



# Minnesota's Health Workforce

Physicians 2007

June 2008

The Office of Rural Health and Primary Care asks physicians 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 Physicians

Minnesota had 18,265 licensed physicians in mid-2007. Some of these were retired or not working as doctors, and some practiced in other states.

Based on survey responses and licensing data from the Minnesota Board of Medical Practice, the Office of Rural Health and Primary Care estimates approximately 13,700 physicians were practicing at least part time at Minnesota practice sites in mid-2007. Using the July 1, 2007, population estimate for Minnesota, 13,700 physicians equate to 262 active physicians per 100,000 people.

Because of different data sources and definitions, this estimate is not directly comparable to other reported data. The U.S. Health Resources and Services Administration estimated that Minnesota had 218 active, non-federal patient care physicians per 100,000 population in 2004, excluding residents and fellows (New York Center for Health Workforce Studies, The United States Health Workforce Profile, 2006). Minnesota ranked slightly above the national figure of 214, and above its four neighboring states.

Unless otherwise indicated, all data in this report is for physicians who reported working in a paid or unpaid position at a primary practice site in Minnesota in 2007. The data excludes most medical residents in graduate medical education programs because they are not required to renew licenses annually.

## Geographic Distribution

- Physicians' primary practice sites are disproportionately in metropolitan area counties.
- The 46 most rural counties have 13 percent of the state's population, but only 8 percent of the state's practicing physicians.
- More than one-third (35 percent) of all respondents said their primary practice site was in Hennepin County. Olmsted County accounted for 15 percent and Ramsey County 12 percent.

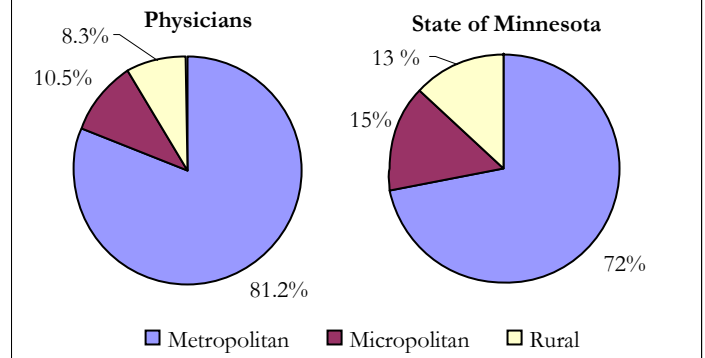
### Geographic location

**Metropolitan** – The 21 counties surrounding the seven metropolitan statistical areas connected with Minnesota, as defined by the U.S. Census (Minneapolis-St. Paul; St. Cloud; Rochester; Duluth-Superior, Wisc.; Fargo, N. D.; Grand Forks, N. D.; and La Crosse, Wisc.).

**Micropolitan** – The 20 Minnesota counties surrounding smaller urban centers of at least 10,000 people.

**Rural** – The 46 Minnesota counties outside a Metropolitan or Micropolitan area.

### 2007 Geographic Distribution



	2007 Population	% Population	% Physicians
Statewide	5,231,106	100.0%	100.0%
Metropolitan	3,810,396	72.8%	81.2%
Micropolitan	761,302	14.6%	10.5%
Rural	659,408	12.6%	8.3%



### Gender of Physicians by age and Location, 2007

- Only 31 percent of all physicians are women, but women account for 56 percent of physicians under age 35, and 41 percent of physicians age 35 to 44.
- Males dominant older age brackets; most of the physicians approaching retirement age are male.
- Female physicians are somewhat more common in metropolitan counties, but the gender mix of metropolitan counties is not much better balanced than for micropolitan and rural areas.
- Eighty-five percent of female physicians practice in metropolitan counties.

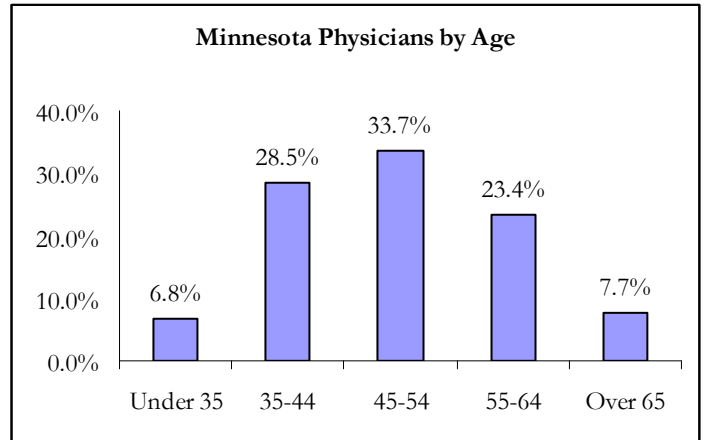
	Respondents	% Male	% Female
All Physicians	7,209 *	69.5%	30.5%
<b>By age</b>			
Under 35	488	44.3%	55.7%
35-44	2,058	58.7%	41.3%
45-54	2,431	69.2%	30.8%
55-64	1,681	82.3%	17.7%
65 and older	551	93.5%	6.5%
<b>By location</b>			
Metropolitan	5,853	68.1%	31.9%
Micropolitan	759	74.7%	25.3%
Rural	597	76.5%	23.5%

\* Includes only active Minnesota physician respondents for whom gender is known.

### Age of Physicians by Gender and Location

The median age of physicians active in Minnesota in 2007 was 49, up from 48 a year earlier. Because of the long training period for physicians, few are under age 35.

- Thirty-one percent of physicians are 55 or older.
- Female physicians are younger than their male counterparts. The median age of active female physicians is 44, compared to 51 for males.
- Fifty-one percent of active female physicians are under age 45; seventy-two percent of male physicians are 45 or older.
- Physicians practicing in the state's 46 most rural counties are somewhat older than physicians in metropolitan or micropolitan counties. Thirty-seven percent of rural physicians were 55 or older, compared to 30 percent of micropolitan and metropolitan area physicians.



Age Group	Statewide (n = 7,226)	Metropolitan (n = 5,869)	Micropolitan (n = 760)	Rural n = 597	Male	Female
Median age	49	49	49	51	51	44
Less than 35	6.8%	7.0%	5.8%	5.9%	4.3%	12.4%
35-44	28.5%	28.6%	29.5%	26.3%	24.1%	38.6%
45-54	33.7%	33.8%	34.7%	31.2%	33.6%	34.0%
55-64	23.4%	23.1%	23.7%	26.5%	27.6%	13.5%
65 and older	7.7%	7.1%	6.3%	10.2%	10.3%	1.6%
Total	100%	100%	100%	100%	100%	100%

## Education

Ninety-three percent of physicians active in Minnesota hold M.D. (Medical Doctor) degrees. Three percent hold D.O. (Doctor of Osteopathy) degrees. The other four percent hold a variety of M.B. (Bachelor of Medicine) degrees from other countries following the British model of medical education.

- Doctors of Osteopathy are somewhat more common in rural areas. Seven percent of rural physicians are D.O.s, compared to only 2 percent of physicians in metropolitan counties.
- D.O. and M.B. degrees are slightly more common among younger physicians.

Forty-two percent of active Minnesota physicians received their medical degree from a Minnesota medical school. The proportion of Minnesota-trained physicians varies little by sex or age. Physicians working in rural or micropolitan areas are somewhat more likely to have received their medical degrees from a Minnesota institution.

## Years of Clinical Experience

Nearly four of five physicians practicing in Minnesota report more than five years clinical experience (beyond medical school and residency). More than one-in-five report more than 25 years of clinical experience.

- Thirty percent of female physicians had five or fewer years of experience, reflecting recent growth in the number of women entering the profession.
- Twenty-seven percent of male physicians had more than 25 years experience, reflecting predominance of males among older physicians.
- Twenty-seven percent of rural and metropolitan area physicians, compared to 20 percent of micropolitan area physicians, reported more than 25 years of clinical experience.

## Percent of Physicians with Medical Degree from Minnesota School

All active physicians	42%
Females	44%
Males	41%
Metropolitan	41%
Micropolitan	44%
Rural	48%

## Percent of Physicians by Type of Degree

	M.D.	D.O.	M.B.
All Physicians	93%	3%	4%
Male Physicians	94%	3%	3%
Female Physicians	92%	3%	5%
Metropolitan	94%	2%	4%
Micropolitan	90%	6%	4%
Rural	89%	7%	4%
Under 35 yrs.	91%	3%	6%
35-44	90%	4%	6%
45-54 yrs.	94%	4%	3%
55-64 yrs.	96%	2%	2%
65 or more yrs.	96%	1%	3%

Years	All Physicians	Female	Male	Metropolitan	Micropolitan	Rural
0-5	21.3%	29.8%	17.6%	21.8%	20.5%	17.5%
6-10	17.0%	23.1%	14.3%	17.0%	17.6%	16.4%
11-15	13.3%	16.2%	12.0%	13.1%	14.7%	13.3%
16-20	14.6%	15.0%	14.4%	14.6%	14.7%	14.0%
21-25	12.6%	9.1%	14.2%	11.6%	12.3%	11.6%
26-30	10.4%	4.9%	12.7%	13.7%	9.6%	13.7%
30+	10.8%	1.9%	14.7%	13.5%	10.6%	13.5%

## Practice plans

- Overall, 18 percent of physicians active in 2006 said they expected to quit practicing within five years.
- Twenty percent of males expected to quit within five years, compared to only 14 percent of females. This reflects the fact that most older physicians are males.
- Not all physicians nearing retirement age expect to leave their practices by age 65. Twenty-seven percent of physicians age 55 to 64 said they plan to work five years or less, but 28 percent said they expect to practice at least 10 more years.
- Sixty-eight percent of physicians 65 and older said they plan to quit within five years, but 10 percent said they expected to practiced another 10 years.

	How many more years planning to work as a physician		
	Less than 5 years	6-10 years	More than 10 years
Age < 35	26%	8%	66%
Age 35-44	11%	10%	80%
Age 45-54	6%	19%	75%
Age 55-64	27%	45%	28%
Age 65+	68%	22%	10%
All Physicians	18%	22%	60%

## Hours worked

Half of all physicians reported working 50 hours or more per week.

- More than half of active physicians report working 45 to 60 hours per week, and another 12 percent worked more than 60 hours. Nonetheless, more than one in six physicians reported working 36 hours or less.
- Age makes little difference in hours worked until after age 65. One-third of senior physicians work 45 hours or more, compared to 59 percent of physicians under 65.

Female physicians work fewer hours than male physicians.

- Twenty-eight percent of female physicians said they worked 36 hours or less per week, compared to only 13 percent of males.
- Seventy percent of male physicians said they worked 45 hours or more per week, compared to only 54 percent of females.

## Work hours of physicians under age 40

	Females (n = 687)	Males (n = 737)
1-8 hours	.9%	.1%
9-20 hours	3.9%	1.2%
21-36 hours	22.0%	4.7%
36-44 hours	20.2%	18.7%
45-60 hours	46.4%	60.2%
> 60 hours	6.6%	14.9%

Reported work week	Age					
	< 35 yrs	35-44	45-54	55-64	65+	All Ages
1-8 hours	.2%	.5%	.7%	.7%	9.2%	1.3%
9-20 hours	1.9%	2.7%	2.4%	3.2%	18.5%	3.9%
21-36 hrs	13.2%	12.8%	11.2%	11.5%	20.8%	12.6%
37-44 hrs	20.4%	19.4%	17.6%	18.0%	18.1%	18.4%
45-60 hrs	54.5%	52.4%	54.4%	56.0%	27.5%	52.1%
61+ hrs	9.8%	12.2%	13.7%	10.6%	5.8%	11.7%

Female physicians are much more likely to be young, so the difference between males and females might be thought to simply reflect a tendency for younger physicians to work shorter hours than older physicians. However, the tendency of females to work shorter hours than males holds even among younger physicians.

- Twenty-seven percent of female physicians under age 40 reported working 36 hours or less per week, compared to only 6 percent of male physicians in the same age bracket.
- Seventy-five percent of male physicians under age 40 reported working 45 hours or more per week, compared to only 53 percent of female physicians.

### Race and Ethnicity

With the exception of Asians and Pacific Islanders, minorities remain underrepresented in Minnesota’s physician workforce. Eighty-nine percent of actively practicing physicians are White. Asian and Pacific Islanders account for 7 to 8 percent. About 12 percent of respondents declined to name a race.

Two percent of respondents said they were of Hispanic, Latino or Spanish origin.

### Types of Practice Site

- More than six of 10 (61.3 percent) physicians said their primary practice site was a provider office or clinic. Thirty-two percent said their primary practice site was a hospital or emergency room.
- Physicians in micropolitan and rural counties are less likely than metropolitan area physicians to be based in hospitals and more likely to work in provider offices and clinics.
- Nearly a fourth (23.7 percent) of physicians in metropolitan area counties have their primary practice sites in teaching hospitals. Teaching hospitals are concentrated in the Twin Cities and Rochester.

### Physician Work Hours by Gender

	Females	Males
1-8 hours	1.1%	1.3%
9-20 hours	5.3%	3.2%
21-36 hours	22.2%	8.3%
36-44 hours	21.2%	17.2%
45-60 hours	41.9%	56.7%
> 60 hours	8.2%	13.3%

### Race of Physicians

(n = 6,324)	Single race	Mixed race
White	88.9%	.6%
Black	1.6%	.1%
Asian or Pacific Islander	7.4%	.3%
American Indian	.3%	.2%
Other	1.8%	.3%

### Physician Work Site Setting by Geographic Location

Type of Site	Total	Metro-politan	Micropolitan	Rural
Respondents	6,812	5,514	727	571
Offices and Clinics	61.3%	58.5%	74.0%	73.2%
Teaching Hospitals	19.8%	23.7%	2.1%	4.9%
Other Hospitals	9.1%	8.0%	16.1%	10.2%
Emergency Rooms	3.5%	3.1%	4.4%	6.1%
Other*	6.3%	6.7%	3.4%	5.6%

\* “Other” includes laboratories, medical schools, nursing homes, hospices, treatment facilities and other kinds of workplaces.

- Female physicians are more likely than male physicians to have a primary practice site in a physician office or clinic. Sixty-seven percent of women practice in offices or clinics, compared 59 percent of men.
- Male physicians are more likely than female physicians to practice in hospitals or emergency rooms. Thirty-five percent of men practice in hospital settings, compared to 27 percent of women.
- Men account for 74 percent of physicians practicing in hospital settings, but only 66 percent of physicians practicing in physician offices or clinics.

**Physician Work Site Setting by Gender**

	Male	Female
Respondents	4,703	2,094
Office/Clinic	58.9%	66.9%
Teaching Hospitals	20.2%	18.9%
Other Hospitals	10.6%	5.5%
Emergency Rooms	4.0%	2.5%
Other	6.3%	6.2%
Total	100.0%	100.0%

**Work Responsibilities**

- Most of physicians’ work time is devoted to outpatient care. Fifty percent of active physicians said they spent at least 80 percent of their time at their primary practice site in outpatient care. One-in-five physicians said outpatient care accounted for all their time at their primary work site. These statistics reflect the fact that most physicians have a primary practice site in a physician office or clinic.
- Only 29 percent of physicians devote more than 20 percent of their primary worksite time to inpatient care. This reflects the percentage of physicians who report a primary work site in a hospital setting.
- Relatively small numbers of physicians report spending a significant portion of their time on administration, teaching or research.

**Physicians reporting work-time devoted to patient care and other activities**

Kind of work	Percent of time devoted to each kind of work						
	no time	1-19%	20-39%	40-59%	60-79%	80-99%	Full time
Inpatient care	48%	23%	12%	7%	4%	3%	3%
Outpatient care	17%	5%	8%	10%	12%	29%	21%
Rounds	84%	14%	1%	*	*		
Administration	69%	22%	6%	2%	1%	1%	1%
Teaching	72%	23%	4%	1%	*	*	*
Research	85%	9%	3%	1%	1%	*	*
Other activities	95%	1%	1%	1%	*	*	1%

\* less than .5% of reporting physicians

## Obstetrics and Gynecology

Thirteen percent of physicians actively practicing in Minnesota reported they deliver babies. Only 15 percent of these said they spent half or more of their time in obstetrics practice. Seventy-two percent of physicians who identified their principal practice specialty as obstetrics and gynecology said they devoted more than half their practice time to obstetrics. Among family medicine specialists engaged in obstetric practice, most – 73 percent – devoted less than 20 percent of their time to obstetrics.

Still, family medicine physicians play an important role in obstetrics practice. They were 62 percent of physicians reporting delivering babies and 63 percent of physicians who said they provided prenatal care. Three times as many family medicine specialists as obstetricians and gynecologists delivered babies.

Family medicine physicians played an even more important role in rural areas, where family medicine specialists accounted for 84 percent of physicians delivering babies, and 89 percent of physicians providing prenatal care. Among physicians delivering babies, family medicine specialists outnumbered OB/GYN specialists more than 10 to one.

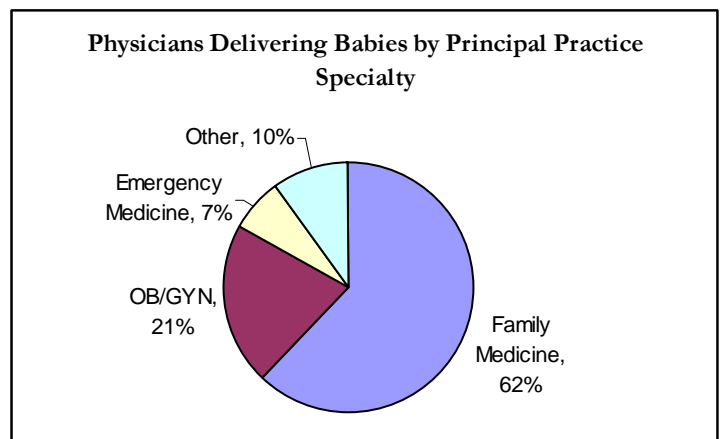
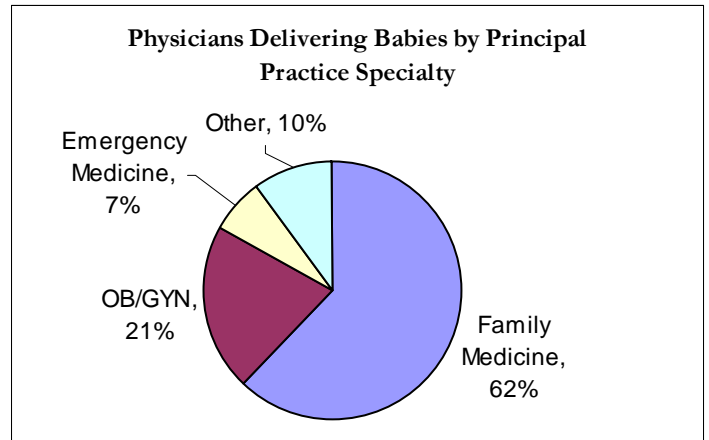
The data does not reflect the role of certified nurse midwives or other non-physician practitioners.

## Pediatrics

Forty-eight percent of actively practicing physicians provide pediatric services. Only 10 percent of these claim pediatrics as their principle practice specialty. Pediatricians account for only 12 percent of physicians who say they provide pediatric care. Forty-two percent of those providing pediatric service are family medicine specialists. Many other specialists – including internal medicine specialists, orthopedic surgeons, emergency medicine physicians and anesthesiologists – are among the other physicians who said they provide pediatric services.

Pediatricians play a much smaller role in rural areas. Sixty-six percent of physicians providing pediatric services in rural counties are family medicine specialists.

The same general pattern holds in metropolitan counties, but pediatric specialists are more common. Family medicine specialists account for 31 percent of physicians providing pediatric services, while pediatricians are 12 percent.



## Methodology

Data reported here is from responses received from physicians renewing their licenses during 2007. License renewals come due by birth date. For this reason, answers to survey questions are not from a single point in time, but over a 12-month period.

The Minnesota Board of Medical Practice received 17,463 license renewals during 2007. Some of the data reported here is collected by the Board during the licensing process. This data includes age, gender, and worksite address.

The Office of Rural Health and Primary Care survey produced usable data on 11,305 physicians. Of these, worksite location information was available from the Board of Medical Practice for 9,638 physicians. Of these physicians with both work status and worksite location information, 7,226, or 75 percent, said they were working as a physician in a paid position at a principal worksite in Minnesota.

The exact number of physicians actually practicing in Minnesota is not known. If 75 percent of all licensed physicians were actively practicing at a Minnesota worksite, the total number of physicians working at least part time in Minnesota in 2007 would have been about 13,700. This estimate of physicians active in Minnesota may be somewhat high because physicians for whom the Board does not have practice site location are much less likely to be active.

An estimate of 13,700 active physicians amounts to 262 physicians per 10,000 population.

Data users should be aware that other data sources may use different definitions. For example, some researchers define “rural” to include all counties outside the original seven-county Twin Cities metropolitan area. Others consider all counties outside metropolitan statistical areas to be rural.

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