked position with 100% of CAHs reporting in comparison to a U.S. rate

for CAHs of 89.4%. Other indicators from the report showed that North Dakota CAHs exceed other CAHs on some measures and rated lower on other measures (CAHMPAS, 2026). North Dakota CAHs were substantially better than other CAHs for the measure “Median time from ED arrival to ED departure for discharged patients” (14.5 minutes shorter than national average). North Dakota CAHs were deemed substantially worse compared to all other CAHs nationally for the measures of “Healthcare workers given influenza vaccination,” and “Patient left without being seen” (CAHMPAS, 2026). The HCAHPS data are collected from all participating hospitals using a consistent data collection tool distributed to a random sample of adult patients for each participating hospital. While this methodology is appropriate, the results for low-volume hospitals, including many rural hospitals, creates a sampling concern. Small sample sizes are sensitive to outliers and result in findings that are not generalizable to the larger population.

Healthcare Expenditures

The U.S. Bureau of Economic Analysis provides data on consumer spending by state broken down into gross domestic product (GDP) by state and personal consumption expenditures (PCE) by state. These data are available from 1997 through 2024 and provide the ability to compare between states by year and production category as well as within states over time. This includes data regarding per capita spending on healthcare which can be a key metric when assessing the quality and value within a healthcare system.

In 2024, the most recent year of data available, North Dakota had the 8th highest per capita spending on healthcare at $11,667 per person. In comparison, South Dakota had the 3rd highest per capita spending at $12,451 per person, Minnesota was 15th at $10,567 per person, and Montana was 28th at $9,747 per person. Alaska was ranked 1st at $14,044 per person, and Utah was 51st at $7,233 per person (U.S. Bureau of Economic Analysis [BEA], 2026).

When comparing North Dakota to the United States through time, both geographic areas demonstrated an increase in healthcare spending per capita. Between 1997 and 2000, North Dakota’s per capita healthcare spending was between 2.2% and 4.1% higher than the U.S. per capita healthcare spending. That difference grew in the 2000s with North Dakota fluctuating between 6.4% and 9.0% between 2001 and 2007. Starting in 2008, North Dakota’s per capita spending on healthcare shifted to being more than 10% higher than the U.S. for all subsequent years. In 2008 that difference was 10.8% which grew to 20.5% by 2013. Between 2014 and 2018, North Dakota’s per capita spending on healthcare ranged from 21.7% to 24.1% higher than the U.S. The years 2019 through 2022 saw the highest difference in per capita spending on healthcare between North Dakota and the U.S. with a range of 23.4% to 27.5%. The per capita spending difference between North Dakota and the U.S. declined to 21.3% and 19.7% for 2023 and 2024, respectively (U.S. BEA, 2026).

Hospital Cost Reporting

The Centers for Medicare and Medicaid Services (CMS) collects data from healthcare facilities in the U.S. that receive Medicare payments. The payment data provides a way to examine availability within our healthcare facilities as well as another way to assess healthcare spending. All hospitals that receive Medicare funding submit annual hospital cost reports. A public-use file providing a subset of the measures collected through these reports is provided as part of the Hospital Provider Cost Report dataset (Centers for Medicare & Medicaid Services [CMS], 2026). The following summaries compare the PPS hospitals and CAHs in North Dakota for state fiscal

year 2024, which covers the time period of July 1, 2023, through June 30, 2024. The two areas of focus for the hospital provider cost report data analysis will be capacity and finance. The following summaries address the six PPS hospitals and 36 CAHs not associated with Tribal ownership in North Dakota as these have the most complete data for analysis and the following data are presented at a CAH and PPS level. Chapter 9 outlined CAHs as rural hospitals that must meet the following specific federal guidelines: cap of 25 acute-care beds, an average length of stay of 96 hours or less, located at least 35 miles from another hospital, and reimbursement on an allowable-cost basis as opposed to a PPS, which is used by the tertiary hospital (Rural Health Information Hub, 2026). These guidelines that distinguish CAH and PPS hospitals in such a way that they operate differently and the context of their respective operations must be taken into consideration before drawing conclusions.

Capacity

Capacity for the purpose of this section includes full-time equivalent (FTE) staffing, FTE for medical residents and interns, number of beds, number of bed days (beds x 365), number of occupied bed days, and number of discharges. When examining FTE, PPS hospitals had an average of 2,826 FTEs while CAHs had an average of 91. The range of FTE for PPS hospitals was between 844 and 6,178, while the range for CAHs was between 22 and 288. Data for medical resident and intern FTE indicated that PPS hospitals had an average of 31 with a range of 5 to 999. Only one CAH reported medical resident or intern FTE which included an FTE of 3 (CMS, 2026).

When examining the number of beds, PPS hospitals averaged 221 beds while CAHs averaged 22. The range for PPS hospitals was 142 to 493, while the range for CAHs was between 9 and 35. It should be noted here that under federal regulation, CAHs may only operate a maximum of 25 inpatient beds. The reporting mechanism here includes swing beds and other operating status beds, which explains the CAH maximum number of 35 (CMS, 2026).

When assessing the number of available bed days, PPS hospitals averaged 82,109 while CAHs averaged 7,858. The range for PPS hospitals was between 39,162 and 179,945, while the range for CAHs was between 3,294 and 12,775. Data for occupied bed days indicated that PPS hospitals averaged 57,044 while CAHs averaged 2,485. For data regarding hospital discharges, PPS hospitals averaged 11,095 while CAHs averaged 255. The range for PPS hospitals was between 5,651 and 23,763, while the range for CAHs was between 2 and 1,580 (CMS, 2026).

Finance

Financial measures for the purpose of this section include the cost of charity care, the cost of uncompensated care, total costs, and total charges. When examining the cost of charity care, PPS hospitals averaged $5,643,975 while CAHs averaged $482,940 (CMS, 2026). The range for PPS hospitals was between $1,461,488 and $15,804,801, while the range for CAHs was between $823 and $6,960,709. In assessing the cost of uncompensated care, PPS hospitals averaged $10,475,204 while CAHs averaged $1,035,760. The range for PPS hospitals was between $2,737,974 and $26,995,407, while the range for CAHs was between $40,446 and 11,393,477. In the examination of total costs, PPS hospitals averaged $484,205,699 and CAHs averaged $19,644,644. The range for PPS hospitals was between $227,160,253 and $1,052,772,873, while the range for CAHs was between $6,734,129 and $71,111,107. Data on total charges indicated that PPS hospitals averaged $1,546,205,690 and CAHs averaged

$30,837,325. The range for PPS hospitals was between $597,278,543 and $3,387,336,769, while the range for CAHs was between $5,557,336 and $170,706,956 (CMS, 2026).

The final financial metric examined here is the cost-to-charge ratio (CCR). The CCR is the hospitals' total expenses divided by their charges, which can be used to measure how much a hospital marks up its costs. The CCR value for any hospital should range from 0 to 1 with values closer to 1 indicating the hospital's charges and expenses are similar. CCR values closer to 0 indicate a higher markup than those closer to 1. CCR values greater than 1 indicate that the facility is billing less than the costs incurred to the facility. Of the 36 CAHs in North Dakota examined here, 9 had a CCR greater than 1, and another four were between 0.9 and 1. Of all 36 CAHs examined, one in three had a CCR above 0.9 (Association for the Advancement of Blood & Biotherapies, 2024; CMS, 2026).

VOLUME TO VALUE TRANSITION

The delivery and financing of healthcare have evolved over time through a series of strategies that have served to focus on high quality and low-cost care via mechanisms led by payers, health systems, and community-based interventions. This includes managed care settings, accountable care organizations, and the early phases of global budgets. All of these strategies have been implemented in rural and urban areas with varied successes. A more recent model has been developed that allows for a shift from fee-for-service and cost-based reimbursements to value-based payments. This has been introduced and implemented in rural areas in the form of rural hospital networks, often referred to as high-value networks (The Rural Monitor, 2023).

Under a high-value network model, rural hospitals join collaborative networks that facilitate resource sharing to allow facilities to engage in the types and levels of support that they need without holding all of the risk of those resources. Rural hospitals that join networks together may share resources related to finance, operations, service delivery, education, billing, and other needed services that may not be easily supported by a single facility. Two examples of these other services are health care analytics for priority projects and grant-writing assistance (The Rural Monitor, 2023).

High-value networks allow independent or affiliated hospitals to leverage their collective needs to enter into value-based or risk-based contracts. This collective need strategy creates a volume of demand at a level that may reduce overall costs based on the shared risk among partners (American Hospital Association, 2025). Before establishing a high-value network, healthcare facilities must create a clinically integrated network (CIN) which carries a focus of quality improvement in the form of better care and efficiency improvements through smarter spending. This is accomplished by having organizational components in place to ensure that the foundation of the CIN is in place to support the operational functions. The operational functions are the day-to-day activities and reporting metrics that provide performance metrics that allow the CIN to address deficiencies that result in negative financial and clinical outcomes.

SUMMARY

A key factor in improving and maintaining overall health status is the quality and safety of care delivered within a healthcare system. Factors such as access to care and health services, treatment advancement, availability of providers, and healthcare affordability contribute to the overall quality and value of healthcare. NAM proposes six principal aims to improve health

within the current U.S. healthcare system. As demonstrated in this chapter, North Dakota continues to work towards improving the quality and value of healthcare within the state. According to the most recent AHRQ assessment, North Dakota was in the top ten states on all healthcare quality measures; however, there has been a recent decline in patient safety, care coordination, and healthy living. Areas demonstrating improvement over time include an increase in children with health insurance, a reduction of individuals under age 65 reporting high out of pocket medical costs, and a decrease in adults aged 18 and older who went without care due to cost in the past year. Conversely, some indicators have worsened, including an increase in children who did not receive needed mental healthcare, home health patients with a hospital admission, and increased employer-sponsored health insurance spending. Nationally, North Dakota scores worse for healthcare workers given the influenza vaccine, patients leaving emergency departments without being seen, and provider notes after visiting emergency departments. North Dakota exceeds the national average in employer-covered health insurance and has a lower uninsured rate than the national average. Each of these metrics can play an important role in assessing the quality and value of a healthcare system as well as provide insight into areas where improvements can be made.

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GROWING NORTH DAKOTA'S HEALTHCARE WORKFORCE

CHAPTER
ELEVEN
Healthcare Workforce Development

North Dakota's efforts include training future professionals, strengthening rural and primary care pathways, and recruiting and retaining providers. Workforce preparation is also evolving as artificial intelligence becomes part of healthcare. Expanding training opportunities and preparing learners to use AI safely and responsibly can help develop the professionals and skills needed to serve North Dakota communities.

Medical Education Pathway

99th
percentile for UND SMHS graduates training in family medicine

100th
percentile for UND SMHS graduates who are American Indian/Alaska Native



Education and training help prepare future healthcare professionals with the knowledge, experience, and skills needed to serve North Dakota communities.

Building tomorrow's healthcare workforce starts with decisions made today.

NORTH DAKOTA SNAPSHOT

North Dakota ranked 15th nationally with 37 medical students per 100,000 residents in 2025–26.

All eight prior editions of this *Report* have considered healthcare workforce issues in considerable detail. The 8th *Biennial Report* in 2025 reassessed the various options available to increase the in-state healthcare workforce: recruit from outside the state, increase the number of trainees, and retain more graduates for practice within North Dakota. It concluded that the best plan for the state's healthcare workforce development would be an approach that combined increasing both the number of graduates and the retention of practitioners. Those two concepts became two of the four important building blocks (along with reducing disease burden and improving the efficiency of our healthcare delivery system) of the Healthcare Workforce Initiative (HWI) that subsequently was proposed by the University of North Dakota (UND) School of Medicine and Health Sciences (SMHS) Advisory Council, endorsed by the North Dakota State Board of Higher Education, and approved and continuously funded by the 62nd through 69th Legislative Assemblies. Almost all of the components of the HWI have been implemented by UND SMHS under the oversight of its Advisory Council. For example, medical and health sciences class sizes have been expanded to the desired and approved levels on schedule. However, the one outlier was that residency slot expansion (a residency is post-MD degree graduate medical training required of all physicians before they can get a full license to practice medicine) envisioned under the approved HWI plan had to be temporarily truncated owing to budget challenges during the 2019-21 biennium. The HWI funding for an approved new family medicine residency program based in Fargo was not possible at that time, but fortunately Sanford Health generously agreed to provide the required financial support so that this residency program is now up and running (under the umbrella of UND programs). Sanford Health similarly agreed to fund an orthopedic surgery residency program also based in Fargo. In 2024, UND added a residency program in pediatrics. More recently there was an expansion of the existing rural surgery residency, an additional (new) residency in internal medicine located in Bismarck which is in addition to the Fargo internal medicine residency program, a new surgical critical care fellowship, and a new cardiovascular disease fellowship located in Fargo.

One important aspect of a long-term plan like the HWI that relies on educational programs to balance the supply of healthcare professionals with the need for their services is that it necessarily requires a relatively long lead time to achieve its goal. The long lead time is important since the training of additional physicians, for example, takes a minimum of seven years from the time a student enters medical school until that doctor is licensed and ready to see patients in the community.

Since the HWI plan utilizes a variety of approaches both to increase retention and expand class sizes, it might be useful to review the rationale for those approaches and to reevaluate the recruitment of healthcare professionals from outside the state.

RECRUIT FROM OUTSIDE NORTH DAKOTA

One approach to meeting workforce needs is to recruit physicians and other healthcare professionals from training programs or employed positions outside of North Dakota. Indeed, this approach has always played a role in filling the state's workforce complement, and it likely will continue to play an ongoing (albeit more limited) role even as the impact of the HWI becomes more apparent over time. Even if the current healthcare workforce supply were adequate, however, there would be an ongoing need to replace a portion of current healthcare providers resulting from normal and expected turnover in the workforce. For physicians, the typical turnover rate is at least 5% per year due to retirement, death, relocation, or a change in

job status. For North Dakota, this means that nearly 100 new physicians are needed annually – whether locally produced or recruited externally – just to *maintain* current physician workforce levels. Considering that many current physicians are at the age where retirement becomes more likely, there may be an increase in the workforce attrition as the current baby boomers retire.

Recruitment to replace those who have left the workforce may come from physicians located in other states or other countries. The recruitment of international medical graduates (IMGs) has been particularly important for filling a gap in rural primary care needs (McElvaney & McMahon, 2024). Currently, about one in four physicians practicing in North Dakota are IMGs, which is slightly more than the U.S. as a whole where a little over one in five physicians are IMGs. Some, but not all, analyses have suggested that proportionally more IMGs than U.S. medical graduates (USMGs) practice in underserved settings (Thompson et al., 2009). IMGs have filled an important and essential role in providing primary care to North Dakota rural communities for many years. However, relying on an expectation that it will be possible in the future to recruit additional IMGs to meet future needs likely will be difficult for several reasons. First, there is no reason to assume that the national trend for IMGs will be dissimilar to USMGs, whose career choices typically do not gravitate toward primary care and especially rural primary care practice. On the other hand, physicians who graduate from the UND SMHS are much more likely to go into family medicine (99th percentile), primary care (93rd percentile), or practice in a rural area (98th percentile) than graduates of all other United States medical schools (Association of American Medical Colleges [AAMC], 2026b).

One program that allows North Dakota to utilize IMGs in rural and underserved areas is the Conrad 30 waiver program. The Conrad 30 waiver program was implemented in 1994 and was named after Senator Kent Conrad of North Dakota. The program allows each state's health department to request up to 30 J-1 visa waivers per year for foreign physicians. If accepted, these physicians must work in a Health Professional Shortage Area, Medically Underserved Area, or with a Medically Underserved Population (Rural Health Information [RHI] Hub, 2026). In North Dakota, the addition of 30 waivered physicians practicing in rural or underserved areas, assuming they practice primary care, would be approximately 5% of the primary care physicians in the state. While that represents a relatively small number of physicians, the difference of one physician in a rural community may mean a facility being able to continue operations to serve that community.

Second, rules regarding J-1 visa waivers are evolving and will have an effect on the availability of IMGs. A recent change eliminated the Duration of Status policy for those visa types that international medical trainees and graduates utilize to enter the U.S. to learn or practice. The Duration of Status policy allowed trainees and graduates to enter the U.S. under a visa with the authorization duration tied to maintaining the requirements of their immigration status, not a specific calendar date (Yale University, 2026). In July 2026, a fixed-term policy was implemented that limits training or practice to four years, then requiring an Extension of Status (AAMC, 2026a). In a position statement, the Association of American Medical Colleges addressed the new fixed-term rule that presented risks of challenges to recruiting and retaining foreign talent, increasing administrative and financial burden on learners and institutions, and limiting American's access to patient care and scientific advancements (AAMC, 2026a).

It is important to note that when North Dakota communities recruit for professional talent from outside the state, they compete on the world market. Intense competition for scarce human resources often requires that healthcare facilities offer premium compensation to attract workers, which in turn raises costs to North Dakota patients. This is particularly true in rural communities, where the work is demanding and professionals have access to fewer support mechanisms than they could find in larger communities. Cost considerations aside, in order to meet additional future shortages through external recruitment, North Dakota would have to recruit more successfully against other competitors than it does at present.

INCREASE THE NUMBER OF HEALTHCARE PROFESSIONALS TRAINED IN NORTH DAKOTA

An alternative strategy (one that is a benchmark of the HWI) is to grow our own physicians and other healthcare professionals by increasing the number of health professionals trained in the state. As noted above, this approach has a built-in time lag of a minimum of seven years for physicians to complete education and training, and a somewhat shorter time frame for other healthcare professionals (AAMC, 2008). However, the educational process itself does not necessarily guarantee a specific number or type of physicians or healthcare professionals to meet the healthcare needs of rural North Dakota communities, since a trainee's choice of career pathway ultimately is a matter of personal choice that can be influenced but not dictated.

WHAT ARE THE NEEDS OF NORTH DAKOTA?

To understand the need, it is instructive to compare the current status of the healthcare workforce in North Dakota with the national situation. In North Dakota, the current number of active patient-care physicians is 1,672 or 209 per 100,000 population. This compares with the U.S. average of 255. The current number of active patient-care physicians in North Dakota in primary care is 634 or 79 per 100,000 population, which is slightly higher than the U.S. median of 76 (Medical Marketing Services, 2025; Health Resources Services & Administration [HRSA], 2026; U.S. Census Bureau, 2026). While these data suggest that North Dakota is doing reasonably well compared with the rest of the country, the United States currently is experiencing an aging healthcare workforce with a geographic maldistribution that is not adequately meeting the current needs of many communities, especially rural. This is especially true for North Dakota. Rural communities have too small a population to support specialists, and they rely on primary care physicians and other providers to adequately and affordably meet healthcare needs. Nationally, one quarter of all physicians are in primary care, while almost one-half of physicians in primary care (mostly family physicians) are in rural communities (HRSA, 2026; Hoffer, 2024). Family physicians provide the broadest care to all segments of the population and are essential to addressing the healthcare needs of North Dakota's rural and remote communities. But rural communities have experienced a chronic shortage of primary care physicians for many decades.

The challenge for rural communities is to attract and retain healthcare professionals to areas where technology is less advanced, salaries may be less competitive, and geographic or other challenges exist for the clinician and/or their family. The current healthcare workforce is aging, and younger healthcare professionals typically seek more specialization and a better work-life balance. Healthcare delivery methods will continue to evolve in order to address the increasing demand for the management of chronic diseases; care of the aging with increasing dementia;

and the need to address significant population health issues such as obesity, physical inactivity, and cigarette smoking. These issues are interrelated insofar as successfully addressing population health issues likely will result in longer survival and thus a paradoxical *increase* in the number of people with chronic diseases requiring care. These complex and challenging realities require thoughtful strategies (such as the HWI) to ensure the right healthcare professionals with the right skills are available to keep our citizens and populations healthy.

NATIONAL RECOMMENDATIONS FOR INCREASING HEALTH PROFESSIONS STUDENTS

In June 2006, the Association of American Medical Colleges (AAMC) recommended a 30% increase in U.S. medical school enrollment and an expansion of graduate medical education (GME) positions to accommodate the growing demand for healthcare professionals (AAMC, 2019). The AAMC periodically has updated its workforce predictions and recommendations. Its analysis in 2017 found that the recommended 30% increase in medical school slots had been achieved in the prior decade or so, and as a consequence the AAMC initially moderated its projection of future physician workforce shortages. Nevertheless, the most recent AAMC report in 2024 adjusted its projected shortfall to between 13,500 and 86,000 physicians nationwide by 2036, with primary care and surgery being the specialties with the greatest predicted shortages (AAMC, 2024). Because GME (residency training) is a requirement for licensure in the United States, the AAMC and others have emphasized that simply increasing the number of graduating medical students without ensuring a commensurate growth in the number of residency training positions will not eventuate in more physicians; there will be a bottleneck at the residency level. However, the number of federally sponsored GME positions has been essentially frozen since 1997 by the Balanced Budget Act, and the growth of GME slots since then has been slow - less than half the rate of growth of medical student positions. While federally funded residencies are frozen, with the exception of special circumstances, states and health systems have worked to develop residencies to fill the gap that federal funding has left. North Dakota and its health systems have continued to develop residencies to help address the demand for physician specialties most needed in the state.

There had been considerable debate by experts regarding the AAMC recommendation for a 30% increase in the number of first-year medical school slots; in retrospect, the recommendation would appear to have been too conservative. An AAMC report on the complexities of projecting physician supply and demand from 2008 identified the following findings that supported the prediction of increasing demand: (AAMC, 2008)

- Aging of the population will drive demand for healthcare services sharply upward.
- The growing U.S. population.
- Increased health coverage that increased the demand for healthcare services.
- Increased clinical productivity (that is to say, more efficient healthcare delivery) is hard to accomplish because of the increasing complexity of care of current and future patients.
- Increasing the numbers and roles of physician assistants and nurse practitioners may help, but the full effect is difficult to predict.
- Effects of the healthcare workforce shortage will include longer wait times, increased travel distances, shorter visit times, expanded use of non-physicians, higher prices, and

possible reduced access to the healthcare system.

- Shortages are expected to continue to be especially problematic in poor, rural, and urban communities (Commonwealth Fund, 2025).
- A 30% increase in the number of matriculated medical students and a commensurate increase in GME positions (which seems unlikely for the foreseeable future) will only moderate but not eliminate the mismatch between the demand for and the supply of healthcare services.

While the AAMC findings presented above were published in 2008, the themes identified still exist in the U.S., especially in rural areas. These issues have been exacerbated by the negative impact of the pandemic on the general status of provider job satisfaction including a noticeable increase in the sense of burnout and job dissatisfaction among providers, that may accelerate the selection of earlier retirement by an aging provider workforce.

NORTH DAKOTA'S PRODUCTION OF MEDICAL STUDENTS

The UND SMHS is the only medical school in North Dakota. The number of students enrolled in medical school in the years 2025-2026 was 295 or 36.9 per 100,000 population. This ranks nationally as 15th out of the 50 states (AAMC, 2026b, U.S. Census Bureau, 2026). Compared with the national benchmark, it is evident that the UND SMHS is doing an excellent job of educating North Dakota students in medicine. Compared with other states, North Dakota will be graduating more North Dakota-trained physicians in the coming years.

The UND SMHS consistently has ranked in the top five schools in the country for the percentage of students choosing a family medicine residency program and in 2026 was in the 99th percentile for percent of graduates training in family medicine (AAMC, 2026b). The UND SMHS has done very well in producing primary care physicians (94th percentile) and educating students from underrepresented minorities. In 2026 the UND SMHS were in the 100th percentile for percent of graduates who are American Indian and Alaska Native (AAMC, 2026b). The diversity of its students is primarily a result of its nationally recognized Indians Into Medicine (INMED) program that ranks first in the United States as to the percentage of students who are from federally recognized tribes.

The UND SMHS has several programs that focus on providing opportunities for experiences in rural communities including the Rural Opportunities in Medical Education (ROME) and the Minot Integrated Longitudinal Experience (MILE). The RuralMed program provides an opportunity for tuition forgiveness in return for practicing in rural North Dakota for five years. In addition to the medical education opportunities, the UND SMHS offers rural residency programming to further enhance the opportunity for trainees to have experiences in rural areas of North Dakota. These programs are explained more in-depth in Chapter 6.

During the 69th Legislative Assembly, the UND SMHS engaged with the legislature to adopt a strategy to achieve an in-state resident enrollment of 85% for both the medicine and physician assistant programs (69th Assembly, 2025). Commonly referred to as ND 85, this effort has achieved approximately 82% North Dakota resident enrollment and aims to meet the benchmark of 85% resident enrollment for those programs by 2030.

Another new opportunity within UND SMHS is the Primary Care Accelerated Track, or PCAT. The PCAT program would shorten the academic program for medical students in the program by one year and would incentivize them to apply to North Dakota residencies. If accepted into a North Dakota residency program, those medical students would receive tuition and fees reimbursed in exchange for a five-year commitment to serving in a health professional shortage area within the state(UND Today, 2025).

FACTORS AFFECTING THE SELECTION OF PRIMARY CARE AND RURAL PRACTICE

Rural communities in North Dakota will continue to need high-quality physicians and, in particular, primary care physicians and other healthcare professionals who can provide primary care. There are many personal and experiential factors that affect an individual's decision to choose a specialty and to select a practice site. The two enduring factors that best predict a student's residency (and eventual practice) choice have been found repeatedly to be the "fit" of the particular specialty with the interests of the student and the right work-life balance associated with that specialty choice.

A 2009 report from the Robert Graham Center suggested that two things are clear regarding primary care: there is a problem with sufficient access to primary care physicians in rural and impoverished areas, and current practice configurations or organizations will have great difficulty absorbing all currently uninsured patients if universal access to healthcare insurance coverage were to be achieved (Robert Graham Center, 2009). For these reasons and others, it is especially important to understand the factors that influence the decision of medical students and residents in their choice of where to practice, and we need to consider providing further opportunities for support and encouragement in this decision.

What can be done to help ensure the right number of the right physicians? Studies have shown that medical students' choices of primary care or specialty careers beyond the considerations of specialty "fit" and work-life balance are influenced by the following: (Angeli et al., 2025; Barret et al, 2011; Rabinowitz et al, 2008; Robert Graham Center, 2009; Wayne et al, 2010).

- Exposure to required family medicine curriculum during the third or fourth year of medical school.
- Income differences between specialties.
- Institutional factors such as state funding, Title VII Health Professions.
- Student loan funding, and the strength of family medicine departments.
- Student-related factors such as gender, race and ethnicity, socioeconomic status, rural or urban background, and attitudes and values.

Each one of these items is important, but none are a direct or certain predictor of career choice. Awareness of personal factors helps identify the potential influences on choices and may help in addressing these factors through the recruitment and admissions process. Educational experiences throughout medical education and residency can be designed to assure quality experiences in primary care and at rural sites.

A study conducted between 2013 and 2019 examined medical students' change in rural intent to practice. Overall findings found that cohorts at almost all medical schools became less

interested in rural practice between matriculation and graduation. Those schools where cohorts maintained their rural interest had large rural cohorts, admissions preferences for rural students, and defined rural programs (Wendling et al., 2026).

Another study identified factors that facilitate the development of a rural physician identity. Some of those factors include rural upbringing, positive rural exposure, preparation for rural life and medicine, partner receptivity to rural living, financial incentives, integration into rural communities, and good work-life balance (Parlier et al., 2018). Note that all of these factors are identifiable at the time of admission to medical school, and thus could be incorporated into admission criteria. Recognizing this, the UND SMHS has an admission process that gives additional weight to rural origin, rural experience, and rural commitment as it considers student applicants to its medical school curriculum.

WHY DOES PRIMARY CARE MATTER?

How important is it to have adequate numbers of primary care providers in our communities? Studies have shown that a greater supply of primary care physicians is associated with lower mortality from all causes, whereas a greater supply of specialty physicians is associated with higher mortality. States with higher ratios of primary care physicians to population had better health outcomes, including lower rates of death from heart disease, cancer, or stroke; infant mortality; low birth weight; and self-reported poor health. This was even after controlling for sociodemographic measures that can be related to poorer health (such as age, education, income, and unemployment) and lifestyle factors (seat belt use, obesity, and smoking). This relationship of improved health with increased primary care also is demonstrated in international studies. In addition to health benefits, there are reductions in healthcare system costs and reductions in disparities across population subgroups.

The American College of Physicians (ACP) released a position paper in 2025 that addressed improving health and healthcare in rural communities. The authors provided an overview of rural areas that easily could have been a description of any community in North Dakota outside of the four major cities. This included health disparities and challenges in access to care, low population densities, increased travel time and distance, and other system factors that create the unique challenge that is addressing healthcare in rural areas The ACP positions can be further condensed into the focal areas of understanding rural to most efficiently allocate resources, prioritization of workforce efforts, reimbursements, and telehealth.

The ACPs positions include supporting public policy efforts to identify, research, and address those health and healthcare challenges that impact rural areas. The first three positions address a greater understanding of rural to assist in prioritizing needs for potential funded interventions. This effort would then need to take into consideration the unique characteristics that exist in rural areas with the understanding that a great deal of variation exists in composition of rural communities in the U.S. This would include the evaluation of social drivers of health to further understand those factors that influence health in rural areas. These efforts would serve to provide a framework for appropriate levels of funding for efforts (Serchen et al., 2025).

The ACPs positions on healthcare workforce provide guidance on how best to address workforce in rural areas utilizing existing frameworks. The three positions address medical education including graduate medical education (GME), recruitment and retention efforts, and the utilization of International Medical Graduates (IMGs). The position in support for medical

education institutions includes incorporating rural health issues and skills, increasing opportunities for rural residencies, and enhanced pathways for rural students. This is followed by a position to prioritization of recruitment and retention efforts, including both existing and novel strategies. The final position in this area focuses on IMGs as playing an important role in increasing access to primary care and other health services and as such should be included when policies and practices are reviewed for barriers to workforce development (Serchen et al., 2025).

The last two positions by the ACP focus on reimbursement and telehealth. The position on reimbursement provides recommendations for reimbursement strategies that support physician recruitment and retention. The last position addresses telehealth and endorses licensure flexibilities that will allow access to telehealth by providers who may choose to provide services in that manner (Serchen et al., 2025).

CHALLENGES TO ADDRESSING THE HEALTH WORKFORCE PATHWAY AND NEED FOR THE HEALTH PROFESSIONS

Seeking and encouraging applicants from rural communities to apply to healthcare professions schools is an important part of any plan to improve healthcare workforce needs, as has been done at the UND SMHS. Some rural educational systems are not able to provide the strong science and math background necessary for success in medical school (Shipman et al., 2019). Additional potential challenges for rural students include coming from a lower educational and socioeconomic status, having fewer role models in healthcare, experiencing less encouragement for attaining advanced degrees, less technology familiarity, and the need to travel to obtain a medical education. It is important to note, however, that studies have shown no significant academic performance differences between students from rural or urban backgrounds.

INCREASING THE NUMBERS OF HEALTH PROFESSIONS STUDENTS AND RESIDENTS

Recognizing the healthcare workforce needs in North Dakota and the nation, the UND SMHS, through the HWI, has increased the number of its healthcare professions students by around 25%.

Ensuring an increase in the number of students interested in primary care and rural practice necessitated additional operational changes. These included continued support of the RuralMed Program, curricular changes in the early years to assure the development of competency in primary care, and additional rural community sites and rural physicians for clinical training. Geriatric, population health, and public health programs have been added at the UND SMHS and will be critical factors in this growth to support educating and attracting students interested in addressing the important healthcare needs of the state. These programs will enhance the experience of primary care for interested students and physicians while developing specific skills for the care of aging individuals and for addressing population health effectively.

The increased number of resident training slots in North Dakota have been designed specifically to attract the interest of our own medical school graduates and to assure an effective workforce for North Dakota. Adding more students to our primary care programs with an option for further training in geriatrics, public health, management of chronic disease or mental health, and disease prevention and health promotion is a priority.

INCREASING THE RETENTION OF HEALTHCARE PROFESSIONALS

Successful recruiting of students and residents into primary care and rural practice is one step in addressing the workforce needs of North Dakota. An equally important step is to improve the retention of healthcare professionals who graduate from a North Dakota program for rural practices and communities within the state.

FACTORS AFFECTING RETENTION

The first, and necessary, step in addressing the healthcare needs of rural North Dakotans is to recruit and retain physicians and other healthcare professionals to practice primary care in rural communities. If trainees don't stay and practice in those communities, however, communities will not be effectively meeting the needs of their populations. Factors that affect students' specialty selection also may affect retention and can be broken down into three areas of a physician's life, childhood/personal experiences, educational experiences, and practice experiences according to a systematic review conducted in 2020 (Asghari et al., 2020). Those experiences in childhood found to influence retention include having a rural background, completing high school in a rural area, having a spouse from a rural area, being attracted to a rural lifestyle, and having friends or family living in the area. Those educational experiences found to influence retention include medical school characteristics such as attending a medical school in a rural area with a rural-focused curriculum, attending a school that selectively recruited students from rural backgrounds, educational settings with a positive attitude towards rural areas, and exposure to rural rotations, clerkships, and residency programs. Those practice experiences found to influence retention include wide scope of practice, flexible work hours, manageable call schedules, and professional development opportunities. Additional practice experiences found to influence retention include pay, incentives or bonuses, having quality educational systems for children, integration into the community, and having a support network of consultants (Asghari et al., 2020).

APPROACHES TO IMPROVING RETENTION

Using repeated surveys, a study by Pathman and colleagues compared the retention of physicians in rural HPSA communities with rural non-HPSA communities and found no significant difference between the two (Pathman et al., 2004).

The conclusion of this study confirms other studies that found that the principal factor affecting rural physician shortages is that too few physicians are recruited there in the first place, and not that there are more problems retaining those physicians that were successfully recruited. There were two characteristics of the physicians who remained in rural practice longer—owning their practice and being on-call fewer than two times a week. Even though recruitment may be the primary factor, these issues affecting retention are more modifiable than many of the issues affecting recruitment. Suggestions to improve retention include the following:

- Promoting practice ownership through low-interest loans and start-up guarantees.
- Offering leadership opportunities.
- Providing a greater voice in clinic policies and work schedules.
- Reducing on-call frequency by coordinating cross-coverage.
- Providing telephone triage systems.
- Providing full-time physician staffing in local emergency rooms.

THE NEED TO STUDY AND EVALUATE THE EFFECTIVENESS OF PROGRAMS

There continues to be a need to study and to better understand the factors or approaches that positively affect retaining quality physicians in a community. An international report that included an extensive review of the literature has shown that while most studies on retention are done on physicians, there is little information on financial incentives and there is a lack of coherence between the strategy to retain physicians and the factors that matter to healthcare workers in choosing and remaining in a location (Dolea et al, 2010).

Another study addressed whether compulsory programs such as the National Health Service Corps are effective in retaining providers in rural or remote areas (Rowan et al., 2024). The conclusion of the study was that clinicians serving in NHSC had a commitment to serving underserved populations, which can be strengthened by providing additional resources related to technical assistance, peer support, and professional development. These resources, in combination with a team-based integrated delivery model which is favored by many NHSC sites, provided additional supports for clinicians.

CONTINUING PROFESSIONAL DEVELOPMENT

Communities can help retain qualified physicians and healthcare professionals by being aware of the challenges and needs for their continuing education and development. Two unique aspects of rural medical practice are the scope of practice and the distance from major urban centers with specialist services. Rural practice includes clinic, house calls, nursing home care, hospital admissions and care, emergency room care, obstetric care, general surgery, and anesthesia. Rural physicians perform a wider range of procedures than providers in more urban settings, play an important role in the initial management of trauma, and have to provide care unique to the location, such as wilderness or industrial areas, specific cultural groups, or agricultural medicine. The reality of rural practice attracts certain types of individuals interested in this breadth and variety. Continuing in rural practice requires the confidence and skills that come from support and access to continuing professional development (Curran et al., 2010). Learning new information or skills and spending time away with peers is essential to continuing a healthy and rewarding practice. One challenge is that rural physicians generally cannot leave their communities for continuing education or professional development. Medical schools can be helpful in retention of rural physicians by creating programs for education and training that provide content that is needed by rural physicians, methods that are accessible through outreach to the community or distance technology, or immersion retraining experiences. Communities can support their physicians by providing financial support for professional development, arranging for physician coverage, and arranging for interesting exchange opportunities between rural and urban physicians. The needs of rural physicians are unique and can only be met successfully if there is flexibility and variety to address different needs. An example of how the UND SMHS can help in this regard was its Rural Surgery Support Program, where the SMHS provided, on a temporary basis, a highly qualified general and trauma surgeon to local, typically rural, communities in need of surgery services for a limited time. The SMHS thus provided a local and internal locum tenens service to the communities of North Dakota.

INCREASED RETENTION OF GRADUATES

It is known that medical students, especially those interested in primary care, have an increased likelihood of practicing in the vicinity of their residency training site(s). One approach to

increasing the needed workforce locally is to attract students to and retain individuals from North Dakota's own residency programs. There are a variety of interventions that are likely to increase the retention of graduating physicians within the state. These include revising and refining the admissions process to select students most likely to remain within the state to practice and revising the curriculum to ensure optimal exposure to primary care experiences. It is important to note that the SMHS provides robust longitudinal clinical experiences in rural communities through programs like the Minot Integrated Longitudinal Experience. Reducing debt burden through the RuralMed Program, where the four-year tuition costs of medical school are defrayed if the physician agrees to practice in a rural area of North Dakota for five years, addresses one issue that may affect the decision to practice rural primary care –that of extensive debt load from medical school tuition. Finally, the substantial number of volunteer clinical faculty role models are extremely important and influential in decision-making for our students and residents.

ROLE OF ADVANCED PRACTICE PROVIDERS

Increased deployment and utilization of non-physician providers, especially physician assistants and nurse practitioners, is an important component in addressing North Dakota's healthcare workforce needs now and in the future. The training and use of such providers in North Dakota is explored in more detail in Chapters 7 and 8 of this *Report*. Precisely what role such advanced practice providers (APPs) fill, however, remains unclear. The hope and expectation is that APPs would complement physician providers by providing needed basic clinical services to patients who are otherwise underserved; thus, APPs are especially important in the most rural communities, where their increased deployment would ameliorate some level of physician shortage. It is hoped that an APP might, in effect, be a substitute for a physician. And while APPs do provide such a service especially in rural areas of North Dakota, it is not clear what fraction of APPs function in this role. From a national perspective, many APPs are providing other non-primary care services to patients; many APPs, for example, work in subspecialty areas (Dill, 2016). While these services may well be needed and important, they do not necessarily alleviate the problem of physician shortages in rural areas. Thus, although APPs are not the sole answer to the problem of healthcare provider shortages in rural regions of North Dakota, they are a component of the solution. To what extent they will be an even more effective positive force in the future remains to be seen.

ARTIFICIAL INTELLIGENCE IN SERVICE TO NORTH DAKOTA'S HEALTH

INTRODUCTION

For North Dakota, the central question about artificial intelligence (AI) is not *whether* it will affect healthcare (it already has), but rather how the state's health professionals, educators, researchers, and institutions can use AI safely and responsibly to improve the health and well-being of North Dakotans.

AI can help clinicians recognize patterns in medical images, identify patients at increased risk of disease, and analyze complex research data. These capabilities are especially important in rural settings, where patients and health professionals are often separated from specialty expertise by long distances.

Yet, AI also presents legitimate risks. Its output may be inaccurate, models may reproduce biases in the data they were trained on, and sensitive information may be exposed if tools that lack adequate protections are used. The powerful AI models developed elsewhere may not perform reliably for North Dakota's people, health conditions, equipment, or clinical settings, and North Dakota health systems don't have the same level of resources to develop their own from scratch. Overreliance on technology can also weaken human judgment.

The University of North Dakota School of Medicine and Health Sciences (SMHS) recognizes both sides of this reality: AI is too consequential to adopt without safeguards, but too important to ignore completely. The SMHS's responsibility is to prepare the healthcare workforce to use these tools wisely while ensuring that people—not machines—remain at the center of education, research, and patient care.

A PROACTIVE RESPONSE

The SMHS began organizing around AI before many institutions had established a formal response. In 2023, a small group of administrators, faculty, and staff formed a discussion group to consider the implications of AI for the school. Interest and participation quickly snowballed through conversations and membership grew to 19 in 2024. Recognizing that healthcare and higher education were at an inflection point with AI, the SMHS dean charged this group with helping the school develop a coordinated response to AI and supported a transition to a formal steering committee to advise the SMHS. The group conducted an AI readiness survey and began developing a strategic framework for responsible integration across education, research, clinical preparation, and school operations.

On May 28, 2026, the group was formalized as the SMHS AI Steering Committee charged with AI planning around teaching and learning, research and development, clinical services and patient care, data governance and infrastructure, policy and guidance, ethics and human-centered computing, and learner engagement.

This deliberate and methodical approach lies in contrast to the process of other schools, who rushed to purchase a particular product or pursued every possible use of AI. Instead, the SMHS began by bringing people together, assessing needs, listening to concerns, establishing responsibilities, and identifying the conditions necessary for safe and useful adoption.

PREPARING LEARNERS FOR AN AI-ENABLED WORKFORCE

The SMHS is approaching AI literacy as a workforce-readiness issue. Today's health professions learners will practice in workplaces where AI is increasingly used to support imaging, diagnosis, documentation, research, population health, and clinical decisions. Graduates who do not understand these technologies will be unprepared for these environments.

However, knowing *how* to operate an AI technology is not the same as knowing how to use it *responsibly*. Learners need a basic understanding of what AI is, what it can and cannot do, and why its answers must be evaluated rather than accepted automatically. They need to recognize common risks involving privacy, security, bias, inaccurate or fabricated information, and the possibility that a model may perform differently when used with a population unlike the one on which it was developed.

AI education also must be specific to each health profession. A future physical therapist, medical laboratory scientist, public health professional, occupational therapist, physician, researcher, or other health professional will encounter different tools, professional standards, and patient-care responsibilities. SMHS programs will therefore need to examine how AI is used in their disciplines and modify their curriculum to reflect what graduates must know to enter practice.

Knowing when to use AI for the right task also means when *not* to use AI at all. Learners must understand what information can be shared with a system, that patient and institutional data must be protected, and that AI-generated answers require verification against reliable evidence. A health professional remains responsible for the decisions made and the care provided, regardless of the sources or tools used in those decisions.

AI may eventually support learners in more individualized ways as well. With appropriate privacy protections and careful validation, analytic models could help educators recognize patterns indicating that a student is struggling, allowing support to be offered sooner and tailored more effectively. Such systems should inform human educators, not label learners or make consequential decisions independently, however.

SUPPORTING EDUCATORS AND PRESERVING CRITICAL THINKING

AI is also changing how learners learn and educators teach. Traditional assignments no longer provide the same evidence of student learning when an AI system can generate a plausible response in seconds. Simply prohibiting AI technology does not resolve that problem, however, and does a disservice to learners, who will be expected to know how and when to use AI in their professions. Educators must reconsider what they are assessing and design learning experiences that make reasoning visible and assessable.

The SMHS is working to help educators determine where AI use is permitted, limited, expected, or prohibited. Expectations should align with the purpose of an assignment, the learning outcomes of a course, and the standards of the profession. These expectations must also be clearly communicated to learners, who should not have to guess whether a particular use is acceptable.

AI, when thoughtfully integrated into learning, may also offer an opportunity to strengthen critical thinking. Greater emphasis can be placed on explaining decisions, evaluating evidence, applying knowledge to new situations, responding to follow-up questions, demonstrating clinical reasoning, and identifying errors in AI-generated material. Learners can be asked to use AI and then critique its response, distinguish sound reasoning from unsupported claims, or improve an answer using authoritative sources. Such outcomes have traditionally been difficult to assess effectively and consistently.

These approaches preserve academic integrity while developing the very capabilities that future health professionals will need: judgment, curiosity, skepticism, communication, and the ability to decide whether information is trustworthy. AI should be used to strengthen these human abilities, not bypass them.

IMPROVING HEALTHCARE WHILE GUARDING AGAINST HARM

The potential value of AI is especially evident in medical imaging and disease-risk assessment. Pancreatic cancer is often fatal because there are no symptoms until it metastasizes to other organs. Researchers at Mayo Clinic recently developed an AI model that can detect pancreatic cancer up to three years earlier than traditionally possible.

Researchers from the Massachusetts Institute of Technology and Massachusetts General Hospital similarly developed an AI model that uses mammograms to estimate a patient's future risk of breast cancer. The model outperformed established risk-assessment methods by as much as 25% for some populations, enabling earlier monitoring, detection, and treatment.

These studies illustrate both the promise of AI and the importance of responsible evaluation. Earlier recognition of cancer risk could lead to closer monitoring, more appropriate screening, and earlier intervention. However, promising performance in a research study does not mean that a model should be placed immediately into practice. Health professionals must understand who was represented in the training data, how the model was tested, what kinds of errors it makes, and whether its performance transfers to the patients and settings where it will be used.

That lesson is particularly important for North Dakota. Many advanced healthcare AI models are developed at large institutions with extensive data and highly specialized resources. A model trained in such an environment may offer a useful foundation, but it may require local evaluation, retraining, or fine-tuning before being used in North Dakota. Differences in patient populations, disease prevalence, imaging equipment, clinical workflows, and available follow-up care can all affect performance.

Done responsibly, however, this work could have significance well beyond cancer. North Dakota faces substantial burdens associated with chronic disease, aging, behavioral health needs, and limited access to specialty care in some communities. AI may help identify patterns of risk earlier, support population-health planning, improve the use of limited resources, and bring additional decision support to clinicians working far from major medical centers.

AI will not create more hours in a day or eliminate the need for additional health professionals. It may, however, help the existing workforce use its time and expertise more effectively. Tools that reduce routine documentation, organize complex information, or help identify patients who need closer attention could allow clinicians to devote more time to direct patient care. In rural communities, where a small number of professionals often carry broad responsibilities, such support may be especially meaningful.

ADVANCING RESEARCH FOR NORTH DAKOTA

AI also is becoming a critical research tool. Biomedical and health researchers can use it to analyze complex datasets, identify relationships that may be difficult to see through traditional approaches, improve medical imaging, and study population-health challenges. The SMHS can contribute by developing new models, evaluating models created elsewhere, and determining whether they are suitable for rural and regional populations. The NIH just announced $5B funding for its Bio Genesis Mission, whose goal is to "double the pace of biomedical innovation, from discovery to health impact, within the next five to 10 years" through the use of AI in research.

RESPONSIBILITY BY DESIGN

Responsible AI requires more than written policy: it requires infrastructure, funding, education, secure access, human oversight, and ongoing evaluation. The SMHS AI Steering Committee's governance structure is designed to meet those needs. Its advisory areas bring together expertise in teaching, research, clinical care, learner engagement, policy, ethics, data governance, security, and infrastructure. Learners are included in the committee's work so that decisions about education and technology are informed by those most directly affected.

The committee's human-centered principle is straightforward: AI may inform a decision, but it should not be in charge of the decision. Faculty members remain responsible for teaching and assessment. Researchers remain responsible for the integrity of their work. Clinicians remain responsible for patient care. Institutional leaders remain responsible for policies and systems.

Equitable access is another important consideration. If secure AI tools are available only to those who can afford personal subscriptions (~$500 per year), differences in access may create new educational and professional inequities. The school must therefore find ways to provide appropriate tools for everyone, while protecting institutional, research, learner, and patient information.

THE NEXT PHASE

For the 2026–27 academic year, the SMHS AI Steering Committee has proposed a strategic, comprehensive, coordinated AI integration rollout focused on readiness, training, assessment, guidance, and carefully selected pilot activities. The rollout will include an AI readiness survey, listening sessions, AI literacy training, policy consultation, curriculum support, inventory of existing AI projects, and competitive funding for a limited number of high-impact projects that align with the SMHS mission that could then be shared as useful models for others to emulate. The rollout will include measurable goals that will help the school determine what is working, where barriers remain, and what investments may be justified.

CONCLUSION

The decision to increase the number of healthcare professionals trained in North Dakota (i.e. "growing our own") to meet the current and future healthcare needs of the population is a critically important component of the HWI. There is a need for all physicians, but a greater need in the specialties of primary care and surgery. There is a corresponding need for other healthcare professionals to complement the work of physicians, and the numbers needed will require ongoing assessment. Successfully meeting those needs will result in improved population health status, costs that are better controlled, and improved quality. While there is a significant time lag in "growing our own," the selection of students from rural North Dakota communities with a commitment to rural practice will increase the likelihood of successful future rural and primary care recruitment. The UND SMHS is striving to meet current and anticipated workforce needs by partnering with North Dakota Area Health Education Centers and others to address the resources and opportunities required to increase the number of North Dakota students interested in and prepared for a healthcare professions education. There are a wide variety of programs and activities in place across North Dakota to encourage students to pursue healthcare careers and even more are planned.

Research has shown that the principal factor in addressing a physician shortage challenge is successful recruitment (Pathman et al., 2004). To be successful in keeping a quality healthcare workforce, however, health leaders should consider the modifiable factors related to educational and work experience that will lead to better retention. Increasing the types and length of experience in rural communities during medical and other health career student education and training will help develop more confident, informed decision-making about choosing rural practice. The UND SMHS will continue to advocate for funding for scholarships or loan repayment for students who commit to rural practice (such as the RuralMed Program). It will work in partnership with rural health systems and physicians to encourage and support mentoring. The UND SMHS will continue to inform and advocate for issues related to reimbursement and practice support in partnership with healthcare systems and local and state government. This will help to ameliorate further the long-standing problem of adequate rural healthcare delivery.

The UND SMHS has taken a proactive approach to adoption and use of artificial intelligence as it relates to learners, educators, and practitioners. This deliberate, collaborative approach has set the stage for embracing artificial intelligence with the health, wellbeing, and safety of the people of North Dakota as the priority.

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CHAPTER
TWELVE
Conclusion

THE WORK CONTINUES

North Dakota has made progress. Meeting the healthcare needs ahead will require continued commitment and collaboration. North Dakota's healthcare landscape continues to change. Population trends, workforce needs, rural access, technology, and behavioral health will shape the care North Dakotans need. Continued implementation of the Healthcare Workforce Initiative remains central, while artificial intelligence and the Rural Health Transformation Program present new opportunities. The path forward requires sustained planning, partnership, and investment.



Without full implementation of the Healthcare Workforce Initiative, North Dakota likely will face a major gap between the demand for healthcare and the capacity of the state's healthcare system to deliver care.

NORTH DAKOTA SNAPSHOT

Since 2011, North Dakota's *Biennial Reports* have supported the Healthcare Workforce Initiative as a strategy to strengthen healthcare statewide.

Using updated employment and demographic datasets and incorporating the results of several recent comprehensive statewide cross-sectional healthcare workforce studies, this *Ninth Biennial Report: Health Issues for the State of North Dakota 2027* concludes with a similar takeaway message as the previous seven *Reports* did: continued implementation of the Healthcare Workforce Initiative (HWI) is having, and increasingly will have, a significant positive effect on helping to narrow the gap between the demand for and the supply of finite healthcare resources. Furthermore, absent full implementation of the HWI, North Dakota likely will face a major gap between the societal demands for healthcare and the capacity of the healthcare system to deliver care.

Chapter 2 provides a new overview of social drivers of health. This topic has been addressed in previous reports; however, there is increased awareness and appreciation that social drivers are key factors in health outcomes in the state (and elsewhere) and focusing on them also serves to highlight areas that have disparities or need additional focus. Social drivers of health, while not a new topic, provides additional insight as to how North Dakota might best address healthcare for the entire population of the state and prioritize efforts to serve as many people as possible.

As Chapter 3 demonstrates, the general level of health in North Dakota is reasonably good. For the general health measures of fair/poor health, diabetes, and asthma, North Dakota fares better than the rest of the country on average. Previous reports noted that North Dakota's age-adjusted mortality rates have exceeded the national average. That trend narrowed and then reversed sharply with the trend for both North Dakota and the U.S. continuing to decline.

As with the eight previous *Biennial Reports* released between 2011 and 2025, rural depopulation, an increasingly older adult population with higher proportions in rural areas, low population density in some regions, and recent localized population growth in the major cities and in the Oil Patch are exacerbating the imbalance between a rising demand for healthcare and the available supply of providers. The imbalance between supply and need for healthcare resources is both quantitative (to a relatively minor degree) and distributional (to a major degree) in that while North Dakota is short of specific providers, the healthcare providers here are distributed disproportionately in the metropolitan areas in excess of what population demands would otherwise require. Some of the apparent maldistribution is entirely appropriate, since it is desirable to have specialists regionalized in more urban areas to maximize the efficient delivery of healthcare services.

However, since even family physicians – the bulwark providers of care in rural areas – are disproportionately found in metropolitan areas, it is clear that major challenges remain in recruiting and retaining needed providers in more remote areas of the state. Importantly, family physicians constitute the physician group whose geographic distribution is the most optimal compared with all other physician provider groups. A similar pattern of more providers relative to the population in urban (compared with rural) regions is found for non-physicians as well. Advanced-practice providers like physician assistants and nurse practitioners also are disproportionately distributed in the metropolitan areas of North Dakota, although physician assistants show the least maldistribution of any healthcare provider group. The *First Biennial Report* concluded that North Dakota had a paradox regarding its healthcare workforce, which it characterized as shortages in the midst of plenty. The size of the physician workforce in North Dakota in 2011 was found to be at or better than national norms for many specialties (although for the overall physician workforce North Dakota lagged the rest of the country on average), but

with maldistribution of providers resulting in shortages especially in micropolitan and rural areas. As subsequent *Biennial Reports* emphasized and the current *Ninth Biennial Report* confirmed, North Dakota continues to lag behind the rest of the United States in the number of physicians relative to population.

As the eight prior *Biennial Reports* noted, the current shortage of physicians is only going to increase as the population grows and ages in the future if there is not continued implementation of the HWI. And the shortage of workers in the healthcare field over the next 15 years will not be limited to physicians. An entire cadre of additional healthcare providers – from nurses to physician assistants to occupational and physical therapists to medical laboratory scientists and others – will be needed to ensure that effective, efficient, and appropriate healthcare is available to all North Dakotans, as envisioned in the HWI.

The *Second Biennial Report* provided a population projection model that attempted to forecast the population of North Dakota through 2040 as recent population trends had not undergone any dramatic shifts. In conjunction, a parallel physician projection model was created to estimate the workforce needed to sustain the population to provider ratios actualized in 2011. That project estimated the physician workforce to be short by 160 physicians by 2025. By the time work began on the *Third Biennial Report*, the population trends of the state had shifted largely in part by the Oil Boom, but equally as much from a trend of retention of the younger population that was absent in the late 1990's and early 2000's. The previous projection model was revised to account for population shifts, resulting in an estimated shortage of between 260 to 360 physicians by 2025. Despite the population changes that have occurred since the initial and revised projection, North Dakota has maintained a similar population to provider ratio. This indicates that the provider supply is maintaining the level of strictly population-based demand.

Where previous projection models fell short is that the estimates did not include the need for replacement of physicians who would retire, leave the state, or cease practicing medicine for other reasons. As discussed in Chapter 5 of this current *Report*, the age at which North Dakota's physicians retire will have a significant effect on future healthcare workforce size and the extent of the physician shortage. It is perhaps the most important factor impacting future physician supply, since more than 40% of the U.S. physician workforce is aged 55 years and older. Delaying or accelerating retirement age by only two years, for example, can have almost a 10% effect on the future workforce size.

Two areas in the current *Report* that will have a high likelihood of a positive impact on the workforce demand and service delivery in North Dakota are the adoption of Artificial Intelligence (AI), and the Rural Health Transformation Program (RHTP). As discussed in Chapter 11, the School of Medicine and Health Sciences has chosen a proactive approach to the adoption of use of AI in a safe and responsible manner to improve the health and wellbeing of North Dakotans. AI is being both taught and used in safe and responsible ways that may assist the health workforce in providing both efficient and quality care. As AI is an emerging technology that is rapidly expanding into all sectors, the early adoption approach chosen by SMHS will allow learners, educators, and clinicians to have a strong foundation to utilize AI in ways that can benefit the largest number of people.

In terms of impact to rural populations, the release of the RHTP priority areas and funding has the potential to impact all rural communities in North Dakota. Chapter 13 introduces the overlap

between RHTP and the HWI efforts that may serve to provide valuable training opportunities, fund recruitment and retention strategies, and assist rural communities in maintaining staffing at their health facilities. Additional RHTP efforts will serve to enhance the technology infrastructure for rural health facilities to benefit internal operations such as electronic medical records (EMR) system as well as externally by enhancing opportunities for telehealth capacity. As RHTP is in its first funding year at the time of this report, impacts have yet to be actualized, however, efforts being implemented in the first year may have immediate impacts on rural populations.

All eight prior *Reports* concluded with a strong endorsement of the HWI, the multifaceted plan to address the healthcare needs of North Dakota. The *Reports* emphasized necessary steps to: reduce disease burden, increase the healthcare workforce through enhanced retention of graduates as well as expansion of class sizes, and achieve a better-functioning healthcare delivery system through more cooperation and coordination. In view of the realization that the state's workforce needs likely are even larger than previously estimated, those recommendations are reinforced in this *Ninth Biennial Report* with added emphasis on the imperative to continue with full implementation of the Healthcare Workforce Initiative. It is important that the three major stakeholder groups involved in the HWI – the North Dakota Legislature that provides the funding; the UND SMHS that provides the training and programmatic support for the HWI; and the healthcare enterprise and local communities throughout the state that provide essential partnerships that are vital to the success of the HWI –continue to work together in the cohesive and effective manner they have in the past to ensure the continuing success of the HWI.

A second major conclusion of this *Ninth Biennial Report* is that further attention and planning (by the healthcare enterprise as a whole, the North Dakota Legislature, the UND School of Medicine and Health Sciences, and other stakeholders) are needed to address a variety of intertwined mental and behavioral health issues that are present throughout the state but are especially challenging in the more rural regions.

FROM UNDERSTANDING TO ACTION

CHAPTER
THIRTEEN

Recommendations: Healthcare Planning for North Dakota

North Dakota has been addressing healthcare workforce and delivery challenges for years. The recommendations ahead build on that progress. Coordinated action can improve health outcomes. In North Dakota, youth cigarette smoking declined from 21.1% in 2007 to 5.9% in 2021 through the combined efforts of agencies and individuals across the state.



The recommendations in this chapter build on the health, workforce, access, and healthcare delivery needs identified throughout this report.

This report supports continued state efforts to:

- Identify and prioritize vulnerable populations
- Strengthen emergency preparedness and community resilience
- Ensure equitable access to public health services
- Strengthen healthcare workforce capacity

The recommendations ahead build on progress already underway across North Dakota.

The proactive approach taken by the last seven North Dakota Legislative Assemblies to address the current and especially the anticipated future healthcare workforce and healthcare delivery challenges facing the state already is having a positive effect that should grow as the Healthcare Workforce Initiative (HWI) becomes even more impactful over the next few years. Phase I of the HWI began in 2011 following the 62nd Legislative Assembly with an initial increase in medical and health science student class sizes, provisions for additional residency positions (post-MD degree clinical training required for state licensure), implementation of coordinated Master of Public Health degree programs at the state's two research universities (the University of North Dakota [UND] and North Dakota State University [NDSU]), and expansion of the RuralMed Program (which encourages physician graduates to set up their practices in rural areas of North Dakota in exchange for the waiving of their medical school tuition). Phase II of the HWI began in 2013, following the 63rd Legislative Assembly, and provided support for additional expansion of the class and residency cohort along with continued support for the multiple other provisions of the HWI. Implementation of the HWI was continued with support from the 64th through 68th Legislative Assemblies.

Implementation of the HWI also required the construction of a new facility for medical and health sciences education that would accommodate the increased class sizes and permit consolidation of previously scattered UND health sciences programs into one building, thus facilitating interprofessional education. Construction of the new facility was completed on time and on budget, and the move into the new building occurred during the spring and summer of 2016, just in time to welcome the medical student Class of 2020, as well as the health sciences students starting their classes later that fall.

The Healthcare Workforce Initiative is designed to help meet North Dakota's healthcare delivery issues by utilizing four foundational approaches:

- Reduce disease burden, thus lowering the demand for healthcare services and related costs.
- Retain more physicians and other healthcare provider graduates for clinical practice within the state.
- Train more physicians and other healthcare providers locally by increasing the medical, health sciences, and resident class sizes.
- Improve the efficiency of the healthcare delivery system in North Dakota principally through the training of healthcare providers who are proficient in team-based, interprofessional healthcare delivery methods.

This combination of reducing demand and increasing supply of various healthcare resources, along with necessary improvements in the healthcare delivery system, should bring the healthcare demand and supply equation into significantly better balance in North Dakota over the next 10 to 15 years.

REDUCE DISEASE BURDEN

It is self-evident to say that the best way to treat disease is to prevent it in the first place. Although simple in concept, disease prevention has proven to be much more difficult to achieve in practice. Nevertheless, the HWI incorporates several concrete steps to encourage and highlight

disease prevention and reduction. The HWI includes the following strategies to reduce chronic and acute disease, all of which have been implemented:

- A Department of Population Health at the UND School of Medicine and Health Sciences (SMHS) was initiated a decade ago under the leadership of Dr. Gary Schwartz, chair of the department. The department's focus is on developing programs that positively influence the health-related behaviors of North Dakotans.
- The Master of Public Health Programs at UND and NDSU continue to develop public health practitioners for the state and were critically important during the response to the COVID-19 pandemic and after.
- The UND SMHS Department of Indigenous Health was established in 2021 and initiated the first-in-the-nation medical school-based Ph.D. track in Indigenous Health.
- A variety of additional residency and fellowship training programs at the UND SMHS have been implemented beyond the initial five that were already in place, including neurology, orthopedic surgery, hematology-oncology, pediatrics, geriatrics – and soon, cardiology and surgery critical care. The geriatrics fellowship program consists of a special advanced clinical training program in geriatric medicine for physicians who have recently completed a family medicine or internal medicine residency (i.e., a one-year residency in geriatrics following the completion of the standard three-year family medicine or internal medicine residency).

HEALTH-RELATED BEHAVIORS

Many serious health problems affecting North Dakotans (and all Americans) are caused, or at least made worse, by the personal choices they make about eating, smoking, physical inactivity, and other considerations (Institutes of Medicine, 2012). In fact, these health-related behaviors account for nearly 40% of all deaths in the United States in 2024 (Centers for Disease Control & Prevention, 2026; Institute of Medicine, 2012). As an example, chronic diseases such as heart disease, type 2 diabetes, and cancer are among the most common and costly health problems. However, they are also among the most preventable because they share – as common contributing causes – undesirable health-related behaviors. One of the best ways to "cure" these widespread diseases is to improve health literacy and the choices people make that affect their health. The potential effect of prevention is substantial. Recent studies link cardiovascular disease, diabetes, heart disease, and cancers with poor health behaviors and chronic conditions (Aukstakalniene et al., 2025; Du et al., 2024; Sheffield & Lewis, 2022; Wu et al., 2024). In contrast, findings illustrate positive outcomes in the form of reduced chronic disease rates in those with good health behaviors. In recent years research regarding health outcomes has included both factors related to personal choice in addition to the social drivers of health addressed in Chapter 2.

In North Dakota, there is good evidence that health-related behaviors can be improved through public education and collaboration. Through the combined effort of many agencies and individuals, the percentage of North Dakota youth who currently smoke cigarettes decreased significantly from 21.1% in 2007 to 5.9% in 2021 (North Dakota Department of Health and Human Services, 2023). Successful improvement of health-related behaviors can avoid not only an enormous toll of suffering and death from disease but also can be accomplished at far less expense than treating the resulting diseases. Based on the foregoing factors, the SMHS

Department of Population Health and the Master of Public Health Programs and their respective faculty members at UND and NDSU are focusing on public education and other efforts to positively affect the health-related behaviors of North Dakotans.

MASTER OF PUBLIC HEALTH PROGRAMS

One of the most practical approaches to improving health education and other public health initiatives in the state is to prepare its health professionals to undertake these roles as they enter practice. Specifically, having individuals with graduate training in public health (Master of Public Health degree) can augment capacity and reduce disease burden. UND and NDSU have partnered to create two collaborative graduate-level programs in public health. Since the programs began accepting students in 2012, they have grown and matured. The first graduates of the programs are now beginning to have a positive effect on the health of the public.

Public Health Priorities

In addition to public health academic programming, having a targeted list of public health priorities and strategies to address and measure is vital for successful outcomes, especially in rural areas where public health serves to fill gaps not elsewhere covered.

1. Identify and Prioritize Vulnerable Populations
    - Use data tools such as the Social Vulnerability Index (SVI) to identify communities at greatest risk.
    - Focus resources on areas with higher vulnerability before emergencies occur.
    - Address factors such as poverty, transportation barriers, housing challenges, disability, age, and access to health insurance.

2. Strengthen Emergency Preparedness and Community Resilience
    - Improve readiness for pandemics, natural disasters, wildfires, and other public health emergencies.
    - Develop coordinated response plans across local, tribal, state, and regional partners.
    - Invest in community resilience to reduce preventable illness, death, and economic disruption.

3. Ensure Equitable Access to Public Health Services
    - Expand access to preventive care, vaccinations, screenings, and health education.
    - Reduce geographic barriers, especially in rural areas.
    - Utilize mobile services, outreach clinics, and community-based programs to reach underserved populations.

4. Use Data to Drive Decisions
    - Continuously monitor community health needs and emerging threats.
    - Use real-time data to identify risks and guide interventions.
    - Regularly evaluate programs and adapt strategies based on evidence and outcomes.

5. Build Strong Community Partnerships
    - Collaborate with healthcare providers, schools, local governments, tribal nations, businesses, and community organizations.

- Leverage existing partnerships while creating new opportunities for collaboration.
- Engage community members in identifying and solving local health challenges.

6. Develop and Support Effective Public Health Policies
   - Promote evidence-based policies that improve health outcomes.
   - Incorporate "Health in All Policies" approaches across sectors.
   - Ensure laws and regulations are applied fairly and consistently to protect public health.

7. Strengthen Workforce Capacity
   - Invest in recruitment, training, and retention of public health professionals.
   - Develop pathways for future healthcare and public health workers.
   - Build partnerships with educational institutions and training programs.

8. Increase Public Awareness and Trust
   - Communicate accurate, timely, and transparent health information.
   - Improve understanding of available public health services and resources.
   - Build trust through consistent messaging and collaboration between local, state, tribal, and federal partners.

9. Support Continuous Quality Improvement
   - Evaluate public health programs, policies, and services on an ongoing basis.
   - Use research, community feedback, and lived experience to inform decision-making.
   - Strengthen organizational infrastructure, technology systems, and strategic planning.

RETAIN MORE GRADUATES

As outlined previously in this *Report*, there are a variety of interventions (many of which are accepted best practices based on national consensus) that the UND SMHS has implemented that are likely to increase the retention of graduating physicians for eventual clinical practice within the state. These include the following:

- A revised and refined medical school admission process designed to select students most likely to remain within the state to practice.
- A revised curriculum to ensure optimal exposure to primary care experiences and to provide increased longitudinal clinical experiences in rural communities, actions that are associated with an increased retention rate.
- Reduced debt burden through the RuralMed Scholarship Program, where the four-year tuition costs of medical school are defrayed if the physician agrees to practice in a rural area of North Dakota for five years. This effort has been augmented by a focused approach to garnering more philanthropic support for student scholarships.
- Partnerships with physicians and healthcare systems to optimize and enhance mentoring and affinity relationships.
- Development of the Primary Care Accelerated Track (PCAT) program to shorten the medical school program for students in PCAT, encourage them to apply for residency programs in North Dakota, and incentivize those that match to a North Dakota residency with a tuition and fee reimbursement. In return, PCAT participants who meet these

criteria will serve the state by practicing in a health professional shortage area for a period of 5 years.

TRAIN MORE PHYSICIANS AND HEALTHCARE PROVIDERS

Increasing retention efforts is a necessary but not sufficient approach to meeting the state's healthcare workforce shortage. Accordingly, an essential component of meeting the healthcare workforce needs of North Dakota is to expand class sizes or, to use the colloquial expression, "widen the pathway." In response to a charge from the Association of American Medical Colleges, total medical school class size across the United States has been increased by more than a third. The UND SMHS now has successfully increased medical class size by almost that same magnitude as a consequence of the HWI, and this should help ensure an adequate physician workforce in the future for North Dakota when coupled with the other efforts already underway and planned.

But simply increasing the medical student class size will be insufficient to meet the needs of North Dakota unless additional residency slots are available in the state for postgraduate training. The optimal retention of physicians occurs when the students go to school and enter residency within the same state; in those cases, about 2 out of 3 students remain in-state. Simply increasing class size will result in only about 1 out of 3 physicians remaining in-state for ultimate practice. Accordingly, the HWI as originally proposed incorporates a total of 17 new residency slots per year (total of 51 slots overall), but this number has been augmented over the years, partly as a consequence of additional financial support provided by a major regional healthcare provider.

Available slots have been committed to the following residencies or fellowships: family medicine, geriatrics, psychiatry, orthopedic surgery, neurology, hematology-oncology, pediatrics, cardiology, transitional year, surgery critical care, general surgery. Many of these offer training specific to rural practice.

The healthcare workforce shortage is not limited to physicians, however. Accordingly, the HWI also allowed an expansion of 30 students per year (total of 90, or an increase of about 15%) for health sciences students trained by the UND SMHS.

MONITORING THE STATE OF HEALTHCARE WORKFORCE

This *Biennial Report* and all previous editions have served to address the health workforce of the state of North Dakota. This has included the development and expansion of a health workforce database that allows for a variety of analyses to illustrate the state of health workforce in North Dakota over time.

One phenomenon that has existed in medicine since the late 1970s is the concept of locum tenens, or providers who fill in for others. Historically locum tenens have been physicians who fill in for other providers to allow for hospitals and other healthcare organizations to meet the needs of their patients when regular staff providers are not available. That concept has expanded over time, notably so since the pandemic, and the landscape of healthcare workforce in the U.S. now includes a robust industry of travel staffing. While lucrative for the workforce, travel staffing is financially detrimental to healthcare facilities. This presents challenges for all healthcare facilities but impacts rural facilities more than urban as rural facilities run on tighter operating margins with little available capital to spend on outside staffing solutions.

As limited research exists regarding the impact of travel staffing on health care facilities in North Dakota, it would be prudent to pursue examination of that topic from several viewpoints. As discussed, health care facilities are directly impacted financially, as well as from an organizational staffing perspective. Travel staff are hired on for limited timeframes and may not have the opportunity, or desire, to fully engage in the workplace culture of a facility. Similarly, patients may not be able to build a trusted relationship with their healthcare provider if the role is filled by temporary staffing. An additional avenue of research is the opportunity to examine the impact of travel staffing on occupational licensing to determine the number and type of licensees who are licensed in North Dakota but have an employer that is out-of-state beyond a reasonable commuting distance.

IMPROVE THE EFFICIENCY OF THE HEALTHCARE DELIVERY SYSTEM

There are numerous health system initiatives already underway locally, regionally, and nationally — and many others proposed — that strive to improve the efficiency of our healthcare delivery system, with a goal of providing better care at lower cost in a more patient-friendly manner. Additionally, given the unique and difficult challenges of depopulation and low population density in rural North Dakota, alternative healthcare delivery models, including enhanced use of non-physician providers, telemedicine and other virtual care delivery methods, home care, and medical homes, need to be explored and expanded.

One of the prime ways in which the UND SMHS intends to improve the efficiency and effectiveness of the state's healthcare delivery system is by better training a wide spectrum of healthcare students in optimal methods of interprofessional healthcare delivery. But working together in effective interprofessional teams doesn't just happen; team members need to learn about each other's discipline and practice working together. So, before we can expect to have effective healthcare teams taking care of actual patients, we need to properly train students in an interprofessional environment. The UND SMHS curriculum has been redesigned to encourage and permit broadened interprofessional education. A proposed health professions addition to the SMHS building is being considered to expand opportunities for interprofessional education through integrated simulations in practice settings typical of rural North Dakota.

RECOMMENDATIONS FOR MEETING NORTH DAKOTA'S HEALTHCARE WORKFORCE NEEDS

Ongoing (and full) funding for the HWI by the 70th Legislative Assembly and other subsequent assemblies to follow is absolutely essential. North Dakota is one of the few states in the nation that has taken a forward-looking and proactive approach to healthcare needs through the HWI, and it is poised to reap the benefits of this approach in the next decade and beyond. Results so far have been quite positive; young physicians who are recent graduates of the UND SMHS, its residency programs, or both are or will be moving to Hettinger, Devils Lake, and Williston, among other communities that have labored for years to attract physicians. In addition to continuing to endorse and support the full implementation of the HWI, a variety of other approaches that policymakers might consider during the 70th Legislative Assembly include:

- North Dakota state income tax credit for healthcare practitioners who volunteer to teach healthcare students.
- Creation of a RuralMed-like (or other financial incentive) program to encourage rural

practice for other needed non-physician providers (e.g., addiction counselors, medical laboratory technicians, and nursing assistants).

- Support for expanded mental and behavioral healthcare.

STATE HEALTH IMPROVEMENT PLAN

In 2020 the state of North Dakota's Health Strategies Planning Group developed the state's Strategic Plan for Health. This was addressed in the *Seventh Biennial Report* and served as the initial blueprint for making North Dakota the healthiest state in the nation. Since that time, the North Dakota Public Health Division engaged in a reaccreditation process. As part of that process, a five-year plan was developed to outline a framework to provide guidance on state-level goals for health improvement. This plan is known as the State Health Improvement Plan and outlines four priorities for 2024 through 2029. Those priorities are strengthening workforce, expanding access and connection, cultivating wellness, and building community resilience.

STRENGTHENING WORKFORCE

The focus of the strengthening workforce priority is to implement effective recruitment, retention, and training strategies so statewide stakeholders can ensure a strong and stable workforce ready to meet the needs of North Dakotans.

EXPANDING ACCESS & CONNECTION

The first focus of the expanding access and connection priority is to enhance well-being by expanding access to essential healthcare services, such as primary care, cardiac care, oral health care, cancer screening, and chronic disease management and prevention. The second focus is to support strategies to actively connect individuals to referrals for services and programs that support their holistic well-being, ensuring that everyone has the opportunity to receive the care and support they need.

CULTIVATING WELLNESS

The focus of cultivating wellness is to advance the collective commitment to improving the health outcomes of all communities in the state by investing in developing strategies to: 1) strengthen childhood opportunities and reduce adverse childhood experiences, 2) decrease occupational injuries, and 3) curb tobacco and e-cigarette usage, and 4) enhance the length and quality of life of Tribal populations and older adults.

BUILDING COMMUNITY RESILIENCE

The focus areas of building community resilience are to build capacity and enhance readiness for infectious disease response, emergency preparedness and response, and strengthen overall community resilience, while being responsive to the challenges of rural communities.

RURAL HEALTH TRANSFORMATION

In July 2026, the federal government passed Public Law No: 119-21 that created a new Rural Health Transformation grant program (RHTP). That program, administered by the Centers for Medicare and Medicaid Services (CMS), allocated $50 billion to be distributed during federal fiscal years 2026-2030. The $10 billion annual amount was awarded to those states that

submitted a Rural Health Transformation Plan application to CMS. As part of that award, North Dakota is expected to receive approximately $1 billion over five years with the funds focused on improving rural health care access, quality, and sustainability (North Dakota Department of Health and Human Services [ND DHHS], 2026).

The goals of the RHTP are to rebuild and retain a rural health workforce, prevent chronic disease, restore health, and reduce cost, bring high-quality care close to home, and gain efficiency with modern data technology. The ways that North Dakota will accomplish these goals are to strengthen and stabilize rural health workforce, make North Dakota healthy again, bring high-quality healthcare closer to home, and connect technology, data, and providers for a stronger North Dakota (ND DHHS, 2026).

While the RHTP initiative and funds are federal, there are several areas where the RHTP aligns with the HWI in North Dakota. The final proposal submitted to CMS from North Dakota included several training pathways initiatives that address rural health workforce. One such proposed initiative addresses increasing training in rural areas and will focus on expanding residency slots to allow trainees to work in and engage with rural communities. A second proposed initiative includes rural rotations for students to train in rural areas with rural providers, while having the opportunity to live in rural areas. A third initiative proposes to augment the current health educations programming targeting middle and high school students to introduce them to health careers. Finally, a fourth initiative proposes to provide funding for recruitment, relocation, and retention grants to facilitate building health workforce capacity in rural areas (ND DHHS, 2025). The alignment of RHTP and HWI goals has the potential to further grow the health workforce for the state of North Dakota from the current and future students of North Dakota, maximizing on the efforts to grow our own.

CONCLUSION

The HWI provided the state of North Dakota with a blueprint for disease prevention, healthcare workforce development, and healthcare delivery system optimization that is having a significant positive effect on the healthcare delivery challenges faced by the state. The HWI is only part of the solution, but it is a crucial element since it primarily addresses the educational foundation upon which the entire healthcare delivery system is based. Coupled with synergistic approaches by insurers, healthcare delivery institutions, other educational organizations, and policymakers, it will form part of the foundation of a revised and improved healthcare delivery system in the state.

DELIVERABLES

Continued full implementation of the HWI, the State Health Improvement Plan, and the other healthcare educational programs of the UND SMHS will help achieve a variety of goals that should be considered the deliverables to be received in exchange for funding of the HWI. The most important deliverable will be an adequate supply and distribution throughout North Dakota of caring, team-oriented primary and subspecialty-care practitioners schooled in interprofessional care. About half of the needed practitioners will result from a variety of increased retention efforts, and the other half will come from the expansion of class sizes and additional residency slots. Inherent in the plan is the anticipation that it will address the twin challenges of provider availability in North Dakota—an adequate supply of providers, as well as an appropriate

distribution of those providers throughout all three population areas of the state (metropolitan, micropolitan [large rural], and rural).

In addition to the obvious and necessary improvement in healthcare delivery throughout North Dakota, the increased number of healthcare providers will have a direct positive effect on the economic environment in the state as a result both of their assistance in improving the overall health of the population and the "halo" effect that has been reported to generate $1 million or more annually as a consequence of each additional physician practitioner employed.

The UND SMHS anticipates that it will continue to generate about $1.50 of additional revenue for every $1 (including the mill levy) appropriated by the Legislative Assembly. The additional revenue currently is composed of $0.40 as a result of tuition, $0.48 in grants and contracts (most often federal funds), $0.60 in ancillary income such as from physician practice plans and contributions from local healthcare delivery institutions to fund certain residency training costs, and $0.03 from philanthropy. Currently, the UND SMHS generates over $150 million biennially in additional revenue to that provided by the State of North Dakota.

Given the track record to date of the HWI and the predicted long-term positive impact on healthcare delivery in the state, it is essential that the UND School of Medicine and Health Sciences receives ongoing and continued support and funding from the North Dakota Legislature. For the 70th Legislative Assembly, the highest imperative is to continue full and stable funding of the HWI as well as for the UND SMHS as a whole.

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APPENDIX A

ABBREVIATIONS AND ACRONYMS

3RNet:	National Rural Recruitment and Retention Network
AAMC:	Association of American Medical Colleges
ACA:	Affordable Care Act
ACGME:	Accreditation Council for Graduate Medical Education
ACOTE:	Accreditation Council for Occupational Therapy Education
ACS:	American Community Survey
AD:	Alzheimer's Disease
AHEC:	Area Health Education Center
AHRQ:	Agency for Healthcare Research and Quality
AI/AN:	American Indian/Alaska Native
ALS:	Advanced Life Support
AMA:	American Medical Association
AMI:	Any mental illness
APA:	American Psychological Association
APRN:	Advanced Practice Registered Nurse
ASWE:	Association of Social Work Boards
ATSDR:	Agency for Toxic Substances and Disease Registry
BACB:	Behavior Analyst Certification Board
BCI:	Bureau of Criminal Investigation
BLS:	Basic Life Support
BLS:	Bureau of Labor Statistics
BRFSS:	Behavioral Risk Factor Surveillance System
BSN:	Bachelor of Science in Nursing
CACREP:	Council for Accreditation of Counseling and Related Educational Programs
CAH:	Critical Access Hospital
CAPTE:	Commission on Accreditation in Physical Therapy Education
CBC:	Community Birthing Center
CBOC:	Community-Based Outpatient Clinic
CCBHC:	Community Based Behavioral Health Clinics

CCNE:	Commission on Collegiate Nursing Education
CCR:	Cost to Charge Ratio
CDC:	Centers for Disease Control and Prevention
CHI:	Catholic Health Initiatives
CHW:	Community health worker
CLAS:	Culturally and Linguistically Appropriate Services
CLIMB:	Career and Life Instruction for Matriculation Building
CLL:	Chronic Lymphocytic Leukemia
CMS:	Centers for Medicare and Medicaid Services
CNA:	Certified Nursing Assistants
CNM:	Certified Nurse Midwife
CNPD:	College of Nursing and Professional Disciplines
CNS:	Clinical Nurse Specialist
CoBRE:	Center for Biomedical Research Excellence
COMAFTE:	Commission on Accreditation for Marriage and Family Therapy Education
COPD:	Chronic Obstructive Pulmonary Disease
COVID-19:	Coronavirus Disease 2019
CPA:	Canadian Psychological Association
CPR:	Cardiopulmonary Resuscitation
CRH:	Center for Rural Health
CRNA:	Certified Registered Nurse Anesthetist
CSWE:	Council on Social Work Education
CTE:	Career and Technical Education
DDS:	Doctor of Dental Surgery
DHHS:	Department of Health and Human Services
DNP:	Doctor of Nursing Practice
DO:	Doctor of Osteopathy
DOCR:	Department of Corrections and Rehabilitation
DPT:	Doctor of Physical Therapy
DUI:	Driving under the influence
EMS:	Emergency Medical Services

EMT:	Emergency Medical Technician
EMR:	Emergency Medical Responders
EPA:	Environmental Protection Agency
FCC:	Federal Communications Commission
FMAP:	Federal Medical Assistance Percentage
FMLA:	Family and Medical Leave Act
FPL:	Federal Poverty Level
FQHC:	Federally Qualified Health Centers
GDP:	Gross Domestic Product
GED:	General Educational Development
GFGSC:	Grand Forks Growth and Support Center
GFHA:	Grand Forks Housing Authority
GPFB:	Great Plains Food Bank
GRASP:	Geospatial Research, Analysis, and Services Program
HCAHPS:	Hospital Consumer Assessment of Healthcare Providers and Systems
HIPAA:	Health Insurance Portability and Accountability Act
HPSA:	Health Professional Shortage Area
HPV:	Human papillomavirus
HRSA:	Health Resources and Services Administration
HSC:	Human Service Center
HSE:	High school equivalency
HUD:	U.S. Department of Housing and Urban Development
HWI:	Health Workforce Initiative
IHS:	Indian Health Service
IMG:	International Medical Graduate
INMED:	Indians into Medicine
IOM:	Institute of Medicine
ITRRC:	Indigenous Trauma and Resilience Research Center
KFF:	Kaiser Family Foundation
LABA:	Licensed Assistant Behavior Analyst
LAC:	Licensed Addiction Counselor

LAMFT: Licensed Associate Marriage and Family Therapist

LAPC: Licensed Associate Professional Counselor

LBA: Licensed Behavior Analyst

LBSW: Licensed Baccalaureate Social Worker

LCME: Liaison Committee on Medial Education

LCSW: Licensed Certified Social Worker

LMFT: Licensed Marriage and Family Therapists

LMSW: Licensed Master Social Worker

LPC: Licensed Professional Counselor

LPCC: Licensed Professional Clinical Counselor

LPHU: Local Public Health Unit

LPN: Licensed Practical Nurse

LSTC: Life skills and Transition Center

LTC: Long Term Care

MCAT: Medical College Admissions Test

MCHEP: Maternal and Child Health Epidemiology Program

MCTA: Maternity Care Target Area

MD: Doctor of Medicine/Medical Doctor

MILE: Minot Integrated Longitudinal Experience

MLS: Medical Laboratory Sciences

MMR: Metropolitan Micropolitan Rural

MMRC: Maternal Mortality Review Committee

MMS: Medical Marketing Service

MN: Minnesota

MPH: Master of Public Health

MRI: Magnetic Resonance Imaging

MSU: Mayville State University

NAM: National Academy of Medicine

NASAC: National Addiction Studies Accreditation Commission

NBCOT: National Board for Certification in Occupational Therapy

NCES: National Center for Education Statistics

NCHS: National Center for Health Statistics

NCLEX-PN: National Council Licensure Examination for Practical Nursing

NCLEX-RN: National Council Licensure Examination for Registered Nursing

ND: North Dakota

NDBACE: North Dakota Board of Addiction Counseling Examiners

NDBCLP: North Dakota Board of Clinical Laboratory Practice

NDBON: North Dakota Board of Nursing

NDBPT: North Dakota Board of Physical Therapy

NDBSWE: North Dakota Board of Social Work Examiners

NDCC: North Dakota Century Code

NDOTA: North Dakota Occupational Therapy Association

NDSACCHO: North Dakota State Association of City and County Health Officials

NDSBOTP: North Dakota State Board of Occupational Therapy Practice

NDSU: North Dakota State University

NHPHS: National Public Health Performance Standards

NHSC: National Health Services Corps

NICU: Neonatal Intensive Care Unit

NIH: National Institutes of Health

NQS: National Quality Strategy

NSDUH: National Survey on Drug Use and Health

NSSP: National Sample Survey of Physicians

OASH: Office of Disease Prevention and Health Promotion

OB/GYN: Obstetrician/gynecologist

OECD: Organization for Economic Cooperation and Development

OEHEM: Office of Environmental Health Emergency Management

OMB: Office of Management and Budget

OT: Occupational Therapist

OTA: Occupational Therapist Assistant

OTD: Doctor of Occupational Therapy

PA: Physician Assistant

PhD: Doctor of Philosophy

PMHNP: Psychiatric Mental Health Nurse Practitioner

PMOS: Polyendocrine Metabolic Ovarian Syndrome

PPA: Postpartum anxiety

PPD: Postpartum depression

PPS: Prospective Payment System

PQC: Perinatal Quality Collaborative

PRAMS: Pregnancy Risk Assessment Monitoring System

PTA: Physical Therapist Assistant

QRU: Quick Response Unit

RBT: Registered Behavior Technician

RDA: Registered Dental Assistant

RDH: Registered Dental Hygienist

RHC: Rural Health Clinic

RN: Registered Nurse

ROME: Rural Opportunities in Medical Education

RUCA: Rural-Urban Commuting Area

SAHIE: Small Area Health Insurance Estimates

SAIL: Social and Academic Intervention Learning

SAMHSA: Substance Abuse and Mental Health Services Administration

SD: South Dakota

SDOH: Social Drivers of Health

SES: Socioeconomic status

SIM-ND: Simulation in Motion-North Dakota

SMHS: School of Medicine and Health Sciences

SMI: Serious mental illness

SNAP: Supplemental Nutrition Assistance Program

STI: Sexually Transmitted Infection

SUID: Sudden Unexpected Infant Death

SVI: Social Vulnerability Index

TAB: Tribal Advisory Board

TRC: Tompkins Rehabilitation Center

UCR:	Uniform Crime Reporting
UND:	University of North Dakota
URM:	Underrepresented Minority
US:	United States
USCB:	United States Census Bureau
USDA:	United States Department of Agriculture
USMG:	U.S. Medical Graduate
VA:	Veterans Affairs
WBL:	Work-based learning
WHO:	World Health Organization
WIC:	Women, Infants and Children Program

APPENDIX B

DEFINITION OF TERMS

NUMERIC

- 340B Drug Discount Program: U.S. federal government program created in 1992 that requires drug manufactures participating in Medicaid to provide outpatient drugs to covered entities at significantly reduced prices.
- 3RNET: an organization focused on connecting healthcare professionals with jobs specifically in rural and underserved areas in the U.S. This network has a nonprofit member organization in each state. Also known as the National Rural Recruitment and Retention Network.

A

- Accountable Care Organization (ACO): a group of hospitals, doctors, and other healthcare providers, who come together voluntarily to give coordinated high-quality care to their Medicare patients. Their goal is to ensure that patients get the right care at the right time, while avoiding unnecessary duplication of service and preventing medical errors.
- Accreditation (accredited): the action or process of officially recognizing someone as having a particular status or being qualified to perform a particular duty.
- Accreditation Council for Continuing Medical Education: sets and enforces standards in physician continuing education within the U.S. It acts as the overseeing body for institutions and organizations providing continuing medical education activities.
- Accreditation Council for Graduate Medical Education (ACGME): an independent, not-for-profit, physician-led organization that sets and monitors the professional educational standards essential in preparing physicians to deliver safe, high-quality medical care to all Americans.
- Accreditation Council for Occupational Therapy Education (ACOTE): Accrediting agency for occupational therapy education in over 600 occupational therapy and occupational therapist assistant educational programs.
- Accreditation Review Commission on Education for the Physician Assistant (ARC-PA): accrediting agency that protects the interests of the public and physician assistant profession by defining the standards for PA education and evaluating PA educational programs.
- Acquired Immune Deficiency Syndrome: a disease in which there is a severe loss of the body's cellular immunity, greatly lowering the resistance to infection and malignancy.
- Acuity: the measurement of the intensity of nursing care required by a patient.
- Acute Care: providing or concerned with short-term, usually immediate medical care (as for serious illness or a traumatic injury).
- Acute Myocardial Infarction: a heart attack, when the heart is deprived of circulating blood due to blocked arteries.
- Addiction Counselor: a mental health professional who specializes in helping patients with addictions.
- Adult-Geriatric Primary Care Nurse Practitioner: an advanced practice nurse who has the education and training to assess and manage adult health and common acute and chronic illness. They emphasize prevention and wellness through patient education.
- Advanced life support: emergency medical care for sustaining life, including defibrillation, airway management, and drugs and medications.

- Advanced Practice Providers: medical providers (physician assistants or nurse practitioners) who are trained and educated similarly to physicians. They work in all areas of the hospital and clinic, and patients can be treated by them in the emergency room, operating room, or during routine visits.
- Advanced Practiced Registered Nurse: a registered nurse with a graduate-level degree such as a Master's of Science in Nursing or a Doctor of Nursing Practice, and has been specially trained in one of the four recognized APRN roles. Potential roles include a Nurse Practitioner (NP), Certified Registered Nurse Anesthetist (CRNA), Certified Nurse Midwife (CNM), and Clinical Nurse Specialist (CNS). The term "APRN" is used interchangeably with these specific licensure levels. These nurses serve as providers and can diagnose illnesses, manage treatments, and prescribe medications. Generally, they work in hospitals, clinics, assisted living facilities, and nursing homes.
- Advocacy: public support for or recommendation of a particular cause or policy.
- Affordable Care Act: landmark health reform legislation passed by 111th Congress and signed into law by President Obama in 2010 that aimed to expand coverage, lower healthcare costs, hold insurance companies accountable, guarantee more choice, and enhance the quality of care for all Americans.
- Agency for Healthcare Research and Quality: one of twelve agencies within the Department of Health and Human Services that invests in research and evidence to make health care safer and improve quality.
- Aggregate: a whole formed by combining several elements.
- Agrarian: relating to cultivated land or the cultivation of land; any community whose economy is based on producing and maintaining crops and farmland.
- Alleviate: make less severe.
- Allopathic: refers to the treatment of disease by conventional means such as using drugs that have the opposite effects compared to the symptoms.
- Alzheimer's Disease: a progressive disease that destroys memory and other important mental functions.
- Amalgamate (amalgamation): combine or unite to form one organization or structure.
- Ambulatory care: the medical care provided in an outpatient basis, including diagnosis, observation, consultation, treatment, intervention, and rehabilitation services. Also known as outpatient care.
- Ameliorate: to make, something bad or unsatisfactory, better.
- American Association of Nurse Practitioners: a national professional membership organization with a mission to empower all nurse practitioners to advance quality health care through practice, education, advocacy, research, and leadership.
- American Community Survey: an annual demographics survey program conducted by the United States Census Bureau. It regularly gathers information previously contained only in the long form of the decennial census, including ancestry, US citizenship status, educational attainment, income, language proficiency, migration, disability, employment, and housing characteristics.
- American Dental Association: the largest dental association in the U.S. that is the leading source of oral health related information for dentists and their patients.
- American Medical Association: an organization that helps physicians help patients by uniting physicians nationwide and medical students to work on the most important professional and public health issues.
- American Psychological Association: the leading scientific and professional organization that represents psychology in the United States that includes researchers, educators, clinicians, consultants, and student members.

- American Recovery and Reinvestment Act: a bill signed into law by President Obama that was designed to give the economy a boost by reducing federal taxes, increasing unemployment benefits, and also increasing spending in certain areas
- Amid: surrounded by or in the middle of.
- Ancillary: providing necessary support to the primary activities or operations of an organization, institution, industry, or system.
- Anecdotal: not necessarily true or reliable, because based on personal accounts rather than facts or research.
- Anesthesiologist: a physician specializing in anesthesiology.
- Anesthesiology: the branch of medicine concerned with anesthesia and anesthetics.
- Anxiety: a nervous disorder characterized by a state of excessive uneasiness and apprehension, typically with compulsive behavior or panic attacks.
- Arthritis: painful inflammation and stiffness of the joints.
- Area Health Education Center: a federally funded program established in the United States in 1972 to improve the supply, distribution, retention and quality of primary care and other health practitioners in medically underserved areas.
- Associate Degree: an undergraduate academic degree awarded by community colleges, junior colleges, technical colleges, and some bachelor-granting colleges and universities upon completion of a course of study lasting two years on average.
- Association of American Medical Colleges: a not-for-profit association dedicated to transforming health care through innovative medical education, cutting-edge patient care, and groundbreaking medical research.
- Asthma: a respiratory condition marked by spasms in the bronchi of the lungs, causing difficulty in breathing. It usually results from an allergic reaction or other forms of hypersensitivity.
- Autism: a developmental disorder of variable severity that is characterized by difficulty in social interaction and communication and by restricted or repetitive patterns of thought and behavior.
- Autoimmune Disease: a health condition that occurs when your immune system attacks the normal cells in your body by mistake instead of defending them. This can present in a variety of different ways through different autoimmune diseases.
- Automated External Defibrillator: a portable electronic device that automatically diagnoses life-threatening cardiac arrhythmias of ventricular fibrillation and pulseless ventricular tachycardia, and is able to treat them through defibrillation, the application of electricity which stops the arrhythmia.
- Axiomatic: self-evident or unquestionable.

B

- Bachelor's Degree: an undergraduate academic four-year degree awarded by colleges and universities upon completion of a course of study. Also called a Baccalaureate degree.
- Balanced Budget Act of 1997: an omnibus legislative package that was designed to balance the federal budget by 2002.
- Basic-Care Facility: a congregate residential setting with private rooms and semi-private rooms, providing 24-hour supervision with a comprehensive care plan.
- Basic Life Support: the level of medical care which is used for patients with life-threatening illnesses or injuries until the patient can be given full medical care at a hospital.

- Behavior Analyst: a professional who uses experimental and applied analysis of behavior, and use statistics, to develop techniques and treatments that facilitate the evaluation and modification of maladaptive behavior.
- Behavior Analyst Assistant: a professional who works closely under the supervision of an applied behavior analyst and assists in completing assessments, developing ABA therapy, collect and analyze data to make intervention changes as needed.
- Behavioral Health: the scientific study of the emotions, behaviors, and biology relating to a person's mental and physical well-being, their ability to function in everyday life, and their concept of self.
- Behavioral Health Risk Factor Surveillance System: a health survey system that collects data on health-related risk behaviors, chronic health conditions, and preventative services.
- Benchmark for Excellence in Patient Safety: a program within the Health Care SafetyZone Portal where critical access hospitals can elect to participate in benchmarking and data sharing with all critical access hospitals in the nation that use the event-reporting system.
- Beneficiary: a person or entity who receives money or other benefits
- Biennium (Biennial): a specified period of 2 years.
- Birth Center: a place for childbirth where care is provided in the midwifery and wellness model.
- Blue Cross Blue Shield of North Dakota: an independent licensee of the Blue Cross and Blue Shield Association, serving residents and businesses with insurance needs in North Dakota.
- Board of Occupational Therapy Practice: board that licenses occupational therapists and occupational therapy assistants, monitors professional conduct and regulate the profession to ensure the highest quality of occupational therapy services for the residents of the state.
- Bulwark: a person, institution, or principle that acts as a defense
- Bundled Payment Model: a model in which providers and/or healthcare facilities are paid a single payment for all the services performed to treat a patient undergoing a specific episode of care.
- Bundled Payments for Care Improvement Initiative: comprised of four broadly defined models of care, which link payments for the multiple services beneficiaries receive during an episode of care. Organizations enter into payment arrangements that include financial and performance accountability for episodes of care.
- Bureau of Labor Statistics: government agency that measures labor market activity, working conditions, price changes, and productivity in the U.S. economy to support public and private decision-making.
- Bush Foundation: a philanthropic foundation that invests in individuals and organizations in Minnesota, North Dakota, South Dakota, and the 23 Native Nations that share the same geographic area.

C

- Cadre: a small group of people specially trained for a particular purpose or profession.
- Canadian Psychological Association: the national association for science, practice, and education of psychology in Canada.
- Cancer: a disease caused by an uncontrolled division of abnormal cells in a part of the body causing malignant tumor(s) to grow.
- Cardiac Arrest: a sudden, sometimes temporary, cessation of function of the heart.
- Cardiac Arrhythmia: abnormal variation from the normal heartbeat. The abnormal rhythm can be too slow, too fast, too irregular, or too early.

- Cardiac Ready Community: a community that has public access to AED's, CPR instruction, blood pressure screenings, and transport plans for first responders, EMS, and the local hospital.
- Cardiology: the branch of medicine that deals with the diseases and abnormalities of the heart.
- Cardiopulmonary Resuscitation (CPR): a medical procedure involving repeated compression of a patient's chest, performed in an attempt to restore the blood circulation and breathing of a person who has suffered cardiac arrest.
- Cardiovascular Disease: a general name for a wide variety of diseases, disorders, and conditions that affect the heart and blood vessel.
- Care Coordination: the process of deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care
- Cartilage: firm, whitish, flexible connective tissue found in various forms in the larynx and respiratory tract, in structures such as the external ear, and in the articulating surfaces of joints.
- Case Aide: a professional who performs community contact work on simpler aspects of programs or cases and assists in providing services to clients and family members, under close supervision of caseworker.
- Catholic Health Initiatives: a national, nonprofit, faith-based health system in the U.S.
- Census: an official count or survey of a population, typically recording various details of individuals.
- Centers for Disease Control and Prevention: U.S. health protection agency that is a subdivision of the Department of Health and Human services.
- Centers for Medicare and Medicaid Services: part of the U.S. Department of Health and Human Services that oversees many federal healthcare programs, including those that involve health information technology.
- Center for Rural Health: a federally designated State Office of Rural Health for North Dakota that connects resources and knowledge to strengthen the health of people in rural and tribal communities.
- Certified Application Counselor: an individual that is trained to help people with their insurance options through the Marketplace at no cost to the consumer.
- Certified Nurse Midwife: a registered nurse who graduated from a nurse midwifery education program accredited by the Accreditation Commission for Midwifery Education and have passed a national certification examination to receive the professional designation.
- Certified Nursing Assistant: an individual who helps patients or clients with healthcare needs under the supervision of a registered nurse or licensed practical nurse.
- Certified Registered Nurse Anesthetist: an advanced practice registered nurse who administers anesthesia and other medications. They also monitor patients who are receiving and later recovering from anesthesia.
- Chaplain: a member of the clergy attached to a private chapel, institution, ship, branch of the armed forces, etc.
- Chief Executive Officer: an individual who has the most authority in an organization or business.
- Children's Health Insurance Program: a partnership between the federal and state governments that provides low-cost health coverage to children in families that earn too much money to qualify for Medicaid. In some states it can also cover pregnant women.
- Cholesterol: a compound of the sterol type found in most body tissue. It is an important constituent of cell membranes and precursor of other steroid compounds, but a high

proportion in the blood of low-density lipoprotein (which transports cholesterol to the tissue) is associated with an increased is of coronary heart disease.

- Chronic Disease: a persistent or recurring disease usually affecting a person for three months or longer.
- Chronic Liver Disease: a progressive decline in liver function that lasts at least six months.
- Chronic Lymphocytic Leukemia: a slow-growing blood cancer caused by the overproduction of B cells.
- Chronic Obstructive Pulmonary Disease: a lung disease that makes it hard to breathe. It is caused by damage to the lungs over many years usually from smoking.
- Cirrhosis: a chronic liver disease that occurs when healthy liver tissue is replaced by scar tissue, making it difficult for the liver to function properly.
- Clinical Nurse Specialist: an advanced practice registered nurse who holds a master's or doctoral degree in a specialized area of nursing practice. They focus on diagnosing and treating patients, nurse management, and administration.
- Clinical Preceptor: a supervised clinical experience which allows students to apply knowledge gained in the classroom portion of a program to clinical practice.
- Clinical Quality Measures: tools that help measure and track the quality of health care services that eligible professional, eligible hospitals, and critical access hospitals provide.
- Coalition: an alliance for combined action
- Colloquial: used in ordinary or familiar conversation; not formal
- Colonization: the action or process of settling among and establishing control over the indigenous people of an area.
- Colonoscopy: a procedure in which a flexible fiber-optic instrument is inserted through the anus in order to examine the colon.
- Commensurate: corresponding in size or degree; in proportion.
- Commission on Accreditation of Athletic Training Education (CAATE): a non-profit organization serving the public and profession by establishing and ensuring compliance with accreditation standards that facilitate quality outcomes, continuous improvement, innovation and diversity to enhance athletic training education.
- Commission on Accreditation for Marriage and Family Therapy Education: establishment, review, and revision of accreditation standards and policies, and the accreditation of graduate and post-graduate educational programs.
- Commission on Accreditation in Physical Therapy Education (CAPTE): grants specialized accreditation status to qualified entry-level education programs for physical therapists and physical therapist assistants.
- Commonwealth Fund: a private U.S. foundation whose stated purpose is to promote a high performing health care system that achieves better access, improved quality, and greater efficient, particularly for society's most vulnerable.
- Community-Based Outpatient Clinics: clinics that provide the most common outpatient services, including health and wellness visits, so that individuals seeking care to do have to travel to larger medical centers.
- Community Health Center: a private, nonprofit organization that directly or indirectly (through contracts and cooperation agreements) provides primary health services to residents of a defined geographic area that is medically underserved.
- Community Health Needs Assessment: a state, tribal, local, or territorial health assessment that identifies key health needs and issues through systematic, comprehensive data collection and analysis.
- Community Health Worker: a frontline public health worker who is a trusted member of and/or has a usually close understanding of the community served. This trusting relationship

enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve quality of service delivery.
- Comorbidity: the simultaneous presence of two chronic diseases or conditions in a patient.
- Concordance: agreement or consistency.
- Concussion: a type of traumatic brain injury caused by a bump, blow, or jolt to the head or by a hit to the body that causes the mead and brain to move rapidly back and forth. The sudden movement causes the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging brain cells.
- Conditions of Participation: a set of stringent health measures designed to regulate how hospitals and other medical establishments utilize Medicare aid.
- Congestive Heart Failure: a weakness of the heart that leads to a buildup of fluid in the lungs and surrounding body tissues.
- Contact tracing: the identification and monitoring of individuals known to be exposed to a highly contagious and infectious disease.
- Constituency: a body of voters in a specified area who elect a representative to a legislative body.
- Contract employees: an individual retained by a company for a predetermined time, for a predetermined price.
- Council for Accreditation of Counseling and Related Educational Programs (CACREP): a group responsible for accrediting master's and doctoral degree programs in counseling and its specialties that are offered by colleges and universities.
- Council on Social Work Education: national association representing social work education in the United States.
- Counselor: a person trained to give guidance on personal, social, or psychological problems.
- COVID-19 Pandemic: an ongoing illness of coronavirus disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and was declared a pandemic in March 2020.
- Credence: a belief in or acceptance of something as true.
- Critical Access Hospital: a designation given to rural hospitals that is designed to reduce the financial vulnerability of rural hospitals and improve access to health care by keeping essential service in rural communities.
- Critical Incident Stress Management: an adaptive, short-term psychological helping-process that focuses solely on an immediate and identifiable problem. It can include pre-incident preparedness to acute crisis management to post-crisis follow-up.
- Curriculum: the subjects comprising a course of study in a school or college.

D

- Decennial: recurring every ten years.
- Deductible: a specified amount of money that the insured must pay before an insurance company will pay a claim.
- Deliverable: a report, a document, a software product, a server upgrade or any other building block of an overall project.
- Dental Assistant: an individual qualified to work with a professional dentist and assist in various duties such as organizing appointments, sterilizing and arranging instruments, escorting patients, and taking x-rays.
- Dental Hygienist: an ancillary dental worker specializing in scaling and polishing teeth as well as providing guidance on cleaning the teeth.

- Dental Therapist: a member of a dental team who provides preventative and restorative dental care, usually for children and adolescents.
- Dentist: a person qualified to treat the diseases and conditions that affect the teeth and gums, especially the repair and extraction of teeth and the insertion of artificial ones.
- Dependency ratio: number of individuals who are economically inactive (less than 16 years of age or older than 65), divided by the number of individuals who are of working age (16 to 65 years old).
- Depopulation: a significant reduction in the population.
- Depression: formally known as Major Depressive Disorder; a mood disorder characterized by persistent feelings of sadness or hopelessness, lack of sleep, change in appetite, loss of interest in activities, and lack of energy every day for at least two weeks.
- Dermatology: the branch of medicine concerned with the diagnosis and treatment of skin disorders.
- Detriment: the state of being harmed or damaged.
- Diabetes: a disease in which the body's ability to produce or respond to the hormone insulin is impaired, resulting in abnormal metabolism of carbohydrates and elevated levels of glucose in the blood and urine.
- Diagnose: to identify the nature of, an illness or other problem, by examination of the symptoms.
- Diagnostic and Statistical Manual of Mental Disorders 5th Edition (DSM-5): a handbook used by health care professionals that contains descriptions, symptoms, and other criteria for diagnosing mental disorders.
- Didactic: intended to teach, particularly in having moral instruction as an ulterior motive.
- Dietitian: an expert on diet and nutrition.
- Direct Care Associate: responsible for providing in-home personal care and daily living tasks to individuals who are suffering from illness, physically disabilities, or the elderly requiring long-term care.
- Direct Secure Messaging: a national encryption standard for securely exchanging clinical healthcare data via the internet.
- Disparity: a noticeable difference between people or things.
- Disseminate: spread or disperse (something, usually information) widely.
- Division of Emergency Medical Service: serves as North Dakota's lead emergency medical services agency. It is responsible for licensing ambulance services and quick response units, training, testing, certification, and licensure of EMS personnel, coordinating the State Trauma System, administering the EMS for Children Program, coordinating the State CISM Team, coordinating, the State Stroke System, of Care, and coordinating the State Cardiac System of Care.
- Doctor of Medicine: a degree that is attained by attending and graduating from a conventional medical school and requires passing a licensing examination and completing residency training prior to treating people or prescribing medications.
- Doctor of Nursing Practice: a degree designed for nurses seeking a terminal degree in nursing practice and offers a general leadership or administration focus.
- Doctor of Occupational Therapy: a professional/clinical doctorate designating the highest level of academic preparation for an entry-level occupational therapist.
- Doctor of Osteopathy: a fully licensed physician who practices in every medical specialty. They provide a full range of services, from prescribing drugs to performing surgery.
- Doctor of Physical Therapy: the qualifying degree for physical therapy in the United States, considered a graduate-level clinical/professional degree for the practice of physical therapy.

E

- Early Intervention: a system of services that helps babies and toddlers with developmental delays or disabilities in domains such as physical, cognitive, communication, social/emotional, and self-help.
- Electrocardiograph: a galvanometric device that detects and records the minute difference sin electric potential cause by heart action and occurring between different parts of the body and it is used to diagnose heart disease. The output it gives is called an electrocardiogram.
- Electronic health record: a longitudinal electronic record of patient health information generated by one or more encounters in any care delivery setting.
- Emergency Department Transfer Communication: a National Quality Forum endorsed measure to evaluate communication for transitions of care during emergency department transfers.
- Emergency Medical Responder: a person who is specially trained to provide out-of-hospital care in medical emergencies.
- Emergency Medical Services: refers to the treatment and transport of people in crisis health situations that may be life threatening.
- Emergency Medical Technician: a person who is specially trained and certified to administer basic emergency services to victims of trauma or acute illness before and during transportation to a hospital or other healthcare facility.
- Emphysema: a condition in which the air sacs of the lungs are damaged and enlarged, causing breathlessness.
- EMS Voluntary Event Notification Tool: a web-based EMS reporting of events such as near-misses, assaults on EMS, patient safety events, and other situations.
- Endodontics: the branch of dentistry concerned with diseases and injuries of the soft tissues inside a tooth (i.e., dental pulp).
- Endometriosis: a condition when the inner lining that grows in the uterus starts growing in areas outside of the uterus.
- Enterprise: a project or undertaking, typically one that is difficult or requires effort; a business or company.
- Epidemiology: the study of the determinants, occurrence, and distribution of health and disease in a defined population.
- Equity: the quality of being fair and impartial.
- Equivocal: open to more than one interpretation; ambiguous.
- Evidence-Based Practice: any practice that relies on scientific and mathematical evidence to form strong inductive or deductive arguments for guidance and decision-making.
- Exit Interview: an interview held with an employee (or student) who is about to leave an organization, typically in order to discuss the employee's reasons for leaving and their experience of working for the organization.
- Expenditure: the action of spending funds.

F

- Family Medicine: the branch of medicine designed to provide basic health care to all members of a family.
- Family Nurse Practitioner: a registered nurse with specialized educational and clinical training in family practice.
- Federal Office of Rural Health Policy: created to advise the Secretary of the U.S. Department of Health and Human Service on health care issues impacting rural communities including access to quality health care and health professionals, viability of

rural hospitals, and effect of the department proposed rules and regulations, including Medicare and Medicaid, on access to and financing of health care in rural areas.
- Federal Poverty Level: a measure of income used by the U.S. government to determine who is eligible for subsidies, programs, and benefits.
- Federally Qualified Health Center: outpatient clinics that qualify for specific reimbursement systems under Medicare and Medicaid.
- Feeding Assistant: any individual employed by a facility, or under contract, to feed or assist with the feeding of nursing facility residents, who must either have successfully completed a department-approved paid feeding assist and training course or be a certified nurse aid.
- Fieldwork: practical work experience conducted by a student in a professional working environment, rather than in a classroom.
- First Aid: the first and immediate assistance given to any person suffering from either a minor or serious injury or illness until full medical treatment is available.
- Flex-Time: a work policy that allows employees the flexibility to choose their work hours.
- Food and Drug Administration known (FDA): U.S. federal agency that is responsible for protecting and promoting public health through the control and supervision of food safety, tobacco products, caffeine products, dietary supplements, prescription and over-the-counter pharmaceutical drugs (medications), vaccines, biopharmaceuticals, blood transfusions, medical devices, electromagnetic radiation emitting devices (ERED), cosmetics, animal foods & feed and veterinary products.
- Food Desert: a low-income census tract with a substantial number or share of residents with low levels of access to retail outlets selling health and affordable foods.
- Food Insecurity: when people don't have enough food to eat and don't know where their next meal will come from.
- Forensic Odontology: a dentist who uses their training and knowledge of the teeth and uses that within the criminal justice field and legal system. Also called forensic dentistry.
- Frontier: a county with a population density of six or fewer people per square mile.
- Frontier Community Health Integration Project Demonstration: a federal 3-year initiative that seeks to develop and test new models of integrated, coordinated healthcare in the most sparsely populated rural counties. Its goal is to improve rural health outcomes and to reduce Medicare expenditures.
- Full time equivalent (FTE): the hours worked by one employee on a full-time basis. The concept is used to convert the hours worked by several part-time employees into the hours worked by full-time employees.

G

- Gamut: the complete range or scope of something
- Gastroenterology: the branch of medicine which deals with disorder of the stomach and intestines.
- Generalist: an internist, family physician, or pediatrician who performs general medicine; one who treats most diseases that do not require surgery, sometimes including those related to obstetrics.
- General Surgery: a surgical specialty that focuses on abdominal contents, alimentary tract, breast, skin, soft tissues, and the endocrine system.
- Geriatrics: a branch of medicine that deals with the problems and disease of old age and the medical care and treatment of aging people.
- Gini Index: also called the Gini coefficient, is a summary measure of income inequality with a scale ranging from 0 indicating perfect income equality (where everyone receives an equal

share) to 1 perfect income inequality (where only one recipient or group of recipients receives all the income).
- Governor's Nursing Shortage Taskforce: a group convened by Governor Burgum of North Dakota that is comprised of a diverse group of stakeholders. The goal of the taskforce is to examine the issue, identify causes, possible solutions, and to make recommendations to address the critical shortage of nurses and other healthcare workers in North Dakota.
- Graduate degree: an advanced academic degree (usually a master or doctorate degree) awarded by colleges and universities to individuals who have completed a bachelor's degree and additional course work for the advanced degree.
- Grant: a sum of money given by an organization, especially a government, for a particular purpose.
- Great Depression: a severe worldwide economic depression in the 1930's.
- Great Plains Telehealth Resource and Assistance Center: an organization with the mission to build telehealth awareness, promote education, provide individualized consultation, and provide data specific to telehealth services in the Great Plains Region.
- Gross Domestic Product (GDP): a standard of measurement of the total value of all goods and services produced in either the nation or at a state level.

H

- Health Information Manager: responsible for obtaining, analyzing, and securing the digital and traditional health records of patients.
- Health Information Technology: information technology applied to health and health care that supports health information management across computerized systems and the secure exchange of health information between consumers, providers, payers, and quality monitors.
- Health Information Technology for Economic and Clinical Health Act: a part of the American Recovery and Reinvestment Act that deals with privacy and security issues in relation to electronic storage of medical files. The standards in this act are meant to improve the protection of medical information.
- Health Insurance: insurance that compensates the insured for expenses or loss incurred for medical reasons, as through illness or hospitalization.
- Health Insurance Portability and Accountability Act (HIPAA): U.S. legislation that provides data privacy and security provisions for safeguarding medical information, and protects America's workers with improvement to portability and continuity of health insurance coverage.
- Health Professional Shortage Area: an area designated by the Health Resources and Services Administration that indicates health care provider shortages in primary care, dental health, or mental health. These shortages can be geographic, population, or facility-based.
- Health Research and Education Trust: a not-for-profit research and education affiliate of the American Hospital Association (AHA) with a mission to transform health care through research and education.
- Health Resources and Services Administration: part of the U.S. Department of Health and Human Services which is tasked with improving access to health care services for people who are geographically isolated, economically and medically vulnerable.
- Health System: the people, institutions, organizations, healthcare professionals, and resources needed to deliver health care to a target population within a geographical area.
- Healthcare SafetyZone Portal: a comprehensive web-based system that transforms any reporting, education, or safety procedure into easy and meaningful electronic processes.

- Health Workforce Initiative: a plan created to identify specific steps to reduce disease burden and increase the provider workforce through programs designed to increase provider retention for practice within the state of North Dakota as well as expand the provider network through class size increases
- Healthy North Dakota: a statewide partnership of more than 400 committee members and organizations working to determine solution for more healthful living.
- Healthy People: an agenda that provides science-based, national goals and objectives with 10-year targets designed to guide national health promotion and disease prevention efforts to improve the health of all people in the United States.
- High Blood Pressure: a common disease in which blood flows through blood vessels, or arteries, at higher-than-normal pressure. Complications from high blood pressure include chronic kidney disease, heart attack, heart failure, stroke, and possibly vascular dementia.
- High Cholesterol: a condition that causes the levels of certain bad fats, or lipids, to be too high in the blood. High cholesterol can lead to a buildup of plaque in the blood vessels which can increase the risk of heart attack, stroke, and peripheral artery disease.
- Holistic Medicine: characterized by the treatment of the whole person, considering mental and social factors, rather than just the physical symptoms of a disease.
- Home Health: medical care provided in a patient's home that is provided by skilled medical professionals.
- Homestead Act: a series of U.S. federal laws that gave an applicant ownership of land, typically called a "homestead," at little or no cost.
- Hospice Care: care that focuses on the quality of life rather than its length. It provides humane and compassionate care for people in the last phase of incurable disease so that they may live as fully and comfortably as possible.
- Hospital-Acquired Condition Reduction Program: a program that provides incentive for hospitals to reduce hospital-acquired conditions. This is done through reducing payments to applicable hospitals that rank in the worst performing 25 percent of all subsection hospitals with respect to risk-adjusted hospital-acquired condition quality measures.
- Hospital Consumer Assessment of Healthcare Providers and Systems: a government survey for measuring patient satisfaction at hospitals across the country.
- Hospital Medicine: the discipline concerned with the medical care of acutely ill hospitalized patients.
- Hospital Readmission Reduction Program: a payment penalty program designed to reduce Medicare fee-for-service hospital readmission rates for conditions that account for expensive, high-volume admissions and frequent readmissions.
- Human Resource Counselor: a professional who provides counseling in different aspects of managing human resources such as career planning or development, performance management, stress management, and other areas which may affect employees emotionally.
- Human Services: a field that centers on meeting human needs through an interdisciplinary knowledge base, focusing on prevention as well as remediation of problems, and maintain a commitment to improving the overall quality of life of service populations.
- Huntington's Disease: An inherited condition in which nerve cells in the brain break down over time.
- Hypertension: abnormally high blood pressure.

I

- Immunization: the action of making a person or animal immune to infection, typically through an injection or series of injections.

- Impetus: the force that makes something happen or happen more quickly
- Incentive: a thing that motivates or encourages one to do something.
- Incidence: a measure of the probability of occurrence of a given medical condition in a population within a specified period of time
- Incrementalism: a method of working by adding to a project using many small incremental changes instead of a few large jumps.
- Indian Health Services: an agency within the U.S. Department of Health and Human Services that is responsible for providing federal health services to American Indians and Alaska Natives.
- Indians into Medicine: a comprehensive program designed to assist American Indian students who aspire to be health professionals to meet the needs of tribal communities.
- Infection: the replication of organisms in host tissue, which may cause disease.
- Infectious Disease: a disease resulting from the presence and activity of a pathogenic microbial agent such as bacteria, viruses, fungi, or parasites.
- Influenza: a highly contagious viral infection of respiratory passages causing fever, severe aching, and catarrh, and often occurring in epidemics. It is also called flu.
- Infrastructure: the basic physical and organizational structures and facilities (e.g. buildings, roads, power supplies) needed for the operation of a society or enterprise.
- Inpatient Care: healthcare delivered in a hospital or other facility where the patient usually stays overnight and receives lodging and food as well as treatment.
- Institute for Healthcare Improvement: an independent not-for-profit organization leading the improvement of health care throughout the world.
- Institute of Medicine: a nonprofit organization with the mission to advance and disseminate scientific knowledge to improve human health.
- Insurance: a means of protection from financial loss in which, in exchange for a fee, a party agrees to compensate another party in the event of a certain loss, damage, or injury. It is a form of risk management, primarily used to protect against the risk of a contingent or uncertain loss.
- Internal Medicine: the medical specialty dealing with prevention, diagnosis, and treatment of adult disease not requiring surgery.
- International Medical Graduates (IMG): medical school graduates from any country outside of the United States and Canada.
- Internship: the position of a student or trainee who works in an organization, sometimes without pay, in order to gain work experience or satisfy the requirement for a qualification.
- Interoperability: the ability of different information systems, devices and applications (systems') to access, exchange, integrate and cooperatively use data in a coordinated manner
- Interprofessional: a group of individuals from different disciplines working and communicating with each other.
- Isolation: in the context of infectious disease management, the separation of people who are known to be infected from those who are not infected.

J

- Joint Committee on Rural Emergency Care: a committee dedicated to advancing policy and practice to ensure access to timely, affordable, and high-quality emergency services in rural America.

K

- Kaiser Family Foundation: a non-profit organization focusing on national health issues. It develops and runs its own policy analysis, journalism, and communications programs, sometimes in partnership with major news organizations.
- Kidney Disease: a condition in which one's kidneys are damaged and cannot filter blood the way they should resulting in a buildup of waste in the body. Also called chronic kidney disease.

L

- Labor Market: the availability of employment and lab, in terms of supply and demand.
- Liability: the state of being responsible for something, especially by law.
- Liaison Committee on Medical Education (LCME): the nationally recognized accrediting authority for medical education programs leading to the M.D. degree in the U.S. and Canadian medical schools.
- Licensed Associate Professional Counselor: a two-year license that allows an individual to have the rights and privileges of a Licensed Professional Counselor but they work under continual supervision. They must attain the necessary supervised experience and meet the criteria to become an LPC within two years.
- Licensed Baccalaureate Social Worker: a license to provide individuals with support and guidance when seeking out services or supports within their community. It is the first level of licensure recognized for social workers and requires a Bachelor of Social Work degree from an accredited institution.
- Licensed Behavior Analyst: a license that requires applied behavior analysis training and provides services to individuals with behavioral problems.
- Licensed Clinical Social Worker: a license that allows an individual to provide clinical treatment for mental illnesses to clients independent of supervision. They must attain a Master's degree in social work and two years of supervised field experience to become a LCSW.
- Licensed Master Social Worker: a license that requires an individual to operate under the supervision of a licensed psychologist, psychiatrist, or LCSW to provide mental health services. They must attain a Master's degree in Social work and meet the criteria to become a LMSW.
- Licensed Nutritionist: an individual that has earned credentials from a nationally recognized nutrition licensing body and may legally provide nutrition counselling, nutrition services, and advice.
- Licensed Practical Nurse: a nurse who works under the direction of a physician or a registered nurse and cares for people who are sick, injured, convalescent, or disabled.
- Licensed Professional Clinical Counselor: a license that allows an individual to provide mental health and substance abuse treatment to individuals, families, or groups. They must attain a Master's degree in clinical mental health counseling and 3,000 hours of supervised fieldwork to become a LPCC.
- Licensed Registered Dietitian: a professional license to assess, diagnose, and treat nutrition and regulation of diet. It requires a baccalaureate degree and experience requirements as approved by the Commission on Dietetic Registration.
- Licensed Vocational Nurse: the term used for Licensed Practical Nurse in Texas and California.
- Life Expectancy: a measure of the average time an organism is expected to live, based on the year of its birth, its current age and other demographic factors
- Liquidity Measure: a measure a firm's ability to pay operating expenses and other short-term, or current, liabilities.

- Locum Tenens: one filling an office for a time or temporarily taking the place of another, used especially of a doctor or clergyman.
- Long-Term Care Facility: a facility that provides rehabilitative, restorative, and/or ongoing skilled nursing care to patients or residents in need of assistance with activities of daily living.

M

- Maldistribution: an uneven distribution of something, especially when disadvantageous or unfair.
- Malpractice: an improper, illegal, or negligent professional activity or treatment
- Mammogram: an x-ray picture of a breast.
- Marginalized: (of a person, group, or concept) treated as insignificant or peripheral.
- Marriage and Family Therapist: a mental health professional; trained in psychotherapy and family systems and licensed to diagnose and treat mental and emotional disorder within the context of marriage, couples, and family systems.
- Matriculated: enrolled at a college or university.
- Maxillofacial Surgery: a type of surgery that deals with any disease, disorders, injuries, or defects that affect either the jaw or facial regions of a person.
- Median: denoting or relating to a value or quantity lying at the midpoint of a frequency distribution of observed values or quantities, such that there is an equal probability of falling above or below it.
- Medicaid: a health care program that assists low-income families or individuals in paying for doctors' visits, hospital stays. Long-term medical, custodial care costs and more.
- Medicaid Health Management Program: a disease management program that focuses on asthma, diabetes, chronic obstructive pulmonary disease, and congestive heart failure. The program allowed providers to provide additional care coordination services in the form of a health management program for the previously listed health conditions.
- Medicaid Primary Care Case Management Program: a model of health care delivery that generally requires a Medicaid enrollee to choose and primary care provider who is responsible for coordinating the enrollee's care and is paid a monthly fee for doing so, on top of payment for providing medical services.
- Medical Director: an individual responsible for overall coordination of care and for implementation of policies related to care of residents in a nursing home.
- Medical Records Staff: individuals who are responsible for a variety of tasks including collecting patient information, issuing medical files, filing medical records, and processing patient admissions/discharge papers.
- Medical Technologist: an allied health professional that analyzes and tests body fluids and tissues. Also called a medical laboratory scientist, clinical laboratory scientist, or medical laboratory technologist.
- Medically underserved areas: areas having too few primary care providers, high infant mortality, high poverty or a high elderly population.
- Medicare: the federal health insurance program for people who are 65 or older, certain younger people with disabilities, and those with end-stage renal disease (permanent kidney failure requiring dialysis or a transplant).
- Medicare Access and CHIP Reauthorization Act: a law signed by President Obama in 2015 that repeals the substantial growth rate methodology for determining updates to the Medicare physician fee schedule, established annual positive or flat fee updates for 10 years, and institutes a two-track fee update beginning in 2019.

- Medicare Beneficiary Quality Improvement Program: a quality improvement activity under the Medicare Rural Hospital Flexibility (FLEX) grant program with a goal of improving the quality of care provided in small, rural Critical Access Hospitals.
- Medicare Part A: hospital insurance provided by Medicare through the Centers for Medicare and Medicaid Services. It covers inpatient care in hospitals, nursing homes, skilled nursing facilities, and critical access hospitals.
- Medicare Part B: medical insurance that covers services and supplies that are medically necessary to treat health conditions of Medicare beneficiaries.
- Medicare Part D: U.S. federal-government program to subsidize the cost of prescription drugs and prescription drug insurance premiums for Medicare beneficiaries.
- Medicare Quality Innovation Network-Quality Improvement Organization: an entity under the direction of the Centers for Medicare and Medicaid Services. It is one of the largest federal programs dedicated to helping improve the nation's quality of care.
- Medicare Rural Hospital Flexibility Program: a program that allows small hospitals to be certified as Critical Access Hospitals and offers grants to states to help implement initiatives to strengthen the rural hospital health care infrastructure.
- Mental Health: a person's condition with regard to their psychological and emotional well-being.
- Mental Health Technician: an individual that observes and assists assigned mental health patients with daily living activities, therapeutic activities, and socialization.
- Mental Illness: any of a broad range of medical conditions (such as major depression or schizophrenia) that are marked primarily by sufficient disorganization of personality, mind, or emotions to impair normal psychological functioning and cause marked distress or disability and that are typically associated with a disruption in normal thinking, feeling, mood, behavior, interpersonal interactions, or daily functioning.
- Metropolitan: denotes areas with a core population of 50,000 or more
- Micropolitan: denotes areas with core populations of 10,000 to 49,999
- Morbidity: the condition of being diseased.
- Mortality: the condition of being dead.
- Multi-Payer Advanced Primary Care Initiative: in this demonstration, CMA participated in multi-payer reform initiatives that were conducted by states to make advanced primary care practices more broadly available. It evaluated whether advanced primary care practice reduced unjustified utilization and expenditures, and improved the safety, effectiveness, timeliness, and efficiency of health care.
- Maternal Morbidity: Any short- or long-term health issues that result from pregnancy and childbirth. Some conditions start during pregnancy and are short-lived, while others develop years later and continue throughout a woman's life.
- Maternal Mortality: The death of a woman from complications of pregnancy or childbirth that occur during pregnancy or within six weeks after the pregnancy ends. Maternal mortality can also be caused by a chain of medical events started by the pregnancy or delivery, or by the worsening of an unrelated condition due to the pregnancy or delivery.

N

- National Academy of Medicine: formerly known as the Institute of Medicine, it is an independent organization of eminent professional from diverse fields including health and medicine, and the natural and social sciences, that works to address critical issues in health, medicine, and related policy in the U.S. and globally.
- National Addiction Studies Accreditation Commission (NASAC): an academic accreditation organization for higher education in addiction studies programs.

- National Health Service Corps: an organization that connects primary health care providers to area of the U.S. with limited access to care.
- National Priorities Partnership: a partnership of 52 major national organizations with a shared vision to achieve better health and a safe, equitable, and value-driven healthcare system.
- National Quality Strategy: a nationwide effort in the U.S. to provide direction for improving the quality of health and healthcare in the United States with three guided aims: better care, healthy people and communities, and affordable care.
- National Rural Health Association: a national nonprofit membership organization with more than 21,000 members. Their mission is to provide leadership on rural health issues through advocacy, communications, education, and research.
- National School Lunch Program: a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day.
- Nephrology: specialty of medicine focused on the kidneys, specifically normal kidney function and kidney disease, the preservation of kidney health, and the treatment of kidney disease.
- Neurosurgery: surgery performed on the nervous system, especially the brain and spinal cord.
- Next Generation ACO: this model builds upon a provider's experience in the Pioneer ACO Model and the Shared Savings Program by offering a new opportunity in accountable care that sets predictable financial targets, enables providers and beneficiaries' greater opportunities to coordinate care, and aims to attain the highest quality standards of care.
- North Dakota Board of Medicine: a board that protects the citizens of the state by regulating the practice of medicine by physicians, physician assistants, and fluoroscopy technicians and disciplines them if they violate the state's medical practice act.
- North Dakota Board of Nursing: a board that strives to proactively regulate the practice of nursing by providing timely information that gives registered nurses, licensed practical nurses, advanced practice nurses, QAP/Technicians, and medication assistants the knowledge they need to remain compliant with the laws and rules.
- North Dakota State Board of Occupational Therapy Practice: a board responsible for licensing qualified applicants to practice occupational therapy and to ensure that licensees comply with the state laws and regulations covering that practice.
- North Dakota State Board of Physical Therapy: a board responsible for licensing qualified applicants to practice physical therapy and to ensure that licensees comply with the state laws and regulations covering that practice.
- North Dakota Board of Social Work Examiners: a board responsible for licensing qualified applicants to practice social work and to ensure that licensees comply with the state laws and regulations governing that practice.
- North Dakota Century Code: the collection of all the statutes passed by the North Dakota Legislative Assembly since the state's admission to the Union. It also includes the North Dakota Constitution.
- North Dakota Dental Association: a constituent organization chartered by the American Dental Association that is organized into five component districts representing 87% of North Dakota dentists.
- North Dakota Health Information Network: a network focused on improving healthcare by creating a secure medical record-sharing network for providers and consumers. They aim to empower patients by ensuring their medical data remains safe and private.

- North Dakota Hospital Association: a voluntary trade organization of North Dakota's licensed hospitals committed to advancing public policy and fostering excellence in medical and health service.
- North Dakota Long Term Care Association: a professional association of community and long-term care providers, whose goal is to enhance the lives of the people they serve through collaboration, education, and advocacy.
- North Dakota Nurse Practices Act: the state law that governs the practice of nursing and scope of practice, specifically protects those who need nursing care
- Nuclear Medicine: a medical specialty involving the application of radioactive substances in the diagnosis and treatment of disease.
- Nurse Administrator: RNs, LPNs, and APRNS who may hold additional titles specific to the clinical setting, such as chief executive officer, chief nursing officer, chief operating officer, nurse director, nurse executive, or nurse manager.
- Nurse Case Manager: RNs or APRNs who plan and coordinate long-term and complex medical care for individuals. These nurses act as a bridge among patients, providers, and insurance companies to ensure treatment is safe, effective, and affordable. In addition, they often coordinate discharge planning for patients who will transition to care at a different health care facility, such as from a hospital to a rehabilitation facility.
- Nurse Consultant: RNs or APRNs, hired by employers to identify problems and develop workable solutions collaboratively with employer staff and administrators. Such roles include providing education, reviewing the care provided, and developing new ways to ensure the patient's well-being, safety, and quality care are improved and maintained.
- Nurse Educator: RNs or APRNs who teach nursing care to students in a college's or university's nursing program. In addition, nurse educators can work in staff development positions at a variety of health care facilities and are responsible for orientation of new employees, improving employees' skills and competencies, boosting job performance, and increasing employee retention. At times, an LPN serves in this role at a healthcare facility.
- Nurse Manager: a nurse who manages the nursing staff at a particular facility. They are responsible for the recruitment and retention of nursing staff and overseeing them. They also occasionally collaborate with doctors on patient care and help assist patients and their families when needed.
- Nurse Practitioner: a nurse who is qualified to treat certain medical conditions without the direct supervision of a doctor.
- Nurse Researcher: RNs or APRNs whose primary role is to conduct research in healthcare facilities or at universities. They can also be called "nurse scientists".
- Nursing Home: a private institution providing residential accommodation with healthcare, especially for elderly people. They provide 24-hour nursing care and supervision.

O

- Obesity: the condition of being overweight with a BMI (body mass index) greater than 25.
- Obstetrics-Gynecology: the branch of medical science concerned with childbirth, caring for women in connection with childbirth, and women's reproductive health.
- Occupational Therapist: a licensed health professional who is trained to assist people to overcome the limitations caused by injury or illness, emotional or psychological difficulties, developmental delay, or the effects of aging. It requires a Master's degree.
- Occupational Therapist Assistant: helps patients develop, recover, and improve, as well as maintain the skills needed for daily living and working. It requires an Associate's degree.

- Occupational Therapy: a form of therapy for those recuperating from physical or mental illness that encourages rehabilitation through the performance of activities required in daily life.
- Occupational Therapy Assistant: individuals that are directly involved in providing therapy to patients under the direction of an occupational therapist. They are involved in helping patients develop, recover, improve, as well as maintain the skills needed for daily living and working.
- Office Nurse: RNs, LPNs, and APRNs who work in a provider's office located in primary care or other specialty clinics. This role overlaps with the "staff nurse" primary position and can be used interchangeably.
- Oil Patch: refers to western counties (Divide, Burke, Renville, Bottineau, McHenry, Ward, Mountrail, Williams, McKenzie, Dunn, McLean, Golden Valley, Billings, Stark, Slope, and Bowman) in North Dakota that occupy a portion of the Bakken Formation where oil is extracted.
- Ombudsman: an official appointed to investigate individual's complaints against maladministration, especially that of public authorities.
- Oncology: the study and treatment of tumors and cancer.
- Oral and Maxillofacial Surgery: the specialty of dentistry which includes the diagnosis, surgical and adjunctive treatment of diseases, injuries, and defects involving both the functional and aesthetic aspects of the hard and soft tissues.
- Oral Health: the health of the mouth (oral cavity) and includes hard tissue (teeth and bone) as well as the soft tissue (gums, cheeks, tongue, floor of the mouth, lips, palate, and throat.
- Organization for Economic Cooperation and Development: an intergovernmental economic organization with 35 member countries, founded in 1961 to stimulate economic progress and world trade.
- Orthodontist: a licensed dentistry professional qualified to treat irregularities of the teeth, especially alignment and occlusion, and jaws, including the use of braces.
- Orthopedic Medicine: the branch of medicine concerned with the diagnosis and treatment of problems related to the bones, joints, and ligaments.
- Outpatient Care: medical care or treatment that does not require an overnight stay in a hospital or medical facility. It may be administered in a medical office or a hospital, but most commonly, it is provided in a medical office or outpatient surgery center (also called ambulatory care).

P

- Palliative Care: specialized medical care for people living with a serious illness focused on providing relief from the symptoms and stress of the illness. The goal is to improve quality of life for both the patient and the family.
- Pap Smear Test: a test carried out on a sample of cells from the cervix to check for abnormalities that may be indicative of cervical cancer.
- Paramedic: a person trained to give emergency medical care to people who are seriously ill with the aim of stabilizing them before they are taken to the hospital.
- Parkinson's Disease: A disorder of the central nervous system that affects movement, often including tremors.
- Part-Time Employment: working less than full-time, typically less than 30 hours per week.
- Patient-Centered Medical Home: a care delivery model whereby patient treatment is coordinated through their primary care physician to ensure they receive the necessary care when and where they need it, in a manner they can understand.

- Patient-Centered Primary Care Collaborative: a not-for-profit multi-stakeholder membership organization dedicated to advancing an effective and efficient health system built on a strong foundation of primary care and the patient-centered medical home.
- Payer-Mix: the percentage of revenue coming from private insurance versus government insurance versus self-paying individuals
- Pediatric Medicine: a branch of medicine dealing with the development, care, and diseases of children.
- Pediatric Dentistry: a branch of dentistry provides both primary and comprehensive preventive and therapeutic oral health care for children from birth through adolescence, including those with special health care needs.
- Peer Support Specialist: a person with “lived experience” who has been trained to support those who struggle with mental health, psychological trauma, or substance use.
- Per-Capita: for each person, or in relation to people taken individually.
- Percutaneous Coronary Intervention: a nonsurgical procedure that improves blood flow to the heart by opening narrowed arteries that supply blood to the heart.
- Per Diem: for each day. Often used in financial contexts. Also called flex time, referring to a flexible schedule where an individual picks and chooses which days they work based on open shifts.
- Perinatal: relating to the time, usually a number of weeks, immediately before and after birth.
- Periodontics: the branch of dentistry concerned with the structures surrounding and supporting the teeth as well as the diseases and disorders that affect them.
- Pew Charitable Trusts: an independent nonprofit organization that invests in evidence-based, non-partisan analysis to solve current societal challenges.
- Pharmacist: an individual licensed to prepare, compound, and dispense drugs upon written order (prescription) from a licensed practitioner such as a physician, dentist, or advanced practice nurse.
- Pharmacy: a store where medicinal drugs are dispensed and sold.
- Pharmacy Technician: a health care provider who performs pharmacy-related functions, generally working under the direct supervision of a licensed pharmacist.
- Physical Therapy: the treatment of disease, injury, or deformity by physical methods such as massage, heat treatment, and exercises rather than by drugs or surgery.
- Physician: a person qualified to practice medicine.
- Physician Assistant: a medical professional who can diagnose illness, develop and manage treatment plans, prescribe medications, and often serve as a patient’s primary healthcare provider usually under the supervision of a licensed physician.
- Pioneer ACO: an ACO designed for health care organizations and providers that were already experienced in coordinating care for patients across care settings. It allows these provider groups to move more rapidly from a shared savings payment model to a population-based payment model on a track consistent with, but separate from, the Medicare Shared Savings Program.
- Pneumonia: lung inflammation caused by bacterial or viral infection, in which the air sacs fill with pus and may become solid.
- Polyendocrine metabolic Ovarian Syndrome: a hormone health condition with symptoms that can include irregular periods, male-pattern hair growth, severe acne, polycystic ovaries, and weight fluctuations
- Postpartum: occurring in or being the period following childbirth
- Postpartum Depression: a type of depression that typically occurs after childbirth with affected individuals experiencing extreme sadness or loneliness, severe mood swings or anxiety, and/or lose interest in things they normally enjoy.

- Postpartum Anxiety: severe anxiety that occurs after having a baby or becoming a parent with affected individuals experiencing extreme worry and being constantly nervous or panicked.
- Postulate: suggest or assume the existence, fact, or truth of (something) as a basis for reasoning, discussion, or belief.
- Post-Traumatic Stress Disorder: a condition of persistent mental and emotional stress occurring as a result of injury or severe psychological shock, typically involving disturbance of sleep and constant vivid recall of the experience, with dulled response to others and to the outside world.
- Practica: a supervised placement in a variety of settings (i.e., community mental health, hospitals, inpatient) that provides students the opportunity to apply knowledge and clinical skills gained in coursework to develop and practice the professional competencies that are an essential part of the training program.
- Practice Transformation Networks: a program designed to help participants develop the tools, skills, and knowledge necessary to successfully participate in shared shavings programs and other alternative payment models.
- Preceptor: a skilled practitioner or faculty member who supervises students in a clinical setting to allow practical experience with patients.
- Pregnancy Risk Assessment Monitoring System: a joint surveillance project between state, territorial, or local health departments and CDC's Division of Reproductive Health developed in 1987 to reduce infant morbidity and mortality by influencing maternal behavior before, during, and immediately after live birth.
- Premature: occurring or done before the usual or proper time; too early. Also refers to a baby born before the end of the full term of gestation, especially three or more weeks before.
- Premium: an amount to be paid for an insurance policy.
- Prenatal Care: the healthcare a woman receives during pregnancy, including checkups, testing, education, and counseling.
- Prescribe: to advise and authorize the use of a medicine or treatment for someone, usually put into writing (prescription) for documentation purposes.
- Prevalence: the proportion of a particular population found to be affected by a medical condition.
- Primary Care: healthcare provided by a medical professional (such as a general practitioner, pediatrician, or nurse) with whom a patient has initial contact and by whom the patient may be referred to a specialist.
- PrimeCare Select ACO: an ACO made up of a team of health care providers working together to coordinate care. It combines the entire range of patient care in an effort to realize greater efficiencies and lower the out-of-pocket costs for patients.
- Privacy Officer/Security Officer: both have a role in developing the facilities policies and procedures, training the staff in HIPPA's requirements, and working to establish and maintain compliance of PHI within the practice.
- Projection: an estimate or forecast of a future situation or trend based on a study of present ones.
- Prospective Payment System: several payment methodologies for which means of determining insurance reimbursement is based on a predetermined payment regardless of the intensity of the actual service provided.
- Prosthodontics: the branch of dentistry concerned with the design, manufacture and fitting of artificial replacements for teeth and other parts of the mouth.
- Prudent: acting with or showing care and thought for the future.

- Psychiatric Mental Health Nurse Practitioner: an advanced practice nurse who has the education and training to provide a wide range of mental health services to patients and families in a variety to settings. They can diagnose, conduct therapy, and prescribe medication for patients with psychiatric disorders, organic brain disorders, or substance abuse problems.
- Psychiatrist: a medical practitioner specializing in the diagnosis and treatment of mental illness.
- Psychiatry: the study and treatment of mental illness, emotional disturbance, and abnormal behavior.
- Psychologist: an expert or specialist in psychology.
- Psychology: the scientific study of the human mind and its functions, especially those affecting behavior in a given context.
- Psychometric Test: a standard and scientific method used to measure individuals' mental capabilities and behavioral style
- Public Health: promotes and protects the health of people and the communities where they live, learn, work, and play through scientific research, education, and policy.
- Public Health Accreditation Board: a nonprofit organization dedicated to improving and protecting the health of the public by advancing and ultimately transforming the quality and performance of state, local, tribal, and territorial public health departments.
- Public Health Nurse: RNs who focus on improving community and population health rather than treating individuals in a hospital or long-term care facility. They work to prevent disease, educate the public, and manage health programs through local agencies, schools, and government departments.
- Public Policy: government policies that affect the whole population.
- Pulmonology: the branch of medicine concerned with the diagnosis and treatment of disease involving the respiratory tract.

Q

- Quality Health Associates of North Dakota: collaborates with healthcare professionals, organizations, and communities across the state to improve the quality of care provided to the people of North Dakota by successfully balancing the needs of providers, consumers, stakeholders, and payers.
- Quality Improvement Organization: a group of health quality experts, clinicians, and consumers organized to improve the quality of care delivered to people with Medicare.
- Quality Nurse: May be called a quality improvement nurse. RNs, LPNs, and APRNs focused on facility-wide patient safety and standard of care rather than bedside duties. They analyze patient outcome data, investigate incidents such as medication errors, audit clinical records, and train staff on new regulatory protocols to prevent system failures.
- Quarantine: In the context of infectious disease management, the separation of contacts from tother after exposure to a probable or confirmed case of infection.
- Quartile: each of four equal groups into which a population can be divided according to the distribution of values of a particular variable.
- Quick Response Units: also known as first responders.

R

- Radiation Therapy: a type of cancer treatment that uses external beams of intense energy to kill cancer cells

- Radiation Therapy Technologist: allied health professionals who work in medical and clinical settings administering radiation treatments to patients in highly targeted ways.
- Radiographer: also referred to as radiology technologists are allied health professionals who take x-rays and other medical images to assist clinical radiologists and other doctors to diagnose, monitor, or treat a patient's injury or illness.
- Radiology: the science dealing with x-rays and other high-energy radiation, especially the use of such radiation for the diagnosis and treatment of diseases.
- Regional Extension Center: an organization that has received funding under the Health Information Technology for Economic and Clinical Health Act to assist health care providers with the selection and implementation of electronic health record technology
- Regional Extension Assistance Center for HIT: formed as a program of an alliance of nonprofit organizations dedicated to helping clinics, small hospitals, and other settings in Minnesota and North Dakota improve care by implementing and effectively using electronic health record systems.
- Registered Behavior Technician: paraprofessional certification in behavior analysis and a person who assists in delivering behavior analysis services and practice under supervision.
- Registered Nurse: a graduate-trained nurse who has been licensed by a state authority after qualifying for registration.
- Rehabilitation: treatment or treatments designed to facilitate the process of recovery from injury, illness or disease to as normal a condition as possible.
- Reimburse: to repay a person who has spent or lost money.
- Renal Disease: kidney failure, also called end-stage kidney disease which means the kidneys no longer work well enough to filter waste out of the blood.
- Residency: a period of specialized medical training in a hospital under the direct or indirect supervision of an attending physician.
- Respiratory Disease: a group of disease that damage the airways and lungs, and affect one's ability to breathe properly.
- Respiratory Therapist: a licensed individual in the medical field that cares for patients who have trouble breathing due to various causes such as asthma, emphysema, or premature infants with underdeveloped lungs.
- Retention: the ability of an organization to retain its employees.
- Robert Graham Center: aims to improve individual and population healthcare delivery through the generation or synthesis of evidence that brings a family medicine and primary care perspective to health policy deliberations from the local to international levels.
- Rural: areas with a core population of less than 10,000.
- Rural Health Clinic: a clinic located in a rural, medically under-served that has a separate reimbursement structure from the standard medical office under the Medicare and Medicaid programs. They can be public, non-profit, or for-profit healthcare facilities.
- Rural Health Network Development Grant Program: the purpose of the program is to support rural integrated health care networks that have combined the functions of the entities participating in the network.
- Rural Opportunities in Medical Education (ROME) Program: a 24-48-week interdisciplinary experience in a rural primary care setting, open to third-year students at the University of North Dakota School of Medicine and Health Sciences. Students live and train in non-metropolitan communities under the supervision of physician preceptors.
- Rural-Urban Commuting Area (RUCA) codes: classify U.S. census tracts using measures of urbanization, population density, and daily commuting from the decennial census.

S

- Salient: most noticeable or important.
- Satellite Clinic: a facility owned by a hospital but operated at a distant site.
- School Nurse: RNs and LPNs who manage student health in schools by providing direct care for injuries and illnesses, administering medications, and creating health plans for students with chronic health conditions. They conduct health screenings (vision/hearing), verify vaccinations, and educate students on healthy living.
- School Psychologist: an expert who intervenes at the individual and school system level to provide support for various developmental and mental health issues.
- SARS-CoV-2: severe acute respiratory syndrome coronavirus 2, the infection that causes the illness named COVID-19.
- Scoliosis: abnormal lateral curvature of the spine.
- Scope of Practice: describes the procedures, actions, and processes that a healthcare practitioner is permitted to undertake in keeping with the terms of their professional license.
- Septicemia: blood poisoning, especially that caused by bacteria or their toxins.
- Sequestration: the action of taking legal possession of assets until a debt has been paid or other claims have been met.
- Shared Savings ACO: facilitates coordination and cooperation among providers to improve the quality of care for Medicare fee-for-service beneficiaries and reduce unnecessary costs.
- Sigmoidoscopy: an examination of the sigmoid colon by means of a flexible tube inserted through the anus.
- Simulation in Motion-North Dakota: a statewide, mobile education system using high fidelity human patient simulators to train pre-hospital and hospital personnel.
- Skilled Nursing Facility: a facility, very similar to a nursing home, that provides skilled nursing care and/or rehabilitative services to help injured, sick, or disabled individuals. These facilities typically offer more skilled medical expertise and services than a nursing home.
- Sliding Fee: variable prices for products, services, or taxes based on a customer's ability to pay.
- Social Drivers of Health: the economic and social conditions that influence individual and group differences in health status.
- Social Services: services provided (usually through a government) for the benefit of the community, such as education, medical care, and housing.
- Social Vulnerability Index (SVI): a tool that uses U.S. Census data to identify communities most susceptible to the negative impacts of a disaster by ranking them based on social factors like poverty, lack of access to transportation, crowded housing, minority status, and household composition.
- Social Worker: a trained person who works to alleviate the conditions of those in need of help or welfare.
- Socioeconomic Status: the social standing or class of an individual or group. It is often measured by a combination of education, income, and occupation.
- Specialty Care: specialized medical service provided by a physician specialist such as dermatology, mental health, oncology, or cardiology.
- Speech Therapy: training to help people with speech and language problems to speak more clearly.
- Staff nurse: LPNs, RNs, or various APRNs who encompass most nurses who provide direct patient care at the bedside in clinical settings such as hospitals, clinics, nursing homes, and assisted living facilities for most of their shifts. Staff nurses are vital to ensuring that patients receive safe, high-quality care

- State Stroke System of Care Program: guidelines that were developed to assist healthcare providers in the care of stroke patients with a goal to reduce death and disability due to heart disease.
- Statewide Online Ambulance Reporting System: an online system that allows hospitals to log on and download patient-care reports in instances where that facility is listed as the destination.
- Stroke: a medical emergency where blood flow to a part of the brain stops, usually caused by a clot in the blood vessels of the brain.
- ST-Segment Elevation Myocardial Infarction: a term used to describe a classic heart attack. It is one type of myocardial infarction in which a part of the heart muscle has died die to the obstruction of blood supply to the area.
- Subsidy: a form of financial aid or support extended to an economic sector generally with the aim of promoting economic and social policy.
- Substance Abuse: an overindulgence in or dependence on an addictive substance, especially alcohol or drugs.
- Substance Abuse and Mental Health Services Administration: a branch of the U.S. Department of Health and Human Services that is charged with improving the quality and availability of treatment and rehabilitative services in order to reduce illness, death, disability, and the cost to society resulting from substance abuse and mental illness.
- Substance Use Disorder: a treatable mental disorder that affects a person's brain and behavior, leading to their inability to control their use of substance, including legal or illegal drugs, alcohol, or medications.
- Sudden Infant Death Syndrome: the death of a seemingly healthy baby in its sleep, due to an apparent spontaneous cessation of breathing.
- Suicide: the action of killing oneself intentionally.
- Surgical Care Improvement Project: a multi-year national campaign to substantially reduce surgical mortality and morbidity through collaborative efforts between healthcare organizations.
- Surgical Technologist: an individual who works under the supervision and delegatory authority of a surgeon to facilitate the safe and effective conduct of invasive and non-invasive surgical procedures, ensuring that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety.
- Susceptibility: the state or fact of being likely or liable to be influenced or harmed by a particular thing.
- Synergistic: relating to the interaction or cooperation of two or more organizations, substances, or other agents to produce a combined effect greater than the sum of their separate effects.

T

- Team-Based Care: the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers – to the extent preferred by each patient – to accomplish shared goals within and across settings to achieve coordinated, high-quality care.
- Telehealth: the use of electronic information and telecommunication technologies to support long-distance clinical health care professional health-related education, public health, and health administration.

- Telemedicine: the use of electronic technology and telecommunication technologies to support long-distance patient and healthcare provider interactions for the purpose of diagnosis and treatment.
- Telepsychiatry: the application of telemedicine to the specialty field of psychiatry. The term describes the delivery of psychiatric assessment and care through telecommunications technology, usually videoconferencing.
- Tertiary Hospital: a hospital that provides tertiary care, which is health care from specialists in a large hospital after referral from primary care and secondary care.
- Transforming Clinical Practice Initiative: a large federal investment uniquely designed to support clinician practices through nationwide, collaborative, and peer-based learning networks that facilitate large-scale practice transformation.
- Trauma: tissue damage caused by the transfer of thermal, mechanical, electrical, or chemical energy, or by the absences of heat or oxygen; physical injury or a distressing or disturbing experience.
- Trauma Center: a hospital equipped and staffed to provide care for patients suffering from major traumatic injuries such as falls, motor vehicle collisions, or gunshot wounds.
- Travel/Agency Nurse: An RN, LPN, or APRN who fills short-term staffing needs at hospitals, long-term care facilities, and clinics on temporary contracts. These nurses are costly as they earn higher competitive pay rates, receive housing stipends, and work for third-party agencies.
- Tuberculosis: an infectious bacterial disease characterized by the growth of nodules (tubercles) in the tissues, especially the lungs.
- Turnover Rate: the percentage of employees leaving a company within a certain period of time.

U

- Ulcer: an open sore on an external or internal surface of the body, caused by a break in the skin or mucous membrane that fails to heal.
- Ultrasound Technician: an individual that operates special equipment that uses high-frequency sound waves to record images of internal organs. Also referred to as a sonographer or diagnostic medical sonographer.
- Urban Areas: area designation referring to those with a core city population of 50,000 or greater.
- Urbanization: the process of making an area more urban
- Urgent Care: walk-in clinics that provide health care for individuals who are unable to see their primary care provider (either due to unavailability or care being needed outside of usual clinic hours) but need immediate care to treat and injury or illness that is not serious enough to require going to an emergency room. These clinics fill the gap between a doctor's office and emergency room care.
- Urology: the branch of medicine and physiology concerned with the function and disorders of the urinary system.
- U.S. Department of Agriculture: a department within the U.S. federal government responsible for developing and executing federal laws related to farming, forestry, rural economic development, and food.
- U.S. Department of Health and Human Services: a cabinet-level agency in the executive branch of the federal government tasked with enhancing and protecting the well-being of all Americans by providing effective health and human services and fostering advances in medicine, public health, and social services.

- U.S. Department of Veterans Affairs: a department within the U.S. federal government tasked with providing patient care and federal benefits to veterans and their dependents.

V

- Vacancy Rate: number of vacant job-specific positions (or positions within the whole organization), divided by the total number of job-specific positions (or within the whole organization), multiplied by 100
- Vaccination: treatment with a vaccine to produce immunity against a disease.
- Value-Based Purchasing Program: an initiative of the Centers for Medicare and Medicaid that rewards acute-care hospitals with incentive payments for the quality of care they provide to Medicare beneficiaries.
- Vocational Rehabilitation Counselor: a professional who works with people with physical, mental, developmental, or emotional disabilities to overcome or manage the effects of disabilities on employment or independent living.
- Volunteer: a person who freely offers to participate in an enterprise or undertake a task.

W

- Webinar: a seminar conducted over the internet.
- Women, Infants and Children (WIC): a nutrition and breastfeeding program that helps eligible pregnant women, new mothers, babies and young children. WIC provides nutrition education and counseling, nutritious foods, and referrals to health and other social services.
- World Health Organization: a specialized agency of the United Nations that is concerned with international public health. The primary role is to direct international health within the United Nations' system and to lead partners in global health responses.

XYZ