

# Minnesota's Advanced Practice Registered Nurse Workforce

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# Introduction to Minnesota's Advanced Practice Registered Nurse Workforce (APRN)

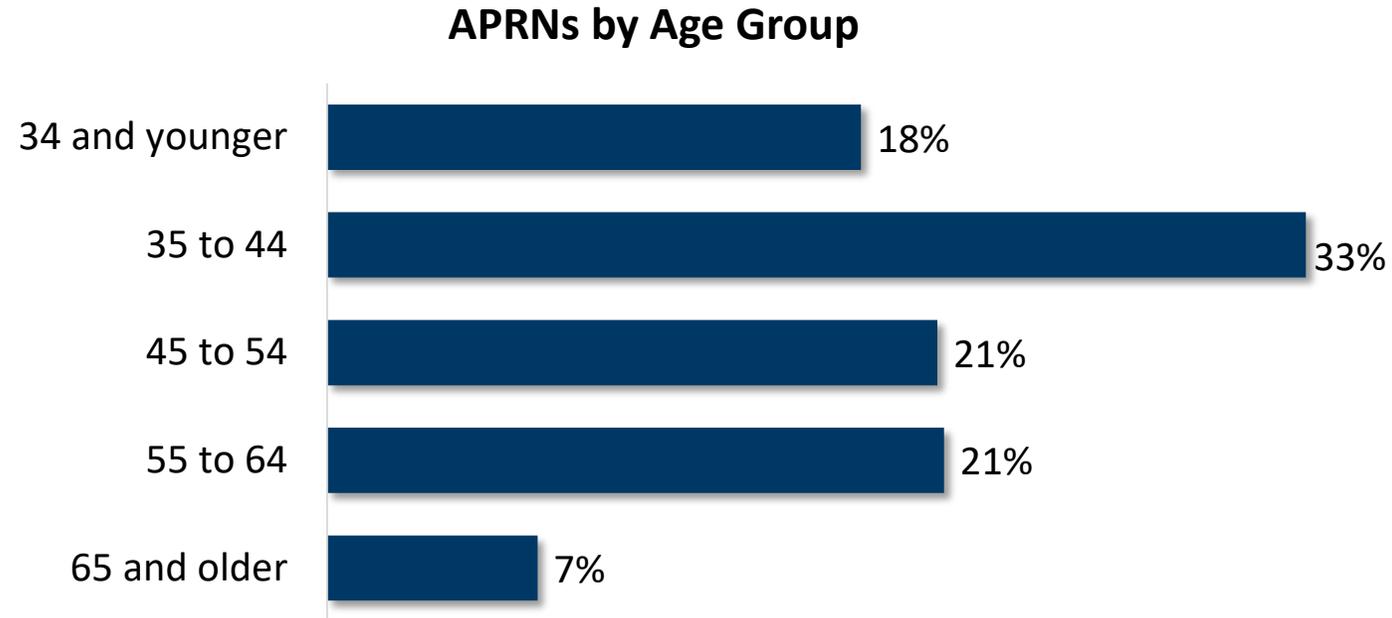
- The Minnesota Department of Health collects information on the licensed health care workforce per state laws (Minnesota Statute [144.051-0.052](#), [144.1485](#)). Data are collected during the license renewal process in coordination with state health licensing boards and used to inform healthcare workforce policy discussions, and planning and designing health workforce programs, such as Minnesota's loan forgiveness program.
- Advanced Practice Registered Nurses (APRNs) are an important segment of the health care workforce, delivering primary and specialty care. APRNs are a subset of Registered Nurses (RNs) who have advanced their education by earning a master's, post-master's, or doctorate in a specific role and population focus to become licensed as Certified Nurse Practitioners (CNPs), Clinical Nurse Specialists (CNSs), Certified Nurse Midwives (CNMs) and/or Certified Registered Nurse Anesthetists (CRNAs). In 2015, the Minnesota Legislature enacted legislation providing full practice authority to APRNs allowing them to practice independently without supervision by a physician.
- There were **8,849** APRNs actively licensed in Minnesota as of May 2019. Of those, 6,014 listed a practice address in Minnesota, 1,218 were employed outside Minnesota, and another 1,617 listed no practice address and could not be assigned to a geographic location.
- Of the 8,849 actively licensed APRNs, 6,217 responded to the 2017-2018 MDH questionnaire resulting in a 70 percent response rate. Based on the survey responses, one percent reported not working as APRNs, but continue to maintain active licenses as RNs, making them still part of the Minnesota health care workforce. See more about our [data and methodology](#).

# Highlights

- As of May 2019, there were **8,849** actively licensed APRNs in Minnesota ([see slide 6](#)), the majority of whom work in the Twin Cities region ([slide 25](#)).
- Most APRNs are certified as CNPs comprising 66 percent of the workforce followed by CRNAs at 24 percent, CNSs at 6 percent and CNMs at 4 percent.
- After APRNs were granted the authority to practice independently in Minnesota in 2015, the number of licensed APRNs shot up from 6,100 previously reported in 2014 to 8,849 as of 2019, a 31 percent increase.
- APRNs are younger overall ([slide 6](#)) with more than half the practitioners under the age of 45 and most planning to practice for at least another ten years ([slide 15](#)).
- Rising numbers of newly licensed APRNs entering the field places them in a position to partially fill the gap left by retiring physicians. In 2015, almost a quarter of [physicians reported plans to leave the field in the next five years](#).
- Growing numbers of APRNs entering the field have increased the supply of new APRNs, but there are still big differences in the geographic distribution of APRNs across the state ([slide 24](#)). The majority of APRNs remain concentrated in the Twin Cities Metro area and the southeast region, most likely drawn to both the larger hospital systems and the Mayo Clinic.

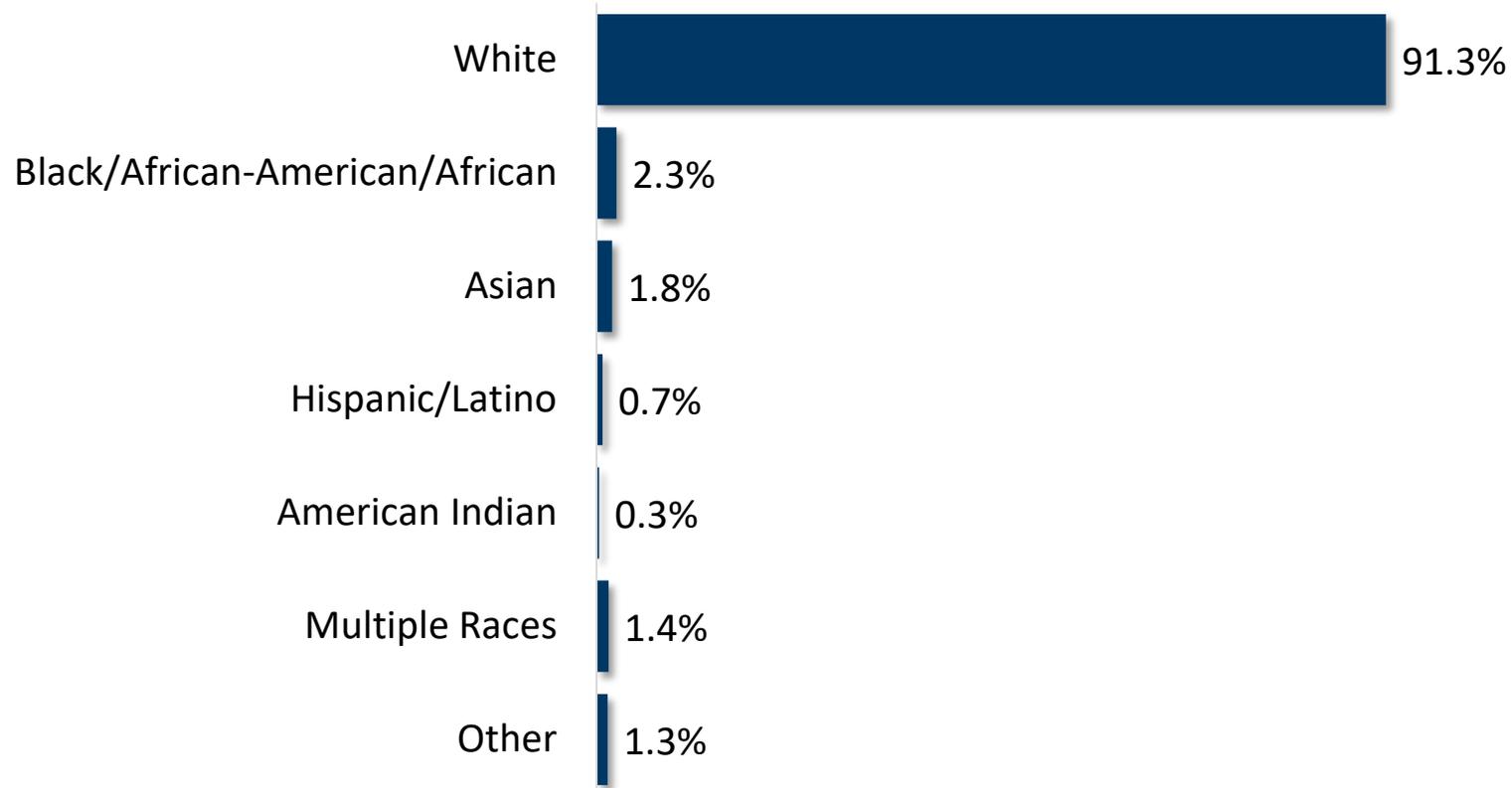
# Demographics

# Sex and Age



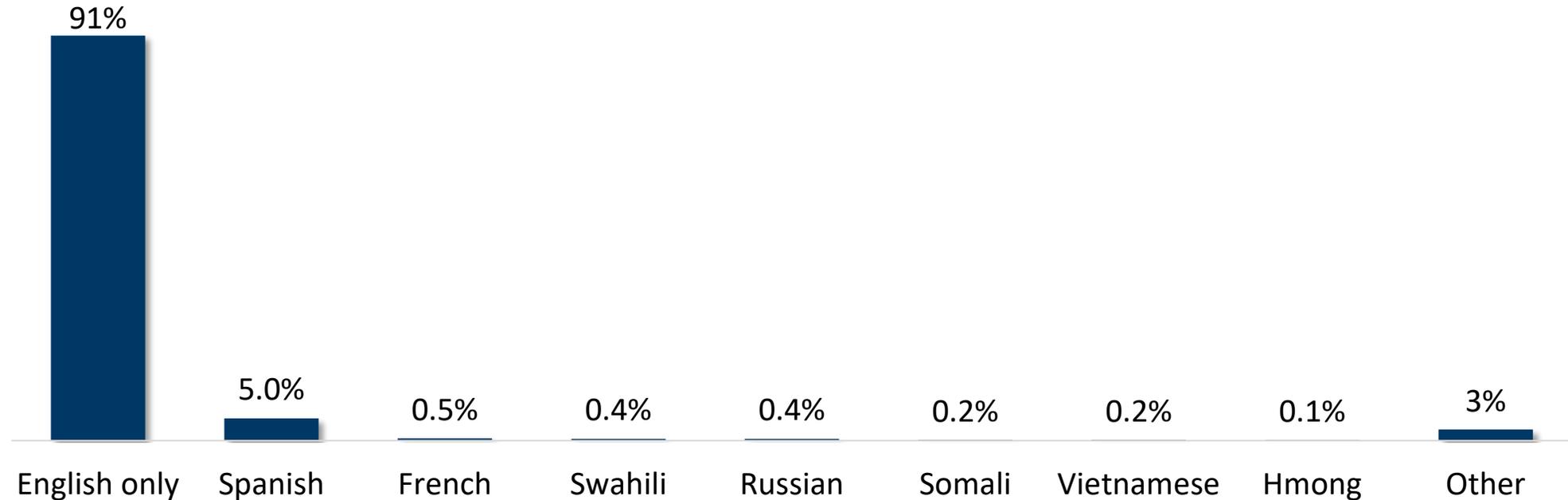
- The median age of APRNs is 44. As a group, APRNs are younger than Minnesota physicians (median age, 50) , but older than the state’s health workforce overall (41 years).
- Health care providers are predominantly female, and this is true for APRNs as well. Approximately 85 percent of all Minnesota APRNs are female. (data not shown)
- Overall, there are more male APRNs (15 percent) compared to the rest of the nurse workforce. Only seven percent of Licensed Practical Nurses and nine percent of RNs are male. The larger percentage of men in the APRN workforce is mostly due to the 41 percent of CRNAs who are male. (data not shown)
- The growing share of younger APRNs entering the field is good news for Minnesota as more physicians retire and delivery models rely on team-based care including Physician Assistants and APRNs.

# Race and Ethnicity



- The majority (91 percent) of APRNs indicated they were white, followed by Black/African American/African and Asian.

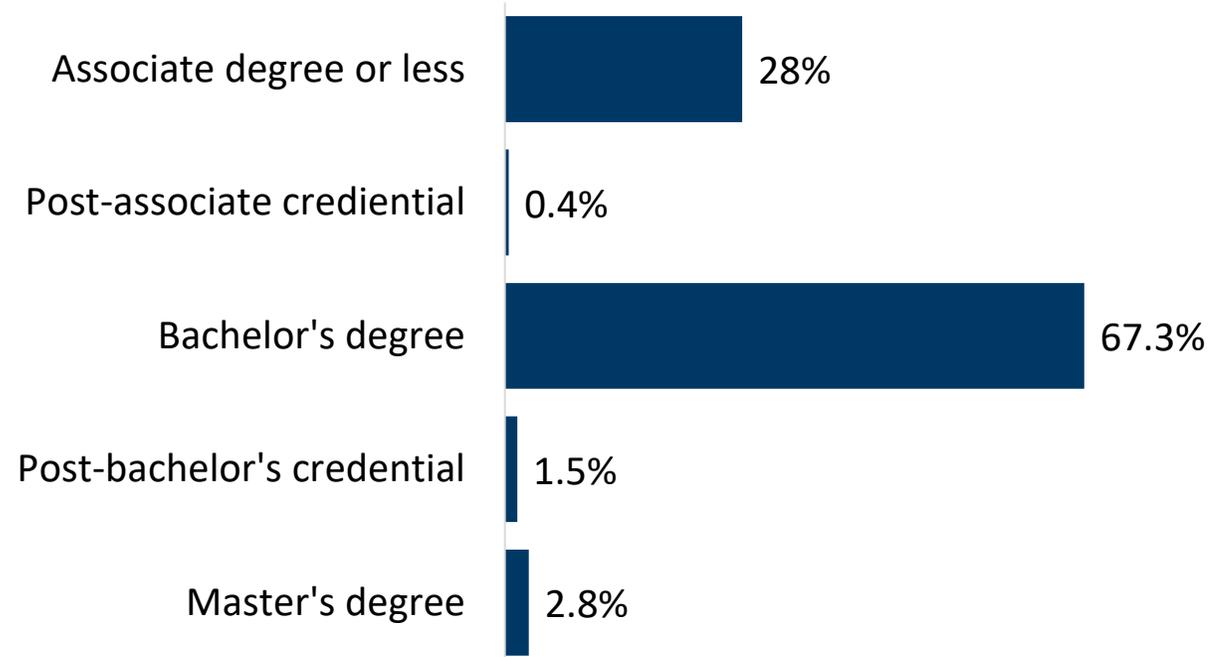
# Languages Spoken in Practice



- Not unlike other health care providers, a majority of APRNs only speak English in their practice. The second most commonly spoken language was Spanish. The remaining three percent of APRNs who spoke other languages reported speaking French, Swahili, Russian, Vietnamese, Hmong, Somali or some other language with their patients.
- Some of more frequently spoken languages listed as “other” were German , Hindi, Tagalog (Filipino), Wolof (West Africa).

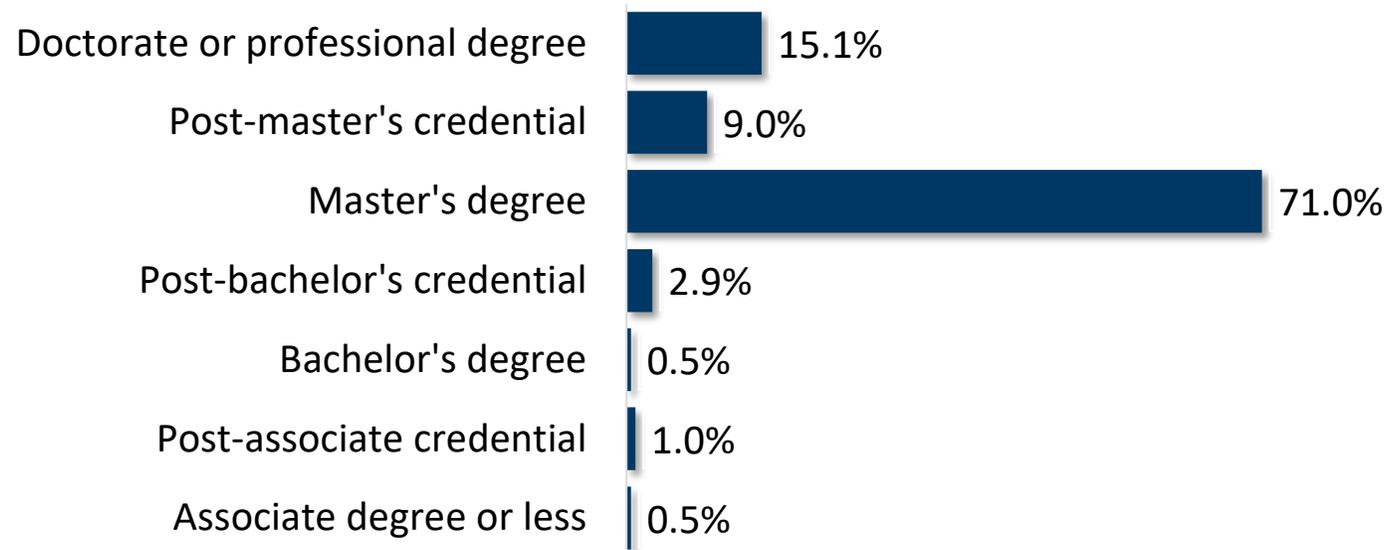
# Education

# Initial Educational Attainment



- APRNs were asked about the type of degree or credential they first obtained to practice as a nurse. Unlike other health professionals with advanced professional degrees, an associate or bachelor's degree in nursing can serve as a career ladder for many seeking to become an APRN.
- Most APRNs reported earning a bachelor's degree (67 percent) qualifying them for their first nursing license, while another 28 percent earned an associate degree or other type of certificate such as a hospital diploma.
- Among APRNs who reported earning a bachelor's degree, 99 percent also reported the bachelor's degree was in nursing.

# Highest Educational Attainment



- Historically, the completion of a diploma, certificate, or bachelor's degree was required of APRNs to practice (see previous slide). The advanced educational credentials such as master's and doctorates have become the standard for entry to practice as an APRN. APRNs today must have a master's degree for licensure in Minnesota.
- Ninety-five percent of Minnesota's APRNs have a master's degree or higher. More APRNs (15 percent) reported obtaining a professional or doctorate degree (up from 3 percent in 2014).
- Most APRNs earned their highest degree in Minnesota (61 percent), followed by the border states of North Dakota at 7 percent, Wisconsin at 6 percent, South Dakota at 3 percent, Iowa at 2 percent (data not shown).

# Education: Minnesota Graduates

APRN Program Graduates\*, by Year 2013-2017

	Region	Institution	2013	2014	2015	2016	2017
Clinical Nurse Specialists	Arrowhead	College of Saint Scholastica	2	1	0	0	0
Nurse Anesthetists**	Southeast	Mayo School of Health Sciences	26	24	25	25	23
	Southeast	Saint Mary's University of Minnesota	59	59	58	57	65
Nurse Midwives	7-County Twin Cities	Bethel University	0	0	0	10	7
Nurse Practitioners***	7-County Twin Cities	St. Catherine University	27	40	37	52	46
	7-County Twin Cities & Southeast	Augsburg College	9	47	27	17	23
	7-County Twin Cities	University of Minnesota-Twin Cities	22	23	27	21	32
	7-County Twin Cities	Metropolitan State University	32	33	11	14	19
	Arrowhead	College of Saint Scholastica	52	49	51	43	26
	Southeast	Winona State University	29	24	17	29	27
	West Central	Minnesota State University-Moorhead	1	1	0	0	0
	South Central	Minnesota State University-Mankato^	27	10	12	16	13
Total			286	311	265	284	281

- In 2017, Minnesota produced **281 new graduates** across all the APRN programs, a slight drop from the previous year. State schools have experienced a gradual decline in the number of graduates over several years compared to private institutions.
- As noted before, registered nurses who train to become APRNs have an expanded scope of practice in at least one of four recognized advanced nursing practice roles: Nurse Anesthetist, Nurse Midwife, Clinical Nurse Specialist and Nurse Practitioner.

\*Educational institutions participating in federal financial assistance programs are required to report these data to the National Center for Education Statistics. Some graduate numbers or programs may not be included in the data because of coding error or non-participation.

\*\*Minneapolis School of Anesthesia offers a twenty-seven month program in nurse anesthesia and is not included in the data.

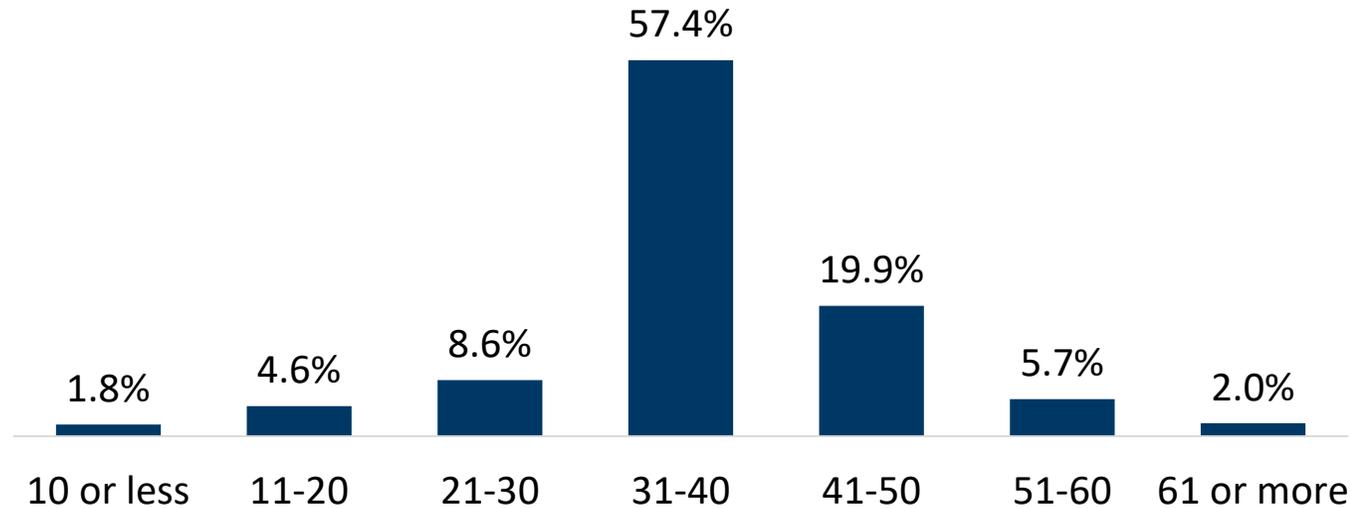
\*\*\* The headquarters of Walden University is in Minneapolis and has a nurse practitioner program. In 2017-2018, Walden reported 4,439 NP graduates located throughout the country, not just Minnesota.

^Reported as of September 2019 by Minnesota State University – Mankato.

# Employment

# Hours Worked

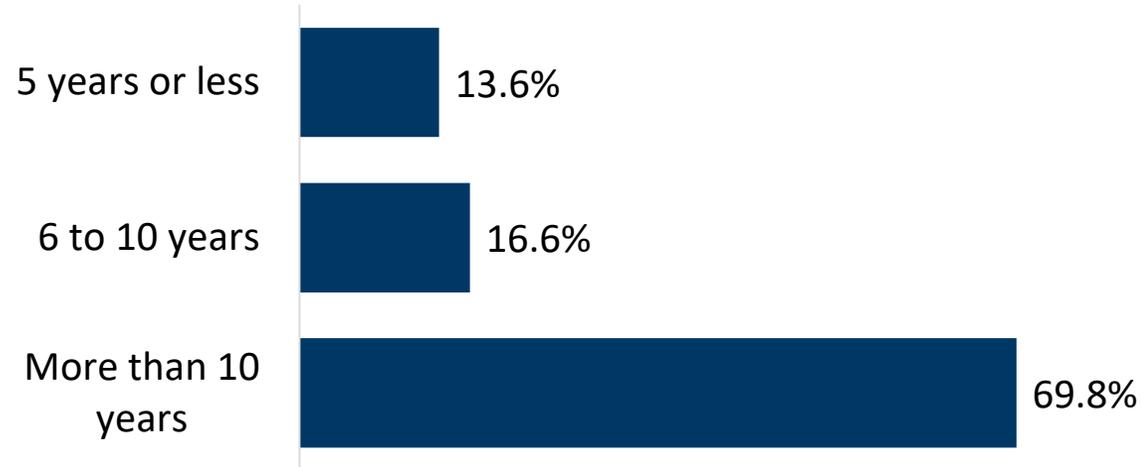
## Hours Worked in a Typical Week



- The median work week for APRNs was 40 hours, and more than half of APRNs worked between 31 and 40 hours per week. Moreover, 28 percent of APRNs reported working 41+ hours in a typical week.
- An estimated 97 percent of licensed APRNs reported on the MDH questionnaire that they were “working in a paid or unpaid position related to [their] license.” This indicates that the vast majority of the APRN workforce is working in the field. (data not shown).
- In addition, APRNs spent the majority of their time caring for patients. Eighty-eight percent reported that they spent more than half of their time providing direct patient care. This is another indication that APRNs are being fully utilized professionally (data not shown).

# Future Plans

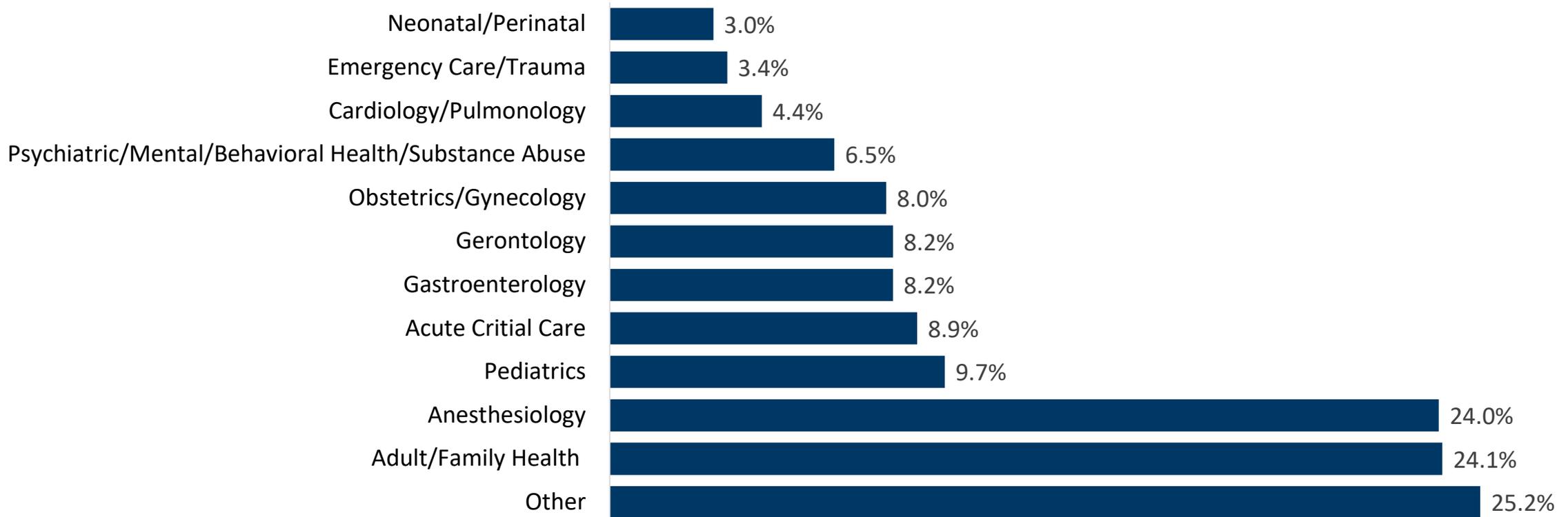
**“How long do you plan to continue practicing as an Advance Practice Registered Nurse in Minnesota?”**



- When asked about future plans, 70 percent of APRNs said they were planning to practice more than 10 years. This is up from 64 percent reported in 2014 and is indicative of the growing number of APRNs entering the profession. Sixty-seven percent of APRNs under the age of 45 were planning to practice for more than 10 years. (data not shown).
- Fourteen percent of APRNs indicated that they planned to leave the field within five years. Of those planning to leave, the vast majority (88 percent) said they planned to retire. Only 4 percent of this sub-group (or 34 APRNs) planned to leave the field due to burnout or dissatisfaction, while 2 percent said they planned to pursue a different career, and another 2 percent planned to leave to pursue training to advance in their current or a related profession. The remaining 4 percent reported leaving due to family or other personal reasons.

# At Work

# Specialties



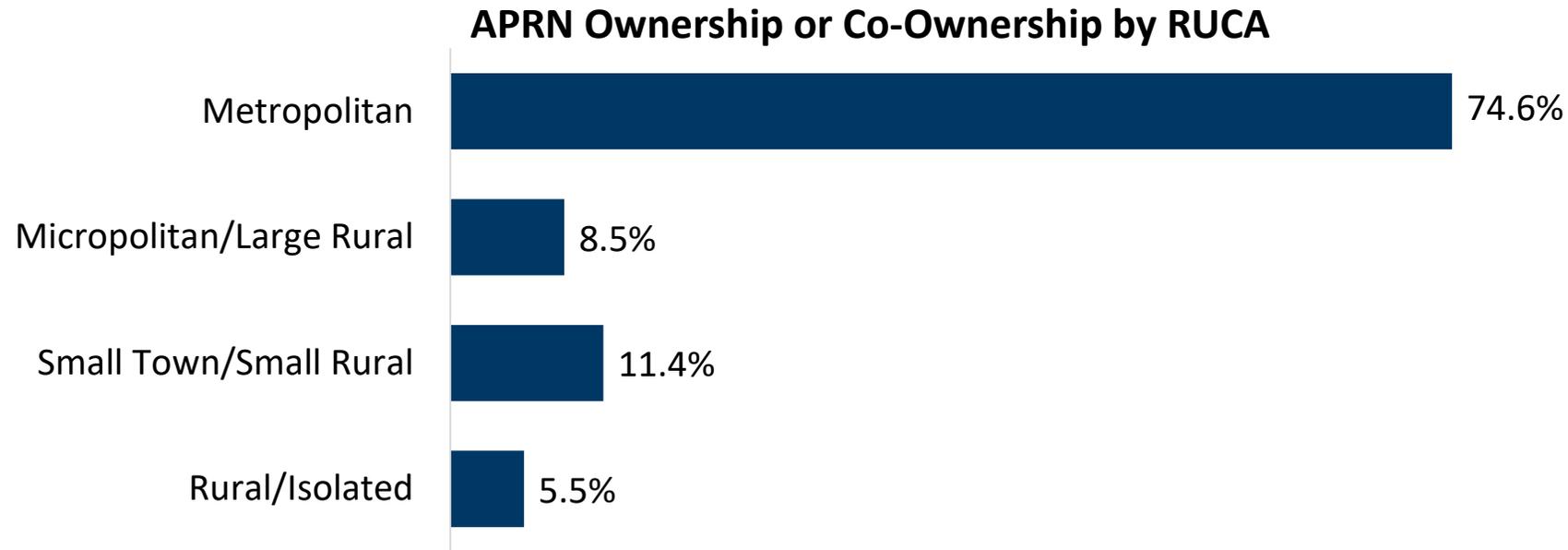
- The questionnaire asked APRNs to identify all the medical specialties they practiced. As shown above, Adult/Family Health and Anesthesiology were the most commonly reported specialties among APRNs, with 24 percent identifying each area as their specialty.
- Among APRNs who reported anesthesiology as their specialty, 99 percent were CRNAs.
- The largest share of APRNs reported they had another specialty not included in the selection list. Based on open-ended responses, APRNs' most common "other" specialties were family medicine or family practice, wound care, urgent care, nurse midwifery and palliative care.

# Primary Work Settings

<b>Primary Setting</b>	<b>Share of APRNs Working in this Setting</b>
<b>Clinic/Professional Office/Health Center/Ambulatory Care</b>	48.0%
<b>Hospital</b>	37.8%
<b>Academic (Teaching/Research)</b>	7.0%
<b>Long-Term Care Facility</b>	2.1%
<b>Community/Faith-Based Organization</b>	1.0%
<b>Home Health Care</b>	0.5%
<b>Public Health Agency</b>	0.4%
<b>School (Pre-K to 12)</b>	0.3%
<b>State, County or City Agency</b>	0.3%
<b>Correctional Facility</b>	0.2%
<b>Other</b>	2.4%

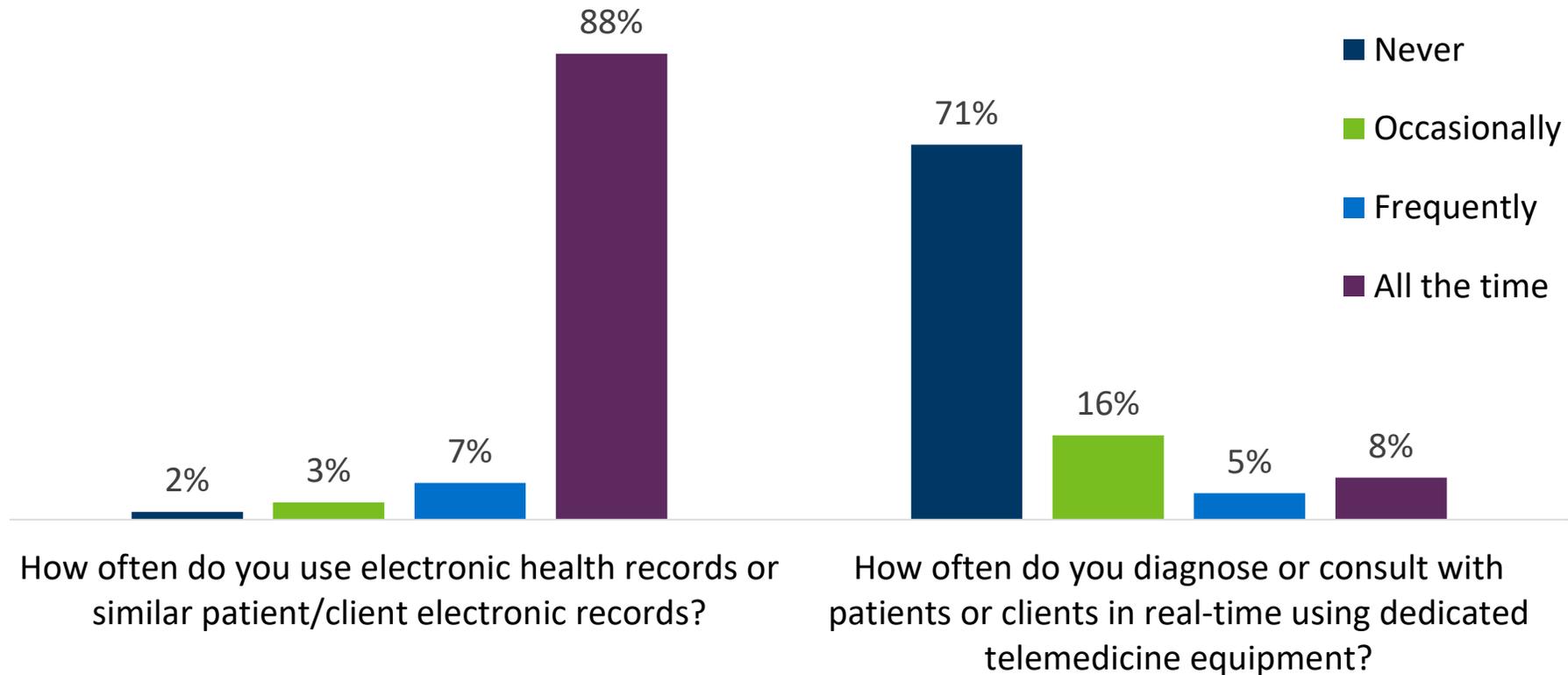
- APRNs were asked to identify their primary work setting. Most APRNs described working in either a clinic or hospital setting (86 percent).
- When APRNs were asked about the number of physical locations where they worked, 51 percent reported working in one location; 27 percent reported splitting their time across two locations, and another 22 percent said they worked at three or more different locations. (data not shown)

# Owning or Co-Owning a Private Practice



- Overall, 4.8 percent of APRNs reported owning or co-owning an individual or group private practice. (data not shown)
- Among APRNs who reported owning or co-owning an individual or group private practice, 25 percent were located in some part of rural Minnesota while the rest were located in Metropolitan areas (75 percent) with only 1 percent not reporting a practice location.
- Of the 25 percent of APRNs who reported owning or co-owning a private practice in some part of rural Minnesota, 55 percent were CRNAs, 37 percent were CNPs, 6 percent were CNMs, and 2 percent were CNSs. (data not shown)
- CRNAs were more likely to report owning or co-owning their own practice (56 percent), followed by CNPs at 33 percent, CNS at 8 percent and CNMs at 3 percent. (data not shown)

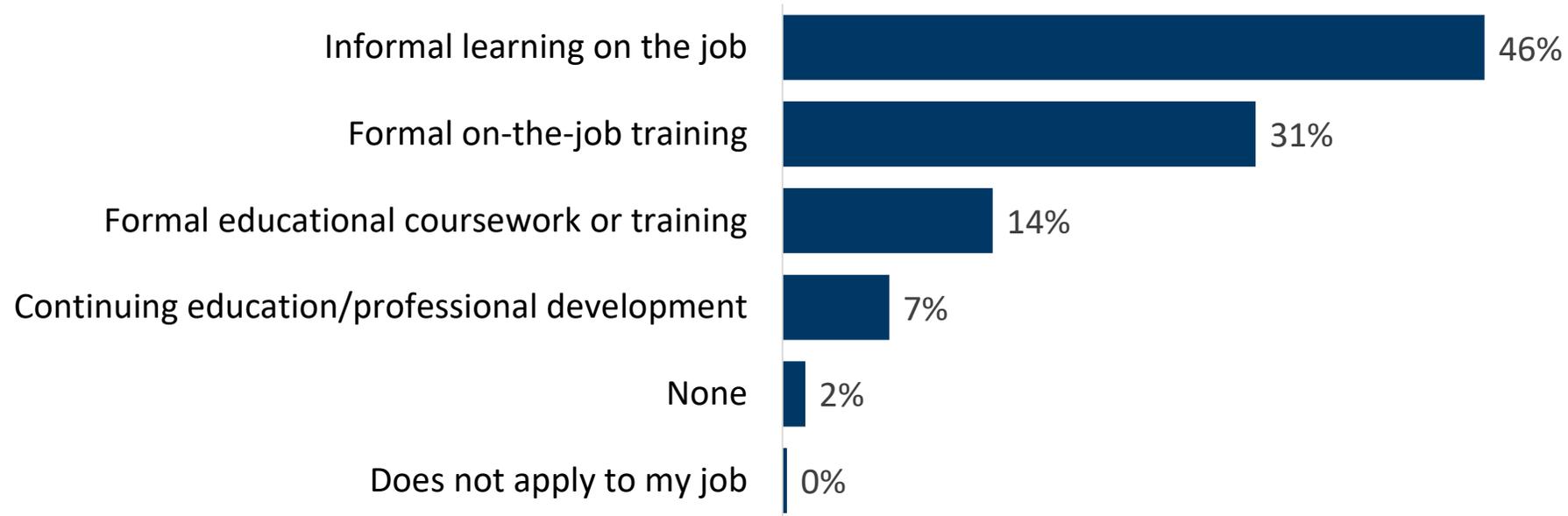
# EHRs and Telemedicine



- The 2017-2018 questionnaire included items about the use of both electronic health records (EHRs) and dedicated telemedicine equipment. Among APRNs who reported seeing patients, the results showed a majority of APRNs use EHRs “all the time” (88 percent).
- When asked how often telemedicine is used to deliver patient care, most APRNs reported **not** using telemedicine equipment in their practice (71 percent).

# Teamwork

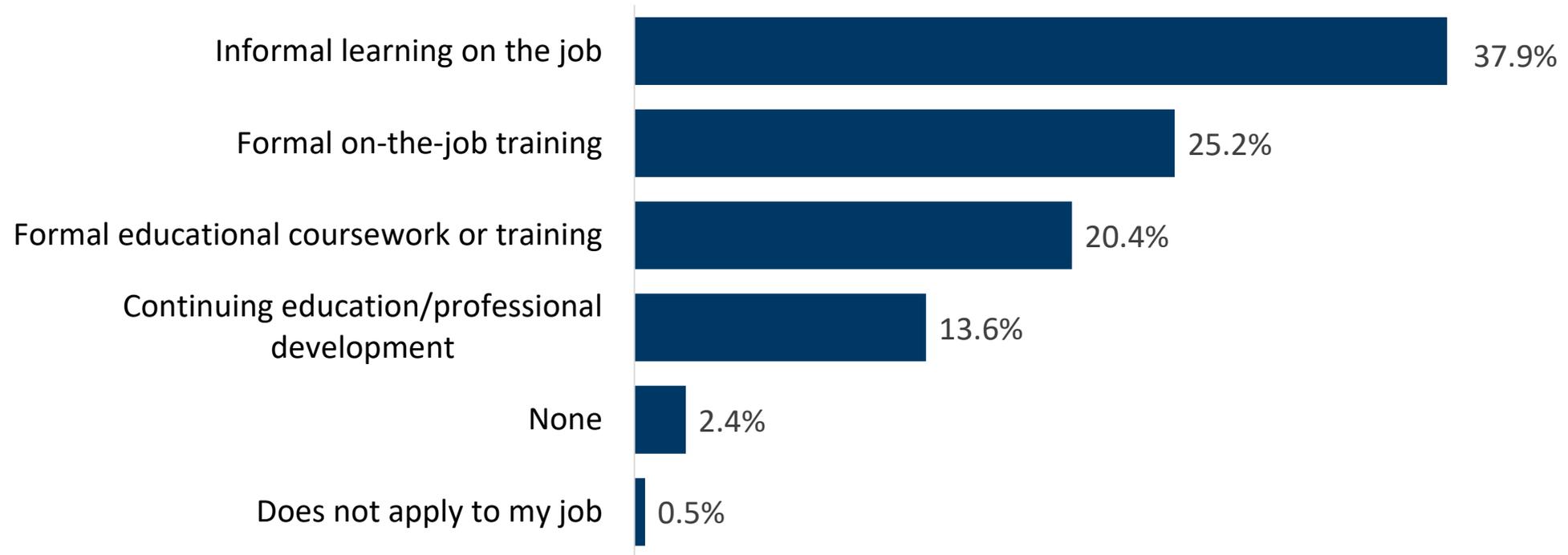
“Which of the following work or educational experiences best prepared you to work in a multidisciplinary team when providing care?”



- Health care providers increasingly work in multidisciplinary teams, prompting educators and health policymakers to ask how best to train providers to communicate and coordinate across professions. In 2016, MDH added a question to the workforce survey about multidisciplinary team work. As shown above, 77 percent of APRNs reported that learning on the job (either informal or formal) **best** prepared them to work in multidisciplinary teams.

# Cultural Competence

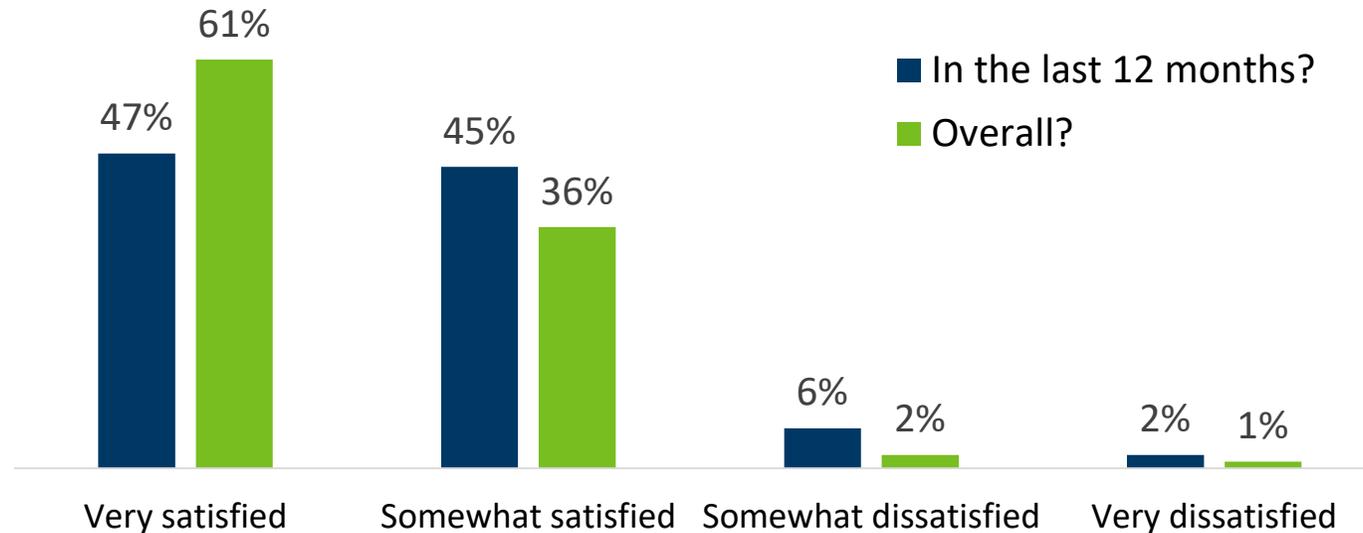
**“Which of the following work or educational experiences best prepared you to provide culturally competent care?”**



- A question about the best way to prepare the health care workforce to provide “culturally competent” care was also added to the survey. As shown above, APRNs most commonly indicated that formal or informal learning *on the job* (63 percent) provided the best preparation for working with diverse groups of patients.

# Career Satisfaction

How satisfied have you been with your job....

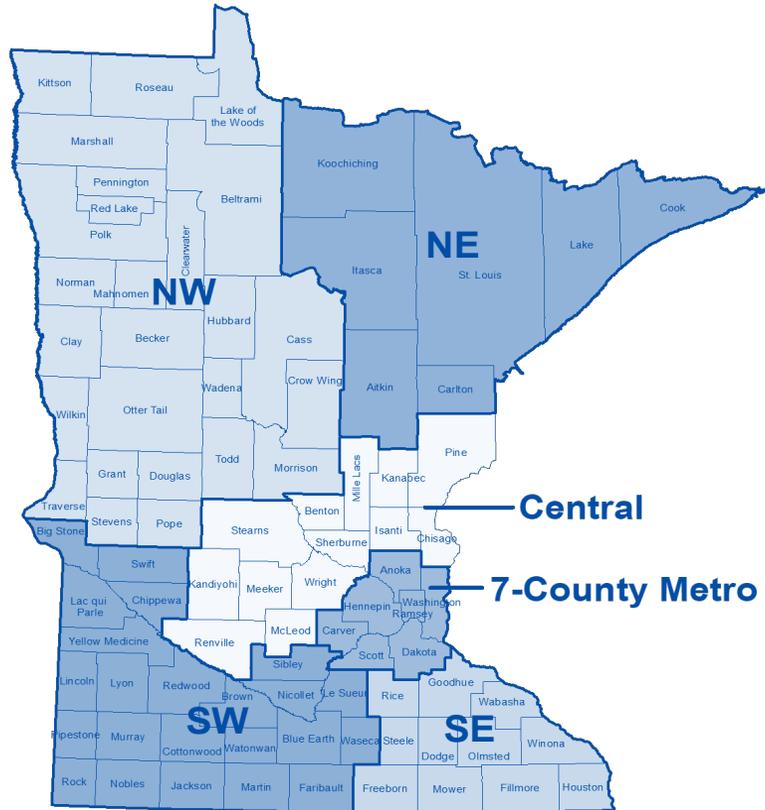


- Questions on career satisfaction in the past 12 months and overall were added in 2016. As shown above, the majority of APRNs reported being either “somewhat satisfied” or “very satisfied,” in the past 12 months and overall. Two-thirds of APRNs were more likely to report being very satisfied with their career overall compared to the last 12 months—a trend typical among other health care professionals for whom work satisfaction data is available. This is consistent with national findings which suggest that the increase in administrative work—such as dealing with billing, insurance, and electronic medical records—has dampened work satisfaction among health care providers.

# Geographic Distribution

# Two ways to present geography

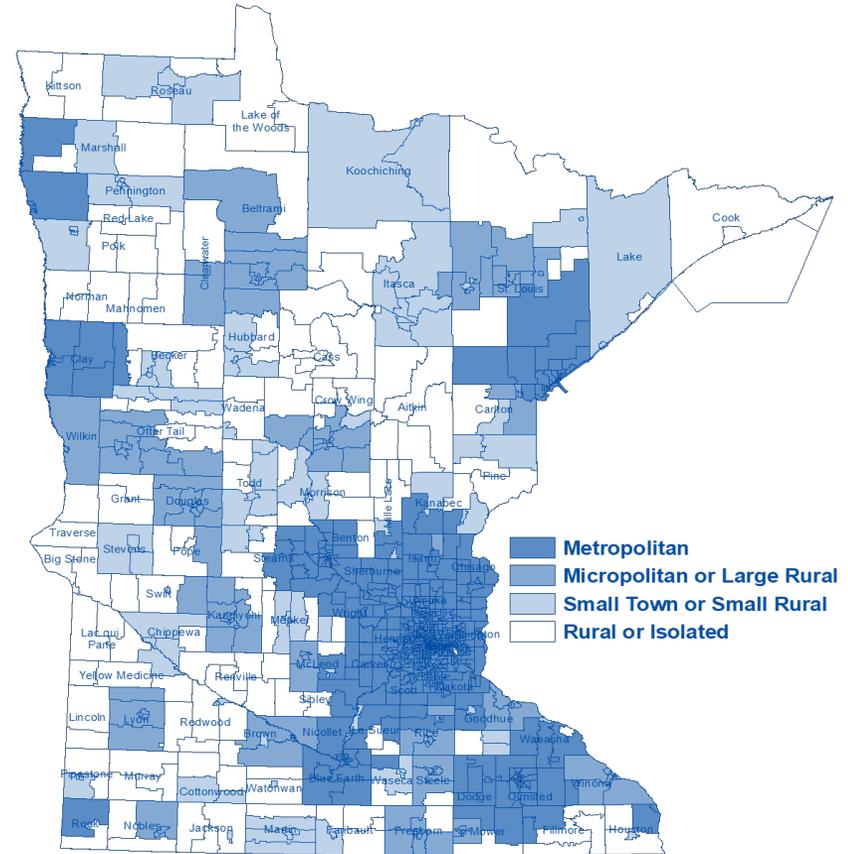
By state planning areas



For more information:

<https://apps.deed.state.mn.us/assets/lmi/areamap/plan.shtml>

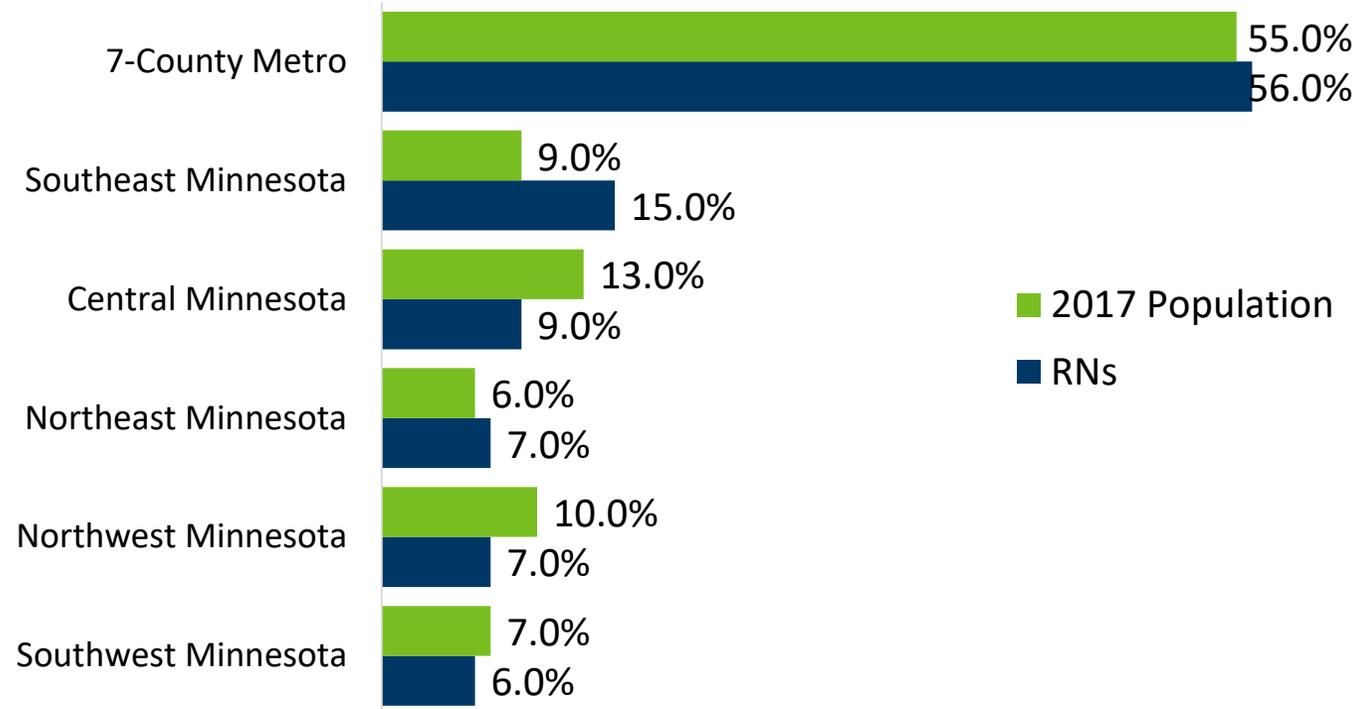
By rural-urban commuting regions (RUCAs)



For more information:

<https://www.health.state.mn.us/data/workforce/method.html#ruca>

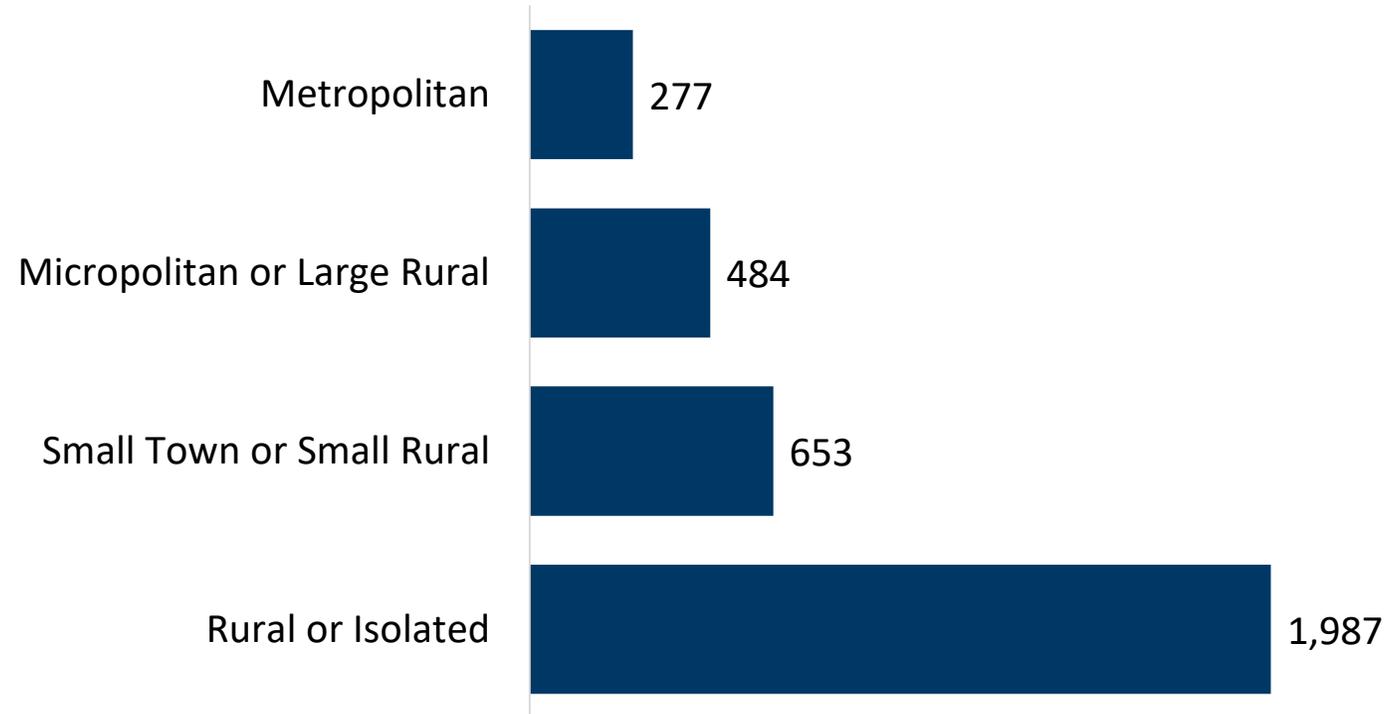
# By Planning Area



- Over half of all APRNs work in the 7-County Metro area, with another 19 percent in the Southeast region, likely reflecting the presence of the Mayo Clinic in Rochester, a large health care employer.
- With the exception of the Northeast region, the Central, Northwest, and Southwest regions all have smaller percentages of APRNs relative to the population residing there, indicating there may be an unmet need for APRNs.

# By Rurality

Minnesota Population-to-APRN Ratio, by Level of Rural Urban Commuting Area



- The chart below provides another view of the geographic distribution of APRNs, showing the share of the population for every one APRN in urban, large rural, small rural, and isolated rural areas. As shown, there were 277 people for every one APRN in urban areas of Minnesota, compared to almost **7 times** that many in the most rural areas of the state. This pattern is typical of other health care professions, and reflects the relative inaccessibility of care in sparsely populated areas of Minnesota.

# Methodology

The data in this report come from two sources:

- The **Minnesota Board of Nursing (MBN)** provides data on the entire population of Advanced Practice Registered Nurses (APRNs) who have active licenses in the state of Minnesota. MBN maintains this database and provides the data to the Minnesota Department of Health, Office of Rural Health and Primary Care (MDH ORHPC). This report uses data current as of Jan 2019. At that time, there were a total of 8,849 APRNs with active Minnesota licenses, approximately 68 percent of whom indicated that their primary business address was in Minnesota. MDH ORHPC analysts clean, organize, clean, and geocode addresses that come from the board to identify practice locations (shown in Slides 24 and 25).
- The **2017-2018 MDH ORHPC APRN Questionnaire** collects additional demographic and workforce data from APRNs. MDH ORHPC administered the survey to all APRNs who renewed their Minnesota license in the calendar years of 2017-2018. A total of 6,217 responses to the workforce questionnaire were received; a response rate of 70.3 percent.
- See the ORHPC website for more details about the [methodology](http://www.health.state.mn.us/data/workforce/method.html) (www.health.state.mn.us/data/workforce/method.html) of survey.

# Notes

Visit our website at [Reports on Workforce](#) to learn more about the Minnesota health care workforce.

County-level data for this profession is available at [MN Health Professions by County Data](#)

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