

Office of Rural Health and Primary Care Health Workforce Analysis Program

Minnesota's Registered Nurses Facts and Data 2008

The Office of Rural Health and Primary Care (ORHPC) asks registered nurses to answer questions about their employment status and the nature of their practices each year when they renew their licenses. Response to the survey is voluntary and does not affect license renewal.

Numbers of Registered Nurses

As of June 2008, Minnesota had 77,950 licensed registered nurses (RN), a 19 percent increase since 2002. Not all of these RNs are actively working in Minnesota. Some are retired or not working as RNs, and some work or practice in other states. About 66,150 licensed RNs had Minnesota mailing addresses, but not all work in Minnesota.

Responses from the ORHPC survey make possible an estimate of the number of RNs actually working in Minnesota.

Based on survey responses and licensing data from the Minnesota Board of Nursing, the Office of Rural Health and Primary Care estimates about 56,700 RNs were practicing at least part time at Minnesota practice sites in 2007. Using the July 1, 2007, population estimate for Minnesota, 56,700 RNs equate to 1,091 active RNs per 100,000 people. For explanation of this estimate, see the methodological note at the end of this report.

The U.S. Bureau of Labor Statistics estimated 52,690 RN jobs in Minnesota in May 2007. This lower estimate equates to 1,013 RNs per 100,000 people, compared to a national figure of 818. Minnesota ranked eighth in the number of RNs per capita.

All data reported below is for RNs who worked at least part time at a primary practice site in Minnesota at the time they completed the survey.

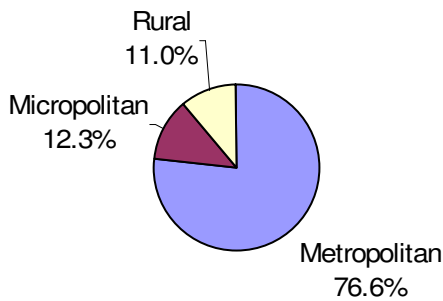


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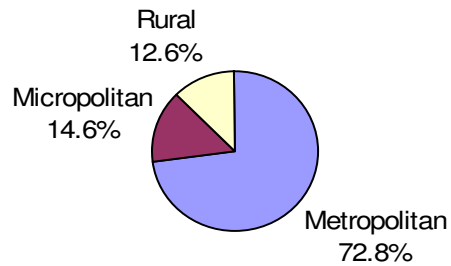
Geographic Distribution

- RN employment is somewhat concentrated in metropolitan area counties. Seventy-seven percent of RNs work in metropolitan counties, compared to 73 percent of the population living in metropolitan area counties.
- Eleven percent of RNs work in rural areas, which accounts for 13 percent of the state's population.

Geographic Distribution of RNs, 2006-08



Minnesota Population, 2007



| | <i>%</i> Population | <i>%</i> RNs |
|------------------------------|-------------------------------|------------------------|
| Metropolitan counties | 72.8% | 76.6% |
| Micropolitan counties | 14.6% | 12.3% |
| Rural | 12.6% | 11.0% |

Gender

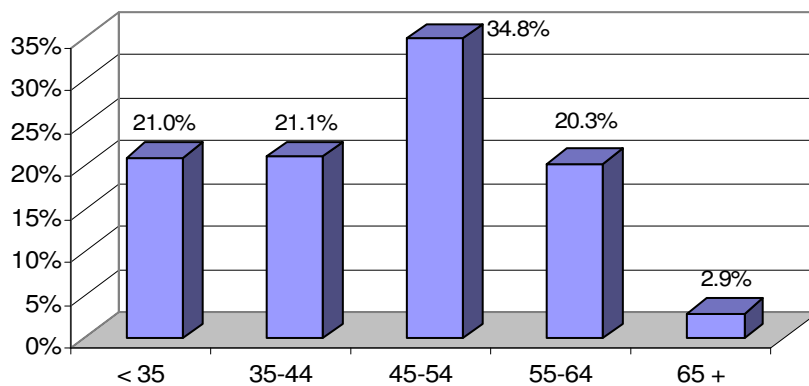
- More than 93 percent of RNs are female.
- Male RNs are somewhat more common in metropolitan area counties and urban areas, as well among RNs aged 35 to 44.

| AGE | N | % MALE | % FEMALE |
|---------------------|----------|---------------|-----------------|
| All RNs | 29,531 | 6.8% | 93.2% |
| Under 35 | 6,159 | 6.2% | 93.8% |
| 35-44 | 6,187 | 9.2% | 90.8% |
| 45-54 | 10,207 | 6.3% | 93.7% |
| 55-64 | 5,950 | 6.5% | 93.5% |
| 65 and older | 848 | 1.3% | 98.7% |
| Metropolitan | 22,494 | 7.4% | 92.6% |
| Micropolitan | 3,618 | 4.8% | 95.2% |
| Rural | 3,238 | 4.8% | 95.2% |

Age and Career Plans

- Twenty-three percent of RNs practicing at least part time in Minnesota are 55 or older. The median age is 47.5.
- RNs in micropolitan and rural counties are slightly older than RNs in metropolitan counties. The median age of micropolitan and rural area RNs is 48.5 and 48.3, respectively.
- The 2006-08 data suggest an increase in the percentage of RNs under age 35, and a small decrease in the percentage 65 and older. This may reflect recent growth in nursing training programs.

Age of Active Minnesota RNs, 2007



| Age Group | Statewide n = 29,351 respondents | Metropolitan n = 22,494 respondents | Micropolitan n = 3,618 respondents | (new) Rural n = 3,238 respondents |
|--------------------------------------|--|---|--|---|
| Median age (July 1, 2006) | 47.5 | 47.2 | 48.5 | 48.3 |
| Less than 35 | 21.0% | 21.8% | 18.5% | 17.9% |
| 35-44 | 21.1% | 21.3% | 20.0% | 20.9% |
| 45-54 | 34.8% | 34.6% | 35.5% | 35.5% |
| 55-64 | 20.3% | 19.7% | 22.9% | 21.1% |
| 65 and older | 2.9% | 2.6% | 3.0% | 4.6% |

Age as July 1, 2007, for RNs working at Minnesota sites at time of survey.

Eighteen percent of active RNs say they plan to continue practicing in Minnesota for five years or less. Sixty-one percent expect to work more than ten additional years in Minnesota. Work plans do not differ across metropolitan, micropolitan and rural RNs.

- Thirty-nine percent of RNs aged 55 to 64 expect to work five years or less, but 20 percent of nurses in this age group said they expect to work at least 10 more years.
- Twenty percent of RNs under age 35 said they plan to continue working five years or less as an RN in Minnesota. These RNs may be considering other career paths or moving outside Minnesota.

| | 0-5 years | 6-10 years | More than 10 years |
|--------------|-----------|------------|--------------------|
| All RNs | 18.1% | 21.3% | 60.6% |
| Under 35 | 20.2% | 10.1% | 69.7% |
| 35-44 | 6.2% | 9.4% | 84.5% |
| 45-54 | 6.6% | 24.7% | 68.7% |
| 55-64 | 39.1% | 40.8% | 20.1% |
| 65 and older | 81.5% | 10.6% | 7.9% |
| Metropolitan | 18.2% | 21.2% | 60.6% |
| Micropolitan | 18.0% | 21.5% | 60.5% |
| Rural | 18.1% | 21.3% | 60.6% |

Race

Minorities are underrepresented in Minnesota's nursing workforce.

- Ninety-five percent of RNs working at a Minnesota practice site are White; Less than five percent identify themselves as non-White.
- Minorities are only slightly more represented in metropolitan area counties than in micropolitan or rural counties.
- Black and Asian RNs are slightly more common in Hennepin and Ramsey counties than in the rest of the state.
- Minorities are somewhat more common among younger RNs.

| | N = 26,721 All RNs | Hennepin and Ramsey | Metropolitan counties | Micropolitan counties | Rural counties |
|---------------------------|-----------------------|------------------------|--------------------------|--------------------------|-------------------|
| White | 95.5% | 93% | 94.8% | 98.2% | 97.3% |
| Black | 1.3% | 2.3% | 1.6% | .1% | .4% |
| Asian/Pacific Islander | 1.4% | 2.3% | 1.8% | .1% | .7% |
| American Indian | .3% | .2% | .3% | .4% | .6% |
| Multiple Races | .5% | .7% | 1.0% | .3% | .3% |
| Hispanic | .5% | .7% | .5% | .4% | .4% |
| Other | .5% | .7% | .5% | .3% | .3% |

Respondents were allowed to select more than one category.

Education

- Sixty percent of actively practicing RNs hold an associate degree or other non-baccalaureate diploma.
- Forty percent of actively practicing RNs hold bachelors, post-baccalaureate, masters or doctorate degrees in nursing.
- Four-year bachelor's degrees are much more common among younger than older nurses. Fifty-five percent of nurses under age 35 report a bachelor's degree to be their highest degree, compared to only 32 percent of older nurses. Thirty-seven percent of RNs age 55 or older report a nursing school diploma as their highest nursing degree.
- Bachelors, masters and doctorate degrees are more common among metropolitan county nurses than among micropolitan or rural nurses. Forty-three percent of metropolitan nurses have at least a four-year degree, compared to 29 percent of rural nurses.

| | All RNs | Metropolitan | Micropolitan | Rural |
|----------------------------------|---------|--------------|--------------|-------|
| Nursing Diploma | 15% | 14% | 17% | 18% |
| Associate degree | 46% | 44% | 50% | 53% |
| Bachelor's Degree | 37% | 39% | 31% | 27% |
| Post-baccalaureate Degree | 1% | 1% | * | * |
| Master's Degree | 2% | 3% | 2% | 2% |
| Doctorate Degree | * | * | * | * |

* less than .5%.

| | Under 35 | 35-44 | 45=54 | 55-64 | 65 or more |
|----------------------------------|----------|-------|-------|-------|------------|
| Nursing Diploma | 1% | 4% | 14% | 33% | 61%% |
| Associate degree | 42% | 53% | 49% | 39% | 17% |
| Bachelor's Degree | 55% | 39% | 33% | 24% | 19% |
| Post-baccalaureate Degree | 1% | 1% | 1% | * | 1% |
| Master's Degree | 1% | 3% | 3% | 3% | 2% |
| Doctorate Degree | * | * | * | * | * |

| | % Trained in Minnesota |
|------------------------------|---|
| All RNs | 76% |
| Associate degrees | 86% |
| Bachelor's degrees | 66% |
| Metropolitan counties | 77% |
| Micropolitan counties | 77% |
| Rural counties | 76% |
| Age < 35 | 76% |
| Age 35-44 | 77% |
| Age 45-54 | 75% |
| Age 55-64 | 75% |
| Age 65 or more | 73% |

More than 75 percent of actively practicing RNs earned their highest nursing degree in Minnesota. The percentage varies little by age or geographic region. Most RNs with only associate degrees earned their degree in Minnesota, while one-third of bachelor's degree nurses earned their degrees outside Minnesota.

Types of Practice Site

- Fifty-nine percent of registered nurses practicing at least part time in Minnesota work in hospitals. The next most common workplaces are clinic/provider offices and long term care facilities.
- Hospital employment is most important in metropolitan areas, where 62 percent of RNs work in hospitals. Slightly more than half of micropolitan area RNs, and only 46 percent of rural RNs report working in hospitals.
- More than one in six—17 percent—of rural RNs work in nursing homes. Rural RNs are also more likely than metropolitan RNs to work in public health agencies and home health agencies.

| Type of Work Site | Statewide | Metropolitan | Micropolitan | Rural |
|--------------------------------|------------------|---------------------|---------------------|--------------|
| Total respondents | 29,351 | 22,494 | 3,618 | 3,238 |
| Hospital | 58.6% | 61.6% | 51.1% | 46.2% |
| Clinic/provider office | 11.1% | 11.7% | 9.6% | 9.3% |
| Long-term care facility | 7.6% | 5.5% | 12.2% | 17.4% |
| Home health agency | 5.0% | 4.4% | 6.3% | 7.4% |
| Public Health agency | 3.1% | 2.2% | 5.5% | 6.7% |
| School/college/univ. | 3.8% | 3.5% | 5.6% | 3.8% |
| Insurance company | 1.7% | 2.1% | ..3% | .5% |
| Other | 9.1% | 9.0% | 9.4% | 8.7% |

Primary professional activity of registered nurses

- Thirty-five percent of RNs report working full time in patient care activities. Half (49 percent) devote at least 80 percent of their time to patient care. One-fourth (24 percent) report spending no time in patient care.
- Twenty percent report spending at least 20 percent of their time in supervision of patient care.
- About ten percent of RNs spend at least 20 percent of their time in case management and administrative activities.

More than half of RNs working in hospitals report working 100 percent in patient care; 70 percent devote at least 80 percent of their time in direct patient care.

Only one-third of RNs working in clinics or provider offices report spending at least 80 percent of their time in patient care. Eleven percent devote at least 80 percent of their time to triage activities.

Registered nurses reporting work time devoted to patient care and other activities

| Kind of work | Percent of time devoted to each kind of work | | | | | | |
|---------------------------------|--|--------------|---------------|---------------|---------------|---------------|-------------|
| | <i>no time</i> | <i>1-19%</i> | <i>20-39%</i> | <i>40-59%</i> | <i>60-79%</i> | <i>80-99%</i> | <i>100%</i> |
| Patient care | 24% | 7% | 6% | 8% | 8% | 14% | 35% |
| Patient care supervision | 69% | 12% | 9% | 6% | 2% | 2% | 1% |
| Administration | 84% | 5% | 3% | 3% | 1% | 1% | 3% |
| Case management | 87% | 4% | 4% | 2% | 1% | 1% | 2% |
| Insurance | 96% | 2% | 1% | * | * | * | 1% |
| Triage | 86% | 8% | 3% | 1% | 1% | 1% | 1% |
| Teaching | 83% | 9% | 4% | 1% | 1% | 1% | 2% |
| Public health | 97% | 1% | * | * | * | * | 1% |
| School health | 98% | * | * | * | * | * | 1% |
| Other activities | 92% | 1% | 1% | 1% | 1% | 1% | 3% |

* less than .5% of reporting physicians; percentages may not add to 100 due to rounding.

RNs working in hospitals

| Kind of work | Percent of time devoted to each kind of work | | | | |
|---------------------------------|--|---------------|---------------|---------------|-------------|
| | <i>< 20%</i> | <i>20-59%</i> | <i>60-79%</i> | <i>80-99%</i> | <i>100%</i> |
| Patient care | 14% | 9% | 8% | 18% | 52% |
| Patient care supervision | 83% | 13% | 2% | 2% | 1% |
| Triage | 98% | 1% | * | * | * |

RNs working in clinics or provider offices

| Kind of work | Percent of time devoted to each kind of work | | | | |
|--------------------------|--|--------|--------|--------|------|
| | < 20% | 20-59% | 60-79% | 80-99% | 100% |
| Patient care | 34% | 24% | 10% | 12% | 21% |
| Patient care supervision | 88% | 9% | 1% | 1% | 1% |
| Triage | 65% | 20% | 4% | 6% | 5% |

Type or department/unit/area worked in a primary practice site

- Twenty-seven percent of RNs working in hospitals said they worked in medical or surgical units.
- Intensive care, operating room/recovery, and obstetrics/gynecology units claimed the next largest numbers of RNs working in hospitals.
- Intensive care units account for a larger share of metropolitan than micropolitan or rural nurses. Obstetrics/gynecology and emergency units account for a larger share of nurses in rural and micropolitan areas than in metropolitan areas.

| Department/unit/area | All RNs n = 14,652 | Metropolitan n = 10,74 | Micropolitan n = 1,851 | Rural (new) n = 2,060 |
|-------------------------|-----------------------|---------------------------|---------------------------|--------------------------|
| Medical/Surgery | 26.8% | 27.0% | 27.2% | 25.4% |
| Intensive care | 15.6% | 16.8% | 11.6% | 12.9% |
| Operating room/Recovery | 10.5% | 10.6% | 10.9% | 10.7% |
| Obstetric/Gynecologic | 10.6% | 8.9% | 14.0% | 15.5% |
| Emergency Room | 9.5% | 7.4% | 12.6% | 18.2% |
| Psychiatric/Behavioral | 4.6% | 4.6% | 7.1% | 2.5% |
| Outpatient | 3.5% | 3.1% | 3.7% | 5.5% |
| Other* | 18.8% | 21.7% | 12.9% | 9.3% |

* Other includes very small numbers of RNs working in a wide variety of areas, including administration, admissions, chemotherapy, cardiac and intensive care step-down units, pediatrics, oncology and other departments that the respondent did not consider covered by the options above. Many of these unclassified responses may properly be categorized as specialized medical or surgical units. The number of unclassified responses was particularly high among urban respondents (including the Twin Cities, Duluth, Rochester and Duluth). This may reflect large numbers of RNs working in specialized settings who had difficulty matching with the choices they were given.

Advanced Practice Nurses

About 5 percent of registered nurses report practicing in a certified advanced practice category. About half of these were nurse practitioners, followed by registered nurse anesthetists, clinical nurse specialists and nurse-midwives. Nurses reporting having nurse practitioner or anesthetist certifications were more likely to report actually working in their certified advance practice area than were nurse specialists or midwives.

Nurse practitioners and clinical nurse specialists are certified in a number of specialty areas.

- The most common specialty areas among nurse practitioners were family nursing (30 percent), adult nursing (27 percent), women's health (15 percent), gerontology (15 percent) and pediatrics (14 percent).

- The most common specialty areas among clinical nurse specialists were adult psychiatric/mental health nursing (27 percent) and medical-surgical nursing (23 percent).

A significant number of advance practice nurses report practicing in more than one certification area.

Practice areas of certified nurse practitioners

| Certification Areas | N = 727 |
|-------------------------|---------|
| Acute care | 11.7% |
| Adult | 26.8% |
| Adult psychiatric/MH | 4.4% |
| Family | 30.3% |
| Family psychiatric/MH | 1.8% |
| Diabetes management | 2.6% |
| Women's Health (OB/GYN) | 15.4% |
| Neonatal | 5.5% |
| Pediatric | 14.2% |
| Gerontology | 15.3% |
| School | .8% |
| Other | 9.9% |
| Total | * |

*Total exceeds 100 percent because many respondents practice in more than one certification area. Respondents selecting "Other" reported working in a wide variety of specialty areas that do not directly correspond to these certification areas.

Practice areas of certified nurse specialists

| Certification areas | N = 259 |
|--|---------|
| Adult critical care | 9.7% |
| Adult psychiatric and mental health | 27.0% |
| Child/adolescent psychiatric and mental health | 4.6% |
| Community health | 2.7% |
| Diabetes management | 1.9% |
| Gerontological | 10.4% |
| Home health | 1.5% |
| Medical-surgical | 23.2% |
| Neonatal critical care | 1.5% |
| Pediatric | 2.7% |
| Pediatric critical care | 1.2% |
| Other | 22.8% |
| Total | * |

*Total exceeds 100 percent because many respondents practice in more than one certification area. Respondents selecting "Other" reported working in a wide variety of specialty areas that do not directly correspond to these certification areas.

Methodological note for numbers of RNs

Data reported here is from responses received from RNs renewing their licenses between July 2006 and June 2008. RN license renewals are due every two years in the licensee's birth month. Thus, over a two-year period, all RNs renewing licenses are asked to complete the ORHPC survey. Therefore, survey data reported here is not for a point in time, but rather for a two-year period.

The Board reported a total of 75,508 licensed RNs in June 2007, and 77,950 in June 2008. The Board of Nursing received 68,462 license renewals during the survey period.

The Office of Rural Health and Primary Care received survey responses from 40,687 RNs. Survey respondents represented 59 percent of all RNs renewing licenses. At the time of license renewal, 30,567 (75 percent) of respondents said they working at least part time at a primary practice site in Minnesota.

The exact number of RNs actually practicing in Minnesota is not known. If survey respondents were representative of all licensed RNs, it could be estimated that about 87 percent of all licensed RNs, or about 56,700 RNs were actively working in Minnesota in June 2007. However, it is likely that RNs who were not working or were working outside Minnesota were less likely to answer the survey than RNs working in Minnesota. Thus, it is likely that somewhat fewer than 56,700 RNs were employed either full or part time in Minnesota. The U.S. Bureau of Labor Statistics estimated about 52,690 registered nurses working in Minnesota in the second quarter of 2007.

Using the July 1, 2007, population estimate for Minnesota, 56,700 RNs equate to 1,091 active RNs per 100,000 people.

Because of different data sources and definitions, this estimate of 1,091 active RNs per 100,000 population is not directly comparable to other reported data. The 2006 U.S. Health Workforce Profile estimated that Minnesota had 1,028 registered nurses per 100,000 population, 27 percent more than the U.S. figure of 802. The most recent national data permitting comparisons among states is from the U.S. Bureau of Labor. The second quarter 2007 estimate of 52,690 RNs amounts to 1,013 RNs per 100,000 population, 24 percent above the national May 2007 figure of 818.

Urban-Rural Definitions

Data is also reported for three groupings that differentiate counties on a rural to metropolitan scale.

MSA counties – 21 Minnesota counties included in seven metropolitan statistical areas (Minneapolis-St. Paul, St. Cloud, Rochester, Duluth-Superior, Fargo, Grand Forks and La Crosse)

Micropolitan counties – 20 counties surrounding smaller urban centers of at least 10,000 people

Rural – 46 counties outside MSAs and Micropolitan areas
