

North Dakota Nurse Practitioner Workforce Summary Brief



Nurse Practitioners (NPs) have been recognized healthcare providers in the United States since 1965. Currently, to practice, NPs must have a Bachelor's degree in Nursing, either a Master's or Doctorate of Nursing Practice degree, pass state licensing exams, and must pass a national certification exam.

According to the American Association of Nurse Practitioners (2016), "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, outpatient, and many other practice areas. NPs can work independently in many states, including North Dakota, and are a significant addition to many inter-professional healthcare teams.

ND NP FACTS North Dakota Nurse Practitioners

3

Number of NP education programs in ND: UND, NDSU, UofM

50%

Percentage of licensed NPs in ND who graduated from a ND NP program

8.7

Number of NPs per 10,000 population: up from 6.0 in 2010

49%

Percentage of ND NPs practicing primary care

\$4,333

Amount ND NPs average salary is below the National Average

POLICY RECOMMENDATIONS

Actions that will allow policy makers to more accurately project and plan for primary care needs in North Dakota include:

1. Encourage healthcare institutions to recognize the full scope of NP practice.
2. Align ND NP salaries with regional and national NP salary rates.
3. Increase efforts to recruit and retain qualified faculty and preceptors for NP education programs.
4. Provide incentives for RNs in rural areas to return to school for their NP education.
5. Support practicing NPs in investigating and establishing new models of primary care that meet the needs of rural communities.
6. Maximize data collection at the ND State Board of Nursing and optimize through electronic formats.
7. Establish a more collaborative ND practice environment by collecting and analyzing complete healthcare workforce data.

Summary extracted from "North Dakota Nurse Practitioners 2017: Understanding the Workforce" prepared by Jana Zwilling APRN, MS, FNP-C and Rhoda Owens PhD, RN

University of North Dakota, College of Nursing & Professional Disciplines, Department of Nursing | [Download full report at cnpd.UND.edu](http://cnpd.UND.edu).

North Dakota Nurse Practitioners 2017: Understanding the Workforce

University of North Dakota
College of Nursing & Professional Disciplines
Department of Nursing

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Disclaimer

The *Nurse Practitioner Report* represents the good-faith effort of the University of North Dakota College of Nursing & Professional Disciplines to provide current and accurate information about the state of nurse practitioner services in North Dakota. Numerous sources were used in gathering the information found in this *Report*. We welcome corrections, which we will incorporate in subsequent editions of the *Nurse Practitioner Report*.

Acknowledgement

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Table of Contents

| | |
|--|----|
| Executive Summary..... | 5 |
| Chapter 1: Nurse Practitioner Workforce Overview..... | 6 |
| Chapter 2: Nurse Practitioner Workforce Development..... | 15 |
| Conclusions & Recommendations..... | 24 |
| References..... | 26 |
| Appendix..... | 28 |



About the College of Nursing & Professional Disciplines

The University of North Dakota (UND), College of Nursing & Professional Disciplines (CNPD) is located in Grand Forks, North Dakota and has educated nurses for over 100 years. The college offers several undergraduate and graduate nursing degrees. Specifically, the college offers three nurse practitioner education programs: Family Nurse Practitioner, Psychiatric and Mental Health Nurse Practitioner, and Adult Gerontological Primary Care Nurse Practitioner. Graduates of these nurse practitioner programs are eligible to take various nurse practitioner certification examinations.

The mission of the CNPD is to prepare future leaders, to advance human well-being and improve quality of life for diverse populations, with an emphasis on rural communities in North Dakota, the region and beyond, through the provision of high-quality innovative inter-professional education, research, and service.

The college has a vision to lead the state and nation, and influence the world through the impact of our research, educational programs and practice innovations on health and human services. In addition, the college believes in empowerment of students, individuals, and communities. Scholarly investigation, practice, and service are the foundations of our professions. We have a commitment to excellence through creative partnerships, and are accountable to the people we serve.

We want to acknowledge Gayle Roux, PhD, NP-C, FAAN, Dean and Professor, Darla Adams, PhD, CRNA, Associate Dean and Clinical Associate Professor, Rashid Ahmed PhD, Associate Dean for Research and Associate Professor, and Maridee Shogren, DNP, CNM, DNP Director and Graduate Program Chair for their support and assistance in the completion of this report.

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Executive Summary

Physician-only workforce documents are the traditional means of workforce planning in the United States. The well-known shortage of physicians has forced U.S. policy makers to look at the best way to care for the population, especially in regards to primary care. A workforce study completed in 2011 indicated only 35% of the states included any information regarding nurse practitioners (NPs) (Morgan, 2011). It is difficult to truly project future needs where there is no one source of provider data that encompasses all primary care provider types. Current literature has established the contributions of NPs to the primary care workforce and that these providers can likely assist in offsetting the primary care shortage. The goal of this study was to examine North Dakota Board of Nursing (NDBON) licensure information on NPs in order to determine where the NPs are educated and where they are practicing. Another study goal was to provide an overview of ND NP educational program enrollment and costs, as well as current job openings for NPs in the state. Ultimately this document is an attempt to gather appropriate data to assist policy makers in North Dakota to realize the full scope of primary care workforce from the NP perspective.

Chapter One: Nurse Practitioner Workforce Overview

Overview

Nurse practitioners (NPs) have been recognized healthcare providers in the United States since 1965. Currently, NPs must have a Bachelor's degree in Nursing, either a Master's degree or Doctor of Nursing Practice degree, pass state licensing exams, and must pass a national certification exam to practice. According to the American Association of Nurse Practitioners (2016), "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, outpatient, and many other practice areas. NPs can work independently in many states and are a significant addition to many interprofessional healthcare teams.

There are currently 205,000 licensed NPs in the United States. Over 90% of these NPs are certified in a primary care area such as family or adult care. Approximately 66% of NPs work in communities with populations of less than 250,000, with 35% practicing in communities of less than 50,000. NPs tend to care for rural and underserved populations. Based on the 2012 sample survey of nurse practitioners (Chattopadhyay, Zangaro, & White, 2015), NP practices consist of roughly 60% Medicaid and Medicare beneficiaries. 72.2% of NPs nationwide are between the ages of 40 and 64. 92.3% of NPs nationwide are female, and 86.6% are white/European non-hispanic (AANP, 2015). 77% have greater than 5 years' experience, 55.5% have greater than 10 years' experience. (American Association of Nurse Practitioners, 2016). Using National Provider Identification (NPI) numbers there were 3.4 NPs per 10,000 population overall in the U.S. as of 2012. This was further delineated into 3.6 urban and 2.8 rural NPs per 10,000 population in the U.S. during that same timeframe (Skillman, 2012).

North Dakota

Nurse Practitioner Workforce Overview

As the United States NP numbers increase, so do North Dakota's numbers. North Dakota has shown a 129% increase in overall licensed NPs since 2009. Since Senate Bill 2148 passed during the 2011 legislative session, affording independent practice to nurse practitioners, North Dakota has seen an 83% increase in licensed NPs (see Figure 1.1). There were 6 NPs per 10,000 population in ND in 2010, this increased to 8.7 NPs per 10,000 population in 2015.

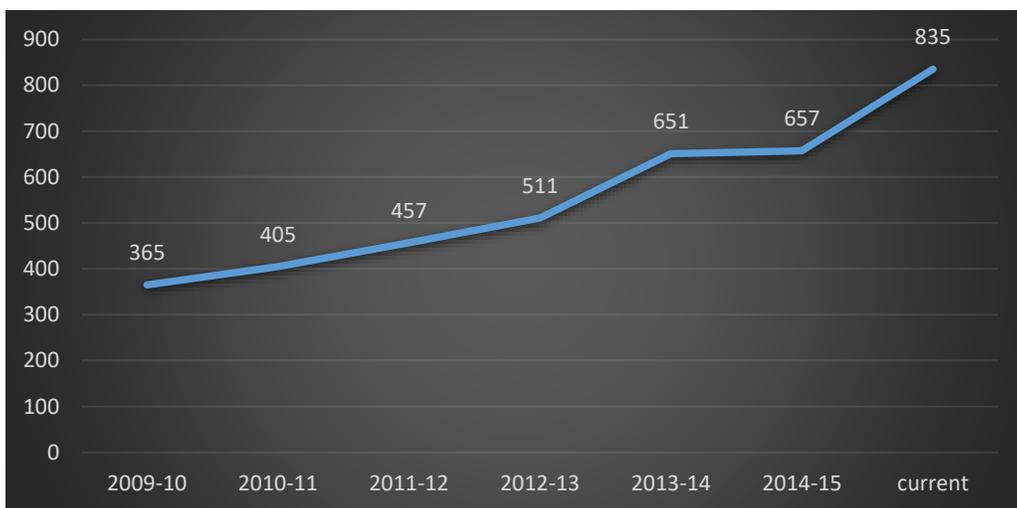


Figure 1.1. Number of Licensed NPs in North Dakota

As of the date of licensure information capture on August 30th, 2016, there are currently 835 Nurse Practitioners licensed in North Dakota. Of these, 659, or 79% are licensed and employed within North Dakota. States surrounding ND are the next largest employer of ND licensed NPs. 6% of NPs licensed in ND have employment in MN, 2% of licensees list SD as employer state, and 1% in MT. The remaining 12% of NPs with ND licenses, indicated as other on figure 1.2, are spread throughout the U.S. (see Figure 1.2).

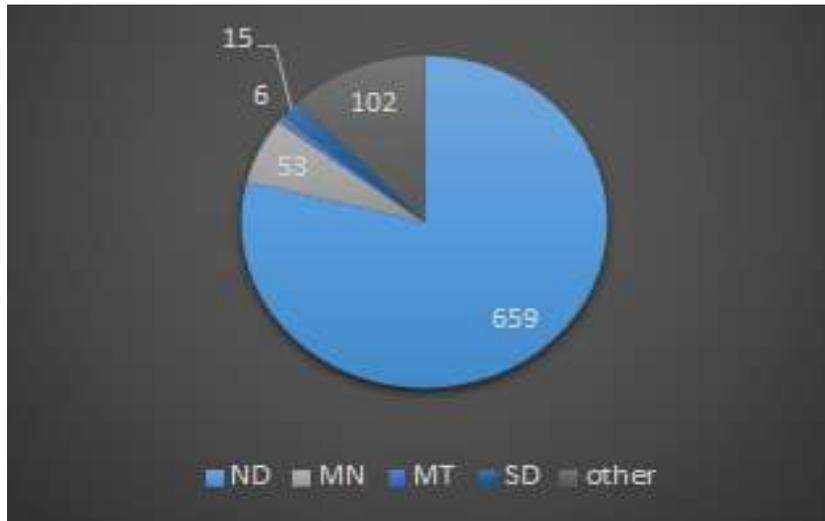


Figure 1.2. Where are ND Licensed NPs Practicing in 2016?

NPs were originally inaugurated to be primary care providers. Several specialties of NPs have evolved over the past 50 years so registered nurses could be trained in a particular NP specialty area. Additionally, many primary care NP designations such as Family Nurse Practitioner or Adult and Geriatric Nurse Practitioner may also lend themselves to specialty practice. This occasionally depends on job availability within the NP’s home area. Many primary care NPs are either choosing or are involuntary taking positions outside of primary care due to lack of NP primary care positions. This trend is most seen in more urban areas, both in North Dakota and in the U.S. (Graves et al., 2016). 49% of NPs licensed in ND are working in primary care areas such as family medicine, internal medicine, pediatrics, women’s health, or ER/Urgent Care. 23% are in specialty care, and the remaining 26% listed other as their practice area (see Figure 1.3).

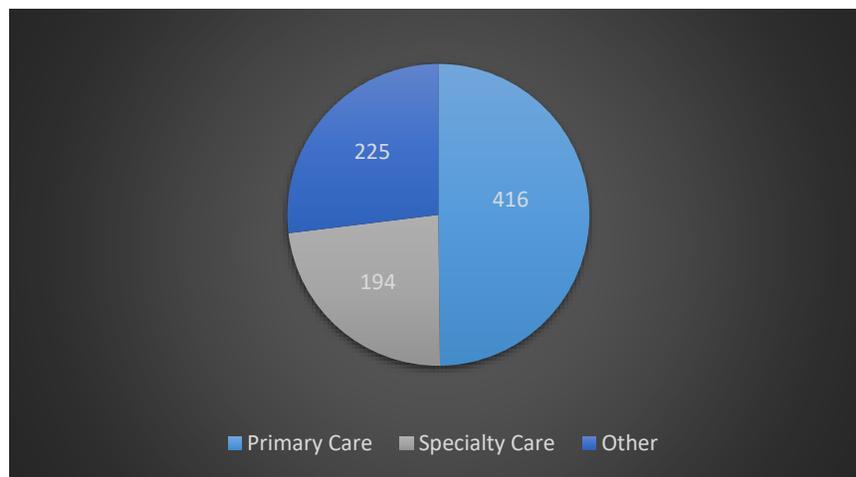


Figure 1.3. NDs Licensed in ND by Practice Area, 2016

North Dakota currently has three Colleges or Universities that offer the nurse practitioner graduate degree. These programs will be discussed more in depth later in the document. It is a nationwide issue to have limitations in space in these programs. This is primarily due to lack of faculty and preceptors. The shortage is evident in North Dakota as well, with RNs seeking NP training out of state. Below is an overview of where licensed NPs practicing in North Dakota have been educated. The data from the NDBON licensure information was such that only 608 of the 835 licensed providers had reported education information. North Dakota is able to claim about half of the licensed and practicing NPs are educated in ND. However, the remaining NPs are educated out of state (see Figure 1.4)

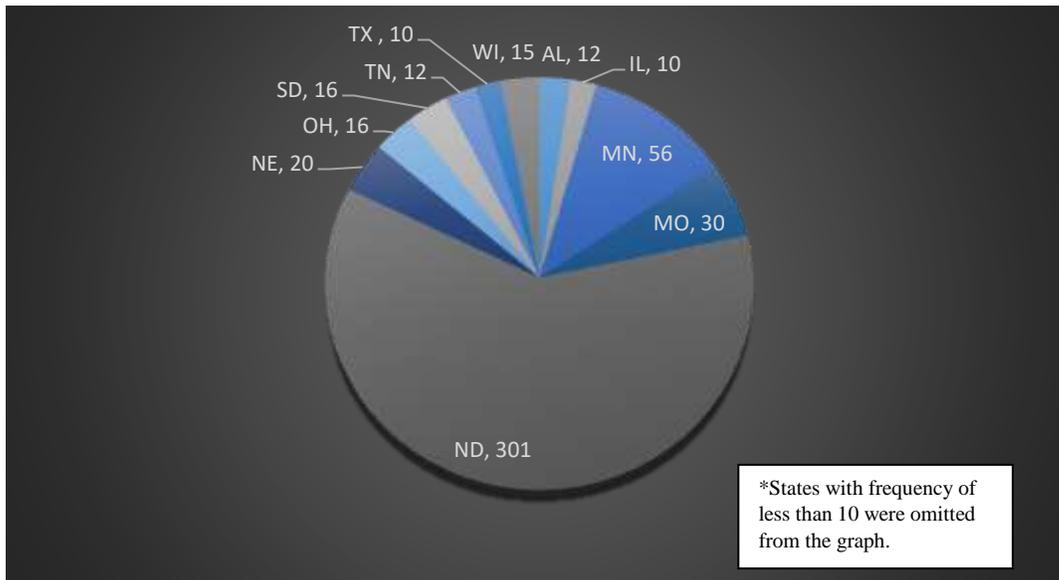


Figure 1.4. Where are Practicing ND NPs Educated by State?

“Growing” Our Own

Information based on Nurse Practitioners licensed and educated within North Dakota

The data from the NDBON licensure information was such that only 608 of these licensed providers had reported education information. Of these 608, 301 have graduated from a North Dakota NP program, which is 49.51% (see Figure 1.5).

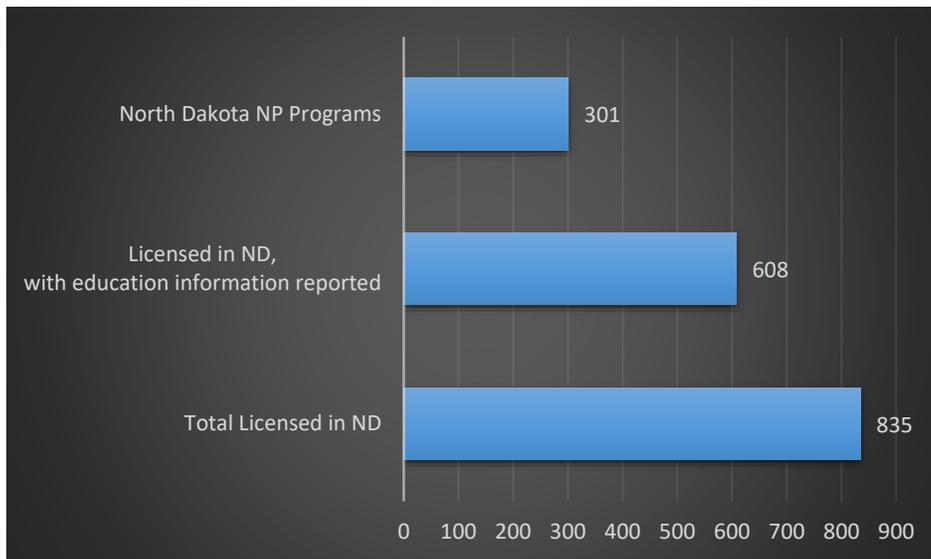


Figure 1.5 Comparison of Overall NP Licensees and Education

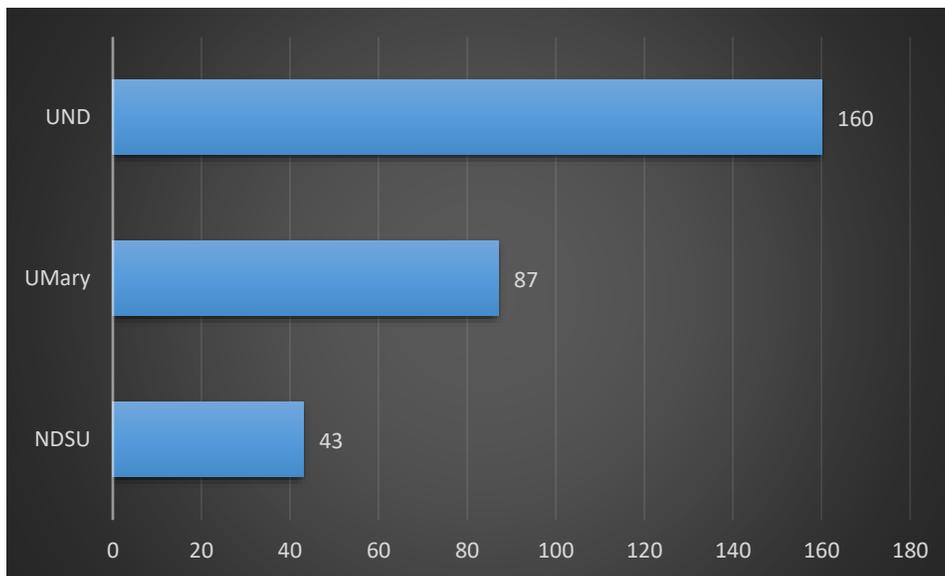


Figure 1.6. Number of Graduates practicing in ND from ND NP Programs by School

Specifically, 43 are graduates of North Dakota State University, 87 are graduates of the University of Mary, and 160 are graduates of the University of North Dakota, 10 were missing the school name but designated North Dakota as the state of their program of attendance (see Figure 1.6). These numbers may differ significantly from actuality as 27% of NPs did not list their educational program when renewing their licensure.

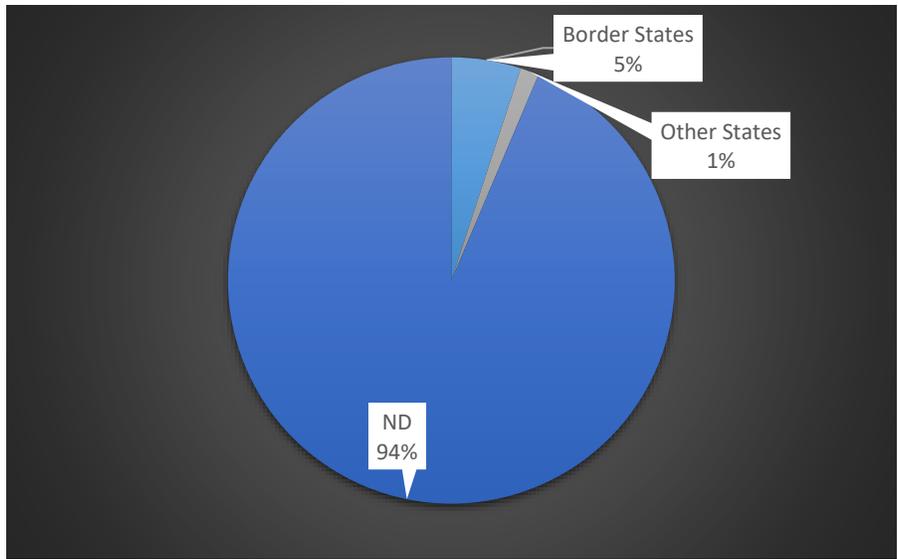


Figure 1.7 Where do NPs Licensed and Educated in ND Practice?

Of the 301 Nurse Practitioners licensed and educated within North Dakota, 3 did not report employer information. 298 NPs remain in the sample and 279 (94%) of these are practicing in ND. 5% of the 298 are practicing in bordering states including MT, MN, and SD. 1% are practicing in other states. Cumulatively, of the 298 NPs licensed and educated in ND, 294 or 99% are practicing in ND or a bordering state. These NPs licensed in ND and practicing in bordering states are likely practicing in “border” towns of ND and thus require ND licensure as they are providing services to patients within ND (see Figure 1.7).

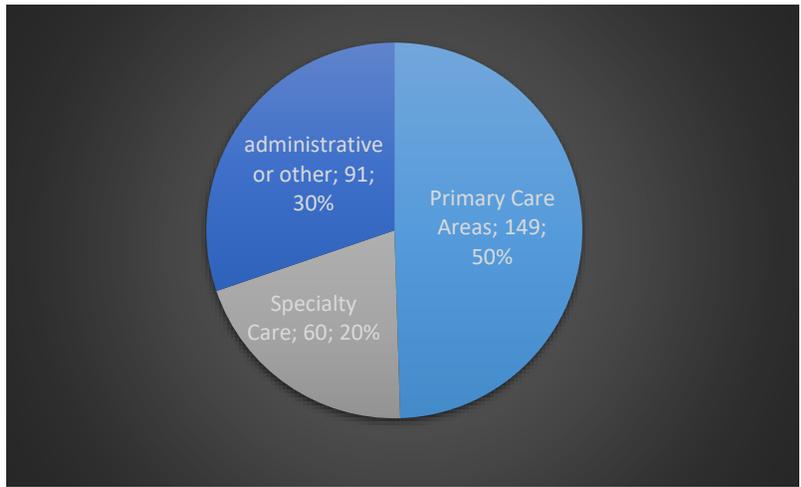


Figure 1.8. NPs Licensed and Educated in ND and Practice Areas

Out of the 835 NPs in ND, 608 reported education information. Of these 608 NPs, 301 are licensed and educated in ND and practice largely (50%) in primary care areas. 20% practice in specialty areas and 30% listed administration or other as their practice area. This is reflective of U.S. numbers and overall North Dakota NP numbers (see Figures 1.8).

Summary

This chapter was a good faith effort to illustrate North Dakota's NP workforce. However, there is a lack of a centralized database for information regarding NPs. Multiple resources needed to be accessed to obtain sufficient information. Despite the difficulty in obtaining necessary data it was evident that NP numbers in ND are increasing, exponentially after gaining independent scope of practice in 2011. From this we could conclude that registered nurses are more empowered to be able to provide encompassing care for their patients so are more apt to continue their education to become NPs.

The majority (88%) of NPs licensed in ND practice within the state and bordering states. NPs provide a significant contribution to primary care within the state. 50% of licensed NPs currently practice in a primary care area. This could be a potential opportunity to combat the increasing number of patients needing primary care and the low numbers of available primary care physicians. Recruitment and retention of NPs should be the state's focus. This needs to start at the healthcare system level, both rural and urban, to include NP positions in all primary care areas. Non-traditional modes of primary care are becoming more mainstream such as virtual visits and home visits. This could be a significant contribution to access to care and a strong niche for NPs. 94% of NPs licensed and educated in ND are practicing here.

It is assumed by this data that "NPs grow where they are planted", with a majority arising from local RNs who have ties to their communities and wish to remain. Increasing numbers of RNs are seeking training outside of ND. There is limited capacity in our 3 NP education programs due to low faculty numbers and preceptor availability. More efforts need to be made to recruit NP faculty and provide incentives for practicing healthcare providers to include students in their practice for educational purposes. The state could also look at alternative solutions for educational programs and preceptorships such as rural residency centers inclusive of practicing nurse practitioners and NP students.

Chapter Two: Nurse Practitioner Workforce Development

Literature supports the important contributions NPs can make toward meeting the primary health care needs of all individuals living in our rural and urban communities. This chapter presents findings regarding North Dakota's NP shortage and workforce development. An overview of ND NP educational program enrollment and costs, as well as current job openings for NPs in the state are discussed. One source of data does not exist to collect and analyze this information. As a result, this is an effort to estimate North Dakota's current NP workforce development needs.

Nurse Practitioners as Primary Care Providers

The demand for primary care services in the United States is expected to continue increasing over the next few years due to implementation of the Affordable Care Act (ACA), and the growth of the total and aging populations (Altman, Butler, & Shern, 2015; Graves et al., 2015; Schiff, 2012). More people are seeking care due to expanded health care coverage and improved coverage for primary care services.

Research concludes that NPs are trained to and already deliver many primary care services. NPs work both autonomously and in collaboration with primary care and specialist physicians, physician assistants, and other clinicians (Altman et al., 2015; Graves et al., 2015; Perloff, DesRoches, & Buerhaus, 2016). Care managed and provided to Medicare beneficiaries by NPs has lower costs when compared to primary care physicians across inpatient and office-based settings (Perloff et al., 2016). Several studies support that NPs provide at least equal quality of care to patients as compared to physicians on several process measures, such as patient satisfaction, time spent with patients, prescribing accuracy, and the provision of preventive education (Schiff, 2012). In addition, several studies conclude that nurse practitioners are successful with managing and providing quality care leading to good outcomes for patients suffering such chronic conditions such as hypertension, diabetes, and obesity (Schiff, 2012). Therefore, efforts must be increased to utilize more NPs to help fill the shortage of primary care providers and meet the healthcare needs of individuals in the United States and North Dakota.

To assist in meeting the primary care needs of the United States population, NPs must be able to practice within their full legal scope of practice. Several states limit scope of practice causing barriers toward the ability of nurse practitioners to fully practice. As of 2016 there are 21 states plus the District of Columbia with full practice authority for NPs. (American Association of Nurse Practitioners, 2016) (see Figure 2.1). The American Association of Nurse Practitioners (2016) defines practice authority in three categories: full practice, reduced practice, and restricted practice. Full practice states have practice and licensure laws that provide for all NPs to “evaluate patients, diagnose, order and interpret diagnostic tests, initiate and manage treatments – including prescribe medications - under the exclusive licensure authority of the state board of nursing” (American Association of Nursing Practitioners, 2016). NPs who have full practice authority collaborate with other interprofessional team members in the delivery of quality health care services. Reduced and restricted environments require some level of collaboration or supervision with another health discipline (American Association of Nurse Practitioners, 2016). North Dakota is one of the states who grant full-practice authority to NPs as recommended by the National Council of State Boards of Nursing and Institute of Medicine (Altman et al., 2015) (see Figure 2.1). However, practice authority limits occur in the state of North Dakota below

what is recommended because of physician and health care facility policy barriers. Administrators and policy makers at North Dakota's healthcare facilities must ensure that NPs are able to provide care within their legal full scope of practice.

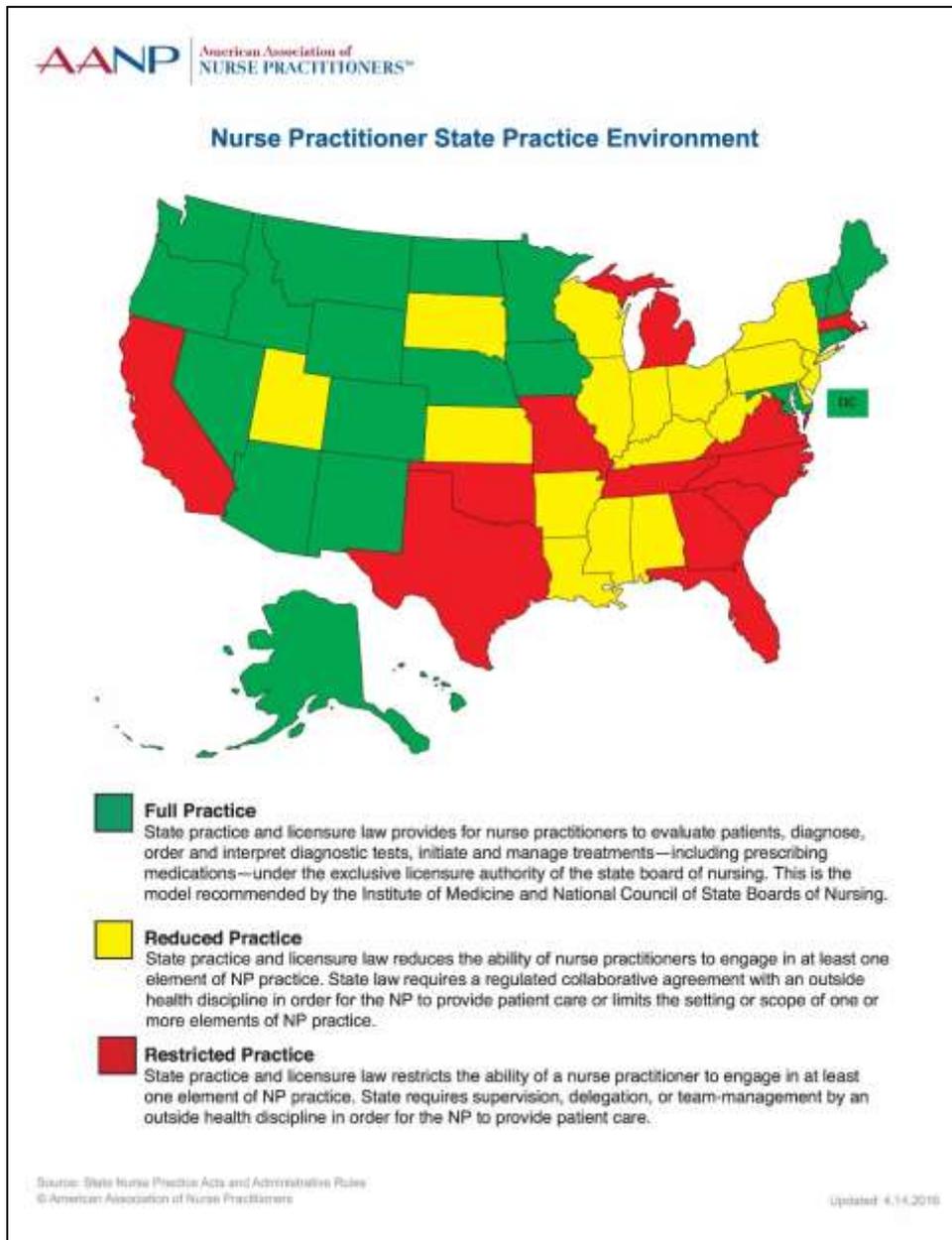


Figure 2.1. Nurse Practitioner State Practice Environments

North Dakota

North Dakota's Nurse Practitioner Vacancies as of 2016

No one source of data exists to determine North Dakota's present nurse practitioner vacancies in specific clinical practice areas. In October 2016, a search was completed on North Dakota's hospital and clinic web sites to determine the approximate total number of NP job openings. As of October 2016, North Dakota had approximately 73 openings for NPs, 35 in primary care and 37 in specialty care clinical areas. Most openings were found to be in specialty care focus areas (see Table 2.1 and Figure 2.2). In addition, most openings were found to be in urban areas. However, rural healthcare facilities may not advertise NP openings due to cost and low success in recruitment. As a result, more NP vacancies may actually exist within our rural healthcare facilities than are posted.

Table 2.1. October 2016 Nurse Practitioner Vacancies in North Dakota Based on Clinical Focus Area

| Clinical Focus Area | Number of Openings |
|--|--------------------|
| Primary Care (Emergency Room, Family Medicine, Hospital, Internal Medicine, Long-term Care, Pediatrics, and Walk-in Clinic) | 35 |
| Specialty Care (Administration, Cardiac Surgery, Cardiology, Endocrinology, Gastroenterology, Infectious Disease, Maxillofacial Surgery, Neonatology, Neurosurgery, Obstetrics/Gynecology, Occupational Medicine, Oncology, Orthopedic Surgery, Pain Management, Psychiatric, Pulmonology, Radiology, Urology) | 37 |

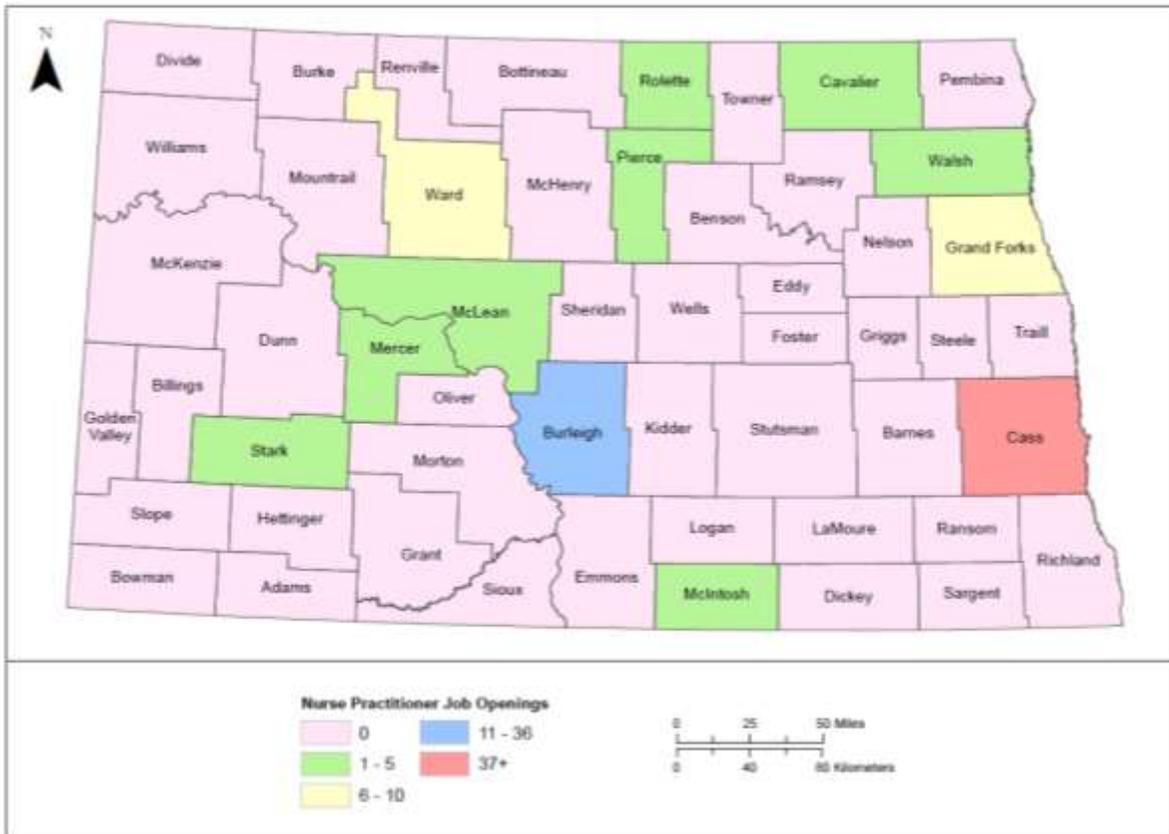


Figure 2.2 Nurse Practitioner Job Openings by County as of October 2016

Shortage of Healthcare Professionals in Rural Communities

Similar to the rest of the United States, North Dakota is experiencing an overall shortage of health care professionals in the rural areas (community health centers, critical access hospitals, rural health clinics) (see Figure 2.3). One factor further impacting the shortage is that North Dakota's overall state population is increasing. According to the US Census Bureau (2016), North Dakota's estimated state population in 2010 was 672,591 (14.6% age 65 and older) and in 2015 increased by 12.5% to 756, 927 (14.2% age 65 and older). This population increase places further demand on the need for an adequate number of primary healthcare providers resulting in unequal access by North Dakota's rural residents to healthcare.

Some health care professionals are reluctant to practice in rural areas and prefer urban areas. However, compared to other primary health care providers, NPs are more likely to practice in the rural communities (Graves et al., 2016). In states, such as North Dakota, that have a more favorable regulatory environment and a larger percentage of rural residents, NPs are even more likely to practice in the rural settings. Many registered nurses who become NPs already live in rural communities and choose to remain practicing in rural healthcare facilities (Graves et al., 2016). According to the American Association of Nurse Practitioners (2015), 18% of NPs practice in rural settings of less than 25,000 individuals. Since NPs are more likely to practice in rural settings,

North Dakota’s health care facility administrators and state government officials must recognize this need, and support and encourage increased utilization of NPs to meet the healthcare needs for individuals living in rural communities.

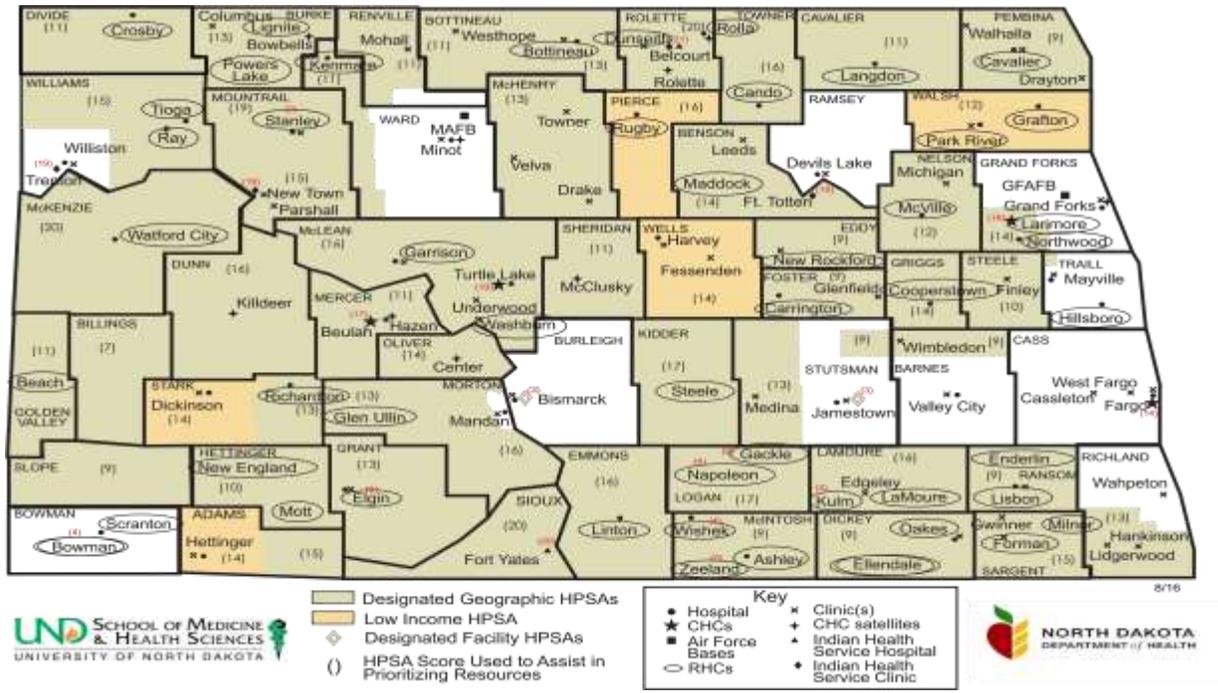


Figure 2.3. North Dakota Health Professionals Shortage Areas: Rural Hospitals, Clinics, Community Health Centers (CHCs), Rural Health Clinics (RHCs)

Nurse Practitioner Wage Estimates

The average base salary for North Dakota’s full-time NPs is below the average regional and national base salaries for full-time NPs (does not include benefits, productivity, bonuses, etc.) (see Table 2.2).

Table 2.2. Average 2015 Base Salary for Nurse Practitioners

| Geographical Area | Average |
|---|----------|
| National | \$97,083 |
| Region 8 (Montana, ND, SD, Colorado, Utah, Wyoming) | \$97,955 |
| North Dakota | \$92,750 |

Sources: AANP 2015 Compensation Survey; ND Labor Market Information Center (2015)

Education Programs for Nurse Practitioners

North Dakota currently has three NP education programs. In 2015 and 2016 the three programs admitted a total of 202 students and graduated a total of 139 students (see table 2.3). North Dakota State University and the University of Mary each offer a Doctor of Nursing Practice (DNP) degree program that prepares students for the role of a Family Nurse Practitioner. Students can complete a DNP degree in approximately three years as a full-time student. The University of North Dakota offers a Master of Science in Nursing (MS) degree program with three different NP tracks: Family Nurse Practitioner, Adult Gerontology Primary Care Nurse Practitioner, and Psychiatric-Mental Health Nurse Practitioner. Typically, the time to complete a MS degree is approximately two years as a full-time student and three years as a part-time student. Beginning fall 2018 the University of North Dakota will offer a DNP program that will replace the current MS degrees for all NP education tracks.

The three universities increased their total NP program admissions from 91 in 2015 to 101 in 2016 to assist in decreasing North Dakota's NP shortage (Table 2.3). NP education programs report barriers to further increasing enrollment numbers to meet the supply and demand issues such as lack of qualified nursing faculty, qualified preceptors, and funding. All programs received many more applications than they can accept into the program. For example, UND's Family Nurse Practitioner program typically can only accept about 1/5th of applicants due to a shortage of qualified faculty.

Table 2.3. Number of Admissions, Graduates, Credits for 2015 and 2016

| University | Degree | Number of Credits | Admissions | | Graduates | |
|---|----------------------------|-------------------|------------|------|-----------|------|
| | | | 2015 | 2016 | 2015 | 2016 |
| University of North Dakota (Master of Science) | Family Nurse Practitioner | 57-59 | 17 | 37 | 26 | 26 |
| | Adult Gerontology | 52 | 13 | 15 | 11 | 13 |
| | Psychiatric Mental Health | 57-59 | 21 | 17 | 7 | 8 |
| | Total | | 51 | 69 | 44 | 47 |
| North Dakota State University | Doctor of Nursing Practice | 86 | 16 | 18 | 13 | 11 |
| University of Mary | Doctor of Nursing Practice | 86 | 24 | 24 | 16 | 8 |

Cost to Complete a Nurse Practitioner Degree

Completion of a degree to practice as a NP is costly. In order to pay for the costs, many registered nurses rely on federal student loans that result in adding to their debts they may previously incurred from obtaining other nursing academic degrees. Limited federal grants and university scholarships are available. Few North Dakota healthcare facilities provide some type of tuition reimbursement to the registered nurses provided they agree to practice at the facilities upon licensure and completion of their NP academic degrees. The North Dakota Board of Nursing offers the Nursing Education Loan program in which they will provide up to \$5500 (for a doctoral degree) in tuition assistance to a student while completing a graduate degree. After graduation, the NP can repay the loan to the North Dakota Board of Nursing over a period of time based on the number of hours worked in North Dakota.

North Dakota's NP education programs vary in cost to complete based on number of credits necessary to obtain the degree (see Table 2.4). Please note that this approximate cost does not include books, travel, clinical placement fees, and other expenses that further financially impact registered nurses. In addition, the program degrees that require more credits and/or offered at a private institution (not state funded) have a greater overall cost to complete. Graduates of all programs are eligible to take the national licensing exams necessary to work as a nurse practitioner in North Dakota.

Table 2.4. Approximate Cost (Tuition and Basic Fees) to Complete Degree

| Type of Institution | Cost |
|----------------------|---|
| State Universities | \$22, 360 - \$29, 971 (\$430/credit) |
| Private Universities | \$54,400 \$570/credit |

Upon graduation some NPs choose to practice in North Dakota. Overall, 40 % of the 2015 and 2016 North Dakota's NP program graduates began their practice in North Dakota health care facilities (see Table 2.5). The three universities accept students from all over the United States. Some graduates remain to practice in North Dakota since they are already living in North Dakota. However, others that live in North Dakota decide to practice in bordering states. Many choose to not practice in North Dakota because they reside in other states.

Table 2.5. North Dakota Nurse Practitioner Program Graduates – First Job in North Dakota

| University | Degree and Program | Graduates who remained in ND to begin practice | |
|-------------------------------|---------------------------|--|------|
| | | 2015 | 2016 |
| University of North Dakota | Family Nurse Practitioner | 8 | 14 |
| | Adult Gerontology | 1 | 3 |
| | Psychiatric Mental Health | 0 | 2 |
| North Dakota State University | Family Nurse Practitioner | 7 | 7 |
| University of Mary | Family Nurse Practitioner | 6 | 7 |

Conclusion

It has been predicted that there will continue to be an increased need for NPs to fill vacant primary care provider positions further adding to the shortage and impacting the access of the North Dakota's urban and rural population to primary healthcare. Information was presented on the state's current NP vacancies. In addition, the availability of NP academic programs in North Dakota including the number of admissions and graduates for the last two years, and the approximate cost for registered nurses to complete the degrees was discussed. Despite the fact that NP academic programs have increased their student admissions and graduates in the last two years, a shortage of NPs remains in North Dakota. Completing the required education to practice as NPs is costly.

In order to help meet the state's increased demand for NPs, state policy makers must encourage registered nurses to pursue NP degrees by assisting them with the cost of completing the required education. More incentives such as tuition assistance and reimbursement need to be offered to NPs who remain in North Dakota and practice after graduation. There must be an increase in state funding to the current NP education programs to meet the costs of increasing the number of student admissions and graduates. The NP faculty salary gap must also be addressed. Clinician salary rates for NP faculty could provide more incentive for NPs to venture into academia. North Dakota's NP education programs should attempt to recruit and enroll more of the state's registered nurses living in rural and urban communities. In order to attract more NPs to work in North Dakota, healthcare facilities must increase salaries to be more competitive with salaries offered by healthcare facilities in the region and other states. Administrators and policy makers at the North Dakota's healthcare facilities must ensure that NPs are able to practice within their full legal scope-of-practice. Lastly, administrators at healthcare facilities located in healthcare professional shortage areas must attempt to hire more NPs to fill vacant provider positions to assist in meeting the healthcare needs of these rural communities. More state and federal funding could be provided to these facilities to assist in NP recruitment and retention costs.

Conclusions and Policy Recommendations

Conclusions and Policy Recommendations

In 2011 NPs gained fully independent scope-of-practice in ND. This means all NPs can practice without physician oversight or collaboration. This is an excellent use of resources, as NPs tend to locate in rural areas of ND where there are no physician providers (Graves, 2016). This autonomy allows NPs to properly care for the primary care needs of North Dakotans, especially in rural locales. NP data needs to be included in the overall picture of healthcare workforce in ND. State licensure data can potentially be a great source for workforce assessment. ND can take the lead in demonstrating how to best collect NP data so this can filter to other states and compared, ultimately providing a better nationwide picture of NP workforce supply. Current data collection requires use of multiple resources to obtain needed information, this creates difficulty in analyzing workforce. Data in this report supports the huge contributions NPs play in the healthcare of ND. Lack of preceptors and faculty seem to be the bottleneck for increasing NPs in practice. There are typically exponentially more applications from highly qualified RNs than the programs are able to accommodate. Not only are NPs originating here in ND, but they are also being educated here and practicing in the state.

- Healthcare institutions need to be encouraged to optimize full utilization of the nurse practitioner by recognizing full scope of practice.
- Efforts should be made to better align ND NP salaries with regional and national salary rates.
- Increased support for NP educational programs including efforts to recruit and retain qualified faculty.
- Incentives could be designated for these RNs in rural areas of ND to return to school for their NP education.
- Provide incentives for qualified preceptors and faculty for NP students.
- Support should be provided by healthcare facilities around the state to allow their healthcare providers to precept NP students and/or offer individual preceptor incentives.
- Support could be provided to NP organizations and practicing NPs to investigate and establish new models of primary care that meet the needs of rural communities.
- Data collection needs to be maximized at the ND State Board of Nursing, and optimized through proper electronic entry formats.
- Efforts need to be made to collect and analyze data on the complete healthcare workforce in North Dakota to establish a more collaborative practice environment.

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Appendix

Methodology

Licensure data was obtained from the North Dakota Board of Nursing. For the purpose of this study the data utilized included: addresses, certification type, practice type, address of employer, and NP educational program attended. Approximately ½ of licensees did not enter information regarding educational program and/or employer. Additional searches via LinkedIn were utilized in an attempt to gather missing information. An attempt was made to configure NP population by RUCA code, however, county and/or zip code of employer was not routinely included in licensure data. Per capita supply was determined using population data from U.S. Census Data. Analysis was performed with the SAS software.

An attempt was made to obtain NP vacancy information from the North Dakota Job Service's website, however, multiple repetitious postings were found making it difficult to formulate an accurate data extraction. As a result, a search of the rural and urban healthcare facilities web sites was completed to determine the number, areas of practice, and locations of North Dakota's NP vacancies.

Emails were sent to North Dakota's NP education programs to obtain data on the numbers of admissions, tuition rates, and graduates from their programs. Information was also requested on the graduate's employment state.