

Chapter 2

STATUS OF THE HEALTH WORKFORCE IN TEXAS



2007–2008

TEXAS STATE HEALTH PLAN UPDATE

INTRODUCTION

The importance of access to health care services cannot be overstated. Every person at some point in life will need access to one or more health providers. However, access to these providers could be adversely affected by factors beyond the person's control, such as provider acceptance of health plans, distance to the provider, and adequacy of the supply of providers. By reporting on demographic trends and the supply and distribution of health professionals by geographic region, researchers, legislators and state planners may better understand and influence access to health care services by Texans.

Statistics

The data in this chapter and Appendix B describe trends in the supply and distribution of various types of health care providers and compare these trends to national averages. The statistics are presented as narratives, tables, graphs, and maps. Most of the data are presented in the form of ratios: the number of providers in a given health profession divided by the population of the area being evaluated, multiplied by 100,000. These ratios were used to compare supply and distribution trends among various populations and areas over time. High ratios indicate there are more providers who are available to serve the population in an area; low ratios indicate there are not enough providers to serve the population. Although ratios are simplistic measures of provider supply adequacy, they are good indicators that, when observed over time, may be used to signal the need for conducting more extensive and comprehensive workforce studies.

Data and sources

Supply data for Texas were collected from state licensing boards. All statistics in this report were based on professionals who were actively practicing in Texas for a given year. U.S. supply data were obtained from the U.S. Bureau of Health Professions and some national professional organizations. U.S. data were not available for all professions, and for many professions, the most current U.S. data available were not as recent as the current Texas data. For both Texas and the United States, there were some years where supply data were not available. The years for which actual data were used in this report are indicated on the graphs by data markers.

The supply ratios for providers in each county for all available years may be found online at: <http://www.dshs.state.tx.us/CHS/hprc/>.

Texas population numbers used to calculate ratios were estimates provided by the Texas State Data Center at The University of Texas at San Antonio (TXSDC, <http://txsdc.tamu.edu/>). Population numbers for the census years 1990 and 2000 were actual counts. The estimates for a

given year may not necessarily match estimates in other reports or Web sites because estimates are revised periodically by the TXSDC. The population data used for national statistics were obtained from the U.S. Bureau of the Census.

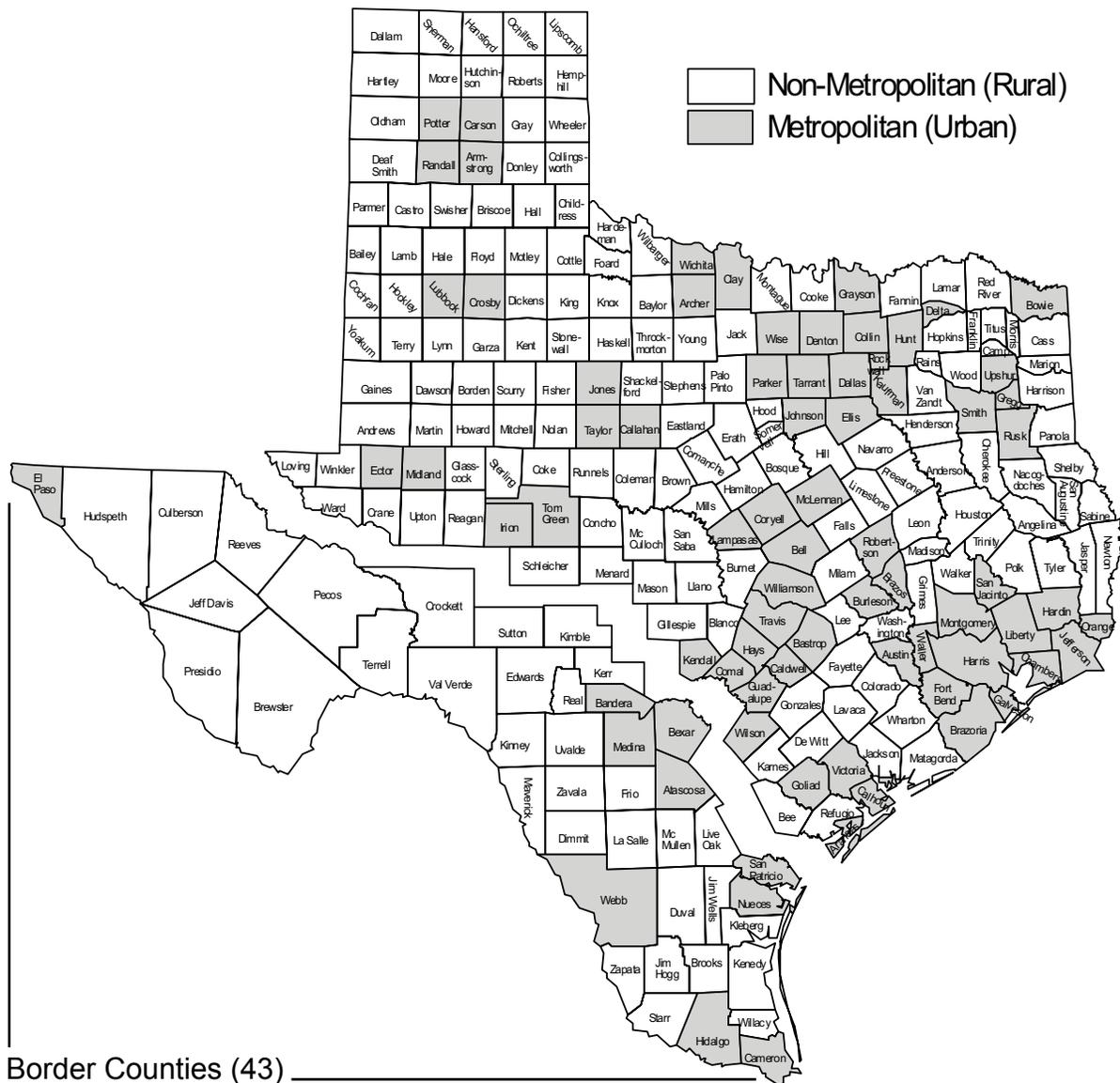
The classification of counties as either metropolitan (77 counties) or non-metropolitan (177 counties) was based on reports from the U.S. Office of Management and Budget. The identification of 43 Texas counties as border counties was based on SB 1378 of the 76th Texas Legislative Session (see Figure 2.1). For many of the analyses presented in this chapter or Appendix B, the 254 counties were aggregated as border metropolitan, non-border metropolitan, border non-metropolitan, and non-border non-metropolitan counties. In 2005, 86.7 percent of the Texas population lived in metropolitan counties and 13.3 percent in non-metropolitan counties. Also, 69.2 percent of the state population lived in non-border metropolitan counties, 17.5 percent in border metropolitan counties, 2.2 percent in border non-metropolitan counties, and 11.1 percent in non-border non-metropolitan counties. Overall, 19.7 percent of the Texas population lived in the 43-county border area.

Health Professional Shortage Areas (HPSAs)

The designation of a county as a Health Professional Shortage Area for primary medical care, dental care, or mental health care indicates the county has an inadequate number of specific health providers to serve the population in the county. There are several categories of HPSA designations: whole county, sub-county, facility, or special population. The Texas Primary Care Office administers the federal HPSA program in Texas in collaboration with the Health Professions Resource Center and the Shortage Designation Branch, Health Resources and Services Administration, Bureau of Health Professions, U.S. Department of Health and Human Services. Lists of designated areas can be found at <http://www.dshs.state.tx.us/CHS/hprc/hpsa.shtm>. Detailed information about HPSA designations is presented for primary care physicians, dentists, and psychiatrists in this chapter and Appendix B.

Figure 2.1.

Border and Metropolitan Counties in Texas, 2005



2005 Population Statistics:

211 Non-Border Counties — 80.3 percent of total Texas Population

69.2 percent in metropolitan non-border counties

11.1 percent in non-metropolitan non-border counties

43 Border Counties — 19.7 percent of total Texas Population

17.5 percent in metropolitan border counties

2.2 percent in non-metropolitan border counties

Prepared by: Health Professions Resource Center, Center for Health Statistics, Texas Department of State Health Services, February 7, 2006

MEDICAL PROFESSIONS

- **Physicians**
 - Direct patient care (DPC)
 - Primary care (PC)
 - Internal medicine
 - Pediatrics
 - Family practice
 - Obstetrics and Gynecology (Ob/Gyn)
 - Psychiatry — included in the section on Mental Health Professions
- Physician Assistants
- **Chiropractors**
- **Podiatrists**

DPC Physicians

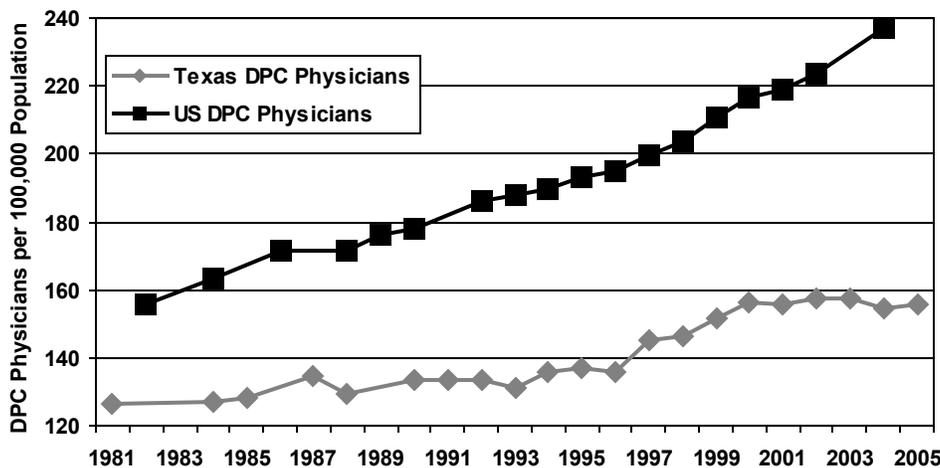
The term *DPC physician* includes both allopathic and osteopathic physicians who are licensed by the Texas Medical Board (TMB), but excludes physicians with a practice type of medical teaching, administration, research, or “not-in-practice.” Other physicians who are excluded from the supply of DPC physicians in this report are those physicians who are affiliated with the federal government — including the armed forces, the Department of Veterans Affairs, or the U.S. Public Health Service — and fellows or residents in training. DPC physicians spend at least 50 percent of their time in the direct care of patients and are trained in one or more of the 70+ “general” or “specialist” specialties.

The supply of DPC physicians increased between 1996 and 2005 by an average of 1,094 per year. In October 2005, there were 35,811 DPC physicians actively practicing in Texas. However, over the years, Texas has consistently lagged behind the U.S. average in the ratio of DPC physician supply per 100,000 population, and the gap between the two appears to be increasing (Figure 2.2). The DPC physician supply ratios in Texas were fairly constant between 1981 and 1996. In 1997, the ratios for both metropolitan and non-metropolitan counties began to increase; however, they began to stabilize and decrease slightly after 2003 (Appendix B, item 1). Non-metropolitan counties in Texas have had much smaller supply ratios than metropolitan counties throughout these two decades.

In 2005, there were 23 counties with no DPC physicians; and, there were seven counties that did not have a DPC physician in 1996, but had at least one in 2005. DPC ratios decreased in 80 counties between 1996 and 2005. In general, the counties with the highest ratios were those in Central or East Texas. The counties with lower ratios were generally located in the 43-county border area, West Texas, South Texas, and the Panhandle. Almost all of the counties with no DPC physicians were in these areas. The median age of DPC physicians was 47 years in 2005, compared with 48 years in 2000.

Figure 2.2.

DPC Physicians per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas Medical Board; HRSA, Bureau of Health Professions; American Medical Association

PC Physicians

The term *PC physician* includes physicians who are trained in one of six specialties of the more than 70+ specialties included under the umbrella of DPC – family practice, general practice, internal medicine, obstetrics and/or gynecology, general pediatrics, and geriatrics. Geriatrics was included as a primary care specialty starting in 2004, at the request of the Bureau of Shortage Designation’s HPSA program. Of the 35,811 DPC physicians in Texas in 2005, 15,718 were PC physicians, an increase of 15.7 percent over the number practicing in Texas in 1999. In 2005, 13 percent of the over 23 million Texans were located in the 177 non-metropolitan counties and 87 percent in the 77 metropolitan counties. By comparison, only 10 percent of the PC physicians were practicing in non-metropolitan counties and 90 percent in metropolitan counties. Twenty-seven of the state’s 254 counties had no PC physicians in 2005 and 16 counties had only one PC physician.

Sources of PC physicians

In 2005, less than one-half (47.3 percent) of the PC physicians practicing in Texas were trained in Texas schools. Supplementing this pool of Texas medical graduates were PC physicians who received their training in other states (25.8 percent) or other countries (26.9 percent). Due to the size of this in-migrating PC physician supply, this external source of physicians is very important to the health care delivery system in Texas.

Supply trends

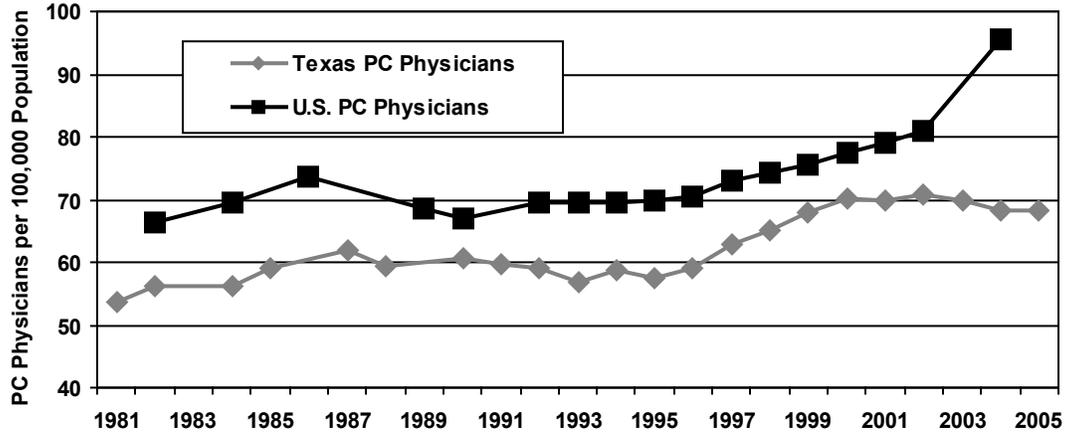
The PC physician supply increased by an average of 492 physicians per year between 1996 and 2005. Although the state's population also increased during this time, the PC physician ratios remained in the range of 59 to 70. Compared to a national benchmark ratio of 60 to 80, Texas remained in the lower range of the national benchmark; in 1996, Texas was even below the federal benchmark with a ratio of 59. The supply of PC physicians could be even more marginal since some of the physicians listed in the 2005 database practice only part-time. The total number of PC physicians available to some population groups could also be lower than the supply totals would suggest because some PC physicians limit their practices to paying or insured patients and others do not accept Medicaid patients. Thus, in some areas of the state, the "effective" physician supply is probably less than simple supply ratios would seem to indicate.

The PC physician average supply ratios in the U.S. (79.0 in 2000) have consistently exceeded the supply ratios in Texas (69.7 in 2000) for the past 20 years (Figure 2.3). Several years ago, the gap between the U.S. and Texas ratios began to widen, apparently due to stabilization in the Texas supply ratios.

The ratios in metropolitan and non-metropolitan counties were fairly constant between 1983 and 1996, with the non-metropolitan ratios being considerably smaller than the metropolitan ratios (Appendix B, item 2). Beginning in 1997, the ratios in both areas began to increase; however, the ratios in both the metropolitan counties and non-metropolitan counties appeared to stabilize about six years ago. In 2005, 27 counties had no PC physicians; and, eight counties did not have a PC physician in 1996, but had at least one in 2005. In general, the lowest supply ratios were associated with the 43 border counties, West Texas, and South Texas. Almost all of the counties with no PC physicians were in these areas. The highest ratios were in Central or East Texas.

Figure 2.3.

PC Physicians per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas Medical Board; HRSA, Bureau of Health Professions; American Medical Association

Location

In 2005, there were fewer PC physicians per 100,000 people in non-metropolitan counties than in metropolitan counties. The ratio of 53 PC physicians per 100,000 population in non-metropolitan locations was well below the national benchmark of 60 to 80; however, the ratio in metropolitan areas (71) was in the mid-range of the national benchmark. This difference between metropolitan and non-metropolitan locations has been observed for years in Texas. The supply ratio also varied between border (63) and non-border areas (70), and very low PC physician supply ratios were observed in non-metropolitan non-border (54) and non-metropolitan border (45) locations (See Table 2.1).

Table 2.1.

PC Physician Ratios for Non-metropolitan, Metropolitan, Border, and Non-border Locations, Texas, 2005

Location	Population	PC Physicians Per 100,000 population
Statewide	23,002,555	68.3
Metropolitan border	4,026,681	64.7
Metropolitan non-border	15,915,213	72.2
Non-metropolitan border	511,389	45.0
Non-metropolitan non-border	2,549,272	54.4

Data Sources: Texas Medical Board, October 2005; Population data: Texas State Data Center, Population Estimates & Projection Program, University of Texas at San Antonio.

Practice settings

In 2005, 38 percent of the PC physicians were employed in solo practices, 48 percent in partnership or group practices, 13 percent in hospitals, and 1 percent in Health Maintenance Organizations (HMOs). A small number of PC physicians did not report their practice settings.

Primary care specialties

In 1991, 45 percent of the Direct Care Physicians were primary care physicians, and 55 percent were non-primary care specialists. In 2005, the ratio was 44 percent primary care to 56 percent specialists. Three-fourths of the PC physicians in non-metropolitan counties were either family practice physicians (51.2 percent) or internal medicine physicians (22.5 percent). However, in metropolitan counties, two-thirds of the PC physicians were trained in family practice (31.2 percent) or internal medicine (29.5 percent). See Table 2.2 for more information.

Table 2.2.

PC Physicians by Primary Specialty and Practice Location, Texas, 2005

PC Physicians by Specialty	2005 PC Physicians Total	% Metropolitan	% Non-Metropolitan
Family Practice	5,221	84.2	15.8
General Practice	792	80.8	19.2
Internal Medicine	4,524	92.0	8.0
General Pediatrics	2,884	95.0	5.0
Obstetrics and Gynecology	2,266	94.2	5.8
Geriatrics	31	100.0	0.0
Total Primary Care	15,718	89.7	10.3

Source: Texas Medical Board, 2005.

Age

The median age of PC physicians in 2005 was 46 years, the same as in 2000. Female physicians tend to be younger, with a median age of 41, than male physicians, with a median age of 49. The ages of PC physicians also differed based on whether the physicians were practicing in non-metropolitan or metropolitan counties. The median age for PC physicians in metropolitan counties was 46 years and, in non-metropolitan counties, 48 years. The median age for PC physicians in the border counties was 47 years, and in the non-border counties it was 46 years.

Gender

In 1995, 80.8 percent of the PC physicians were male; however, that percentage has steadily decreased to 68 percent in 2005. In 2005, one-third of the PC physicians in metropolitan and non-border counties (34 percent and 33 percent respectively) were female. However, only 18 percent of the PC physicians in non-metropolitan counties and 28 percent in border counties were female.

Male and female PC physicians also vary in their choice of a medical specialty. For example, a greater percentage of female PC physicians report pediatrics as their primary specialty (29.1 percent) than do male PC physicians (13.2 percent) (Table 2.3). The two most prevalent specialties in non-metropolitan counties, family practice and internal medicine (Table 2.2), are not as well represented among female PC physicians (51.7 percent of females are practicing in these two specialties) as among male PC physicians (66.9 percent).

Table 2.3.

PC Physicians by Primary Specialty and Gender, Texas, 2005

Physicians by Specialty	2005 PC Physician Total	% Male	% Female
Family Practice	5,221	35.9	27.7
General Practice	792	6.3	2.4
Internal Medicine	4,524	31.0	24.0
General Pediatrics	2,884	13.2	29.1
Obstetrics and Gynecology	2,266	13.4	16.6
Geriatrics	31	0.2	0.2
Total	15,718	100.0	100.0

Source: Texas Medical Board, 2005

Race-Ethnicity

In 2005, the majority (61.4 percent) of the state’s PC physicians were white, down from 74.7 percent in 1995 (Table 2.4). Although Hispanics made up the largest minority population of PC physicians in 1995, Asian–Pacific Islanders were the largest in 2005. The PC physician workforce that was non-Hispanic African-American in 2005 was about six percent smaller than the percentage of this group in the general population, and the PC physician workforce that was Hispanic in 2005 was about 22 percent smaller than the percentage of Hispanics in the general population.

Table 2.4.

Race and Ethnicity Trends for PC Physicians, Texas, 1995 and 2005

Race/Ethnicity	1995		2005	
	PC Physicians (%)	Population (%)	PC Physicians (%)	Population (%)
White	74.7	58.6	61.4	49.4
Black	3.7	11.7	5.8	11.4
Hispanic	11.4	27.4	13.7	35.4
Asian / Pacific Islander	10.1	2.4	18.8	3.8
American Indian / Alaskan Native	0.2		0.3	

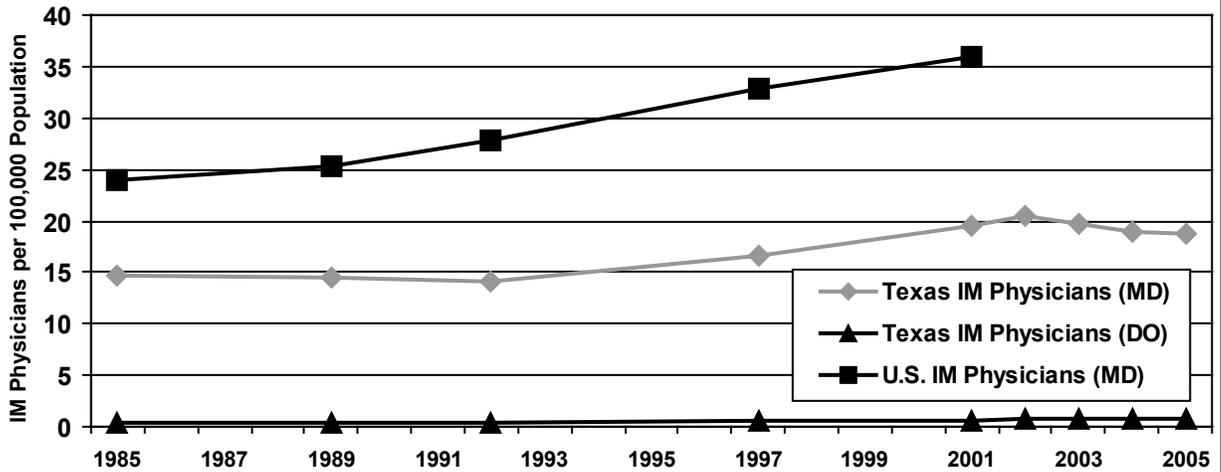
Data sources: Texas Medical Board, 1995 and 2005; Texas population: Texas State Data Center

Internal Medicine (IM)

In Figure 2.4, the supply of IM physicians in Texas is separated into Doctor of Osteopathy (DO) and Medical Doctor (MD) trend lines because national data were not available for DOs. As shown in the graph, the IM supply ratios for MDs in Texas have been lower than the U.S. average ratios for the past two decades. The ratios for DOs have remained stationary. The median age for IM physicians was 44 years in 2005, compared with 45 in 2000.

Figure 2.4.

Internal Medicine Physicians per 100,000 Population, U.S. and Texas, 1981–2005



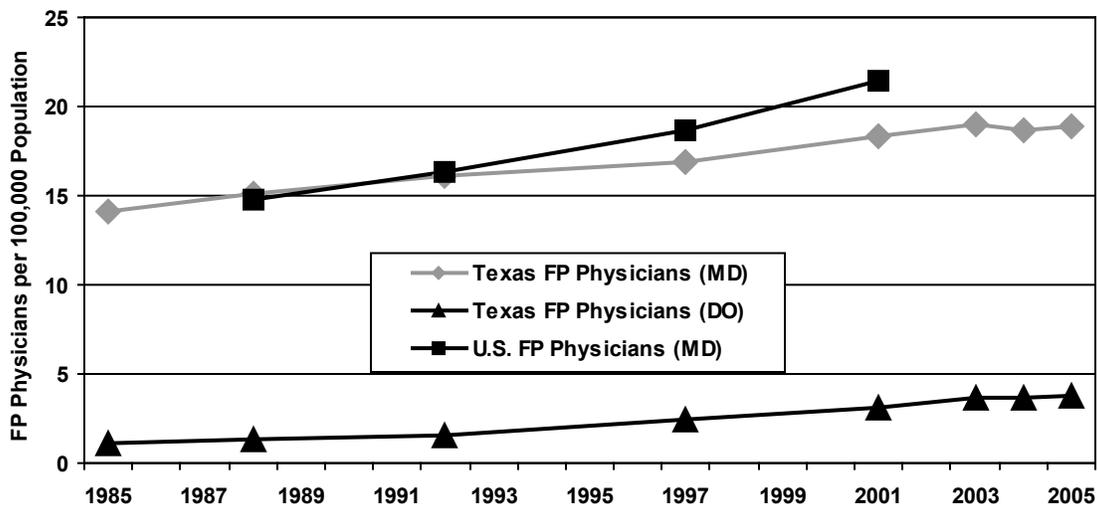
Sources: Texas Medical Board (MD and DO); American Medical Association (U.S. MD); HRSA, Bureau of Health Professions

Family Practice (FP)

In Figure 2.5, the supply of FP physicians in Texas is separated into DO and MD trend lines because national data were not available for DOs. Prior to 1992, the FP ratios in the United States and Texas were about the same; however, after 1992, the gap between the U.S. average ratios and the Texas ratios for FP physicians widened, with the Texas ratios consistently falling behind the U.S. ratios in magnitude. The FP ratios for MDs have increased about the same as the ratios for DOs. The median age for FP physicians was 46 years in 2005, the same as in 2000.

Figure 2.5.

Family Practice Physicians per 100,000 Population, U.S. and Texas, 1981–2005



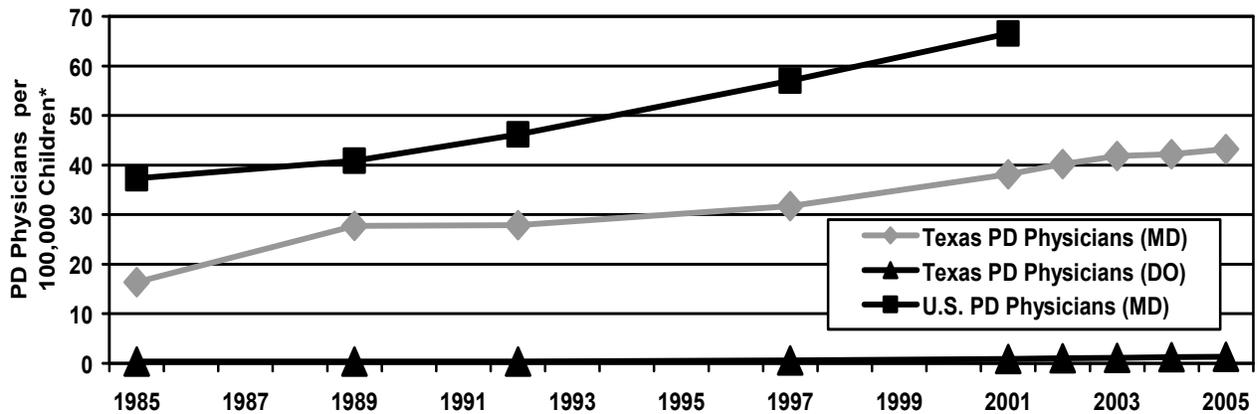
Sources: Texas Medical Board (MD and DO); American Medical Association (U.S. MD); HRSA, Bureau of Health Professions

Pediatrician (PD)

In Figure 2.6, the supply of PD physicians in Texas is separated into DO and MD trend lines because national data were not available for DOs. The PD supply ratios for MDs in Texas per 100,000 children have been lower than the U.S. average ratios for the past two decades, but have been increasing since the mid-'90s. The PD supply ratios for DOs have remained fairly constant. The median age for PD physicians was 44 in 2005, compared with 45 in 2000.

Figure 2.6.

PD Physicians per 100,000 Children (0–18 years), U.S. and Texas, 1985–2005

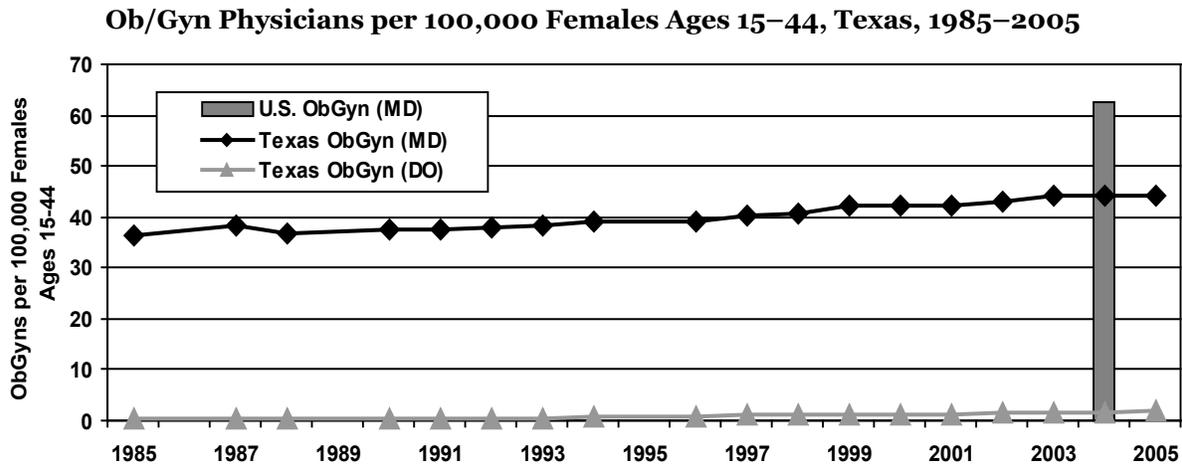


Sources: Texas Medical Board (MD and DO); American Medical Association (U.S. MD); HRSA, Bureau of Health Professions

Obstetrics and Gynecology (Ob/Gyn)

Physicians may have a specialty of Gynecology only, Obstetrics only, or Obstetrics and Gynecology. The data in this report reflect the total of those three specialties. In Figure 2.7, the supply of Ob/Gyns in Texas is separated into DO and MD trend lines to be consistent with previous graphs for FP, IM, and PD physicians. However, national Ob/Gyn supply ratio trends were not available for this graph, although the national ratio in 2004 was 62.5. Ob/Gyn supply ratios for MDs have increased slightly over the past two decades, but the ratios for DOs have remained fairly constant. The median age for Ob/Gyns was 47 years in 2005, compared with 48 in 2000.

Figure 2.7.



Source: Texas Medical Board

HPSAs

PC physician ratios are the primary indicators used by the U.S. Department of Health and Human Services to determine if geographic areas or population groups are experiencing shortages of PC physicians and if they qualify as federal shortage areas. In February 2006, 69.7 percent of the counties in Texas had either whole (117) or partial-county/special population (60) HPSA designations (Appendix B, item 24). Fifty percent of the non-metropolitan counties had “whole county” HPSA designations, and 60 percent of the border counties were designated. Most of the partial-county HPSA designations were located in metropolitan counties. It should be noted many of these federally designated PC physician shortage areas are also experiencing shortages of other health professionals, such as nurses, allied health professionals, and mental health providers.

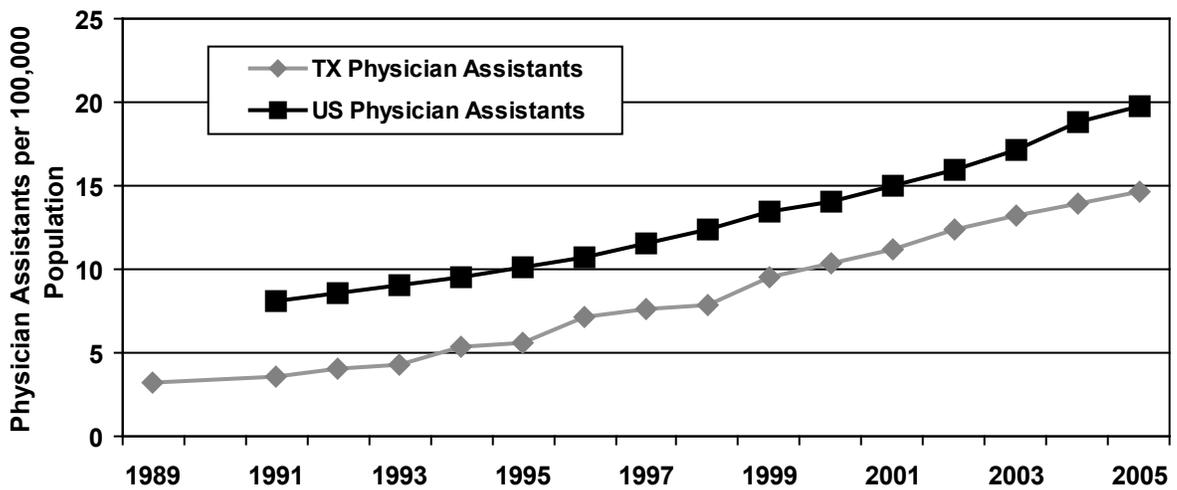
Physician Assistants (PAs)

According to the 2005 TMB licensure data, there were 3,375 PAs licensed to practice in Texas; 88 percent of them practiced in metropolitan counties; 22 percent practiced in border counties. The supply ratios of PAs per 100,000 population for the United States have been consistently higher than the ratios for Texas (for example, 14.1 vs. 10.4 respectively, in 2000). Both the U.S. and Texas ratios have been rising at a comparable rate (Figure 2.8). The ratios for the non-metropolitan areas were higher than those for the metropolitan areas from 1994 to 2002 (Appendix B, item 3); however, the metropolitan areas have sustained a steady increase since that time while the ratios for the non-metropolitan areas have fluctuated. In 2003, the ratios for the metropolitan areas surpassed those of the non-metropolitan areas.

Fifty-two counties that did not have a PA in 1995 had one or more in 2005. In 2005, the counties with the highest supply ratios were in West Texas and the Panhandle, and there were 58 counties with no PAs. Over the past decade, most of the counties with the greatest increase in supply ratios have been in East and Central Texas, with a few counties showing increases in South Texas and the Panhandle. Forty-nine counties experienced a decrease in their supply ratios during that time. In contrast with physicians, the average ratios in the border and non-border counties were similar to each other.

Figure 2.8.

Physician Assistants per 100,000 Population, U.S. and Texas, 1989–2005



Sources: Texas Medical Board, American Academy of Physician Assistants

Age, gender, and race-ethnicity

In 2005, three-fourths (76 percent) of the PAs were white, followed by Hispanic PAs at 12.7 percent of the total (Table 2.5). There were substantially more female PAs than male PAs in 2005, a reversal from 2000, when males slightly outnumbered females, 50.4 percent to 49.6 percent, respectively. The median age of PAs in the state in 2005 was 41 years, the same as in 2000. The median age of PAs in non-metropolitan counties was several years greater than the median age of PAs in metropolitan counties (47 years versus 40 years, respectively). The median age of PAs in border counties was 42 years, 2 years more than that of PAs in non-border counties. A disparity in age and gender exists among PAs based on their practice location: 56 percent of the PAs in metropolitan counties were female, but only 41 percent in non-metropolitan counties were female. In the border counties, only 40 percent of the PAs were female, compared to 58 percent in the non-border counties.

Table 2.5.
Distribution of PAs by Gender and Race-Ethnicity, Texas, 2005

Characteristic	Variable	Percent
Gender	Male	45.4
	Female	54.6
Race-Ethnicity	White, not Hispanic	76.0
	Black	5.3
	Hispanic	12.7
	Asian-Pacific Islander	5.4
	American Indian – Alaskan Native	0.7

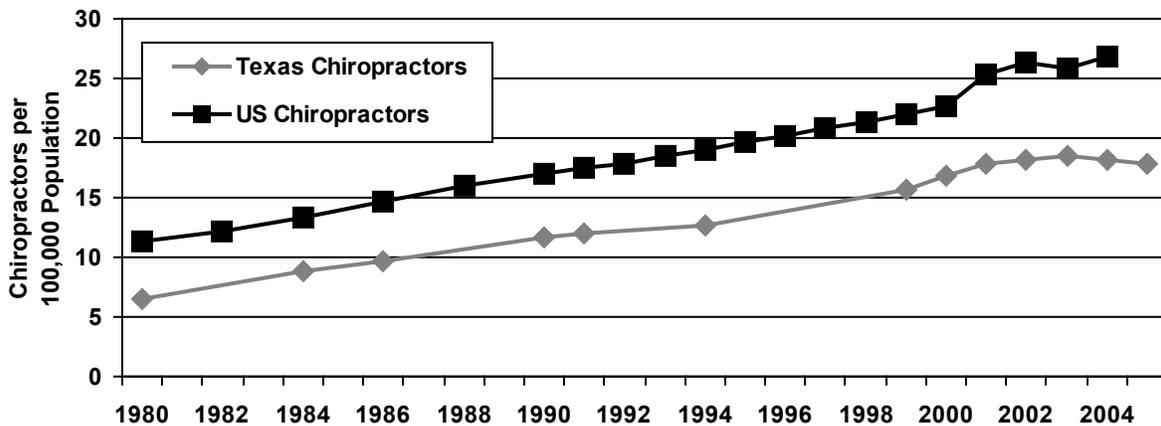
Source: Texas Medical Board, 2005.

Chiropractors

There were 4,091 chiropractors in Texas in 2005. The supply ratio of chiropractors per 100,000 population in the US has consistently exceeded the supply ratios in Texas (Figure 2.9). And, prior to the late 1980s, the ratio was higher in non-metropolitan counties than in metropolitan counties (Appendix B, item 4). Since that time, the ratios for chiropractors in metropolitan counties have greatly increased and have exceeded the rates for non-metropolitan counties. In 2005, there were 79 counties in the state that did not have a chiropractor. Nineteen counties that did not have a chiropractor in 1991 had at least one in 2005. However, 16 counties that had chiropractors in 1991 had no chiropractors in 2005. The highest supply ratios were concentrated in the central part of the state, and also around Dallas and Houston. The general trend appears to be a shift of chiropractors away from non-metropolitan counties to metropolitan counties.

Figure 2.9.

Chiropractors per 100,000 Population, U.S. and Texas, 1980–2005



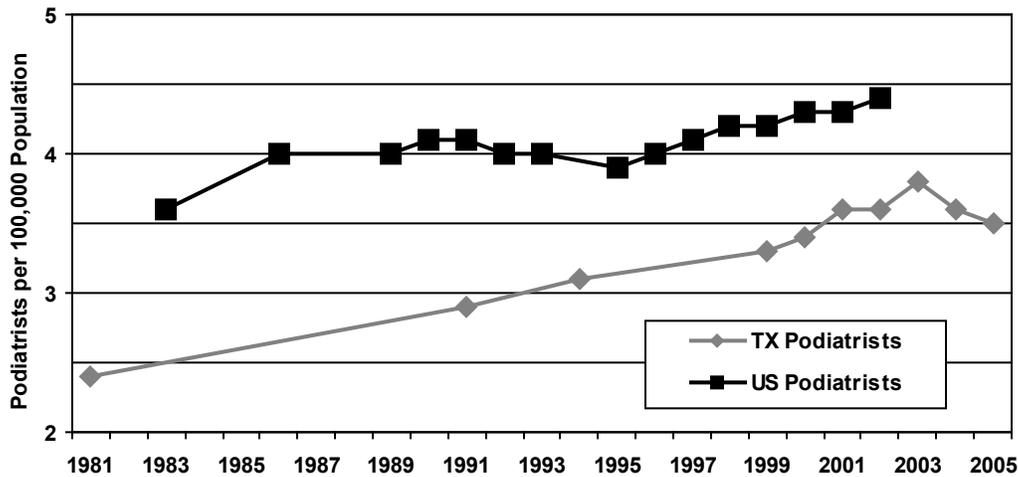
Sources: Texas Board of Chiropractic Examiners; HRSA, Bureau of Health Professions; Federation of Chiropractic Licensing Boards

Podiatrists

There were 814 podiatrists in Texas in 2005. There are no schools of podiatry in Texas and only eight accredited schools nationally. That may partially explain why Texas lags behind the United States in podiatrist supply ratios. The gap had decreased slightly in the last few years until 2004, when the ratios for Texas began to decrease (Figure 2.10). The ratios are greater in metropolitan areas than in non-metropolitan areas (Appendix B, item 5). The highest concentration of podiatrists is in the Central Texas area. There are very few podiatrists in West Texas, South Texas, and the Panhandle. The non-metropolitan border counties have higher average ratios than the non-metropolitan non-border counties. Central Texas experienced the largest growth rate in supply ratios over the last decade. Twenty-eight counties that did not have a podiatrist in 1994 had at least one in 2005, while only three counties lost all of their podiatrists over that time. In 2005, Texas had 167 counties without a podiatrist. The median age for podiatrists was 44 years in 2005, the same as in 2000.

Figure 2.10.

Podiatrists per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas State Board of Podiatric Medical Examiners, 1981–2005; HRSA, Bureau of Health Professions

NURSING PROFESSIONS

- **Registered Nurses**
- **Advanced Practice Nurses**
 - Nurse practitioners
 - Certified nurse midwives
 - Nurse anesthetists
 - Clinical nurse specialists
- **Licensed Vocational Nurses**

Registered Nurses (RNs)

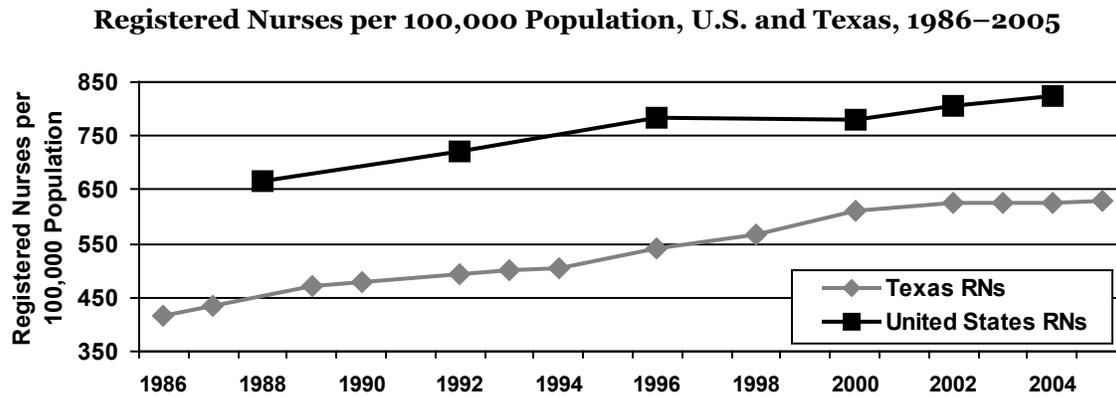
All of the RNs included in the statistics for this chapter and Appendix B held active licenses and were employed either part-time or full-time in nursing. Although some RNs were employed as teachers or administrators and may not provide direct patient care, they were included in the overall supply totals for Texas RNs.

Supply

According to the Board of Nurse Examiners (BNE) licensure file for 2005, there were 144,602 active RNs practicing in Texas — 85.8 percent were employed full-time and 14.2 percent were employed part-time in nursing. The 144,602 RNs give Texas a supply ratio of 628.6 RNs per 100,000 population. The Texas supply ratios have been below the U.S. supply ratios for years (for example, 611.9 vs. 780.4 respectively in 2000). The gap between U.S. and Texas ratios has been slightly increasing in recent years (Figure 2.11).

Metropolitan counties have consistently had a much higher ratio of nurses than the non-metropolitan counties (Appendix B, item 6). There were only four counties that did not have an RN in 2005 but those four counties had a combined population of only 6,539 people. Since 1998, 123 of Texas' 254 counties have seen an increase in the supply ratio of RNs; only two counties did not have an RN in 1998, and neither of them had one in 2005. Although the border counties continue to have much lower supply ratios than the rest of Texas, the ratios in those counties are increasing at a rate comparable to the rest of the state.

Figure 2.11.



Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

Gender

In 2005, the RN workforce in Texas was predominantly female; only 9.5 percent of the nurses were male. This represents only a slight increase in the male representation in the RN workforce from 2000, when 8.4 percent of the RNs were male.

Position type and employment field

A majority (64.3 percent) of the RNs who were actively employed as nurses in Texas were working in hospitals — the others being primarily employed in home health (5.6 percent), physicians’ or dentists’ offices and clinics (4.7 percent), school or college health clinics (4.1 percent), nursing homes or extended care facilities (3.2 percent), business or industry (2.4 percent), community and public health (1.8 percent), freestanding clinics (2.1 percent), schools of nursing (1.6 percent), self-employed or in private practice (1.0 percent), temporary agencies (0.8 percent), military installations (0.7 percent), rural health clinics (0.3 percent) or in other employment fields (6.5 percent). Also, the employment field was unknown for 0.7 percent of the RNs.

Since the majority of RNs work in hospitals, in 2005 most were employed in hospital-related positions, such as head nurse, staff nurse, or general duty nurse (Table 2.6). Advanced practice nurses accounted for 4.8 percent of all nursing positions for active nurses in Texas.

Table 2.6.

Distribution of actively employed RNs in Texas by position type, 2005

Position Type	Number	%
Head Nurse, Staff Nurse, General Duty Nurse, or Assistant	93,839	64.9
Administrator/ Supervisory/ Assistant	15,029	10.4
School / Office Nurse	9,053	6.3
Nurse Practitioner	4,066	2.8
Faculty/Educator	3,229	2.2
Consultant	2,176	1.5
Nurse Anesthetist	1,701	1.2
In-service / Staff Development	934	0.6
Clinical Nurse Specialist	864	0.6
Certified Nurse Midwife	244	0.2
Other	12,282	8.5
Unknown	1,185	0.8

Source of data: Texas Board of Nurse Examiners, September 2005

Education — basic and highest degrees

In 2005, one-third (33.7 percent) of the active RNs listed as their *basic degree* the baccalaureate degree in nursing (BSN), 44.6 percent listed associate degree in nursing (ADN), and 21.2 percent listed diploma in nursing. Other RN degree types (masters in nursing, enroute to masters, RN undergraduate, and VN/VP program) accounted for 0.5 percent of the RNs, and a small number of nurses did not give their basic degree. The majority listed ADN as their *highest degree* (39.5 percent) followed by the BSN degree (35.6 percent), and the diploma in nursing (11.0 percent). Only 6.3 percent had a master of science in nursing and 0.3 percent, a doctorate in nursing. Some RNs had their highest degree in a field other than nursing (7.4 percent).

Of those nurses with a diploma degree, 19.7 percent had progressed to a BSN, 4.9 percent to an MSN, and 0.4 percent to a doctorate in nursing. Of those nurses with ADN as their basic degree, 9.3 percent progressed to a BSN, 2.6 percent to a MSN, and 0.1 percent to a doctorate in nursing. By comparison, of those nurses with a BSN as their basic degree, 11.2 percent advanced to MSN and 0.6 percent advanced to a doctorate in nursing.

Work area

The most common work areas for active RNs in Texas were medical-surgical (14.4 percent), intensive care–critical care (11.5 percent), obstetrics and gynecology (7.8 percent), and operating/recovery care (7.7 percent) (Table 2.7).

Table 2.7.

Distribution of active RNs in Texas by their work area, 2005

Work Area	Number	%
Medical / Surgical	20,862	14.4
Intensive Care / Critical Care	16,612	11.5
Obstetrics and Gynecology	11,343	7.8
Operating / Recovery Care	11,174	7.7
Pediatrics	8,890	6.1
Emergency Care	8,571	5.9
Home Health	7,319	5.1
General Practice	6,220	4.6
Neonatology	5,672	3.9
Geriatrics	5,556	3.8
Psychiatric / Mental Health / Substance Abuse	4,602	3.2
Oncology	4,230	2.9
Community / Public Health	4,196	2.9
Rehabilitation	2,800	1.9
Anesthesia	1,748	1.2
Occupational/Environmental	934	0.6
Other	22,368	15.5
Missing	1,505	1.0

Source: Texas Board of Nurse Examiners, September 2005

Job satisfaction, retention, and re-entry into nursing

The Regional Center for Health Workforce Studies at the Center for Health Economics and Policy (CHEP) conducted a research study in 2004 on Registered Nurses (RNs) in Texas. The following reflects the results of the 2004 CHEP study of 1,012 RNs with some comparison to the 2002 study results on factors that affect retention and re-entry of nurses in the nursing workforce:

- While 73 percent of the RNs reported general satisfaction with their work, 69 percent reported exhaustion and 54 percent reported frustration.
- Almost 43 percent of the RNs reported that, on most days, they often have more work than they can safely handle.
- In Texas, 13 percent of the RNs reported an increase in violence against nurses, mostly from patients and to a lesser degree from non-MD staff. Twenty-eight percent of the Border RNs report an increase in harassment by patients.
- RNs see too little or no relief from paperwork. The issues of patient workload and patient acuity still remain areas of concern for RNs.
- Some of the factors that affect retention and re-entry of nurses in the workforce have to do with the nursing workload involved in caring for an increasingly aged, severely ill, and obese patient population along with increasing paperwork and physical and interpersonal stressors.
- In regard to the work environment, lifting was reported as the greatest risk. Only 34 percent of the RNs perceived that they have adequate help with physical demands in the workplace.
- Only 5.2 percent (a decrease of 7 percent in 2002) of the nurse managers reported that their employers have made changes in the workplace (e.g., part-time scheduling, reducing physical demands) to accommodate nurses over 55.¹

Aging of the Registered Nurse Workforce

The aging of the RN workforce will have an impact on future nursing workforce trends. RNs from the baby boomer generation entered nursing in large numbers in the 1960s and 1970s and represent the largest cohort of RNs today. In conjunction with this, a declining percentage of young RNs are entering the workforce.

The overall RN workforce in Texas continues to age. The median age of RNs in 2000 was 44 years. The median age for nurses in both border counties and non-border counties was 46 years. In 2005, the median age of RNs in Texas was 46 years, with non-metropolitan nurses being slightly older on average (48 years) than metropolitan nurses (46 years). According to the Bureau of Labor Statistics, the national median age for RNs was 43 years.² These trends show that the median age of RNs continues to increase and that the Texas RN workforce is older than the national RN workforce.

Of the 144,602 RNs actively working in nursing in 2005, 38.6 percent of these nurses are 50 years of age or older. This means that 9.6 percent of these nurses can start retiring now and the remaining 29 percent will be retiring in the next three to twelve years. So that by the year 2020, there will be a loss of 56 percent of the current RN workforce due to a large cohort of nurses retiring. According to the Bureau of Health Professions (2005), “three factors contribute to this aging of the RN workforce: (1) the decline in number of nursing school graduates, (2) the higher average age of recent graduating classes, and (3) the aging of the existing pool of licensed nurses.”³

In the 2004 CHEP study, the RNs who were surveyed indicated the following work plans:

- RNs age 46–55 intend to retire at age 62.
- RNs age 56 and above intend to retire at age 66.
- Approximately 6 percent of RNs 56 and above plan to retire within the next year.
- Over 4 percent of RNs planning to leave nursing for another type of work are in the “30 and below” and “46–55” age groups.
- Non-metropolitan RNs average age of intended retirement increased by more than one year, from age 63 in 2002 to age 64 in 2004.
- The percentage of border RNs intending to decrease work hours for next year decreased from 19 percent in 2002 to 16 percent in 2004.⁴

In the 2005 BNE master file, there were 3,229 RNs who held active licenses, were employed full- or part-time in nursing, and indicated “faculty or educator” as the position they held at the time of license renewal. Out of the 3,229 RN faculty or educators, there were 1,851 who worked in schools of nursing. The median age of faculty or educators who worked in schools of nursing was 54 years of age.

In a study done in 2004 on schools of nursing in Texas, the following age-related trends among faculty have an impact on the capacity of schools of nursing to produce more graduates over the next 20 years (Texas Center for Nursing Workforce Studies, 2005):

- Trends show an additional increase in the median age of nurse faculty, from 51 in 1999 to 54 in 2004.
- The nurse faculty workforce in Texas has a higher median age than the RN workforce as a whole.
- The median age of 54 for Texas nurse faculty in 2004 was higher than the national median age of 51.5 for RN faculty as reported in 2003 by the American Association of Colleges of Nursing.
- In 2004, there were only 136 faculty members in Texas who were under 40 years old. The trends over a ten-year period show that there has been no significant increase in recruitment of younger faculty members.

For 2004, there were a total of 1,264 faculty members, or 70.2 percent of the total faculty population, age 50 or older teaching in Texas schools of nursing. One-third of these faculty members could retire at any time because they are 60 and older. The remaining two-thirds of these faculty members could start retiring in the next 3-12 years.⁵

Advanced Practice Nurses (APNs)

The term APN includes all nurses recognized by the TBNE as nurse practitioners, nurse midwives, nurse anesthetists, and clinical nurse specialists. The APN specialties are based on the types of practice or target populations of the practice, such as pediatrics, family, school health, women’s health, oncology, and psychiatry–mental health.

Nurse Practitioners (NPs)

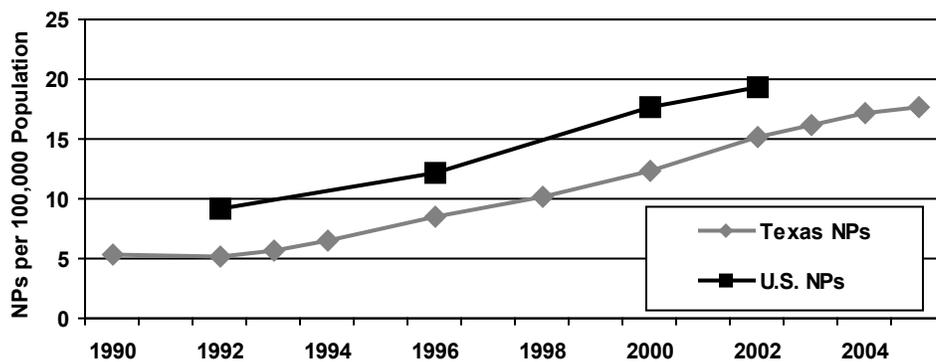
NPs have been granted authorization by the Board of Nurse Examiners to practice based on their advanced education and experience. NPs practice both under the authority of their nursing license and in collaboration with physicians. Some functions, such as prescribing medication, can be performed only in collaboration with a physician under written protocols.

The data for NPs were obtained from the 2005 RN master licensing file. The “position type” on the file has variables for *administrator, school nurse, researcher, nurse practitioner, clinical nurse specialist, nurse anesthetist, and nurse midwife*, among others. For this report, an RN record was selected as an NP record based on the position type of “nurse practitioner.” Since an APN may be certified in multiple position types, but can only choose one position type when completing renewal forms, the totals presented in this report possibly undercount the exact number of NP recognitions in Texas. In 2005, there were 4,066 active NPs practicing in Texas. The importance of NPs in the delivery of health care is indicated by their increasing supply; the ratios increased by 74 percent between 1998 and 2005.

The supply ratios of NPs per 100,000 population in Texas have lagged behind the U.S. average supply ratios for decades (Figure 2.12). In contrast with the trends for many health professions in Texas, the highest NP supply ratios were in certain counties in the Panhandle and in areas west of Central Texas. However, most of the 66 counties that did not have an NP in 2005 were also in these areas. Overall, the average ratios of NPs in metropolitan counties were higher than in non-metropolitan counties, and the gap has been increasing (Appendix B, item 7). Forty-three counties that did not have an NP in 1998 had at least one in 2005. In 2005, the median age for NPs was 48 years, compared with 46 in 2000.

Figure 2.12.

Nurse Practitioners per 100,000 Population, U.S. and Texas, 1990–2005



Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

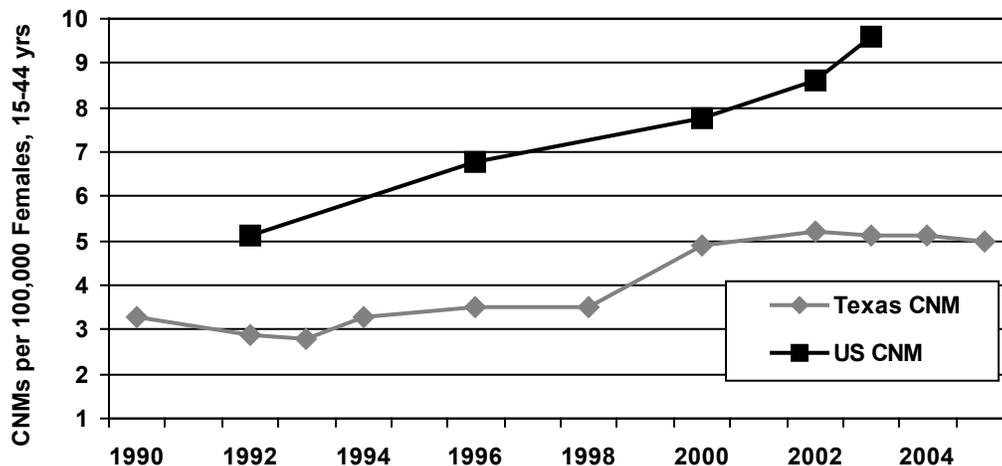
Certified Nurse-Midwives (CNMs)

CNMs have been granted authorization by the Board of Nurse Examiners to practice based on advanced education and experience. CNMs provide obstetrical and gynecological care for women during pregnancy, childbirth, and the postpartum period. In Texas, there are two types of midwives: Direct-entry Midwives and CNMs. Direct-entry Midwives are non-RNs who successfully complete a course on midwifery and successfully pass the state-approved comprehensive written exam as required by the Texas Midwifery Board. Certified Nurse Midwives’ educational preparation requires an RN background. They are regulated by the Texas Board of Nurse Examiners.

In Texas, in 2005, there were 244 CNMs. The data for CNMs were obtained from the 2005 RN master licensing file (for position types, see “Nurse Practitioners,” above). An RN record was selected as a CNM record based on the position type of “nurse midwife.” Since an APN may be certified in multiple position types, but can only choose one position type when completing renewal forms, the totals presented in this report possibly undercount the exact number of CNM recognitions in Texas. CNMs were primarily located in the metropolitan areas of Texas and their ratios increased by 43 percent between 1998 and 2005 (see Figure 2.13). The Texas supply ratio of CNMs per 100,000 female population of childbearing age (ages 15 through 44) has lagged behind the U.S. supply ratio since 1992, when national statistics first became available. In 2005, there were 214 counties that did not have a CNM. In 2005, the median age of CNMs was 49 years, compared with 46 in 2000.

Figure 2.13.

Certified Nurse Midwives per 100,000 Females Ages 15–44, U.S. and Texas, 1990 –2005



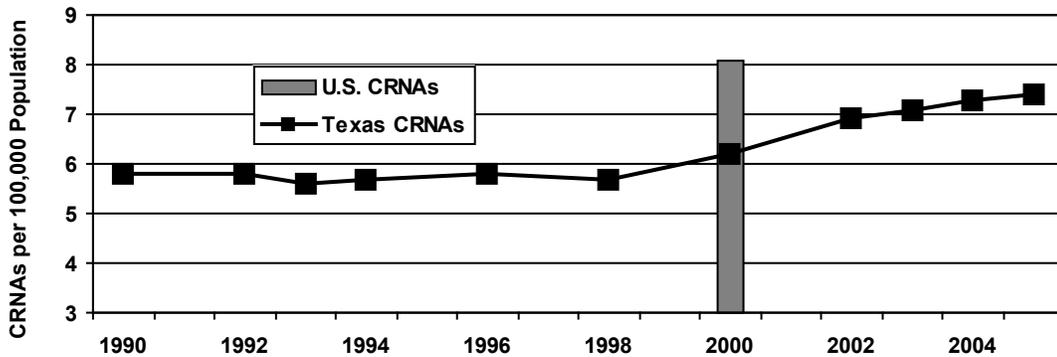
Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

Certified Registered Nurse Anesthetists (CRNAs)

In 2005, there were 1,701 CRNAs practicing in Texas. They were primarily located in the metropolitan areas of Texas (Appendix B, Item 9). Their ratios increased by 30 percent between 1998 and 2005 (see Figure 2.14). U.S. statistics for Figure 2.14 were available only for the year 2000. The Texas ratio in 2000 was below the national average. In 2005, there were 124 counties that did not have a CRNA. In 2005, the median age of CRNAs was 50 years, compared with 48 in 2000.

Figure 2.14.

**Certified Registered Nurse Anesthetists per 100,000 Population, Texas, 1990–2005
(national statistics not available, except for 2000)**



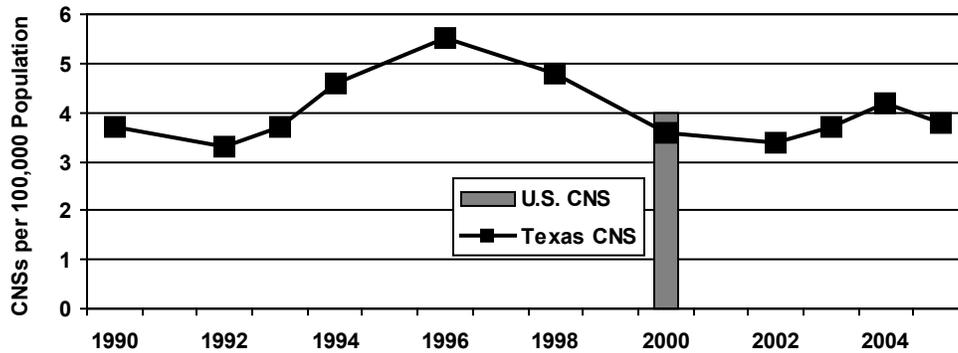
Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

Clinical Nurse Specialists (CNS)

There were 864 CNSs practicing in Texas in 2005. They were primarily located in the metropolitan areas of Texas. Their ratios decreased by 10 percent between 1998 and 2005 (see Figure 2.15). U.S. statistics were not available except for the year 2000; however, the Texas and U.S. supply ratios for that year were similar in magnitude. Twenty counties that did not have a CNS in 1998 had at least one in 2005. In 2005, there were 185 counties in Texas that did not have a CNS. In 2005, the median age for CNSs was 51 years, compared with 49 in 2000.

Figure 2.15.

**Clinical Nurse Specialists per 100,000 Population, Texas, 1990–2005
 (national statistics not available, except for 2000)**



Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

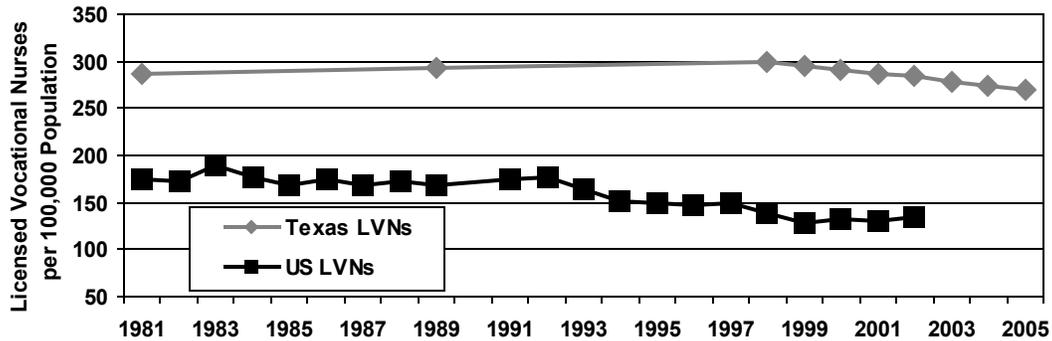
Licensed Vocational Nurses (LVNs)

LVNs provide nursing care under the direction of a registered nurse, a physician, or another authorized health care provider. According to the Texas Board of Nurse Examiners (BNE) licensure file, there were 61,886 active LVNs practicing in Texas in 2005, a supply ratio of 269.0 LVNs per 100,000 population. The LVN profession is among the few health professions in Texas where the supply ratios (290.2 in 2000) exceed the U.S. average ratios (132.6 in 2000) (Figure 2.16). However, the ratio for Texas has been declining slightly over the past seven years, while the U.S. ratios seemed to stabilize in the late 1990s and early 2000s. Current U.S. data were not available. The general trend in both the United States and Texas has been toward a decline in the supply of LVNs.

In contrast with most other professions, the ratios for LVNs are higher in non-metropolitan counties than metropolitan counties (Appendix B, item 11). The trend has been toward the increased use of LVNs in non-metropolitan counties relative to the use of RNs. The supply ratios of LVNs are lower in both the metropolitan border counties and the metropolitan non-border counties than in the rest of the state. None of the three counties that did not have an LVN in 1998 had one in 2005. In 2005, there were seven counties that did not have an LVN, and, since 1998, 66 counties have experienced growth in the supply of LVNs relative to the population; however, 185 counties experienced a decrease in the supply ratios. In 2005, the median age of LVNs was 46 years, compared with 44 in 2000.

Figure 2.16.

Licensed Vocational Nurses per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

DENTAL PROFESSIONS

- Dentists
- Dental Hygienists

Dentists

Most dentists are general dentists, which would, using the physician analogy, be the equivalent to PC physicians. For the purpose of this report, the term *general dentists* will include dentists within the specialties of public health, pediatric, and general dentistry. Also, in this chapter, statistics are reported only for active general dentists who are non-federal, non-administrative, and who are not residents-in-training.

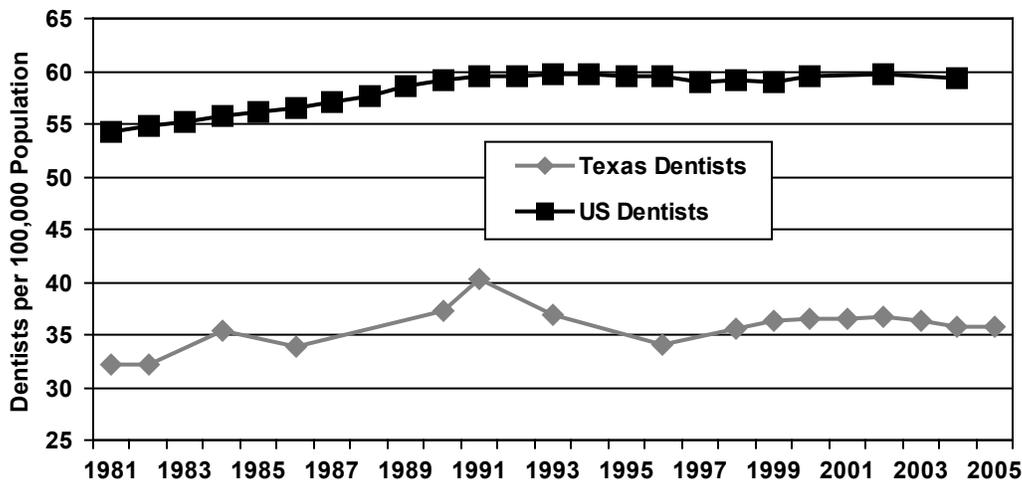
In 2005, there were 8,213 dentists in private practice in Texas. The supply ratios of dentists per 100,000 population have remained fairly constant over the last two decades and have lagged behind the U.S. average ratios (Figure 2.17).

In 2005, the average supply ratio for dentists in Texas was 35.7 per 100,000 population (Appendix B, item 12). There were more dentists employed in metropolitan counties (ratio of 37.5) than in non-metropolitan counties (ratio of 23.6). The average supply ratio of dentists in border counties fell far short of the ratio in non-border metropolitan counties, and the gap between metropolitan and non-metropolitan counties has been widening over the years. Between 1996 and 2005, 121 counties experienced a decline in their ratios, while only 16 counties experienced an increase in ratios of 50 percent or greater, which is considerably less than for most other health professions. Only one county that did not have a dentist in 1996 had gained one in 2005. In 2005, there were 49 counties with no dentists.

Age and Gender

In 2005, three-quarters (76.9 percent) of the dentists were males and 55 percent of the dentists statewide were below the age of 50 years. In 2005, the median age was 48 years, compared with 46 years in 2000. In 2005, the median age of a male dentist in Texas was 50 years, and of a female dentist, 39 years (Appendix B, item 12). In non-metropolitan counties, only one in ten dentists were females, compared to one out of four dentists in metropolitan counties. Twenty-one percent of the dentists in the border counties were female, while 24 percent in the non-border counties were female.

Figure 2.17.
Dentists per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas State Board of Dental Examiners 1981–2005; HRSA, Bureau of Health Professions; American Dental Association

Dental HPSA

In January 2006, 110 counties in Texas had some type of HPSA designation, which indicated that the area or population group was experiencing a shortage of dentists. Seventy-nine of those designations were for whole counties (Appendix B, item 25).

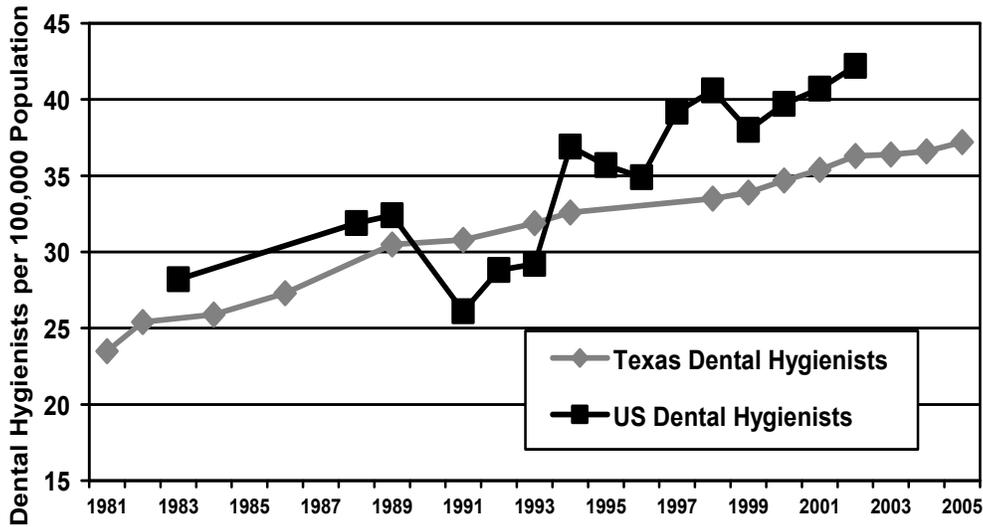
Dental Hygienists

“These health professionals perform services and procedures in the dental office of his/her supervising dentist or dentists who are legally engaged in the practice of dentistry in this state or under the supervision of a supervising dentist in an alternate setting” (Texas Occupations Code, Chapter 262). They are eligible for licensure after graduating from a community college (two-year program) or from a three- or four-year university program. The supply ratios of dental hygienists per 100,000 population have steadily increased in Texas since 1981 (Figure 2.18). The supply ratios for Texas have lagged behind the U.S. average ratios for most of the past two decades.

There were 8,548 dental hygienists practicing in Texas in 2005. Because dental hygienists often practice in combination with dentists in Texas, their geographic distribution is often linked to that of dentists. Thus, the ratios for dental hygienists were much higher in metropolitan than in non-metropolitan counties in 2005 (Appendix B, item 13). Most of the border counties have very low supply ratios. Between 1993 and 2005, 76 counties experienced a decline in their ratios, while the ratios for 38 counties more than doubled; this includes 20 counties that did not have a dental hygienist in 1993 but that had one in 2005. Between 1993 and 2005, 13 counties lost all of their dental hygienists, and 9 counties lost all of their dentists. In 2005, there were 58 counties with no dental hygienists, and 49 counties with no dentists. The median age of dental hygienists in 2005 was 41 years, compared to 40 in 2000.

Figure 2.18.

Dental Hygienists per 100,000 Population, U.S. and Texas, 1981–2005



Sources: Texas State Board of Dental Examiners, 1981–2005; HRSA, Bureau of Health Professions.

ALLIED HEALTH PROFESSIONS

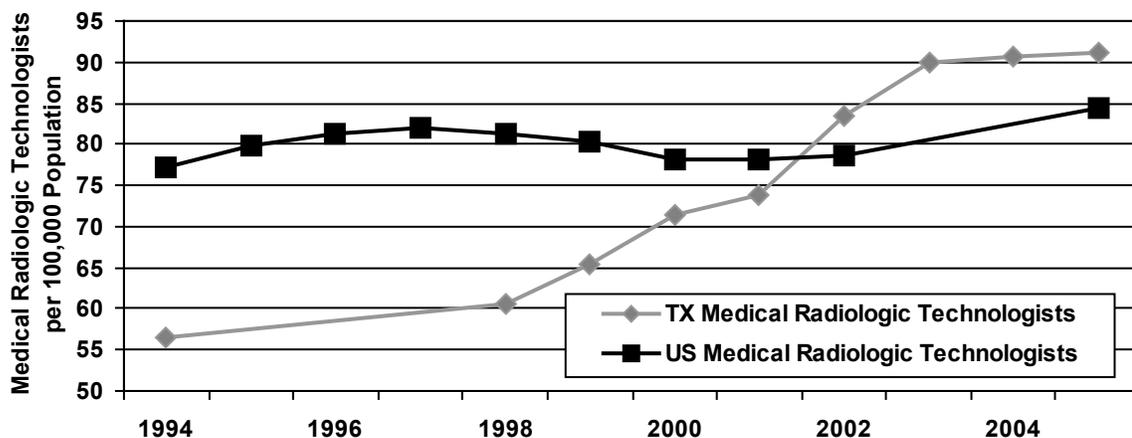
- **Medical Radiologic Technologists**
- **Occupational Therapists**
- **Optometrists**
- **Pharmacists**
- **Physical Therapists**
- **Respiratory Care Practitioners**

Medical Radiologic Technologist (MRT)

MRTs are certified by the Professional Licensing and Certification Unit at the Texas Department of State Health Services. They administer radiation to persons for medical purposes under the direction of a practitioner. The definition includes diagnostic radiography, nuclear medicine, and radiation therapy. There were 20,972 MRTs practicing in Texas in 2005. During the 1990s, the supply ratios of MRTs per 100,000 population in Texas lagged behind the U.S. average supply ratios; however, the gap between the two has been decreasing. In 2002, the Texas ratios surpassed those of the United States (Figure 2.19). Non-metropolitan counties had lower supply ratios than do metropolitan counties and, in general, the border counties had lower ratios (88.3 overall) than did the rest of the state (Appendix B, item 14). In particular, the counties in West Texas, with the exception of El Paso, had very low ratios. Since 1998, ratios have grown in counties distributed throughout the state, including the border counties, and eleven counties that did not have an MRT in 1998 had at least one in 2005. However, four counties that had MRTs in 1998 did not have any in 2005. In 2005, there were 34 counties with no MRTs. The median age of MRTs in 2005 was 43 years, compared with 41 in 2000.

Figure 2.19.

Medical Radiological Technologists per 100,000 Population, U.S. and Texas, 1994–2005



Sources: Texas Department of State Health Services, Professional Licensing and Certification Unit 1994–2005; American Registry of Radiologic Technologists

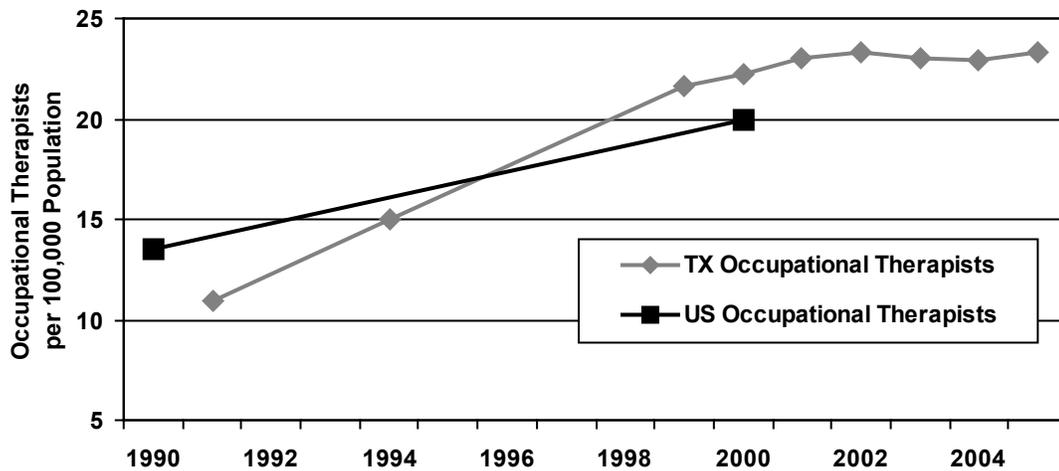
Occupational Therapists (OTs)

The supply ratios of OTs per 100,000 population in Texas have risen steadily over the last decade. And, since the mid-1990s, the state ratios have been higher than the U.S. average ratios (Figure 2.20).

There were 5,354 OTs practicing in Texas in 2005. The ratios for OTs were higher in the metropolitan areas than in the non-metropolitan areas, but the ratios were generally lower for the border counties than in the rest of the state (Appendix B, item 15). Since 1999, 100 counties have experienced an increase in their OT ratios; however, in 2005, there were 95 counties that did not have an OT. Twenty-three counties that did not have an OT in 1999 had at least one in 2005. The median age for OTs in 2005 was 39 years, compared with 37 in 2001.

Figure 2.20.

Occupational Therapists per 100,000 Population, U.S. and Texas, 1990–2005



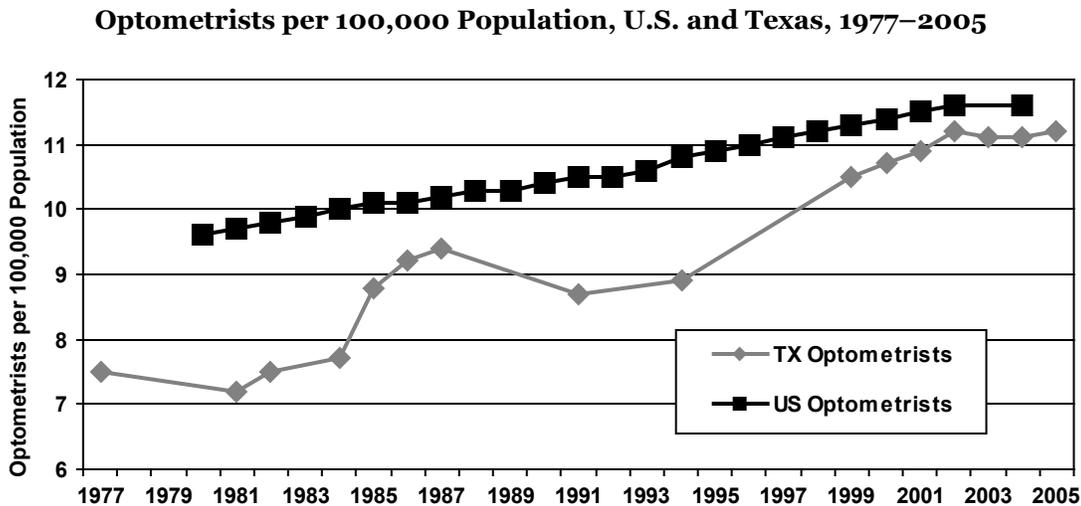
Sources: The Executive Council of Physical Therapy & Occupational Therapy Examiners; HRSA, Bureau of Health Professions

Optometrists

The University of Houston College of Optometry is the only accredited school of optometry in Texas. The ratios of optometrists per 100,000 population in Texas have lagged behind the U.S. supply ratios for over two decades, although the gap appears to be narrowing (Figure 2.21).

In 2005, there were 2,577 optometrists practicing in Texas. Optometrists are more likely to practice in metropolitan counties than non-metropolitan counties, but this hasn't always been the case (Appendix B, item 16). Prior to 1984, the ratios for non-metropolitan counties were higher than those for metropolitan counties. However, since that time, the metropolitan county ratios have surpassed those of the non-metropolitan counties and the gap between the two has been steadily widening. Fourteen counties that did not have an optometrist in 1999 had a least one in 2005; however, nine counties that had optometrists in 1999 did not have any in 2005. In 2005, there were 103 counties that did not have an optometrist. In several areas of Texas, notably the lower Panhandle area and portions of West Texas, a patient would have to travel through several counties to reach an optometrist. The border counties have very low supply ratios and several counties have no optometrists. The median age in 2005 was 42 years, the same as in 2000.

Figure 2.21.



Sources: Texas Department of State Health Services, Professional Licensing and Certification Unit; HRSA, Bureau of Health Professions; U.S. Department of Labor, Bureau of Labor Statistics

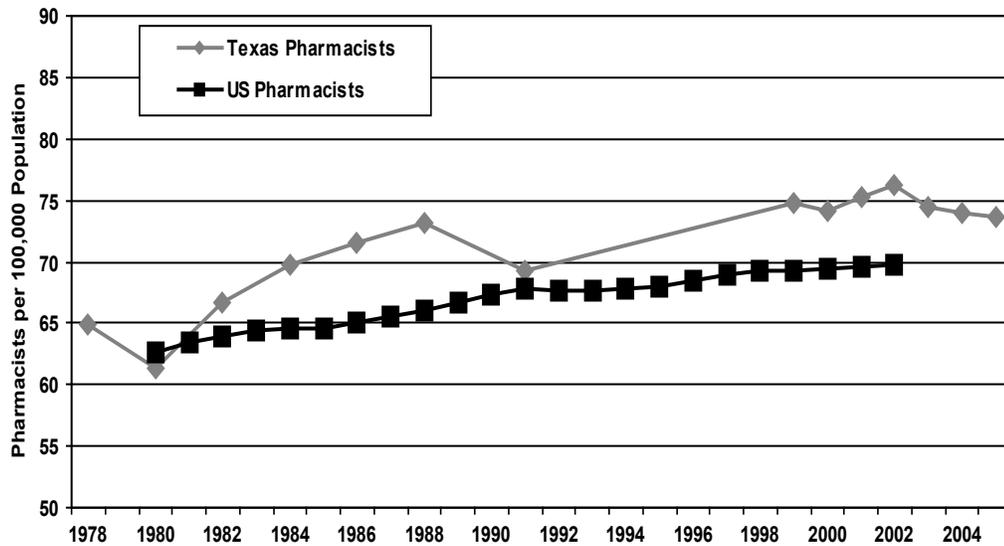
Pharmacists

The state ratio of pharmacists per 100,000 population has exceeded the U.S. average supply ratio for the past two decades. However, since the mid-1990s, the supply ratios for both the United States and Texas have been fairly static, although the Texas ratio has been decreasing slightly since 2003 (Figure 2.22).

The ratios for pharmacists are higher in the metropolitan counties than in the non-metropolitan counties (Appendix B, item 17). However, the ratios are the lowest for the border counties. Between 1999 and 2005, 95 counties in Texas have experienced a decline in the ratios. However, three counties that did not have a pharmacist in 1999 had at least one in 2005. In 2005, there were 23 counties that did not have a pharmacist. The median age in 2005 was 46 years, compared with 44 in 2000.

Figure 2.22.

Pharmacists per 100,000 Population, U.S. and Texas, 1978–2005



Sources: Texas State Board of Pharmacy; HRSA, Bureau of Health Professions

Physical Therapists (PTs)

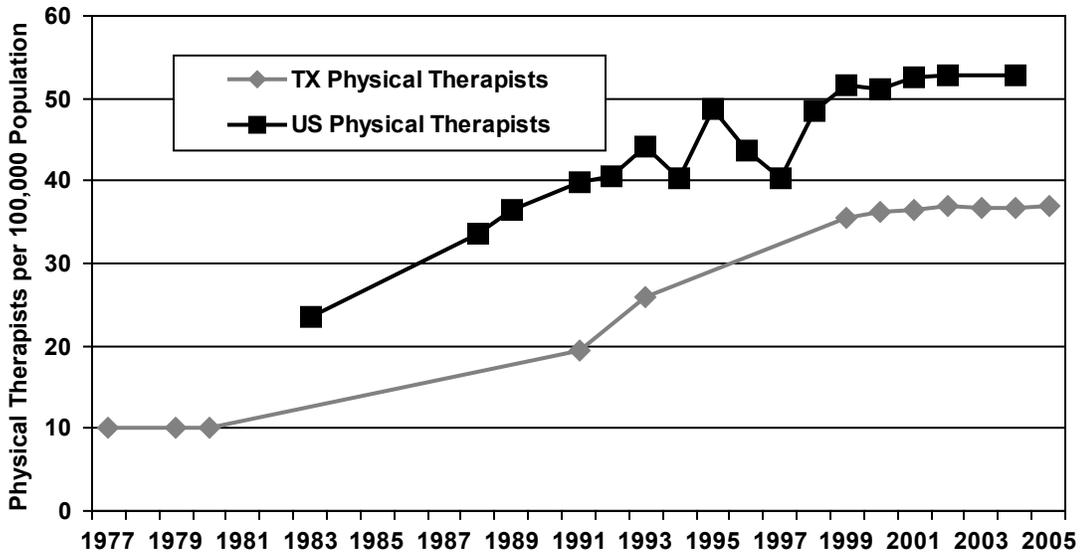
There are no bachelor's degree programs for PTs in the U.S.; the only entry level PT degree is a master's degree. The state requires that PTs hold a bachelor's degree in any major, and at least a master's degree from an accredited PT program; they must also pass a national exam administered by the Executive Council of Physical Therapy and Occupational Therapy Examiners. There are ten accredited PT educational programs in the state.

The supply ratios for PTs per 100,000 population in Texas have shown steady increases over the past 30 years; however, the Texas supply ratios have consistently lagged behind the U.S. average (Figure 2.23).

There were 8,511 physical therapists practicing in Texas in 2005. The supply ratios are generally higher in metropolitan counties, with the exception of the border counties, which generally have much lower ratios (Appendix B, item 18). Between 1999 and 2005, the ratios increased in 113 counties, scattered across the state. Although the border counties experienced an increase in ratios at a comparable rate to the rest of the state, the largest concentrations of counties experiencing the most growth in ratios were in an area from Central Texas to the Dallas metropolitan area in North Texas. Although some individual counties in the Panhandle were among those that had the highest increase in ratios, most of the counties in the Panhandle and West Texas either had a decline in ratios, or had no PTs at all. Twenty counties that did not have a PT in 1999 had at least one in 2005. In 2005, 59 counties did not have a PT. The median age in 2005 was 39 years, compared with 37 in 2001.

Figure 2.23.

Physical Therapists per 100,000 Population, U.S. and Texas, 1977–2005



Sources: The Executive Council of Physical Therapy & Occupational Therapy Examiners; HRSA, Bureau of Health Professions

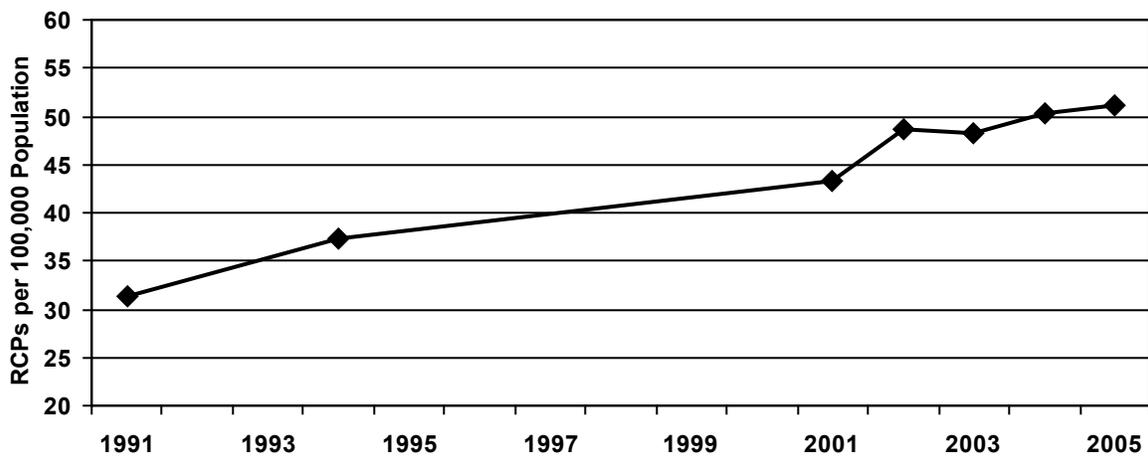
Respiratory Care Practitioners

The Professional Licensing and Certification Unit at the Texas Department of State Health Services issues licenses to respiratory care practitioners in Texas. The ratios of respiratory care practitioners per 100,000 population have risen steadily since 1991, except for a slight decrease in 2002 (Figure 2.24). The non-metropolitan counties had much lower ratios than the metropolitan counties, and the gap is increasing (Appendix B, item 19). Data on gender and race-ethnicity are not available.

In 2005, there were 11,768 respiratory care practitioners in Texas. While some areas of Texas have an adequate number of respiratory care practitioners, other areas - such as the non-metropolitan, West Texas, South Texas, and the Panhandle areas - had lower supply ratios. Most of the counties with no social workers were in these areas. In 2005, there were 69 counties with no social workers, compared to 59 in 1994. However, 20 counties that had social workers in 1994 did not have any in 2005, while ten counties that did not have social workers in 1994 had at least one in 2005. In 2005, the median age was 45 years, compared with 40 years in 2001. National supply ratios for respiratory care practitioners were not available.

Figure 2.24.

Respiratory Care Practitioners (RCPs) per 100,000 Population, Texas, 1991–2005



Source: Texas Department of State Health Services, Professional Licensing and Certification Unit

MENTAL HEALTH PROFESSIONS

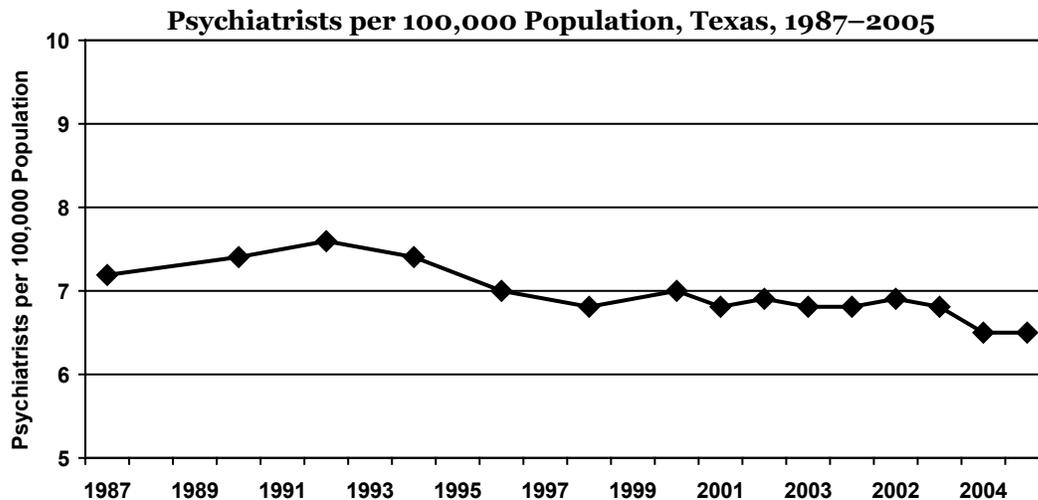
- **Psychiatrists**
- **Psychologists**
- **Social Workers**
- **Licensed Professional Counselors**
- **Advanced Practice Nurses**

Psychiatrists

There were 1,488 psychiatrists licensed by the Texas Medical Board in October 2005. In addition to physicians practicing in the specialty of psychiatry, physicians with a specialty of child psychiatry (190 of the 1,488) were included in this report on “psychiatrists” to comply with the HPSA definition of “general” psychiatry. The ratio of psychiatrists per 100,000 population began to increase around 1986, stabilized for several years, then, in about 1992, began to decline. From 1996 to 2003, the ratios stabilized again, but in 2004 the ratios again began to decline (Figure 2.25). National supply ratios for psychiatrists were not available.

Two-thirds (67.0 percent) of Texas’ psychiatrists were male in 2005; and, more than one-half of the psychiatrists were over 50 years of age; the median age was 51.5 years, compared with 52 in 2000. The supply ratios for psychiatrists per 100,000 population were the largest in metropolitan counties. Metropolitan border counties had lower supply ratios than did metropolitan non-border counties, but the non-metropolitan border counties had higher ratios than did the non-metropolitan non-border counties. (Appendix B, item 20).

Figure 2.25.



Source: Texas Medical Board

Mental Health HPSAs

In January 2006, there were 184 whole counties designated by the U.S. Department of Health and Human Services as mental health HPSAs in Texas, and two counties designated as partial-county HPSAs. Two counties had a “low-income population” HPSA designation (Appendix B, item 26).

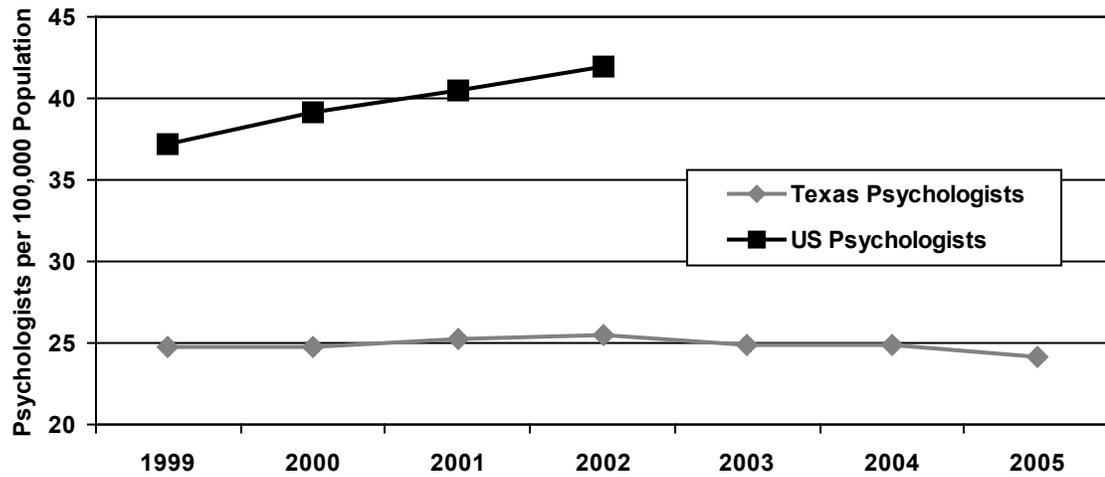
Psychologists

In Texas, there are four categories of licensees recognized by the Texas State Board of Examiners of Psychologists (TSBEP): Licensed Psychologist (LP), Provisionally Licensed Psychologist (PLP), Licensed Specialist in School Psychology (LSSP), and Licensed Psychological Associate (LPA). A psychologist may hold more than one of these licenses. The statistics in this report represent an unduplicated count of these four license types; therefore, there were 5,567 psychologists practicing in Texas in 2005. Only psychologists’ license numbers and mailing address were available for analysis in 2005 because the TSBEP is one of only a few boards that does not collect age, gender and race-ethnicity data on its licensees. Of the four types, licensed psychologists were in greatest supply in 2005. Since 1999, the available data indicates that the psychologist supply ratios have been higher for the United States than for Texas (Figure 2.26).

The psychologist supply ratios have been decreasing slightly since 2002. The supply ratios have been greater in Texas metropolitan counties than in non-metropolitan counties over the past seven years (Appendix B, item 21). In 2005, the largest concentration of counties with high ratios was in Central Texas. The border counties and Panhandle counties had very low ratios; many of these counties did not even have a psychologist. Also, very few of these counties had an increase in supply ratios between 1999 and 2005. However, since 1999, the ratios have increased slightly in the non-metropolitan and border areas overall, while decreasing slightly in the metropolitan areas overall. Even so, most of the growth in supply ratios was in Central Texas. Between 1999 and 2005, 75 counties experienced an increase in ratios, while 81 experienced a decrease. Twenty-three counties that had no psychologists in 1999 had at least one in 2005. Despite these gains, 112 counties had no psychologists in 2005.

Figure 2.26.

Psychologists per 100,000 Population, U.S. and Texas, 1999–2005



Sources: Texas State Board of Examiners of Psychologists, 1999–2005; U.S. Bureau of the Census

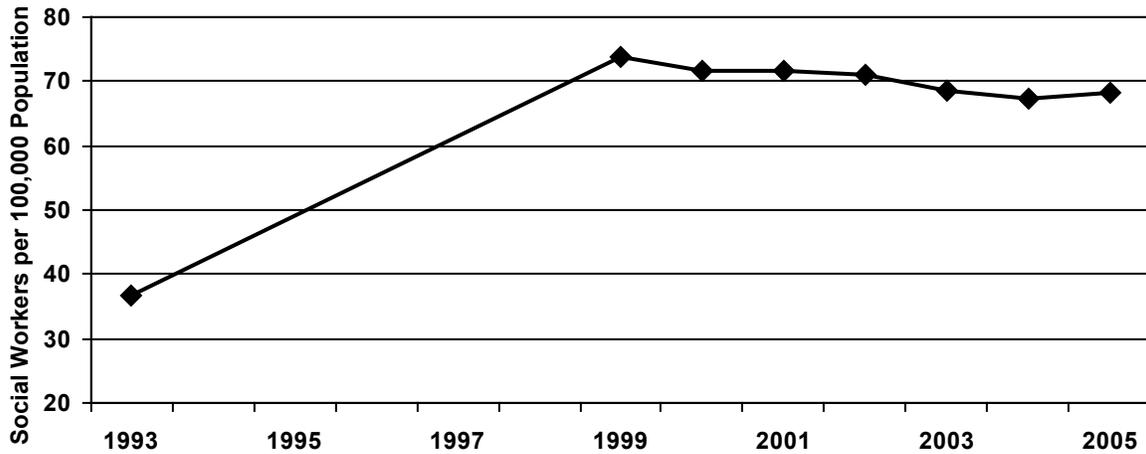
Social Workers

The Professional Licensing and Certification Unit at the Texas Department of State Health Services issues licenses to social workers in Texas. The ratios of social workers per 100,000 population over the last seven years have been fairly constant; however, the overall trend appears to be favoring a slight decline in the magnitude of the ratio (Figure 2.27). The non-metropolitan counties had much lower ratios than the metropolitan counties (Appendix B, item 22). Data on gender and race-ethnicity are not available.

In 2005, there were 15,687 social workers in Texas. While some areas of Texas have an adequate number of social workers, other areas - such as the non-metropolitan, West Texas, South Texas, and the Panhandle areas - had lower supply ratios. Most of the counties with no social workers were in these areas; only five counties with no social workers were located east of I-35. In 2005, there were 46 counties with no social workers, compared to 35 in 1999. However, 20 counties that had social workers in 1999 did not have any in 2005, while nine counties that did not have social workers in 1999 had at least one in 2005. In 2005, the median age was 47 years, compared with 45 years in 2001. National supply ratios for social workers were not available.

Figure 2.27.

Social Workers per 100,000 Population, Texas, 1993–2005



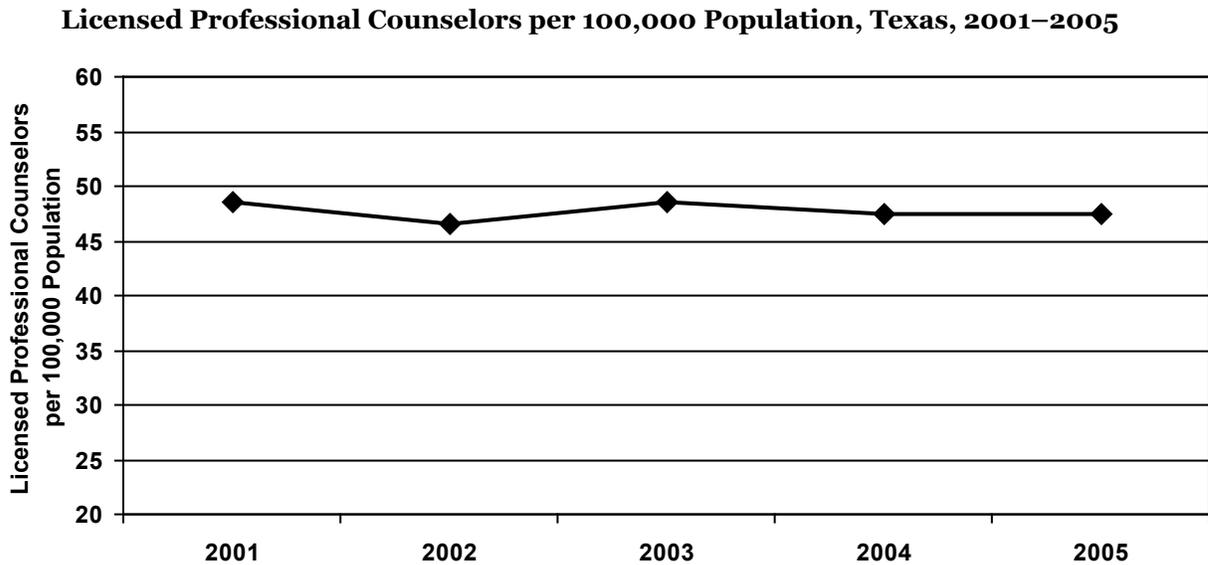
Source: Texas Department of State Health Services, Professional Licensing and Certification Unit

Licensed Professional Counselors

The Professional Licensing and Certification Unit at the Texas Department of State Health Services issues licenses to professional counselors in Texas. The ratios have remained stable for the past five years (Figure 2.28). The non-metropolitan counties had much lower ratios than the metropolitan counties (Appendix B, item 23).

In 2005, there were 10,896 Licensed Professional Counselors practicing in Texas. There were 54 counties with no Licensed Professional Counselors, compared to 49 in 2001. Between 2001 and 2005, the supply ratios for 121 counties declined and 13 of them lost all of their licensed professional counselors. Eight counties that did not have a counselor in 2001 had at least one in 2005. The median age in 2005 was 54 years, compared with 51 years in 2001.

Figure 2.28.



Source: Texas Department of State Health Services, Professional Licensing and Certification Unit

Advanced Practice Nurses (APNs)

The Texas Board of Nurse Examiners recognizes APNs in various clinical practice areas. Nurse Practitioners (NPs) may be recognized in one of 12 clinical areas. In 2005, there were 107 NPs with Psychiatric / Mental Health / Substance Abuse recognitions, an increase from 2000, when there were 49 NPs with P/MH/SA recognitions. The median age of these nurses in 2005 was 51 years, compared with 48 years in 2000. Clinical Nurse Specialists may be recognized in one of 14 clinical areas. In 2005, there were 147 CNSs with P/MH/SA recognitions, a decrease from 2000, when there were 186 CNSs with P/MH recognitions. In 2005, the median age of these nurses was 56 years, compared with 52 years in 2000.

Notes

- ¹ Reineck C, Furino A, Lucke J, Martinez J and Wood R. 2005. In Their Own Words: 2004 Survey of Texas Registered Nurses. *Health and Nurses in Texas* 2(3):1-88. San Antonio, TX: Regional Center for Health Workforce Studies at the Center for Health Economics and Policy, The University of Texas Health Science Center at San Antonio. Available online at: <http://www.uthscsa.edu/rchws/Reports/2004RN%20Survey%20of%20Texas.pdf>. Accessed June 26, 2006.
- ² Center for Health Workforce Studies. 2005. *The Impact of the Aging Population on the Health Workforce in the United States*. Rensselaer, NY: Center for Health Workforce Studies, School of Public Health, SUNY Albany. Available online at: <http://chws.albany.edu/index.php?aging> . Accessed July 24, 2006.
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- ⁴ Reineck C, Furino A, Lucke J, Martinez J and Wood R. 2005. In Their Own Words: 2004 Survey of Texas Registered Nurses. *Health and Nurses in Texas* 2(3):1-88. San Antonio, TX: Regional Center for Health Workforce Studies at the Center for Health Economics and Policy, The University of Texas Health Science Center at San Antonio. Available online at: <http://www.uthscsa.edu/rchws/Reports/2004RN%20Survey%20of%20Texas.pdf>. Accessed June 26, 2006.
- ⁵ Kishi A. 2005. *Increasing RN Graduates: Admission, Progression and Graduation in Texas Schools of Nursing 2004*. Austin, TX: Texas Center for Nursing Workforce Studies, Center for Health Statistics, Department of State Health Services. Available online at: <http://www.dshs.state.tx.us/chs/cnws/nPublica.shtm>. Accessed June 26, 2006.