

Office of Rural Health & Primary Care Health Workforce Analysis Program

Minnesota's Advanced Practice Registered Nurses, 2010

Advanced practice registered nurses are integral members of teams delivering high-quality primary and specialty health care. Advanced practice registered nurses (APRNs) include certified nurse practitioners, certified nurse anesthetists, certified clinical nurse specialists and certified nurse midwives.

A recent Institute of Medicine (IOM) report on the future of nursing¹ recommends that advanced practice registered nurses “be called upon to fulfill and expand their potential as primary care providers across practice settings based upon their education and competency.”² The IOM foresees the profession growing at a relatively rapid pace as access to health care coverage, service delivery settings, and number of services increases under the Affordable Care Act. Such growth is warranted because while more medical school seniors are choosing primary care residencies (11 percent more in 2011 than in 2010), the National Resident Matching Program reports that less than half of the family medicine resident slots were filled in March 2011 (compared to 71 percent of pediatric resident slots and 57 percent of internal medicine resident slots).³ The Association of American Medical Colleges Center for Workforce Studies projects a shortage of 45,000 primary care physicians by 2020 in the United States.⁴

This report documents the demographic characteristics and geographic distribution of advanced practice registered nurses throughout Minnesota, including information about their practice settings and how long they intend to remain in the health care workforce. Rural Minnesota in particular continues to experience an ongoing need for high quality primary care and general surgery, especially in those areas of the state with growing numbers of elderly residents managing multiple chronic conditions.

Data for this report is the result of a joint effort between the Minnesota Board of Nursing and the Minnesota Department of Health Workforce Analysis Program. It combines registered nurse license renewal information through April 2010 with a registered nurse workforce survey completed at time of renewal. See Appendix C for a description of the data collection methods.

¹ Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: National Academies Press (Prepublication copy). 2011.

² IOM, 2011, p 1-2.

³ <http://www.nrmp.org/pressrelease2011.pdf>

⁴ https://www.aamc.org/download/153160/data/physician_shortages_to_worsen_without_increases_in_residency_tr.pdf



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APRN Roles and Qualifications

Any of the four advanced practice certifications available to registered nurses licensed in Minnesota must be issued by national nurse certification organizations acceptable to the Minnesota Board of Nursing. Once certified, APRNs may practice as direct care providers, case managers, consultants, educators, researchers and administrators. By law, they accept referrals from, consult and cooperate with, or refer to other types of health care providers, including physicians, chiropractors, podiatrists and dentists within a scope of practice as defined in statute (See Appendix A).

To become eligible for APRN certification, many R.N.s have earned masters, post-masters or doctoral degrees. Across the four APRN practice areas, an emerging national educational standard leads to a doctor of nursing practice (DNP). The American Association of Colleges of Nursing developed the concept of the DNP and recommends that by 2015 all new applicants for advanced practice should earn the degree in order to become certified. While this requirement has yet to be adopted by the Minnesota Board of Nursing or many accrediting organizations, some local APRN training institutions are steering students toward the DNP instead of a master's for graduation. At this time, all new APRN students at the University of Minnesota are working toward a DNP while the Minnesota State Colleges and Universities offer both degrees.

APRN Collaboration with Physicians

The Minnesota Board of Nursing reminds APRNs that they “must practice within a health care system that provides for consultation, collaborative management, and referral as indicated by the status of the patient.”⁵ “Collaborative management” between an advanced practice registered nurse and one or more physicians is defined in statute as a “mutually agreed upon plan that designates the scope of collaboration necessary to manage the care of patients.” Both the APRN and collaborating physician must have experience in providing care to patients with the same or similar medical conditions.

APRNs may prescribe drugs and therapeutic devices. Certified nurse-midwives may prescribe directly within the scope of their practice; but clinical nurse specialists, nurse anesthetists and nurse practitioners are required to have written collaborative agreements with licensed physicians that define the responsibilities and scope of the APRN's prescribing authority.⁶

Clinical nurse specialists must further provide proof of 30 hours of formal training in medication classifications, clinical indications, dosages, contraindications and side effects for the drugs and devices in their area of clinical expertise. For example, clinical nurse specialists working in psychiatric and mental health nursing are required to know about psychotropic medications and medications used to treat side effects. Part of this required training also includes a supervised practice and competence evaluation.

⁵ http://www.state.mn.us/portal/mn/jsp/content.do?rc_layout=bottom&subchannel=-536882458&programid=536898474&sc3=null&sc2=null&id=-536882404&agency=NursingBoard

⁶ MS Statute 148.235

APRN Geography and Population

The 2010 U.S. Census finds that over two-thirds of Minnesota's population is concentrated in urban areas on the eastern side of the state.⁷ But once outside the eastern population centers, the remaining third is diversely distributed across large-rural, small-rural, and isolated-rural areas. To describe this urban-to-rural distribution in Minnesota and other mostly rural states, the U.S. Department of Agriculture Economic Research Service developed Rural-Urban Commuting areas (RUCAs). RUCAs measure the *rurality* of a location based upon community population size, commuting distance, and driving time to larger population centers. This classification system provides useful information for studying the health care workforce distribution in the state. Figure 1 divides the state into six geographic regions, then into RUCAs representing the urban-rural diversity within each region. See Appendix B for the regional definitions used in this report and for more information about RUCAs.

In general, the distribution of health care resources in Minnesota tends to mirror the population distribution, and the health care workforce reflects the health resources distribution. Exceptions to that generalization occur, as areas beyond population centers become more rural. Access to health services in rural areas of the state is mal-distributed, especially access to primary care and surgery, two key health care services employing advanced practice registered nurses.

APRN Workforce Facts

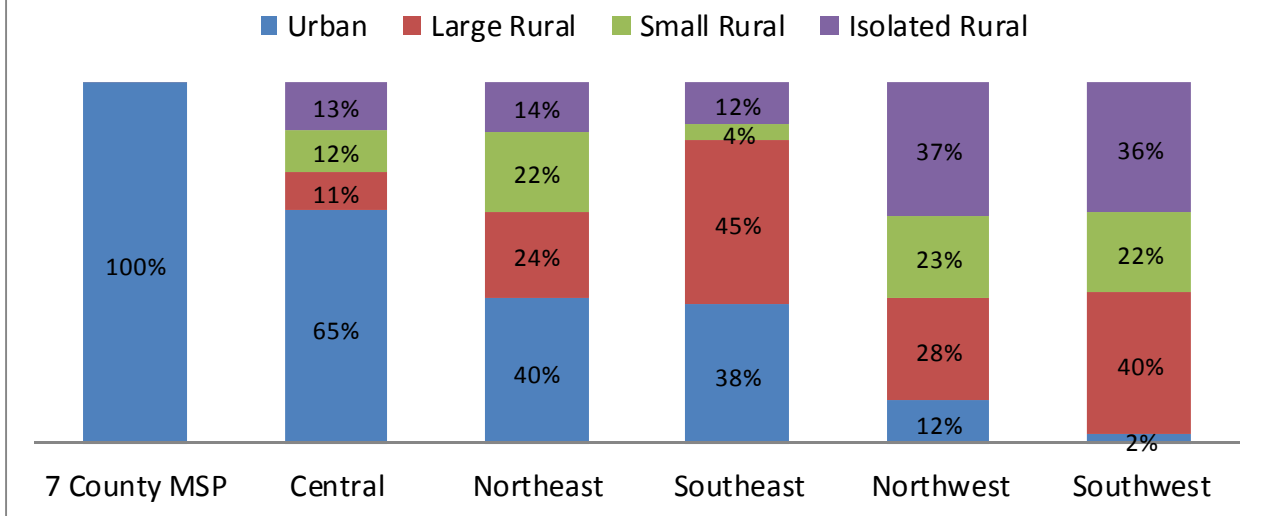
- Less than 6 percent of registered nurses licensed in Minnesota were certified as APRNs⁸ compared with 8 percent of nurses in the United States.⁹
- Between April 2008 and April 2010, a total of 4,686 APRNs renewed their licenses (Table 1).
- Minnesota mailing addresses for APRN renewing their licenses were concentrated in the seven-county Minneapolis/St. Paul (50 percent) and southeast (15 percent) regions of the state; 12 percent reported out-of-state addresses (Table 2).
- One third of APRNs were 55 years of age or older (Figure 2), with a median age of 50 (Table 3).
- APRNs were predominately white (96 percent) while 1 percent reported Hispanic ethnicity (Table 4).
- Seventy-three percent of APRNs 65 or older responding to the Minnesota Department of Health registered nurses workforce survey were working in paid positions while 12 percent responded they had retired (Table 5).

⁷ <http://www.demography.state.mn.us/resource.html?Id=31949>

⁸ Minnesota Board of Nursing.

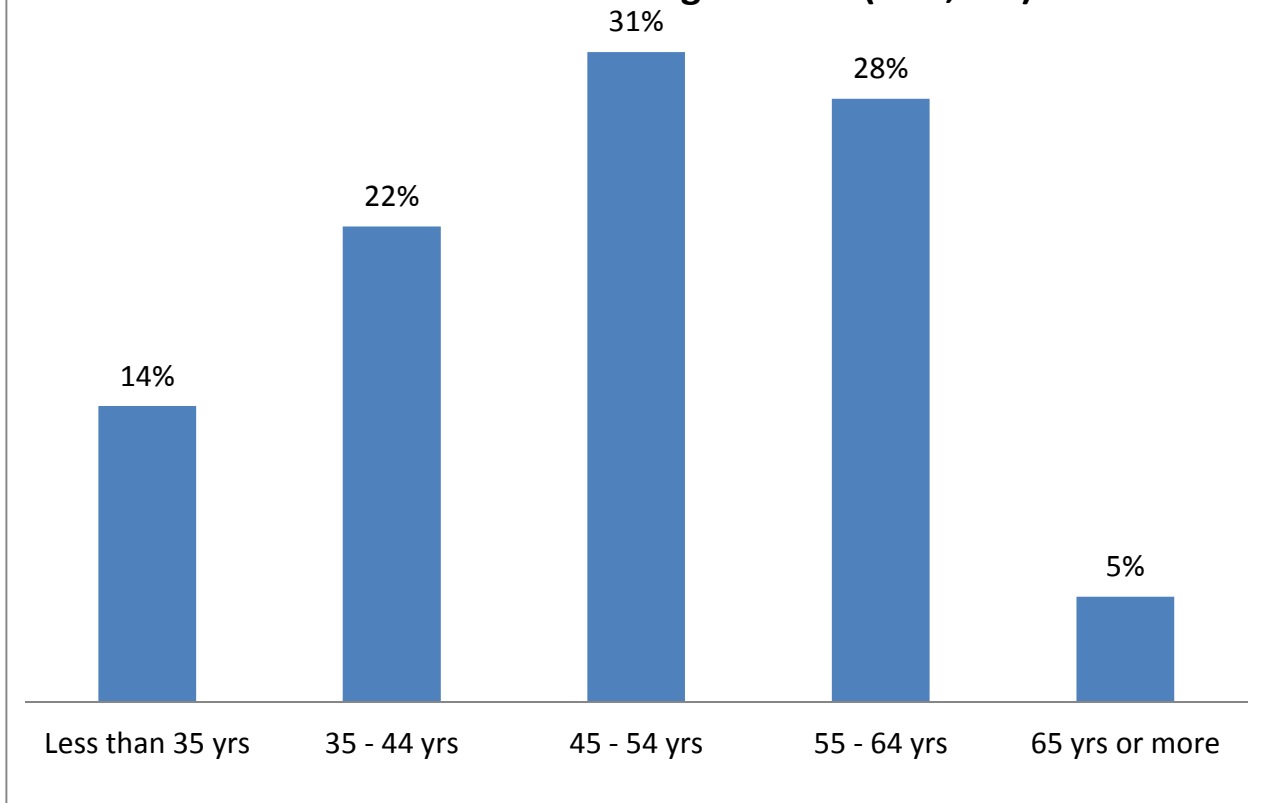
⁹ Health Resources and Services Administration, US Department of Health and Human Services. *The Registered Nurse Population: Findings from the 2008 National Sample Survey of Registered Nurses*. September 2010.

Figure 1 - Geographic Distribution of Minnesota's Population by Region and Rural-Urban Commuting Area

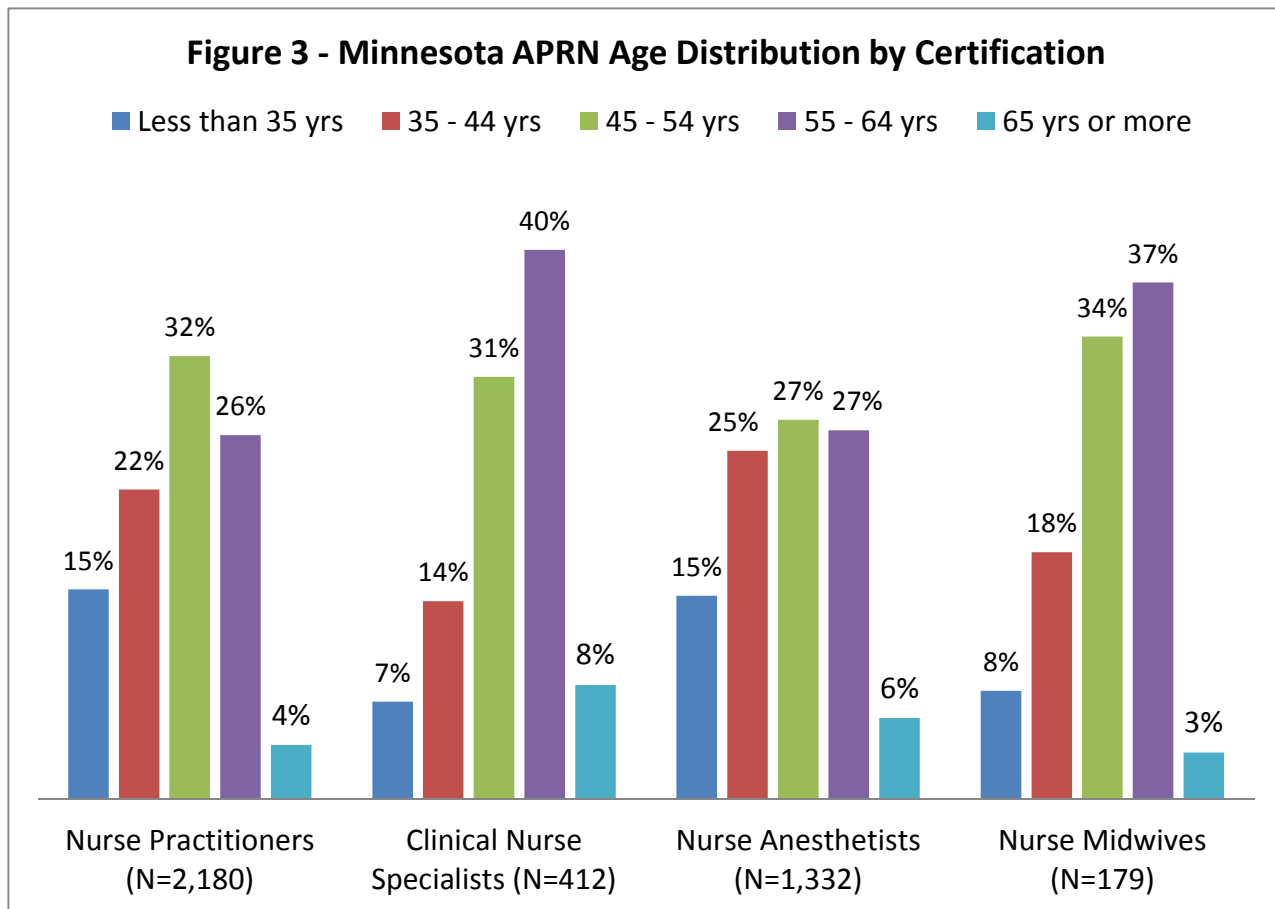


Source: U.S. Census and MDH-ORHPC

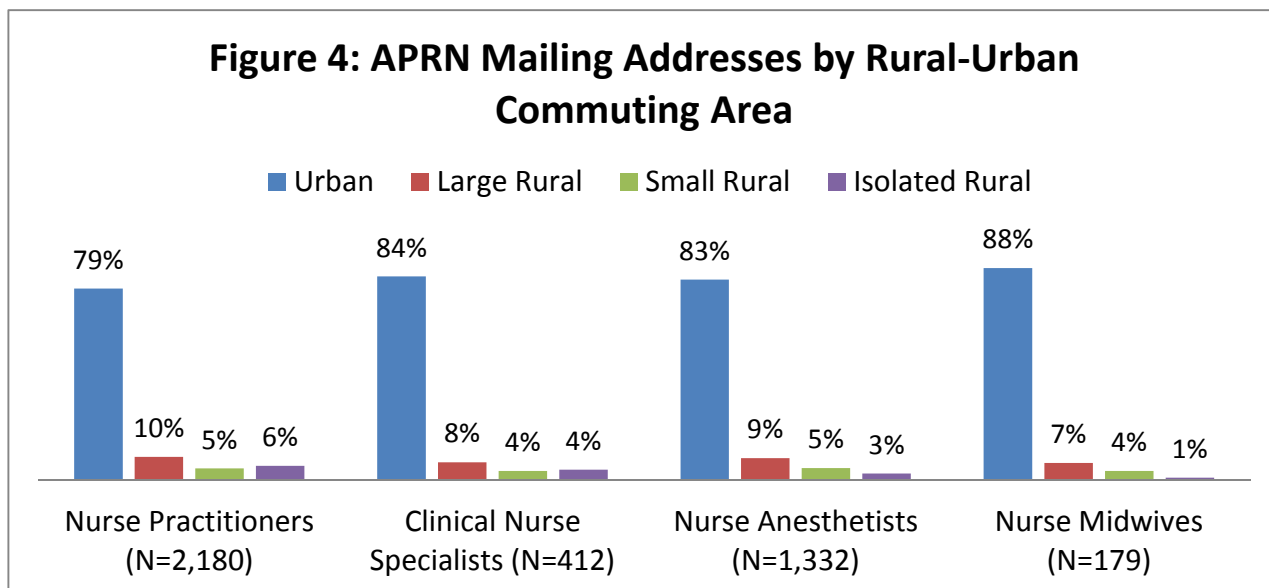
Figure 2 - Age Distribution for All Licensed APRNs With a Minnesota Mailing Address (N=4,103)



Source: Minnesota Board of Nursing and MDH - ORHPC

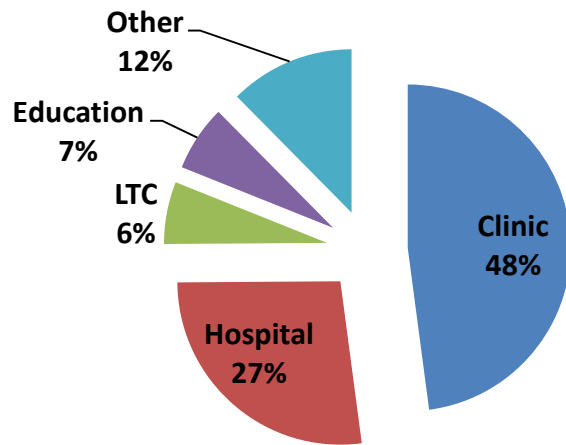


Source: Minnesota Board of Nursing and MDH – ORHPC



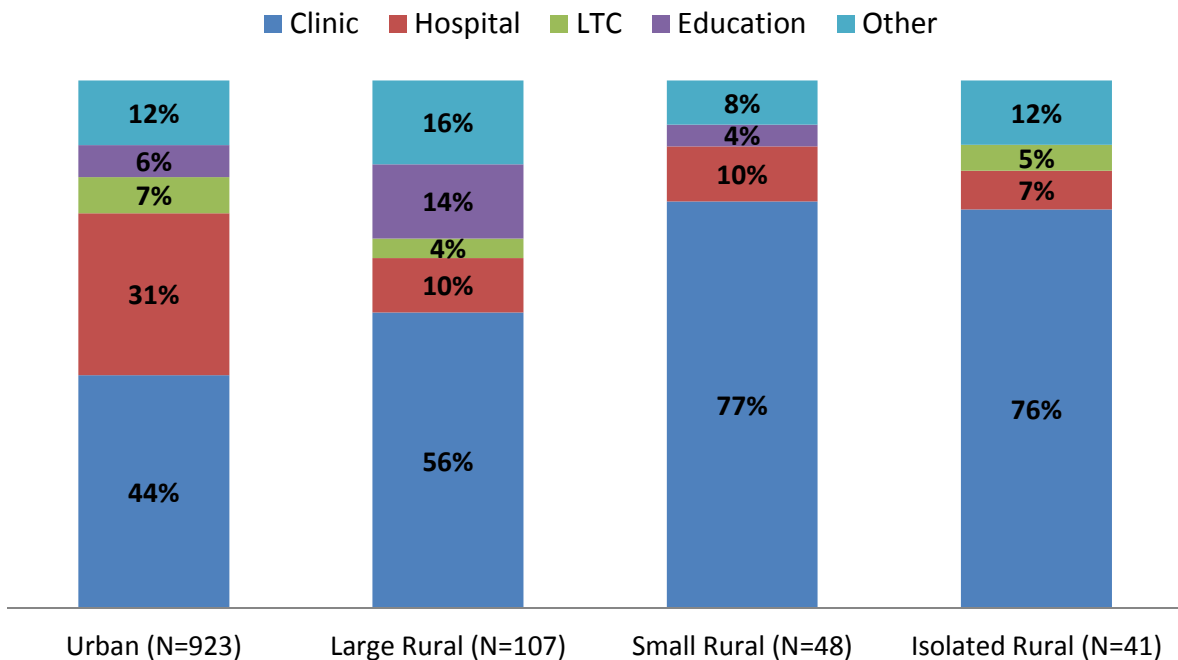
Source: Minnesota Board of Nursing and MDH - ORHPC

Figure 5: Practice Settings of Minnesota's Nurse Practitioners (N=1,119)

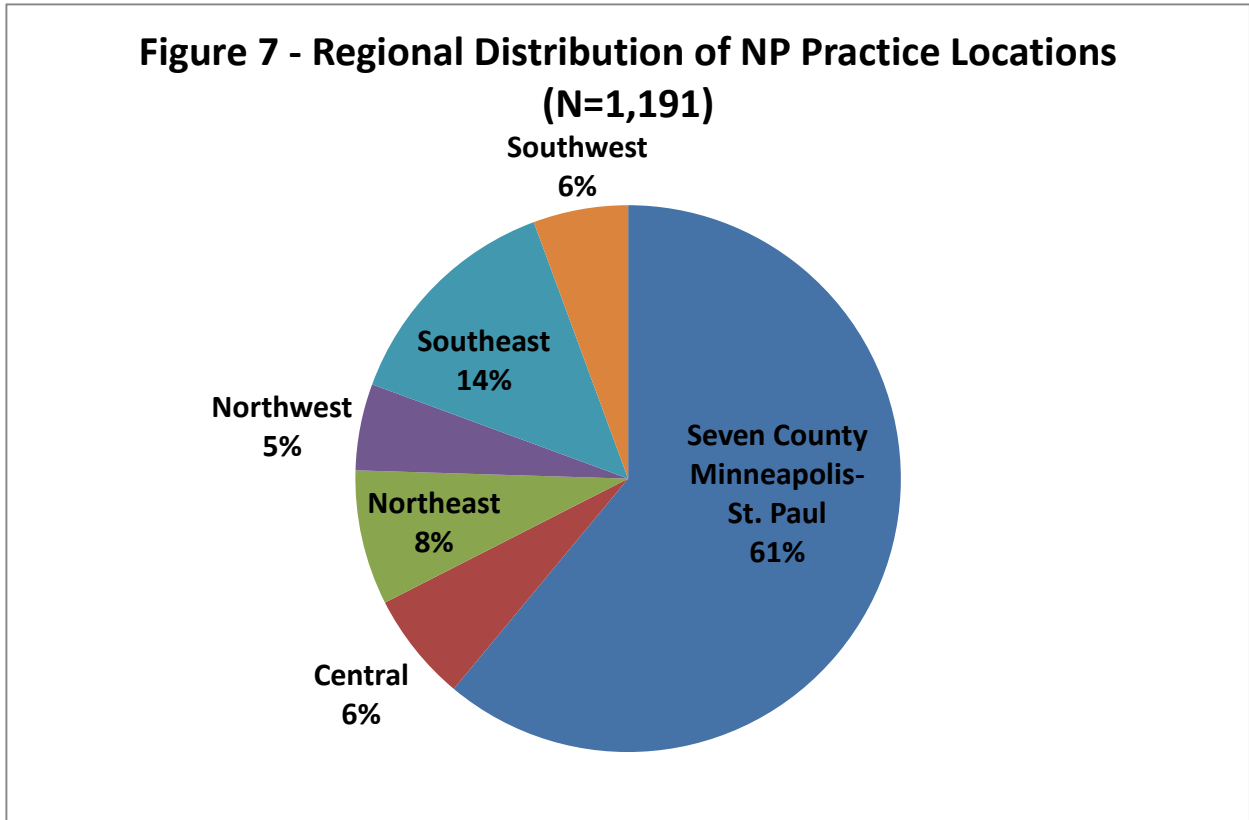


Source: MDH - ORHPC

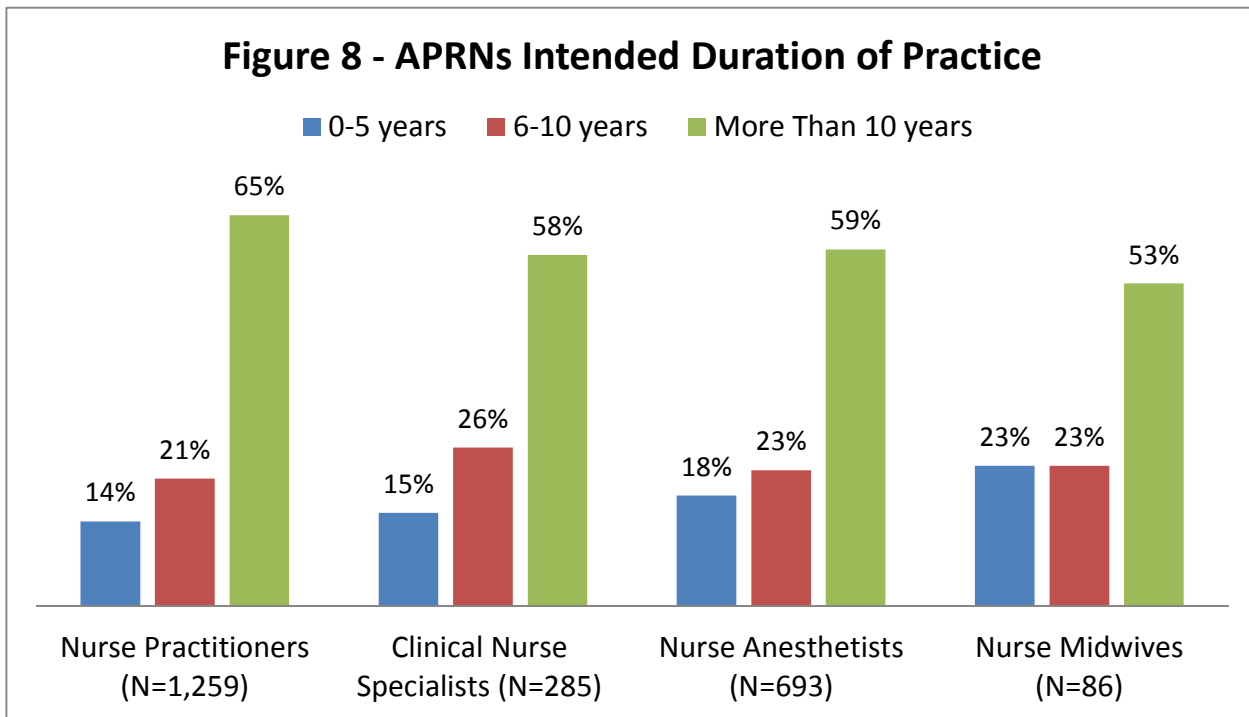
Figure 6: NP Practice Settings by Rural-Urban Commuting Area



Source: MDH - ORHPC

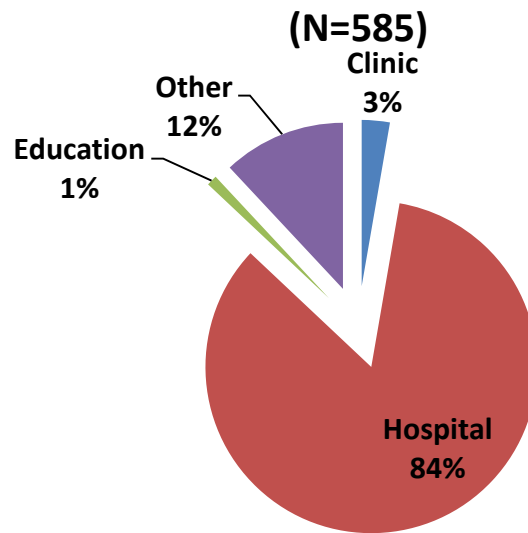


Source: MDH – ORHPC



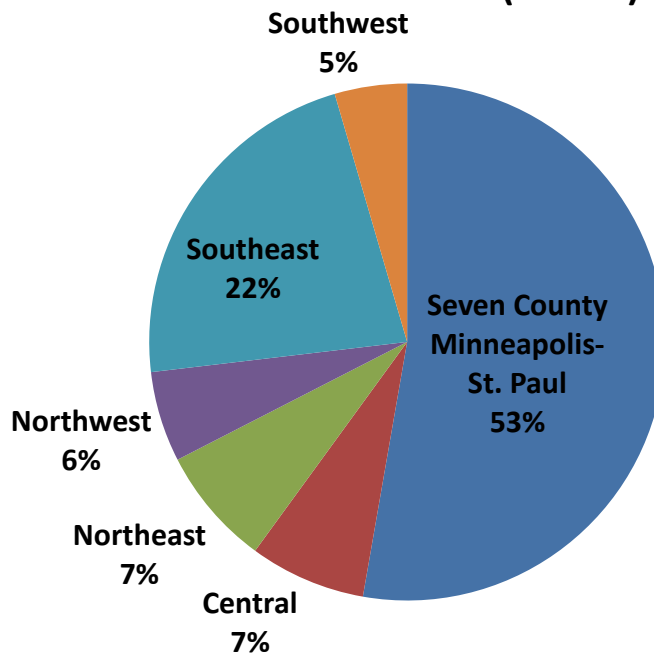
Source: MDH - ORHPC

Figure 9 - Practice Settings for Nurse Anesthetists



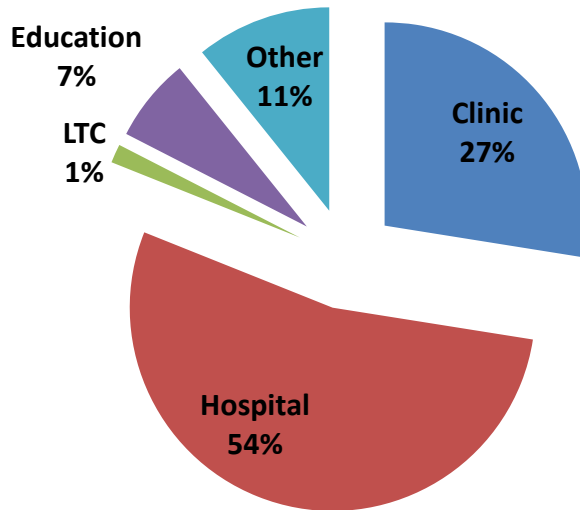
Source: MDH - ORHPC

Figure 10 - Regional Distribution of Nurse Anesthetist Practice Locations (N=618)



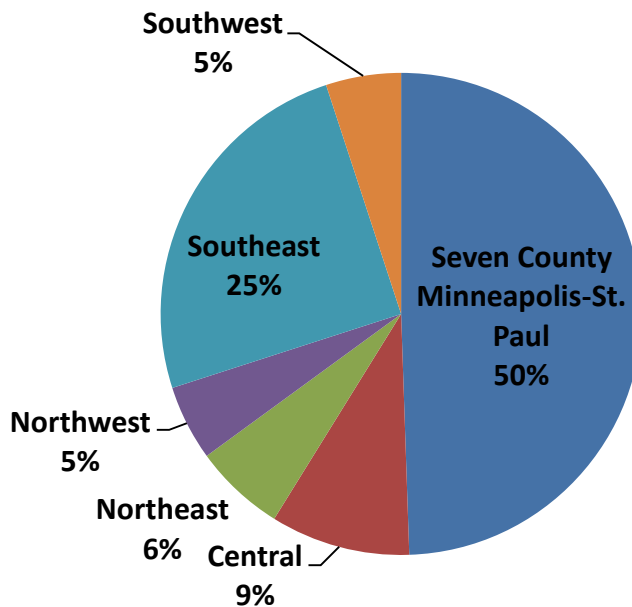
Source: MDH - ORHPC

**Figure 11 - Practice Settings for Clinical Nurse Specialists
(N=269)**



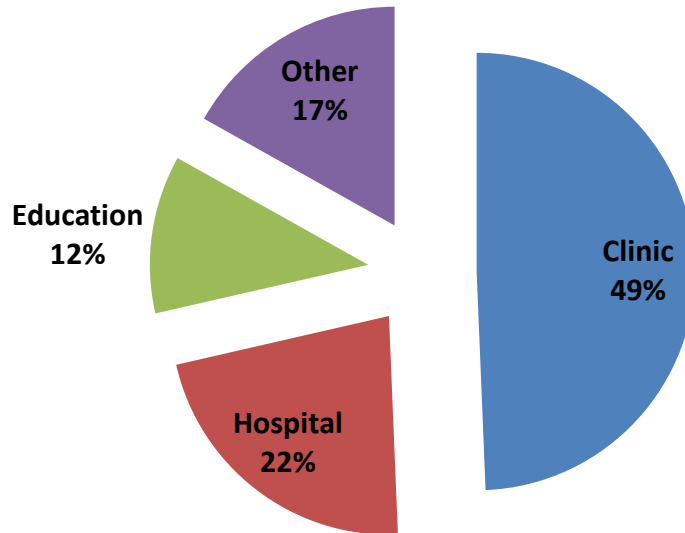
Source: MDH - ORHPC

**Figure 12 - Regional Distribution of CNS Practice
Locations (N=277)**



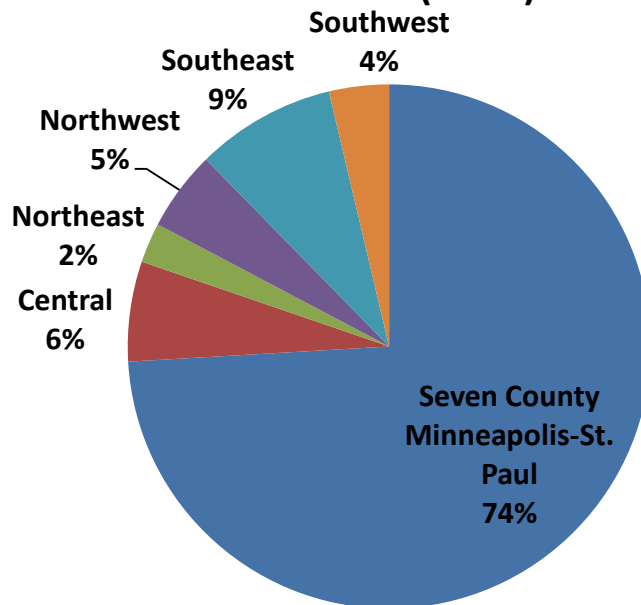
Source: MDH - ORHPC

Figure 13 - Practice Settings for Nurse Midwives (N=77)



Source: MDH - ORHPC

Figure 14 - Regional Distribution of CNM Practice Locations (N=81)



Source: MDH - ORHPC

Nurse Practitioner (NP) Facts

Demographics

- Nurse practitioners (NPs) constitute 53 percent of all renewing APRN licenses (Table 1).
- One percent of all APRNs were double certified as an NP plus another advanced practice registered nurse certification (Table 1).
- Ninety-six percent of Minnesota-based NPs were female (Table 3).
- The median age of Minnesota-based NPs in 2010, was 49 compared with 50 for all APRNs (Table 3).
- Thirty percent of the Minnesota-based NP workforce was 55 years of age or older in 2010 (Figure 3).

Geographic Distribution by Mailing Address

- Minnesota-based NPs reported mailing addresses in regions of the state with the most health care resources:
 - 50 percent within the seven-county Minneapolis/St. Paul region
 - 12 percent in the southeast region
 - 14 percent out-of-state (Table 2).
- Minnesota-based NPs were located in the following rural-urban commuting areas (See Appendix B map and Figure 4):
 - 79 percent were concentrated in urban areas of the state
 - 21 percent were in *rural* areas
 - 10 percent in large rural areas
 - 6 percent in isolated rural areas
 - 5 percent in small rural areas.

Geographic Distribution by Work Location

- Minnesota-based NP work sites were largely split between provider clinics (48 percent) and hospitals (27 percent) (Figure 5).
- The distribution of sites where NPs practiced varied less as work locations became more rural, with 44 percent of urban NPs working in clinics compared to 76 percent in isolated rural areas (Figure 6).
- Sixty-one percent of NP practice locations were within the seven-county Minneapolis/St. Paul region and 14 percent within the southeast region, consistent with the largest concentrations of medical resources in the state (Figure 7).
- Sixty-five percent of NPs responding to the MDH registered nurse survey said they plan to remain in the state to practice more than 10 years (Figure 8).

Certified Registered Nurse Anesthetist (CRNA) Facts

Demographics

- Certified registered nurse anesthetists (CRNAs) represent 32 percent of the APRNs licensed in Minnesota (Table 1).
- Eleven percent of all Minnesota-licensed CRNAs reported out-of-state mailing addresses (Table 2).
- The majority of male APRNs (84 percent) were CRNAs (Table 3).
- Fifty-seven percent of the CRNA workforce was female (Table 3).
- CRNAs were the youngest of the APRN professions with a median age of 48 in 2010 (Table 3).
- A third of Minnesota CRNAs were 55 years of age or older in 2010 (Figure 3).

Geographic Distribution by Mailing Address

- Forty-seven percent of CRNAs received their licenses at addresses within the seven-county Minneapolis/St. Paul region and 19 percent in the southeast region of the state (Table 2).
- According to their mailing addresses, 83 percent of CRNAs were concentrated in urban areas of the state as categorized by the rural-urban commuting area taxonomy (Figure 4).

Geographic Distribution by Work Location

- Eighty-four percent of CRNAs responding to the Minnesota Department of Health registered nurse survey most frequently listed hospitals as their primary practice site (Figure 9).
- Three-fourths of practice sites for nurse anesthetists were within the Minneapolis/St. Paul (53 percent) or southeast Minnesota (22 percent) area where the largest proportions of the state's inpatient hospital beds were available (Figure 10).
- Fifty-nine percent of CRNAs responding to the survey said they plan to practice in Minnesota more than 10 years while an additional 23 percent plan to practice here six to 10 years (Figure 8).

Clinical Nurse Specialist (CNS) Facts

Demographics

- Clinical nurse specialists (CNS) constitute almost 10 percent of advanced practice nurses licensed in Minnesota (Table 1).
- Nine percent of all licensed CNS mailing addresses were out-of-state (Table 2).
- The CNS population was 97 percent female (Table 3).
- The median CNS age was 54, the highest among all APRNs in 2010 (Table 3).
- Forty-eight percent of CNS professionals were 55 years of age or older in 2010 (Figure 3).

Geographic Distribution by Mailing Address

- Among clinical nurse specialists with Minnesota mailing addresses, 84 percent were in *urban* locations, the second highest concentration among APRNs (Figure 4).
- Forty-seven percent of CNS mailing addresses were in the Minneapolis/St. Paul region and nearly 22 percent in the southeast (Table 2).

Geographic Distribution by Work Location

- Clinical nurse specialists responding to the Minnesota Department of Health registered nurse survey practiced primarily in hospitals (54 percent) and clinics (27 percent) (Figure 11).
- Similar to NPs, 7 percent of CNS professionals responded that their place of practice was an educational setting (school/college/university) (Figure 11).
- Among those responding to the survey, 50 percent of clinical nurse specialists reported practice locations within the seven-county Minneapolis/St. Paul area and 25 percent in the southeast region of the state (Figure 12).
- Fifty-eight percent of clinical nurse specialists responding to the MDH survey said they expected to practice another 10 years or more in Minnesota (Figure 8).

Certified Nurse Midwife (CNM) Facts

Demographics

- Certified nurse midwives (CNMs) were the smallest cohort of professionals representing just over 4 percent of all APRNs (Table 1).
- Eleven percent of all Minnesota licensed CNMs reported out-of-state mailing addresses (Table 2).
- The population of nurse midwives was 98 percent female (Table 3).
- Median age for Minnesota-based nurse midwives was 53 years in 2010, making them among the oldest of the APRNs (Table 3).
- Forty percent of CNMs were 55 years of age or older in 2010 (Figure 3).

Geographic Distribution by Mailing Address

- CNMs had the smallest rural representation of APRNs with 88 percent reporting mailing addresses within urban RUCAs (Figure 4).
- CNMs license mailing addresses were primarily clustered within the seven-county Minneapolis/St. Paul region (69 percent) with only 1.5 percent in both the northeast and southwest regions of the state (Table 2).

Geographic Distribution by Work Location

- Forty-nine percent of nurse midwives reported practicing in clinics while 22 percent reported a hospital as their primary practice location (Figure 13). This is comparable to practice settings of NPs (Figure 5).
- Seventy-four percent of nurse midwives responding to the Minnesota Department of Health registered nurse survey reported Minneapolis/St. Paul practice locations (Figure 14).
- Of those CNMs responding to the survey, 53 percent said they planned to practice another 10 years or more in Minnesota (Figure 8).
- CNMs were the most likely of APRNs to respond that they planned to stop practicing in Minnesota within the next five years (Figure 8).

Table 1		
All Advanced Practice Registered Nurses Renewing Licenses in Minnesota, April 2010		
APRN Workforce	Number	Percent
Nurse Practitioners	2,483	53.0%
Nurse Anesthetists	1,504	32.1%
Clinical Nurse Specialists	452	9.6%
Nurse Midwives	201	4.3%
Both NP & CNS	36	0.8%
Both NP & CNM	10	0.2%
Total	4,686	100.0%

Source: Minnesota Board of Nursing

Table 2					
Advanced Practice Registered Nurses License Renewals in Minnesota, April 2010					
License Mailing Address by Region	APRN Workforce				
	Nurse Practitioners	Clinical Nurse Specialists	Nurse Anesthetists	Nurse Midwives	Total
Out of State	13.8%	8.8%	11.4%	10.9%	12.4%
7 County MSP	50.2%	47.3%	47.1%	69.2%	49.7%
Central	7.3%	9.3%	7.9%	4.5%	7.6%
Northeast	6.5%	4.6%	6.9%	1.5%	6.2%
Northwest	5.9%	4.4%	4.5%	4.5%	5.2%
Southeast	12.1%	21.5%	18.9%	8.0%	15.0%
Southwest	4.2%	4.0%	3.3%	1.5%	3.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Number of Licenses	2,529	452	1,504	201	4,686

Source: MDH ORHPC

Table 3					
Advanced Practice Registered Nurses with a Minnesota Mailing Address, April 2010					
APRN Workforce	Basic Demographics				
	Median Age	Number of APRNs	Female	Male	% Female
Nurse Practitioners	49	2,180	2,086	94	95.7%
Clinical Nurse Specialists	54	412	398	14	96.6%
Nurse Anesthetists	48	1,332	752	580	56.5%
Nurse Midwives	53	179	176	3	98.3%
All MN APRNs	50	4,103	3,412	691	83.2%

Source: Minnesota Board of Nursing, MDH-ORHPC

Table 4		
Advance Practice Registered Nurse Race/Hispanic Origin		
Race/Hispanic Origin	# APRNs	% APRNs
White	2,573	95.9%
Asian/Pacific Islander	37	1.4%
Black or African American	34	1.3%
Other	21	0.8%
Multiple races	10	0.4%
American Indian or Alaska Native	9	0.3%
Total Responses to Survey Question	2,684	100.0%
Hispanic, Latino, Spanish Origin		
Yes	17	1.1%
No	1,602	98.9%
Total Responses to Survey Question	1,619	100.0%

Source: MDH Registered Nurse Workforce Survey

Table 5				
APRN Work Status by Age				
All APRNs Work Status	APRN Age			
	< 35yrs	35-64 yrs	65 yrs +	Total
Working in a paid position as an RN	76.8%	87.8%	73.2%	85.5%
Working in a volunteer position as an RN	0.0%	0.5%	4.3%	0.6%
Employed in another field, seeking work as an RN	0.7%	1.0%	0.7%	1.0%
Employed in another field, not seeking work as an RN	12.8%	6.6%	4.3%	7.4%
Not currently working due to family or medical reasons	0.2%	1.0%	2.9%	1.0%
Retired	0.0%	0.9%	12.3%	1.3%
Unemployed, seeking work as an RN	0.5%	0.6%	0.7%	0.6%
Unemployed ,not seeking work as an RN	0.0%	0.5%	1.4%	0.4%
Student	9.0%	1.1%	0.0%	2.1%
Total Question Responses	100.0%	100.0%	100.0%	100.0%
(Number of Responses)	(413)	(2,353)	(138)	(2,904)

Source: MDH - ORHPC

Appendix A: Advanced Practice Registered Nurse Scope of Practice

Minnesota law (MS 148.171) defines the scope of practice for each of the advanced practice registered nurses as follows:

- *Nurse Practitioner* – Within the context of a collaborative management agreement: diagnosing, directly managing, and preventing acute and chronic illness and disease; promoting wellness including providing nonpharmacological treatment.
- *Registered Nurse Anesthetist* – Provides anesthesia care and related services within the content of collaborative management, including selecting, obtaining, and administering drugs and therapeutic devices that facilitate diagnostic, therapeutic, and surgical procedures upon request, assignment, or referral by a patient's physician, dentist, or podiatrist.
- *Clinical Nurse Specialist* – Provides patient care in a particular specialty or subspecialty within the context of collaborative management that may include diagnosing illness and disease, providing nonpharmacological treatment including psychotherapy, promoting wellness, as well as preventing illness and disease.
- *Nurse-midwife* – Provides management of women's primary health care, focusing upon pregnancy, childbirth, the postpartum period, care of the newborn, and the family planning and gynecological needs of women. This includes diagnosis and providing nonpharmacologic treatment within a system that provides for consultation, collaborative management, and referral as indicated by the health status of patients.

Appendix B: Geographic Definitions

To provide a more local perspective of the APRN workforce in Minnesota, this report presents summary results from both the Minnesota Board of Nursing licensing file and the ORHPC registered nurse survey for each of the Minnesota Department of Employment and Economic Development (DEED) planning areas.

Minneapolis/St. Paul Region

– Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington counties.

Central Region – Benton, Chisago, Isanti, Kanabec, Kandiyohi, McLeod, Meeker, Mille Lacs, Pine, Renville, Sherburne, Stearns and Wright counties.

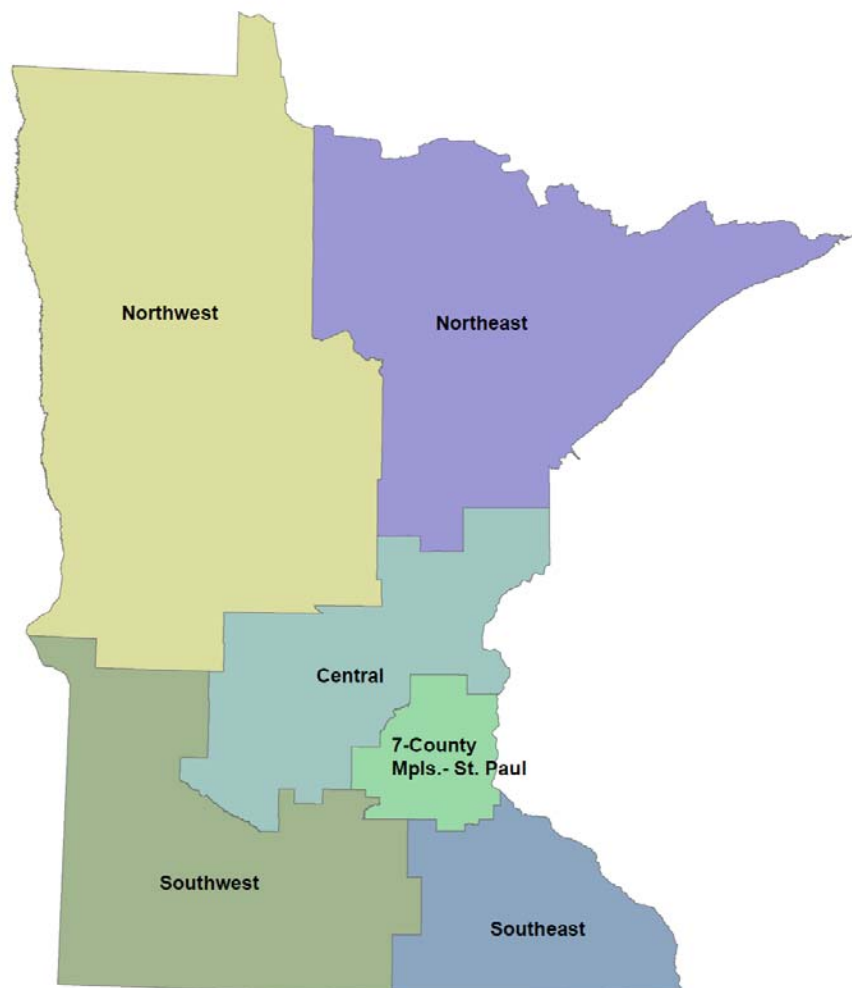
Northeast Region – Aitkin, Carlton, Cook, Itasca, Koochiching, Lake and St. Louis counties.

Northwest Region – Becker, Beltrami, Cass, Clay, Clearwater, Crow Wing, Douglas, Grant, Hubbard, Kittson, Lake of the Woods, Mahnommen, Marshall, Morrison, Norman, Otter Tail, Pennington, Polk, Pope, Red Lake, Roseau, Stevens, Todd, Traverse, Wadena and Wilkin counties.

Southeast Region – Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha and Winona counties.

Southwest Region – Big Stone, Blue Earth, Brown, Chippewa, Cottonwood, Faribault, Jackson, Lac Qui Parle, Le Sueur, Lincoln, Lyon, Martin, Murray, Nicollet, Nobles, Pipestone, Redwood, Rock, Sibley, Swift, Waseca, Watonwan and Yellow Medicine counties.

Minnesota Planning Regions



Source: MN Department of Employment and Economic Development

Minnesota Resident Population		
Minnesota Region	2010 Census Count	% of Minnesota
7 County MSP	2,849,567	53.7%
Central	684,001	12.9%
Northeast	326,225	6.2%
Northwest	553,805	10.4%
Southeast	494,684	9.3%
Southwest	395,643	7.5%
Minnesota	5,303,925	100.0%

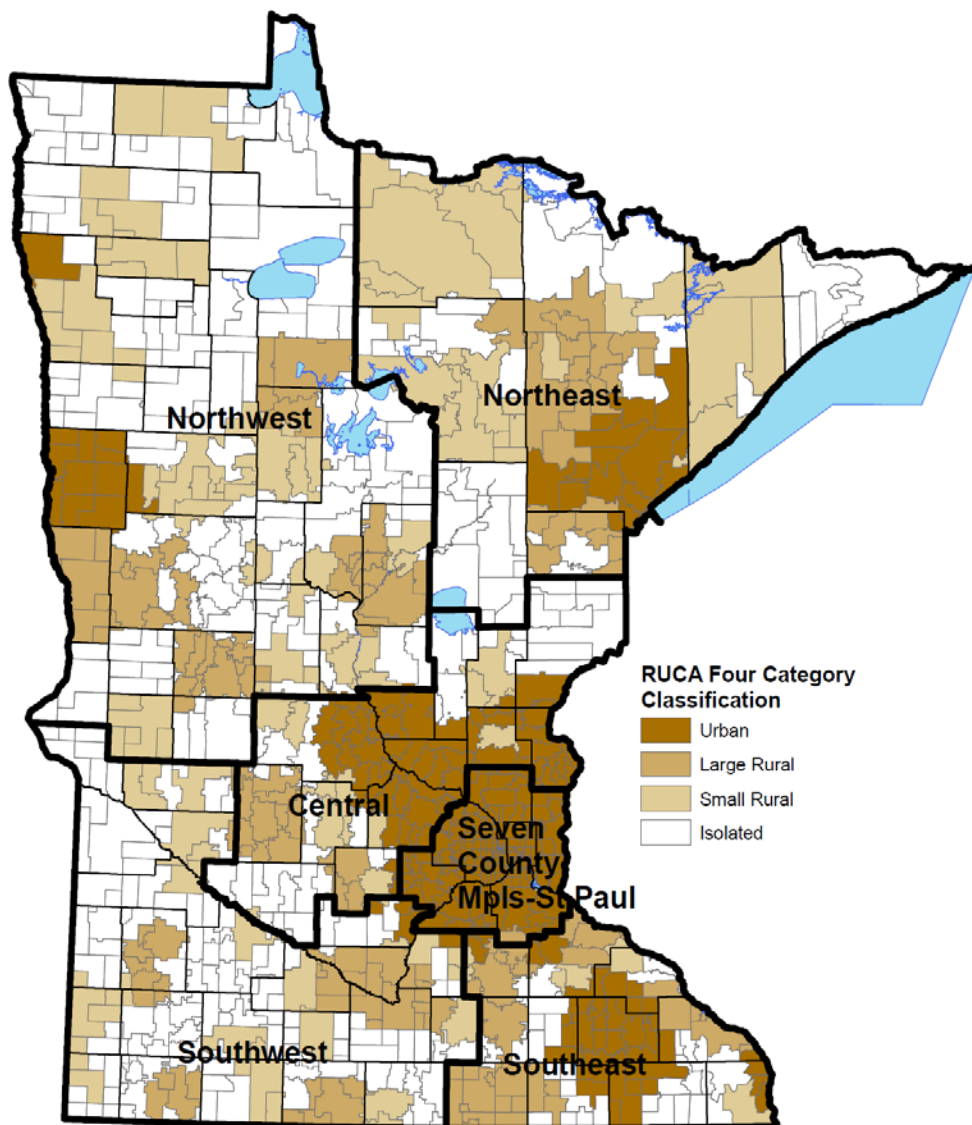
Source: U.S. Census Bureau

Rural-Urban Commuting Areas

For some APRN workforce results, knowing how a profession is distributed along an urban-rural continuum provides information that is more locally meaningful. This report utilizes the Rural-Urban Commuting Areas (RUCAs) taxonomy to indicate the *rurality* of local settings. RUCA categories are based upon the size of settlements and towns, as described by the Census Bureau, and the commuting distance for work flows between places as measured at the census tract-level. For example, a small town with the majority of commuting to a large city is distinguished from a similarly sized town where there is commuting to other small towns.

The Washington, Wyoming, Alaska, Montana, Idaho Center for Workforce Studies (WWAMI) at the University of Washington modified RUCA taxonomy to categorize on the basis of local postal Zip codes in addition to census tracts. RUCAs as reported here are aggregated into four area categories: *urban*, *large rural*, *small rural* and *isolated rural*. These categorical descriptions may apply to finite local areas, portions of counties, or clusters of counties. For example, the seven-county Minneapolis St. Paul metropolitan area is classified as almost entirely *urban*; the area surrounding the city of Marshall is an example of *large rural*; Roseau and surrounding area is classified as *small rural*; and all of Cook County exemplifies an *isolated rural* area. Whenever one of these terms appears in the report, it refers to the RUCA taxonomy as a point of reference. A shortcoming of the RUCA taxonomy is the lack of familiar map geography. To avoid confusion, the report presents both regional and RUCA points of reference. Population estimates for each RUCA category were

Rural-Urban Commuting Areas Zip Code Approximation - Minnesota



made by aggregating Zip code specific population estimates made by Claritas for 2003. Claritas population estimates were matched with the Zip codes mapped into each Minnesota RUCA as defined by WWAMI.

Appendix C: Data Collection Methods

Minnesota Board of Nursing Licensing Data – Data for this report originates from two sources, the Minnesota Board of Nursing licensing system and the Minnesota Department of Health Office of Rural Health and Primary Care (MDH-ORHPC) registered nurse survey. Information for all registered nurses licensed to practice in Minnesota originates with the Board of Nursing and is shared with the Minnesota Department of Health to meet statutory requirements.

Advanced practice registered nurses are required to renew their licenses to practice every two years and it is at that time each licensee has the opportunity to respond to the MDH-ORHPC registered nurse survey. MDH received licensing information for this report in April 2010 and it is an enumeration of all registered nurses renewing their license from the previous two years. In the event nurses renewed their licenses twice within the two-year renewal cycle, the most recent information provided was used for this analysis. The licensing data were de-duplicated then edited for geographic as well as Zip code accuracy.

ORHPC Registered Nurse Workforce Survey – Pursuant to Minnesota Statutes 144.051-144.052, 144.1485 and 314.01, the Minnesota Department of Health presents a workforce questionnaire to all nurses renewing their licenses. Newly licensed nurses are not surveyed until the date of their first license renewal. The Minnesota Department of Health intends that the survey represent an enumeration of the workforce instead of a sample. The number of survey responses for each of the APRN professions, in total and for those with Minnesota mailing addresses only, is displayed below.

APRN MDH Survey Response Counts at License Renewal				
Total MN Licensed APRN Workforce	No Survey Response	Yes Survey Response	Total	Response Rate
Nurse Practitioners	952	1,577	2,529	62.4%
Clinical Nurse Specialists	134	318	452	70.4%
Nurse Anesthetists	611	893	1,504	59.4%
Nurse Midwives	85	116	201	57.7%
Total License Renewals	1,782	2,904	4,686	62.0%
APRN Workforce with Minnesota Mailing Address	No Survey Response	Yes Survey Response	Total	Response Rate
Nurse Practitioners	784	1,396	2,180	64.0%
Clinical Nurse Specialists	120	292	412	70.9%
Nurse Anesthetists	534	798	1,332	59.9%
Nurse Midwives	73	106	179	59.2%
Total License Renewals	1,511	2,592	4,103	63.2%

Source: License counts Minnesota Board of Nursing Workforce Survey MDH-ORHPC

The Survey Response Counts Table indicates that not all APRNs renewing their license are responding to the survey. Furthermore, another important caveat to note is that, when the label *No Survey Response* appears in a results table in this report, it means that the licensee did not respond to the MDH workforce survey, or did not respond to the specific question of interest within the survey. MDH is working with each of the licensing boards to improve survey completion compliance.

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