

Projecting the Need for Medical Education in Texas

July 2002

Texas Higher Education Coordinating Board

This report is available on the Coordinating Board website at
<http://www.thecb.state.tx.us/UHRI/ProfSchools.htm>

Texas Higher Education Coordinating Board

Pamela P. Willeford (Chair)	Austin
Martin Basaldua, M.D (Vice Chair)	Kingwood
Raul B. Fernandez (Secretary of the Board)	San Antonio
Neal W. Adams	Bedford
Ricardo G. Cigarroa, M.D.	Laredo
Gen. Marc Cisneros (ret.)	Corpus Christi
Kevin P. Eltife	Tyler
Jerry Farrington	Dallas
Cathy Obriotti Green	San Antonio
Gerry Griffin	Hunt
Cary Hobbs	Waco
Adair Margo	El Paso
Lorraine Perryman	Odessa
Curtis E. Ransom	Dallas
Hector de J. Ruiz, Ph.D.	Austin
Robert W. Shepard	Harlingen
Windy Sitton	Lubbock
Terdema L. Ussery II	Dallas

The Texas Higher Education Coordinating Board does not discriminate on the basis of race, color, national origin, gender, religion, age or disability in employment or the provision of services.

Table of Contents

Introduction	3
I. Demographic Trends in Medical Education – The Nation and Texas	4
A. Gender	
B. Ethnicity	
C. Number of medical graduates	
D. Where do we educate them?	
II. The Availability of Physicians in Texas	9
A. Statewide	
B. Regional	
C. Potential influence on future availability of medical services	
D. What influences practice location?	
E. Pathway to physician supply	
III. Opportunities for Texas Students to Obtain Medical Education	14
A. Projected over time	
B. Compared to other states	
C. Variances by region	
IV. “Services” and “Opportunities” Findings	24
V. Summary Findings and Recommendations.	25
Appendices	28

Introduction

Estimating the number of physicians that Texas will need to serve its increasing population is a complex task. Simple extrapolation of existing ratios of physicians to population is too simplistic to provide great confidence in the results, even at the statewide level. Such an extrapolation would assume that the state has or knows the right ratio now, that the people of Texas will continue to access and use physician services in the future in the same way they do now, and that many factors beyond state control (the effects of managed care and federal reimbursements, for example) will continue much the same as they are at present. Those assumptions easily could be wrong, but an inability to foresee the future does not remove the need to try and plan for it.

Beyond projecting the number of physicians the state will need is the consideration of how many the state will educate within its borders and how many will be educated elsewhere. If the state decides to increase the number of physicians that it educates, determining whether they will be produced by increasing the class size of existing medical schools or creating new ones adds additional complexity. Finally, if the state decides to create a new school or schools, the educational, health, and economic development benefits conveyed by the presence of a medical school prompt the interest of many communities, further complicating eventual decisions.

To address these issues and similar questions arising for other professional fields, the Coordinating Board in April 2002 adopted a *Methodology for Projecting the Need for Professional Education in Texas*. The Board directed the staff to apply the *Methodology* to the various professional fields (medicine, law, veterinary medicine, pharmacy, dentistry, and perhaps others) in succession. This document is the first fulfillment of that directive.

The *Methodology* principally projects the need for professional education on the basis of only two factors: the need the people of Texas have for professional services, and the need for opportunities to become "professionals." Accordingly, the *Methodology* builds a framework for analysis through two questions: *Is there an increasing need/demand for services?* and *Is there increasing demand from people who want to be "professionals?"* The *Methodology*, however, *does not presume that those are the only factors on which a decision to create a new professional school should be based.* (See Appendix A-87 for the full text of the *Methodology*.)

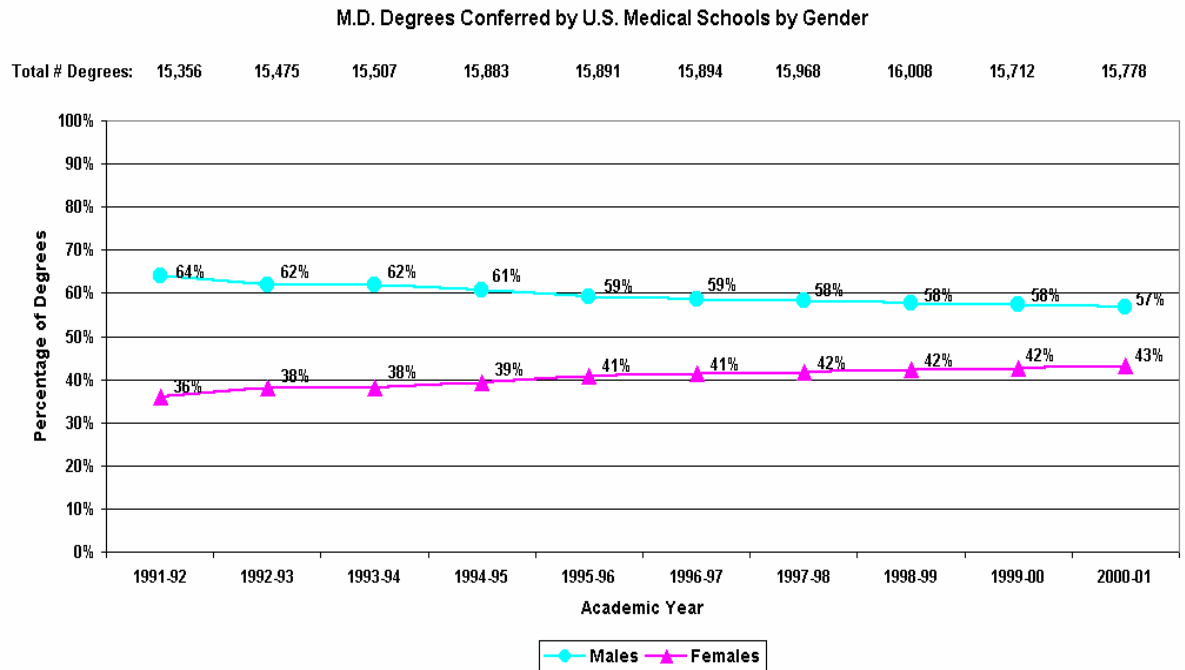
This report applies the *Methodology* to medical education in Texas. After presenting background demographic data, this report offers the results of the Coordinating Board staff's analysis as short assessments of various data, most of which is displayed in graphs and tables. Much additional data and information are available in the many (88) appendices accompanying the document. The report, with findings and recommendations (see page 25), was adopted by the Texas Higher Education Coordinating Board on July 18, 2002.

The Coordinating Board will provide its recommendations to the Legislature and to boards of regents, along with its acknowledgement that any decision to create a new professional school should be based not only on needs identified through an analysis of projected demand for services and demand for opportunity, but on consideration of factors such as costs and benefits, examination of various approaches, effects on existing schools, and the states priorities, needs, and financial capabilities at the time a decision is made. (*Methodology*, pp.4-5)

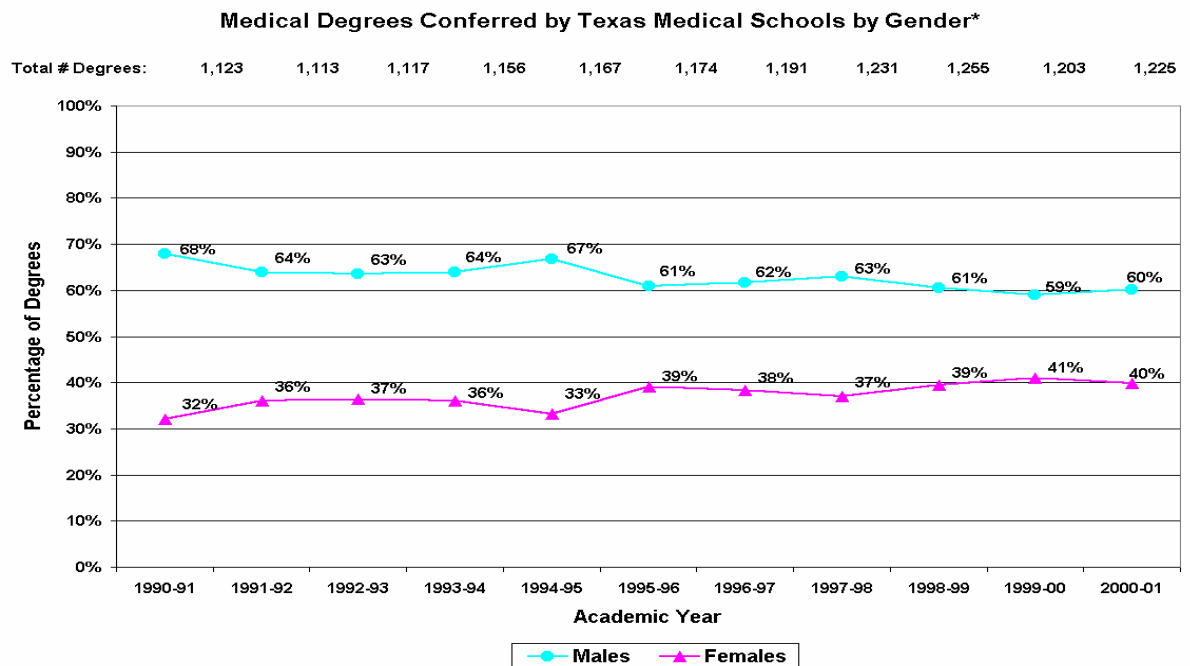
I. Demographic Trends in Medical Education – The Nation and Texas

A. Gender

More women are becoming physicians.



Source: Association of American Medical Colleges Data Warehouse
 Enlarged version of this chart found in Appendix 24.



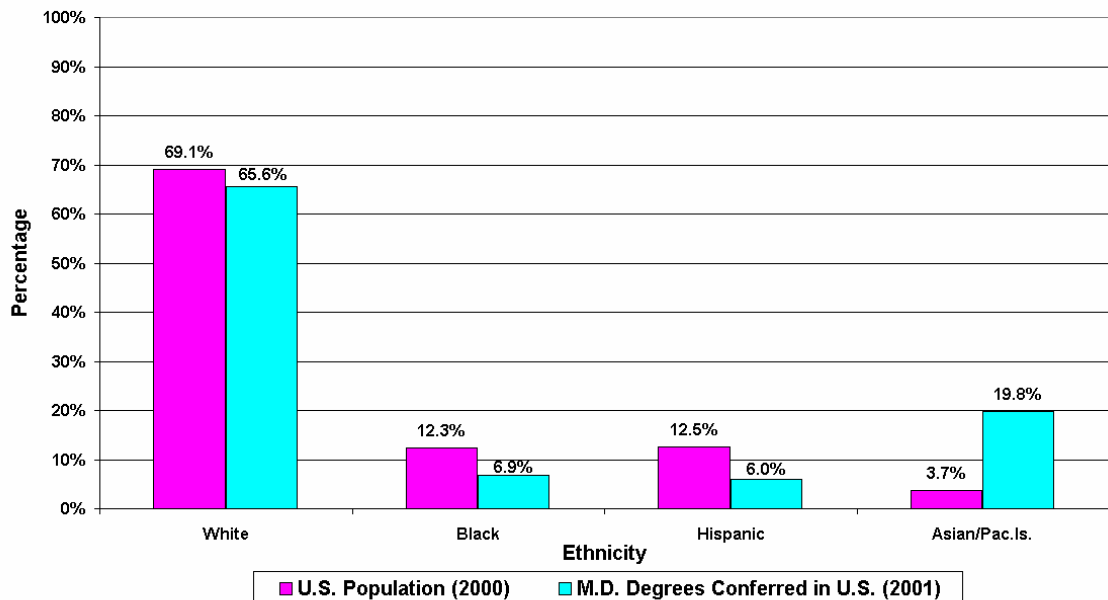
*Includes M.D. and D.O. degrees
 Sources: Texas Higher Education Coordinating Board; Institutions
 Enlarged version of this chart found in Appendix 25.

B. Ethnicity

- Hispanic and Black populations are proportionally under-represented in medical schools.

Comparison of U.S. Population and M.D. Degrees Conferred by U.S. Medical Schools by Ethnicity

(15,778 M.D. Degrees Conferred in U.S. in 2001)

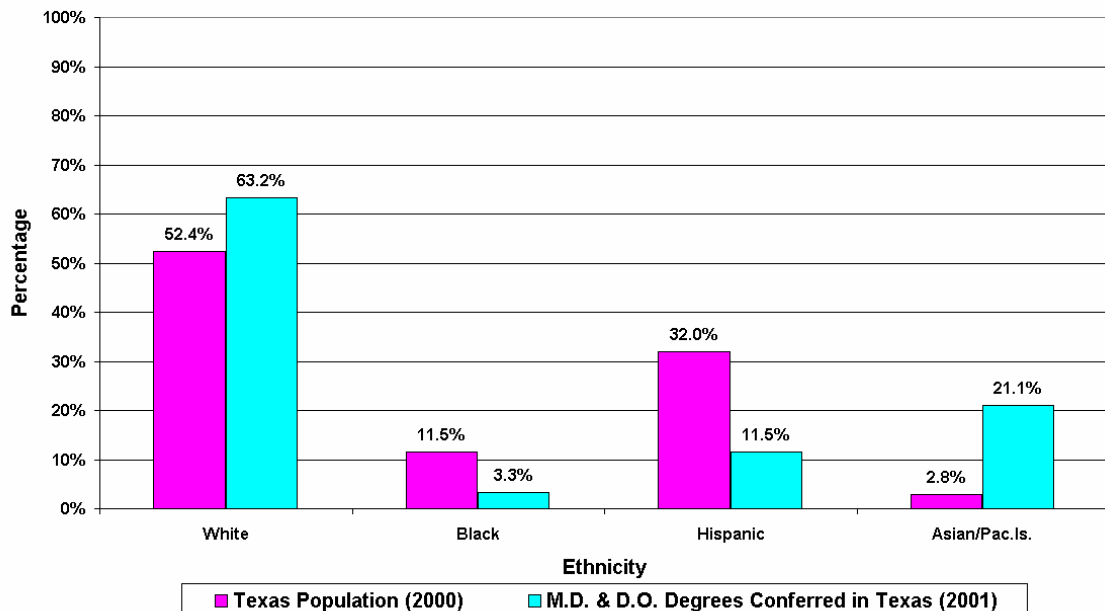


Sources: 1) Population: U.S. Census Bureau, 2000; 2) Degrees: Association of American Medical Colleges Data Warehouse

Enlarged version of chart above found in Appendix 27; chart below found in Appendix 28.

Comparison of Texas Population and Medical Degrees Conferred by Texas Medical Schools by Ethnicity

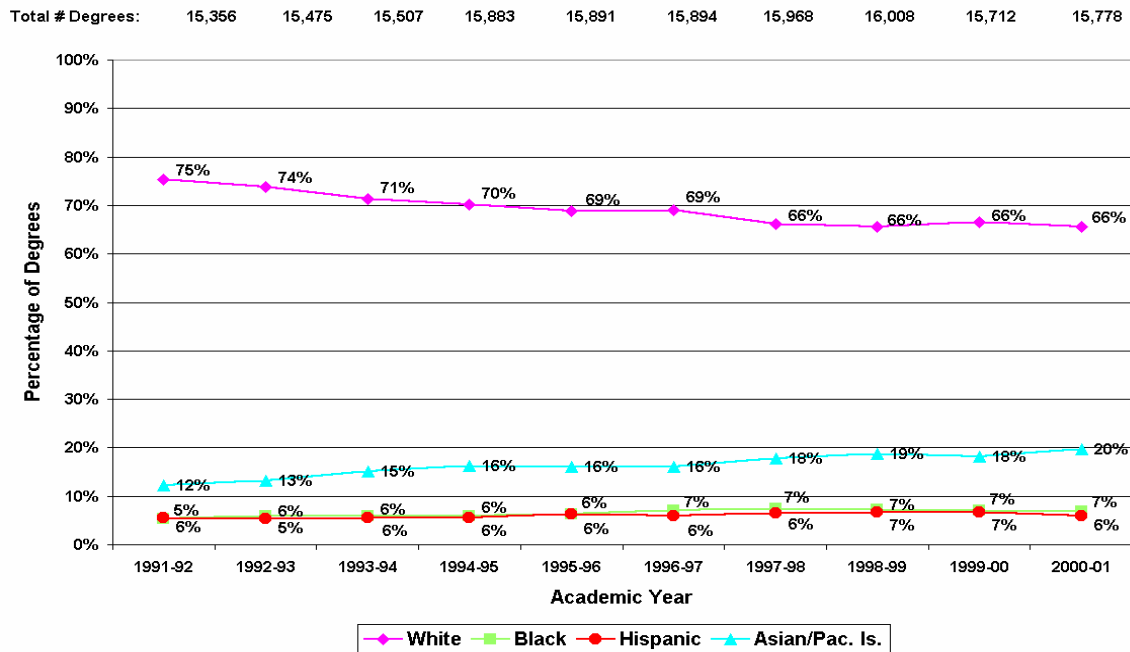
(1,225 Medical Degrees Conferred in Texas in 2001)



Sources: 1) Population: U.S. Census Bureau, 2000; 2) Degrees: Texas Higher Education Coordinating Board, Institutions

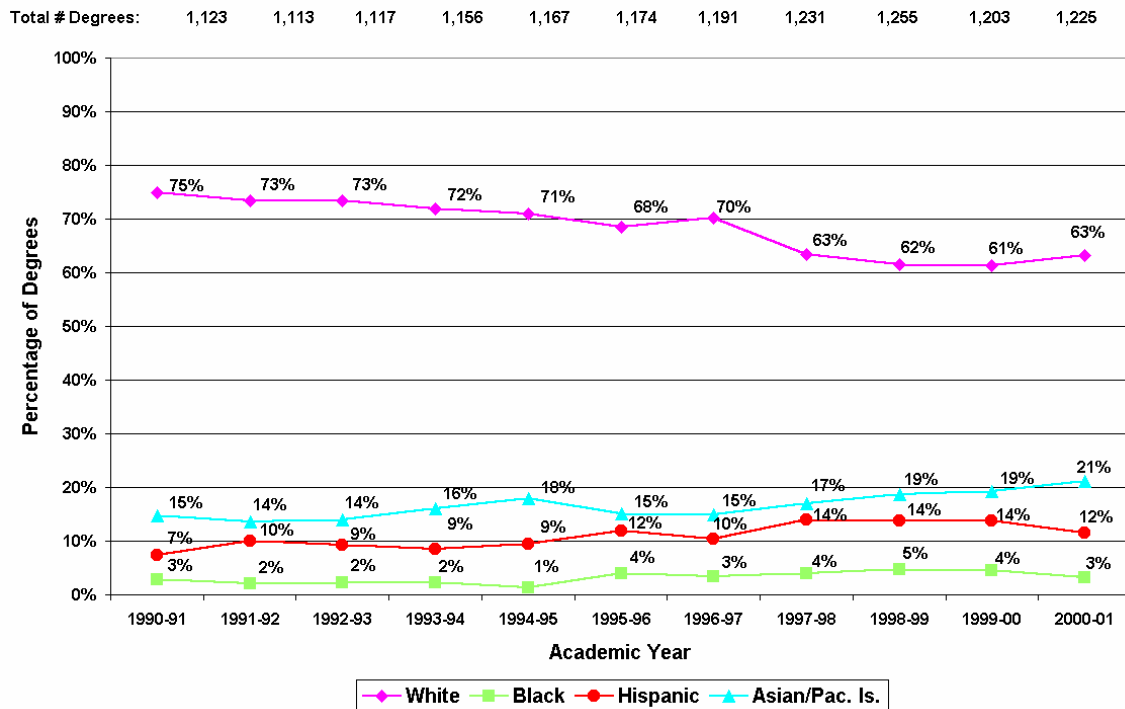
2. Under-representation has changed relatively little in the last 10 years.

M.D. Degrees Conferred by U.S. Medical Schools by Ethnicity



Source: Association of American Medical Colleges Data Warehouse
 Enlarged version of this chart found in Appendix 26.

Degrees Conferred by Texas Medical Schools by Ethnicity*



*Includes M.D. and D.O. degrees.

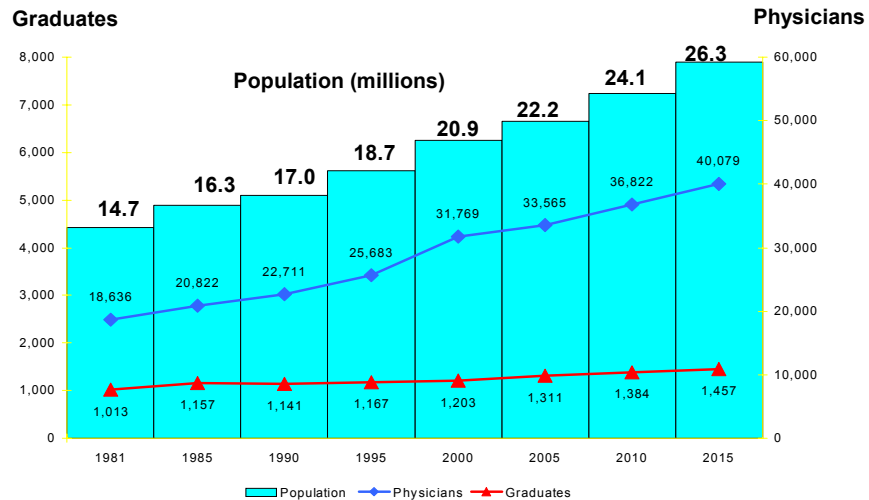
Sources: Texas Higher Education Coordinating Board; Institutions
 Enlarged version of this chart found in Appendix 33.

C. Number of medical graduates

The number of Texas medical school graduates has remained relatively “flat” over the last 20 years.



Population, Graduates, & Physicians



Sources: Texas State Board of Medical Examiners; Texas Department of Health

THECB 7/2001

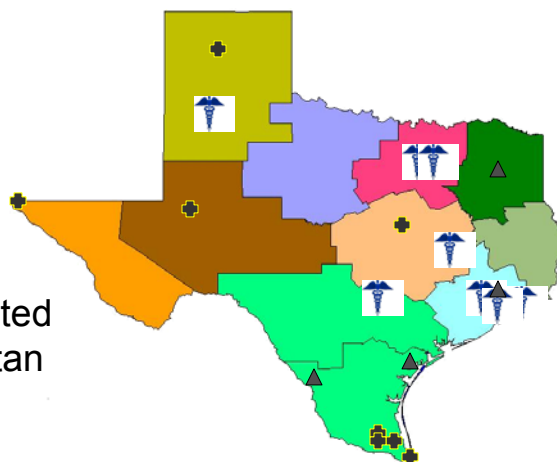
Enlarged version of this chart found in Appendix 64.

D. Where do we educate them?



Medical Schools

Texas has 8 medical schools (7 public and 1 independent) Medical schools generally are located in large metropolitan areas



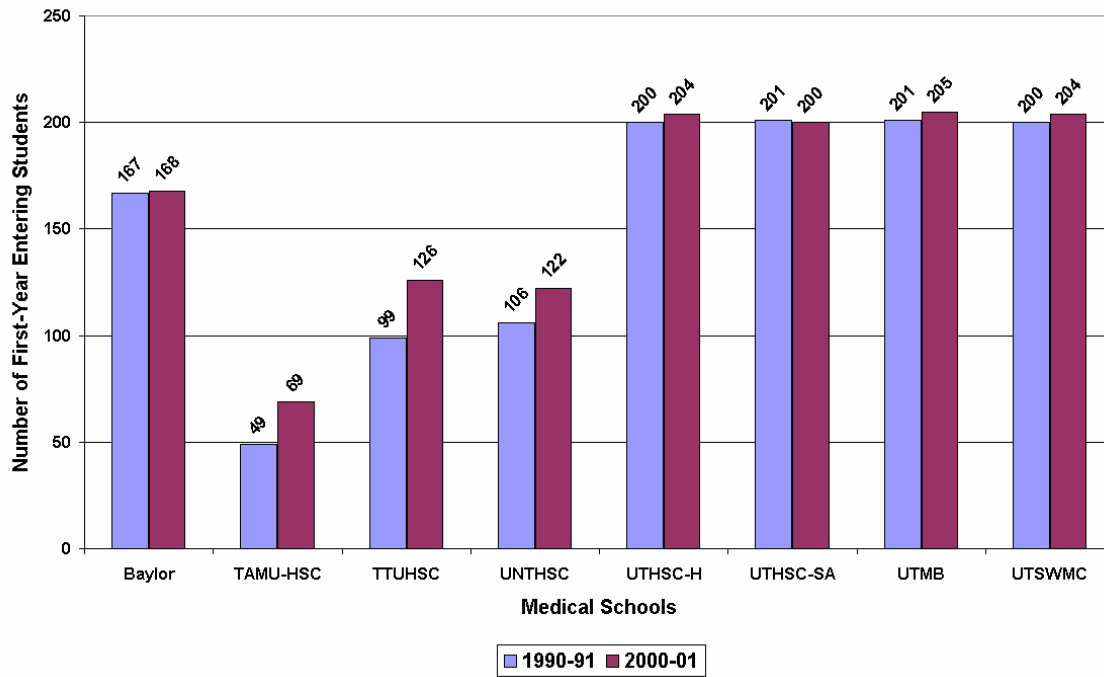
- ▲ Other Health-Related Institutions
- ✚ Regional Academic Health Centers

THECB 7/02

Sources: Texas Higher Education Coordinating Board; Institutions

Enlarged version of this map found in Appendix 69.

First-Year Entering Enrollment Trends in Texas Medical Schools



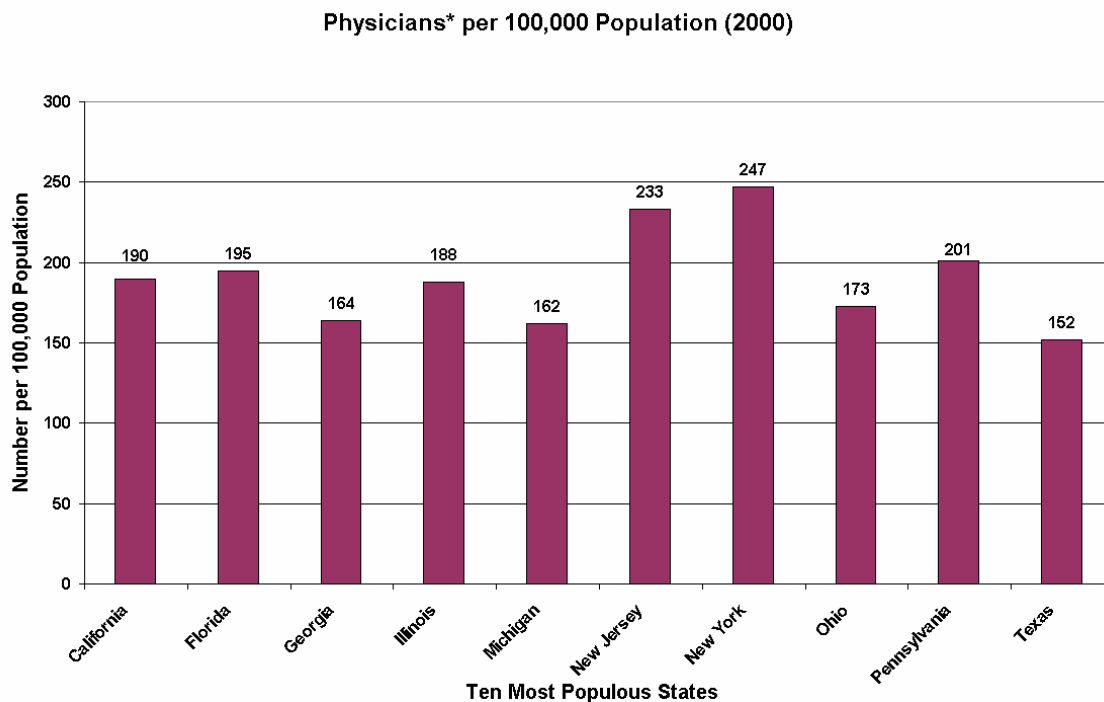
- Baylor – Baylor College of Medicine
- TAMU-HSC – Texas A&M University System Health Science Center
- TTUHSC – Texas Tech University Health Sciences Center
- UNTHSC – University of North Texas Health Science Center at Fort Worth
- UTHSC-H – The University of Texas Health Science Center at Houston
- UTHSC-SA – The University of Texas Health Science Center at San Antonio
- UTMB – The University of Texas Medical Branch at Galveston
- UTSWMC – The University of Texas Southwestern Medical Center at Dallas

Sources: Texas Higher Education Coordinating Board; Institutions
Enlarged version of this chart found in Appendix 13.

II. The Availability of Physicians in Texas

A. Statewide

1. Texas has fewer physicians per 100,000 population (152) than the national average (196).
2. Texas has fewer physicians per 100,000 population (152) than the 10-most-populous states' average (191).
3. Texas is at the low end of the range for the number of physicians per 100,000 population recommended by the U.S. Department of Health & Human Services (145-185, Texas - 152).



*Physicians are nonfederal, patient-care physicians who are not physician residents.

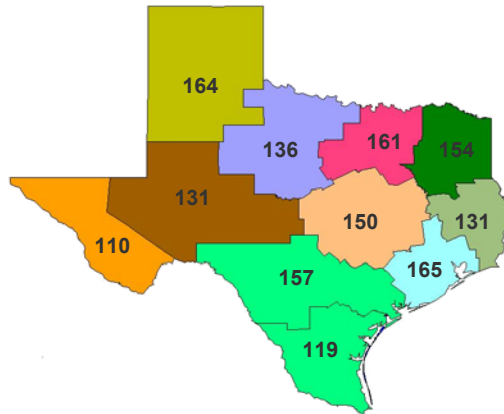
Source: American Medical Association
Enlarged version of this chart found in Appendix 55.

B. Regional

Physicians are not evenly distributed among the Texas population. Some regions have markedly fewer physicians per 100,000 population than others.



Physicians per 100,000 Population



In 2000
Statewide Average:
152 per 100,000
10 Most Populous States:
191 per 100,000
(Texas – 10th)
National Average:
196 per 100,000
(Texas – 40th)

Recommended by U.S. Dept. of Health & Human Services: 145-185 per 100,000

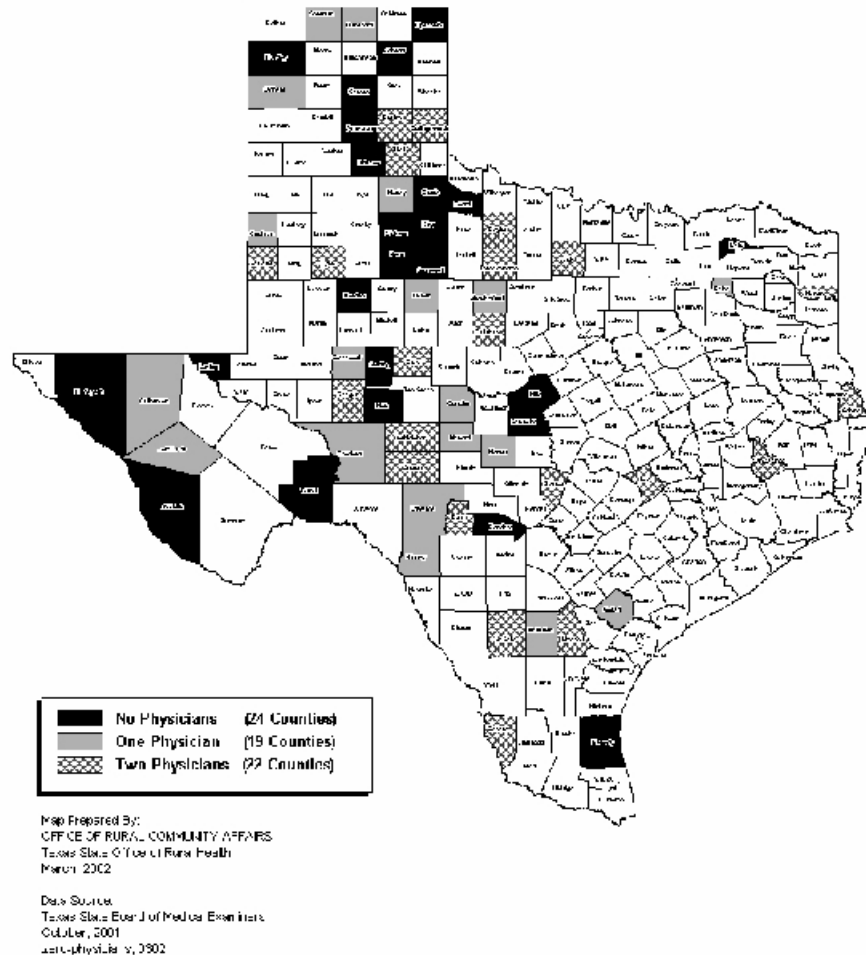
Sources: American Medical Association; Texas Department of Health; Texas State Data Center; Texas State Board of Medical Examiners
Enlarged version of this map found in Appendix 56.



Maldistribution of Physicians

- Many Texas regions remain underserved
 - 77 percent of Texas counties have fewer than 100 physicians per 100,000 population
 - 24 Texas counties have no physician
 - 19 Texas counties have one physician

RURAL COUNTIES WITH ZERO, ONE, OR TWO PRIMARY CARE PHYSICIANS



Source: Texas State Board of Medical Examiners
Enlarged version of this map found in Appendix 60.

C. Potential influences on future availability of medical services

1. Changing patterns of service delivery (physician extenders)

Physician assistants and nurse practitioners may be more widely used.

2. Telemedicine

May enhance delivery of specialist services (consultations, etc.).

D. What influences practice location?

1. Place of birth

Grow up rural, more likely to practice rural (anecdotal)

2. Location of medical school

Probably some undetermined influence (anecdotal)

3. Location of residency training

Likely influences practice location

4. Other factors

Potential income, availability of colleagues, malpractice insurance issues, etc.

E. Pathway to physician supply

1. Texas does not now educate enough medical students and residents to meet projected needs.

Pathway to Physician Supply

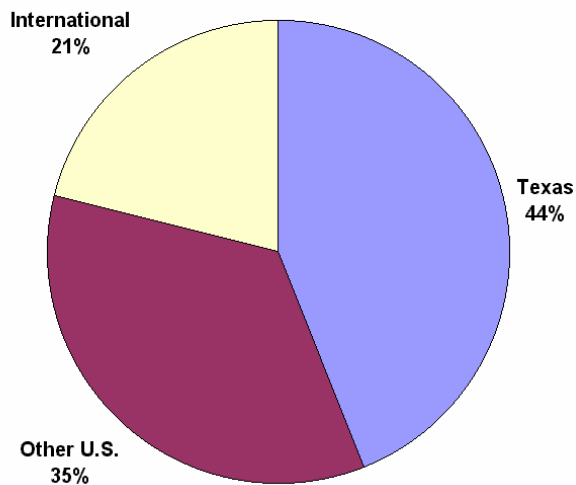
- 1,200 physicians graduated from Texas medical schools in 2000
- 1,339 physicians entered residency training in Texas in 2000
- Annual average increase in number of new physicians in Texas:
 $\text{Gains (2,669)} - \text{Losses (1,614)} = 1,055$

Source: Texas Medical Association

2. Texas is a “net importer” of physicians

44 percent graduated from a Texas medical school, 35 percent come from other states, and 21 percent come from other countries.

Where Texas Physicians Went to Medical School (2000)

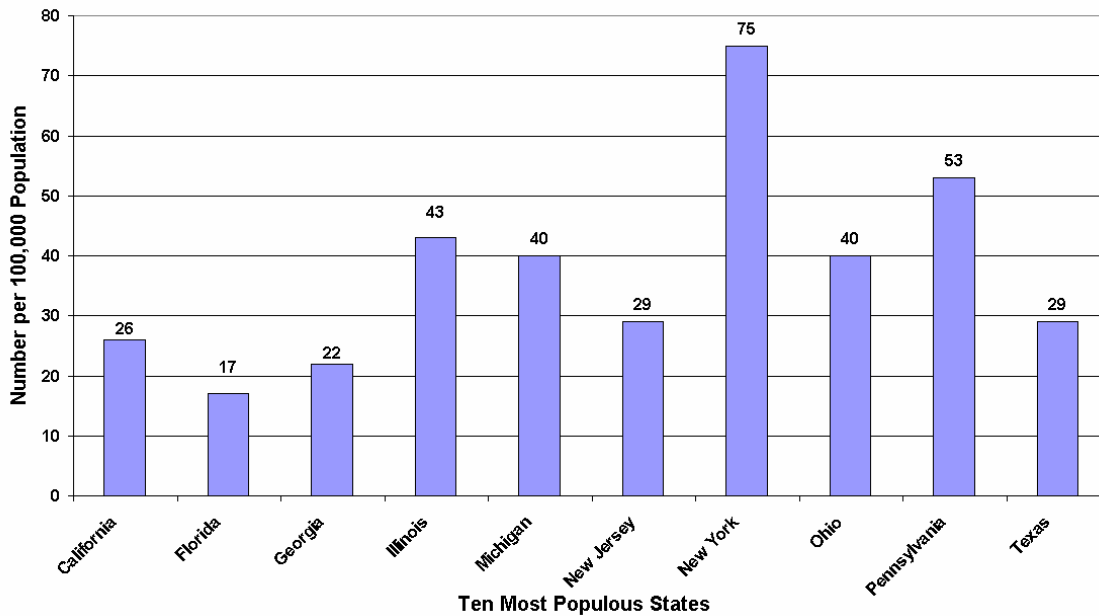


Note: An average of 58% of Texas medical school graduates end up practicing in Texas after residency training, regardless of residency training locations. A survey by the Texas Medical Association (1996) showed that 75% of Texas physicians completing residencies planned to stay in Texas.

Sources: Texas Medical Association; U.S. Department of Health and Human Services, Health Resources and Services Administration; and the Texas State Board of Medical Examiners
Enlarged version of this pie chart found in Appendix 65.

3. Among the 10 most populous states, Texas has an “average” number of physician (M.D.) residents per 100,000 population. Note: Staff is attempting to obtain comparable data for osteopathic residencies.

A-68a - Number of Allopathic Residents* per 100,000 Population in the Ten Most Populous States (2000)



*Includes allopathic resident training at Accreditation Council for Graduate Medical Education residency programs; does not include osteopathic residency programs.

Source: Journal of the American Medical Association, September 5, 2001
 Enlarged version of this chart found in Appendix 68a.

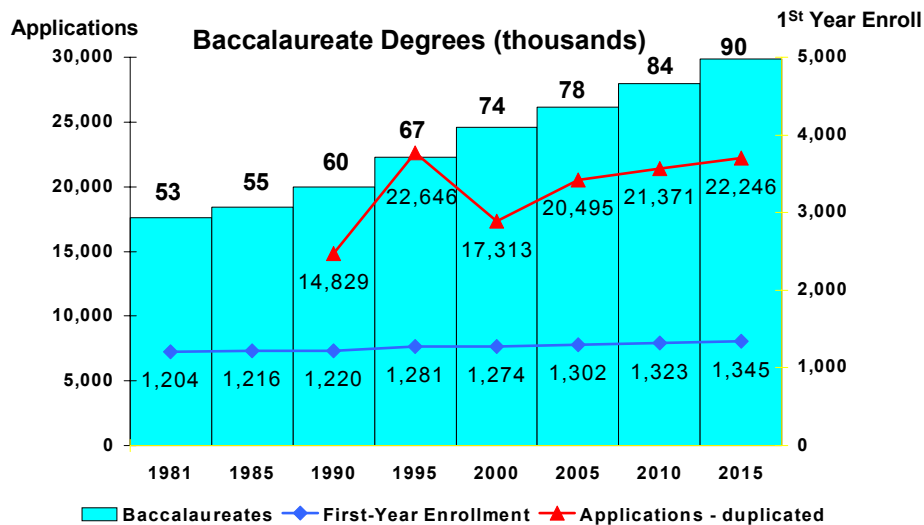
III. Opportunities for Texas Students to Obtain Medical Education

A. Projected over time

Increasing actual and projected number of baccalaureate graduates, essentially unchanged physician production. *Enlarged version of following chart found in Appendix 70.*



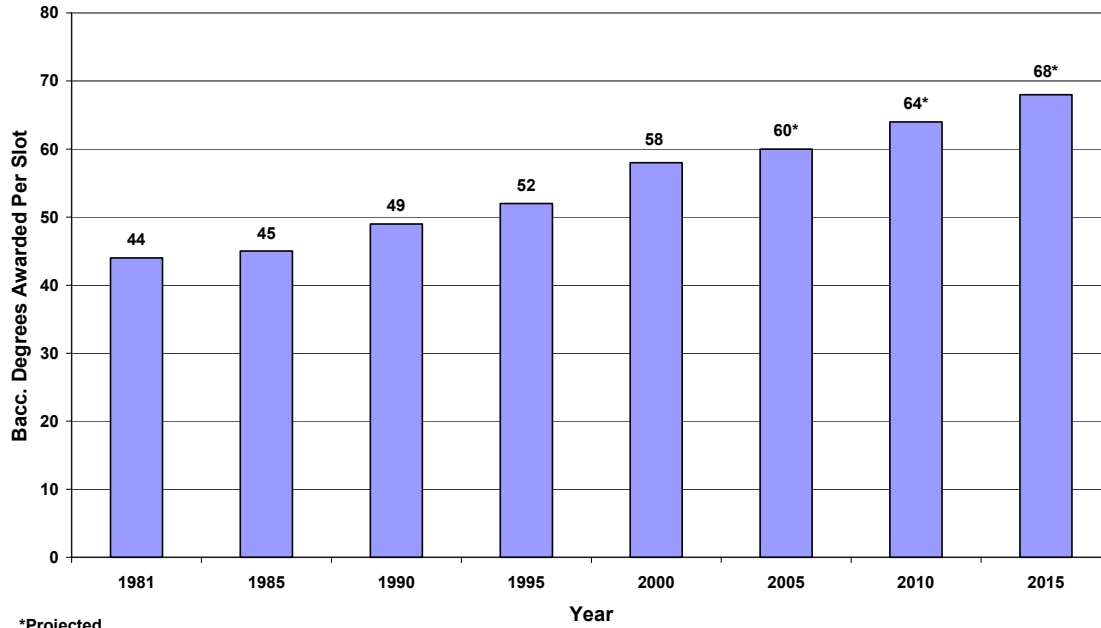
Baccalaureate Degrees, Medical Applications & First-Year Enrollments



Source: Texas Higher Education Coordinating Board; Institutions

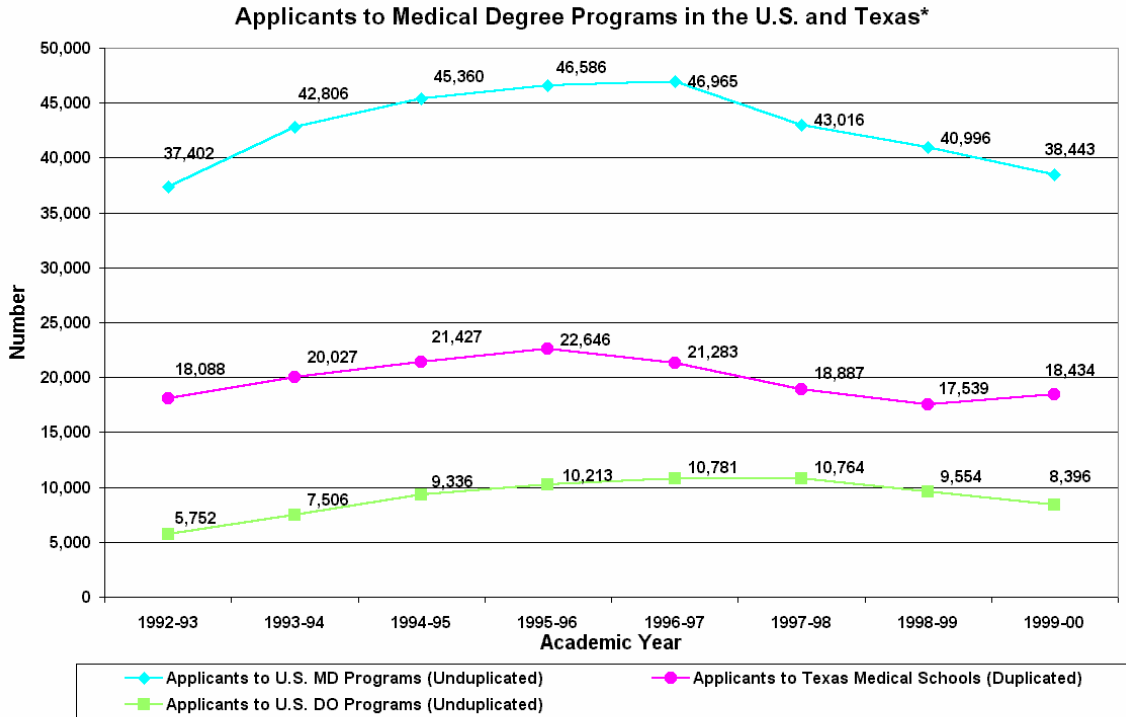
1. The number of baccalaureate degrees awarded for each available medical school slot is increasing.

**Baccalaureate Degrees Awarded in Texas Per
Entering Texas Medical School Slot**



Source: Texas Higher Education Coordinating Board; Independent Colleges & Universities of Texas, Inc.
Enlarged version of this chart found in Appendix 71.

2. From a peak in 1995, applications to medical schools in Texas and the nation have declined.



*U.S. applicant data includes unduplicated applicants to programs leading to M.D. and D.O. degrees; Texas applicant data includes duplicated applications to programs leading to M.D. and D.O. degrees.

Sources: 1) U.S. MD: Assoc. of American Medical Colleges Data Warehouse; 2) U.S. DO: American Assoc. of Coll. of Osteopathic Medicine Application Service; 3) Texas: Texas Higher Education Coordinating Board, Institutions
Enlarged version of this chart found in Appendix 1.

3. Since 2000, 90-95 percent of “qualified” applicants from Texas have been accepted to medical school.

Texas Medical and Dental Schools Application Service Qualified* Texas Residents Not Accepted to Medical School For entry years 2000, 2001 and 2002			
	2000	2001	2002**
Total Number of Qualified* Texas Resident Applicants	1332	1404	1454
Number accepted to at least one Texas Medical School	1180	1332	1325
Number not accepted to a Texas Medical School	152	72	129
Number accepted to Medical School outside of Texas	13	5	7
Number of Qualified* Texas Resident Applicants not accepted to any U.S. medical school	139	67	122
Number that reapplied the following year	65	39	-
Number of reapplicant accepted in following year	40	19	-
Number not accepted after applying 2 years	99	48	-
Data Source: Texas Medical and Dental Schools Application Service (TMSAS), The University of Texas System Office			
NOTE: For the purpose of this report, *qualified applicants are defined as those applicants who were listed by any participating TMSAS medical school as acceptable to the school for the admissions match.			
**2002 data reflects acceptance through June 10, 2002. Additional offers of acceptance may be made until the beginning of classes in August, 2002.			
June 10, 2002			

Enlarged version of this chart found at Appendix 73.

B. Compared to other states

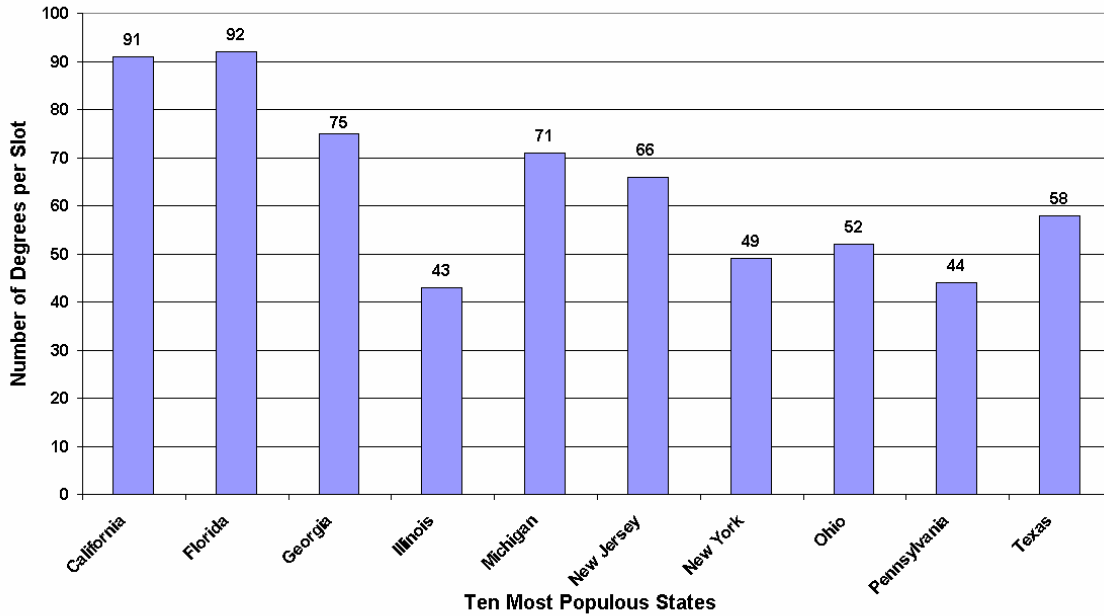
Texas provides its citizens an “average” statewide opportunity to attend medical school in-state, compared to other states.

Comparative Data for Medical Schools for the Ten Most Populous States (2001)*						
State	Population in Millions (2000)	# Med Schools (Public & Indep.)	Average Entering Class Size	% First Year Medical Students Attending In-State	# Graduates of State's Med Schools Per Million in Population**	# Bacc. Degrees Awarded per Entering Med School Slot (2000)***
California	33.9	10	134	45%	35	91
Florida	16	4	140	65%	32	92
Georgia	8.2	4	97	72%	44	75
Illinois	12.4	8	159	71%	95	43
Michigan	9.9	4	161	71%	59	71
New Jersey	8.4	3	136	46%	46	66
New York	19	13	151	73%	98	49
Ohio	11.4	7	136	85%	81	52
Pennsylvania	12.3	8	190	77%	113	44
Texas	20.9	8	163	88%	59	58
* Additional comparative data is available in a more complex chart included in the appendix materials.						
** Allopathic graduate data is for the 2000-01 academic year; Osteopathic graduate data is for the 1999-00 academic year.						
*** Bachelor's degrees include bachelor's degrees awarded by public and independent universities, health science centers, and proprietary institutions.						

Sources: Allopathic: American Association of Medical Colleges; 2) Osteopathic: American Association of Colleges of Osteopathic Medicine; 3) Baccalaureate Degrees: U.S. Department of Education; 4) Texas MD DO Degrees: Institutions
Enlarged version of this chart found in Appendix 79.

1. Among the 10 most populous states in 2000, Texas ranked near the middle in the number of baccalaureate degrees awarded per medical school slot.

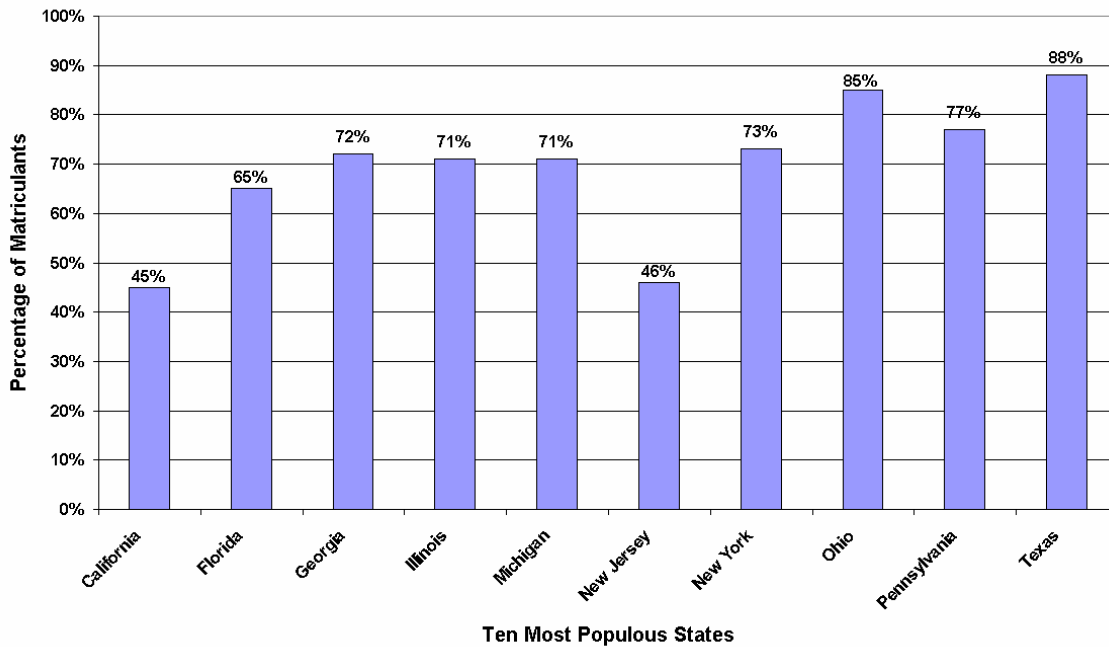
**Baccalaureate Degrees Awarded Per
Allopathic and Osteopathic Medical School Slot (2000)**



Sources: 1) Allopathic: American Association of Medical Colleges; 2) Osteopathic: American Association of Colleges of Osteopathic Medicine; 3) Baccalaureate Degrees: U.S. Department of Education
Enlarged version of this chart found in Appendix 81.

2. Eighty-eight percent of Texas residents beginning medical school (in 2001) remained in the state – the highest percentage among the 10 most populous states.

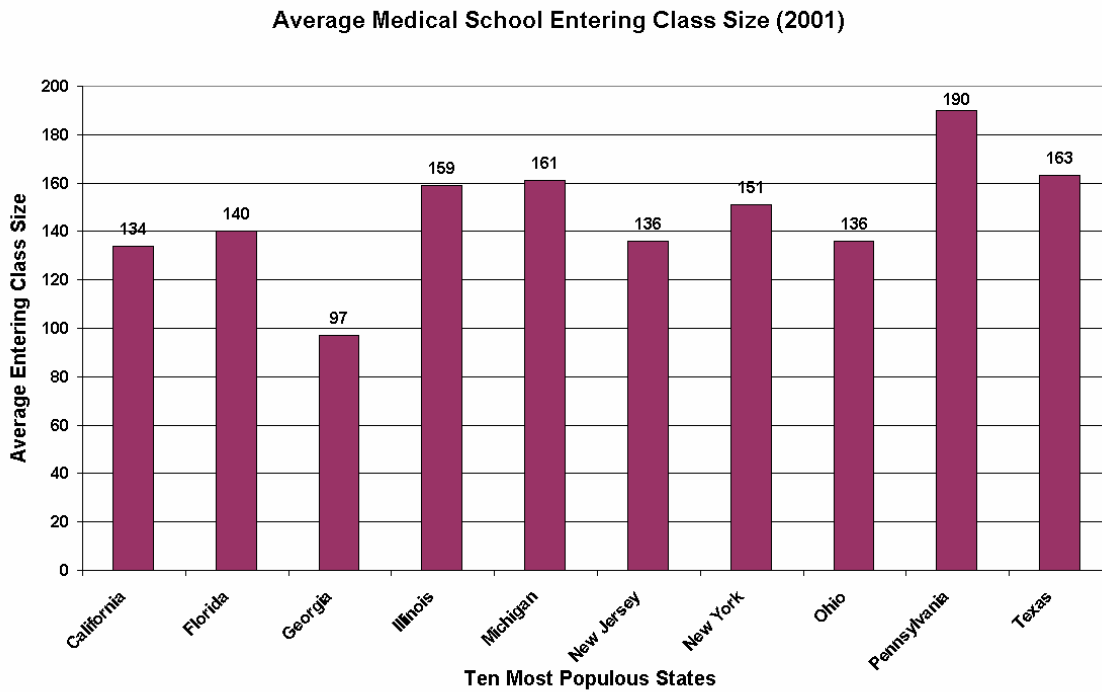
**A-82 - Percentage of First-Year Entering Medical Students Attending In State
(Allopathic and Osteopathic) (2001)**



Sources: Allopathic: 1) American Association of Medical Colleges; 2) Osteopathic: American Association of Colleges of Osteopathic Medicine.

Enlarged version of this chart found in Appendix 82.

3. Texas' average medical school size in 2001 ranked ninth highest among the 10 most populous states.

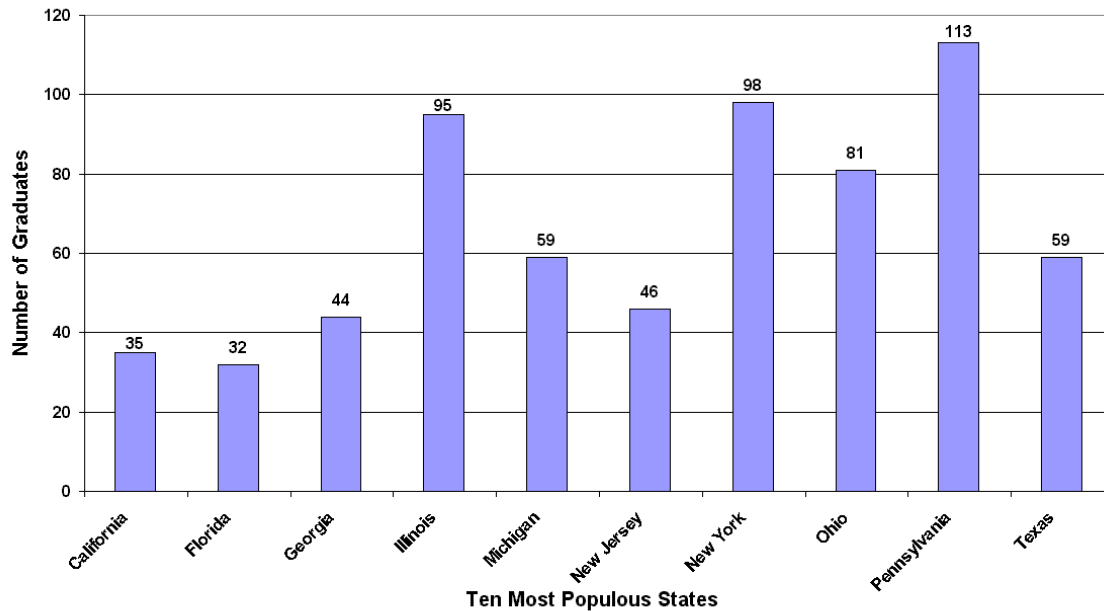


Sources: 1) Allopathic: American Assoc. of Medical Colleges; 2) Osteopathic: American Assoc. of Colleges of Osteopathic Medicine.

Enlarged version of this chart found in Appendix 83.

4. Texas ranked near the middle (in 2000) of the 10 most populous states in the number of medical school graduates per million people.

**Graduates of State's Allopathic and Osteopathic Medical Schools
per Million in State's Population (2000)***



*Allopathic data is for 2000-01 academic year; Osteopathic data is for 1999-00 academic year.

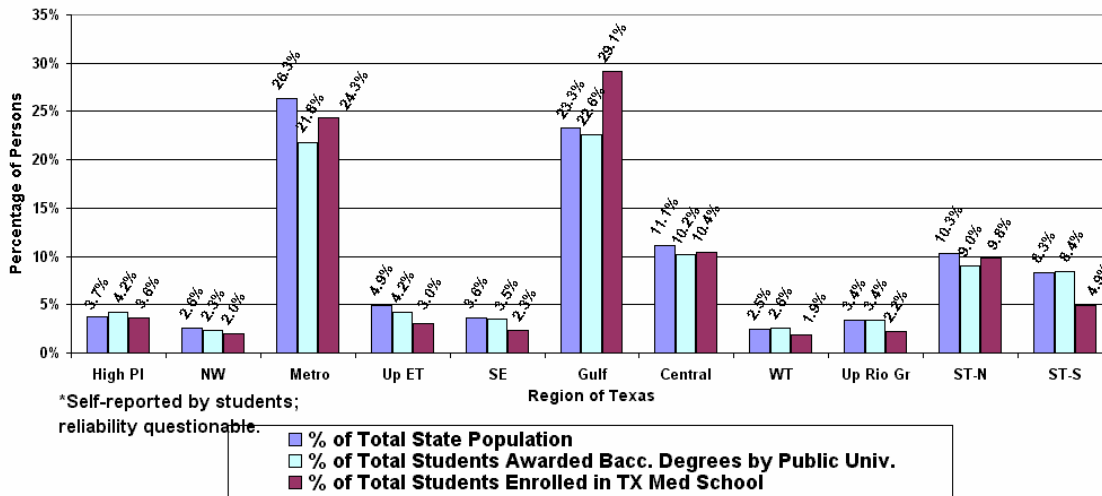
Sources: 1) Allopathic: American Association of Medical Colleges; 2) Osteopathic: American Association of Colleges of Osteopathic Medicine

Enlarged version of this chart found in Appendix 84.

C. Variances by region in Texas

Texans from Upper East Texas, Southeast Texas, South Texas-South (Lower Rio Grande Valley), and Upper Rio Grande Valley regions are under-represented in Texas medical schools.

Comparison of Regional Population, Students from Region Earning Baccalaureate Degrees, and Students from Region* Enrolled in a Texas Medical School (2000)



Sources: 1) Population: U.S. Census Bureau, 2000; 2) Baccalaureate degrees: Texas Higher Education Coordinating Board; Independent Colleges and Universities of Texas, Inc.; 3) Enrollment: THECB
Enlarged version of this chart is found in Appendix 76.

IV. “Services” and “Opportunities” Findings

A. “Services” Issues

1. Texas’ population is increasing rapidly, with particular growth in those segments of the population generally needing higher levels of care – the young and the elderly.
2. Texas now has fewer physicians per 100,000 population than the national average, fewer than the 10 most populous states’ average, and is at the low end of the U. S. Department of Health & Human Services recommended ratio of physicians per population. Texas’ population is increasing; if the number of physicians does not increase, those ratios will become increasingly unfavorable.
3. Texas educates some of its physicians, attracts others from other states, and still others from other countries. Those sources will continue to provide the state’s physicians. The state is a “net importer” of physicians.
4. Texas physicians are not distributed evenly throughout the population. Significant regional imbalances exist and are likely to persist.
5. There are many areas of low population, served by few physicians. In addition, there are two large regions of high population that are served by significantly fewer than the statewide average number of physicians: the Upper Rio Grande region and the South Texas-South region (Lower Rio Grande Valley).
6. Physician practice location is influenced by many personal and professional factors, and it is difficult to determine the relative importance of those factors. Some of those factors include place of birth/upbringing, place of college attendance, location of medical school, location of residency training, area of medicine selected (primary care, medical subspecialty, etc.), characteristics of practice (long or longer hours, potential income, availability of other physicians, differential malpractice insurance rates, cultural or other amenities available, etc.).
7. It is reasonable to assume (and some anecdotal evidence supports) that the location of a medical school exerts some influence on the eventual practice locations of its graduates, but it is not possible to separate that influence from other influences and quantify it with any degree of accuracy.

8. It does appear, however, that the location of residency training positively influences practice location, particularly in primary care disciplines.

B. "Opportunities" Issues

1. The state's higher education plan – *Closing the Gaps* – calls for major increases in the numbers of students participating in and succeeding in higher education by 2015. One anticipated aspect of that "success" is a significant increase in the number of students attaining baccalaureate degrees.
2. As compared to the 10 most populous states, Texas now offers its baccalaureate graduates – on a statewide level – *about an average level of opportunity* to attend an in-state medical school.
3. However,
 - *IF* Texas produces additional baccalaureate graduates *and* the proportion of baccalaureate graduates seeking admission to (and qualified for entry into) the state's medical schools remains the same,
 - *and* the state wishes to continue to provide at least the same chance of entry into a Texas medical school that it now provides,
 - *THEN* the state must increase the number of openings available in its medical schools. The state could increase the class size of existing schools, increase the number of schools, or pursue some combination of both approaches.

V. Summary Findings and Recommendations

- A. Texas now has fewer physicians per 100,000 population than the national average, fewer than the 10 most populous states' average, and is at the low end of the U. S. Department of Health & Human Services recommended ratio of physicians per population. Texas' population is increasing; if the number of physicians does not increase, those ratios will become increasingly unfavorable.
- B. Texas – like many other states – also has physician maldistribution problems that continue to resist solution.
- C. Before creating new medical schools, expanding existing schools, or starting new extension initiatives, the Legislature should ensure that existing schools and regional academic health centers have funding sufficient to support their missions.

- D. An increase in the number of residency training opportunities in the state would probably yield additional numbers of physicians choosing to practice in Texas – whether they attended medical school in the state or elsewhere. The Legislature should consider efforts focused on increasing residency positions to the extent possible and consistent with the provision of high-quality residency training.
- E. To encourage physicians to practice in poorly served areas, the Legislature should consider additional funding to repay educational loans for physicians practicing in those areas.
- F. The Legislature should examine, and, to the extent possible, take steps to address issues that adversely affect physicians' decisions to remain in practice.
- G. Unless patterns of medical services delivery change markedly, an increasing population is likely to need additional medical services, provided by an increasing number of physicians. Therefore, over time, an additional number of physicians will be needed. To meet that need, while balancing important issues of opportunity, cost effectiveness, economic development, and other factors, the state should over time increase its in-state production of physicians by: a) increasing the class sizes at its smaller existing medical schools (Texas Tech University Health Sciences Center, Texas A&M University System Health Science Center, and the University of North Texas Health Science Center at Fort Worth) and b) carefully considering the creation of an additional school or schools.
- H. The availability of physicians in rural and urban underserved areas and the under-representation of Hispanics and African-Americans are critical issues for Texas. The Coordinating Board will continue to examine these issues and forward additional findings and recommendations to the Legislature.
- I. If additional schools are created, they should be located where: a) areas of high population are served by significantly fewer than the state average number of physicians; b) the school location(s) could potentially address issues of geographic access, opportunity to attend medical school, and physician workforce diversity; and c) the state could build on significant prior investments that it and other entities have made for the provision of medical education and services.
- J. Two areas of the state now meet each of those criteria: the Upper Rio Grande region and the South Texas-South region (Lower Rio Grande

Valley). Appendix A-88 provides information on those two areas in regard to the criteria in I, above.

- K. Decisions about if, when, and where to create additional medical schools are, of course, legislative responsibilities that are carried out in the broad context of all of the state's needs, financial capabilities, and priorities. Nevertheless, because it takes considerable time to either develop or expand medical education, the Texas Legislature should give early attention to the issue.
- L. If the state does create a new medical school or schools, it should give careful attention to ensure that a strong, diverse resource base is available for support.

Appendices

I. Medical Schools – U.S. and Texas

A. Applicants

- A-1 Applicants to Medical Degree Programs in the U.S. and Texas
- A-2 Applicants to M.D. Degree Programs in U.S. Medical Schools by Ethnicity
- A-3 Applications to Medical Degree Programs in Texas Medical Schools by Applicant Ethnicity
- A-4 Applications to Medical Degree Programs in Texas by Applicant Ethnicity

B. Offers of Admission

- A-5 Offers of Admission into M.D. Degree Programs from U.S. Medical Schools by Ethnicity
- A-6 Offers of Admission into Medical Degree Programs from Texas Medical Schools by Ethnicity (percentages)
- A-7 Offers of Admission into Medical Degree Programs from Texas Medical Schools by Ethnicity (numbers)

C. First-Year and Total Enrollment

- A-8 First-Year Entering Enrollment in M.D. Degree Programs in U.S. Medical Schools by Gender
- A-9 First-Year Entering Enrollment in Medical Degree Programs in Texas Medical Schools by Gender
- A-10 First-Year Entering Enrollment in M.D. Degree Programs in U.S. Medical Schools by Ethnicity
- A-11 First-Year Entering Enrollment in Medical Degree Programs in Texas Medical Schools by Ethnicity (percentage)
- A-12 First-Year Entering Enrollment in Medical Degree Programs in Texas Medical Schools by Ethnicity (numbers)
- A-13 First-Year Entering Enrollment Trends in Texas Medical Schools
- A-14 Total Enrollment in M.D. Degree Programs in U.S. Medical Schools by Gender
- A-15 Total Enrollment in Medical Degree Programs in Texas Medical Schools by Gender
- A-16 Total Enrollment in M.D. Degree Programs in U.S. Medical Schools by Ethnicity
- A-17 Total Enrollment in Medical Degree Programs in Texas Medical Schools by Ethnicity (percentages)
- A-18 Total Enrollment in Medical Degree Programs in Texas Medical Schools by Ethnicity (numbers)
- A-19 Total Enrollment Trends in Texas Medical Schools

D. Participation and Success

- A-20 Participation and Success of Whites in Medical Degree Programs in Texas Medical Schools
- A-21 Participation and Success of Hispanics in Medical Degree Programs in Texas Medical Schools
- A-22 Participation and Success of Blacks in Medical Degree Programs in Texas Medical Schools
- A-23 Participation and Success of Asian/Pacific Islanders in Medical Degree Programs in Texas Medical Schools

E. Degrees Conferred

- A-24 M.D. Degrees Conferred by U.S. Medical Schools by Gender
- A-25 Medical Degrees Conferred by Texas Medical Schools by Gender
- A-26 M.D. Degrees Conferred by U.S. Medical Schools by Ethnicity
- A-27 Comparison of U.S. Population and M.D. Degrees Conferred by U.S. Medical Schools by Ethnicity – (15,778 M.D. Degrees Conferred in U.S. in 2001)
- A-28 Comparison of Texas Population and Medical Degrees Conferred by Texas Medical Schools by Ethnicity - (1,225 Medical Degrees Conferred in Texas in 2001)
- A-29 Comparison of California Population and M.D. Degrees Conferred by California Medical Schools by Ethnicity – (1,023 M.D. Degrees Conferred in California in 2001)
- A-30 Comparison of New York Population and M.D. Degrees Conferred by New York Medical Schools by Ethnicity – (1,678 M.D. Degrees Conferred in New York in 2001)
- A-31 Comparison of Florida Population and M.D. Degrees Conferred by Florida Medical Schools by Ethnicity – (355 M.D. Degrees Conferred in Florida in 2001)
- A-32 Degrees Conferred by Texas Medical Schools by Ethnicity (numbers)
- A-33 Degrees Conferred by Texas Medical Schools by Ethnicity (percentages)
- A-34 Degrees Conferred to Hispanics by U.S. and Texas Medical Schools
- A-35 Degrees Conferred to Blacks by U.S. and Texas Medical Schools
- A-36 Baylor College of Medicine – 169 Medical Degrees Conferred in 2001 by Ethnicity
- A-37 Medical Degrees Conferred by Baylor College of Medicine by Ethnicity
- A-38 Texas A&M University Health Science Center College of Medicine – 63 Medical Degrees Conferred in 2001 by Ethnicity
- A-39 Medical Degrees Conferred by Texas A&M University Health Science Center College of Medicine by Ethnicity
- A-40 Texas Tech University Health Sciences Center School of Medicine – 119 Medical Degrees Conferred in 2001 by Ethnicity

- A-41 Medical Degrees Conferred by Texas Tech University Health Sciences Center School of Medicine by Ethnicity
- A-42 University of North Texas Health Science Center at Fort Worth College of Osteopathic Medicine – 107 Medical Degrees Conferred in 2001 by Ethnicity
- A-43 Medical Degrees Conferred by the University of North Texas Health Science Center at Fort Worth College of Osteopathic Medicine by Ethnicity
- A-44 The University of Texas Health Science Center at Houston Medical School – 186 Medical Degrees Conferred in 2001 by Ethnicity
- A-45 Medical Degrees Conferred by The University of Texas Health Science Center at Houston Medical School by Ethnicity
- A-46 The University of Texas Health Science Center at San Antonio School of Medicine – 195 Medical Degrees Conferred in 2001 by Ethnicity
- A-47 Medical Degrees Conferred by The University of Texas Health Science Center at San Antonio School of Medicine by Ethnicity
- A-48 The University of Texas Medical Branch at Galveston School of Medicine – 183 Medical Degrees Conferred in 2001 by Ethnicity
- A-49 Medical Degrees Conferred by The University of Texas Medical Branch at Galveston School of Medicine by Ethnicity
- A-50 The University of Texas Southwestern Medical Center at Dallas – 203 Medical Degrees Conferred in 2001 by Ethnicity
- A-51 Medical Degrees Conferred by The University of Texas Southwestern Medical Center at Dallas by Ethnicity
- A-52 Medical Degrees Conferred by Texas Medical Schools by Residency Status
- A-53 Texas Schools of Medicine – 1,225 Medical Degrees Conferred in 2001 by Residency Status
- A-54 Degrees Awarded Trends in Texas Medical Schools

II. Physician Supply

A. Per 100,000 Population

- A-55 Physicians per 100,000 Population – 10 most populous states (chart)
- A-56 Physicians per 100,000 Population – Texas (map)
- A-57 Physicians per 100,000 Population (Texas) – High Plains, Northwest, Metroplex, Upper East Texas, and Southeast Texas
- A-58 Physicians per 100,000 Population (Texas) – Gulf Coast, Central Texas, West Texas, Upper Rio Grande, South Texas-North, and South Texas-South

B. Maldistribution

- A-59 Maldistribution of Physicians (Texas)
- A-60 Rural Counties with Zero, One, or Two Primary Care Physicians (map)

C. Pathway

- A-61 Article from *Journal of the American Medical Association (JAMA)* – “The doctor will see you now - What you should know about your doctor’s education”
- A-62 Physician Education
- A-63 Pathway to Physician Supply
- A-64 Population, Graduates, & Physicians
- A-65 Where Texas Physicians Went to Medical School (2000)
- A-66a Number of Allopathic Residency Programs in the Ten Most Populous States (2000)
- A-66b Number of Osteopathic Residency Programs in the ten Most Populous States (2002)
- A-67a Number of Allopathic Residents in the Ten Most Populous States (2000)
- A-67b Number of Osteopathic Residents in the Ten Most Populous States (2002)
- A-68a Number of Allopathic Residents per 100,000 Population in the Ten Most Populous States (2000)
- A-68b Number of Osteopathic Residents per Million Population in the Ten Most Populous States (2002)

III. Opportunity to Attend Medical School

A. In Texas

- A-69 Medical School location map
- A-70 Baccalaureate Degrees, Medical Applications & First-Year Enrollments
- A-71 Baccalaureate Degrees Awarded in Texas Per Entering Texas Medical School Slot
- A-72 Number of Baccalaureate Graduates in the Top 10 Majors of Medical School Students Entering in FY 2001 with Baccalaureate Degrees From Texas Public Institutions
- A-73 Texas Medical and Dental Schools Application Service, Qualified Texas Residents Not Accepted to Medical School, For entry years 2000, 2001 and 2002
- A-74 Baylor College of Medicine – Applicants, Offers of Admission, and Enrolled
- A-75 Comparison of County/Region of Residence of Texas Medical School Students
- A-76 Comparison of Regional Population, Students from Region Earning Baccalaureate Degrees, and Students from Region Enrolled in a Texas Medical School (2000)
- A-77 Comparison of Regional Population and Students from Region Enrolled in a Texas Medical School (2000)
- A-78 Comparison of Students from Region Earning Baccalaureate Degrees and Students from Region Enrolled in a Texas Medical School (2000)

B. In U.S.

- A-79 Comparative Data for Medical Schools for the Ten Most Populous States (2001) (abbreviated chart)
- A-80 Comparative Data for Medical Schools for the Ten Most Populous States (2001) (complete chart)
- A-81 Baccalaureate Degrees Awarded Per Allopathic and Osteopathic Medical School Slot
- A-82 Percentage of First-Year Entering Medical Students Attending In State (Allopathic and Osteopathic)
- A-83 Average Medical School Entering Class Size – Ten Most Populous States
- A-84 Graduates of State's Allopathic and Osteopathic Medical Schools per Million in State's Population (2000)

IV. Other

- A-85 Map of Texas' Regions
- A-86 Summary of the Major Medical Education Initiatives in West and South Texas
- A-87 *A Methodology for Projecting the Need for Professional Education*
- A-88 Comparison of El Paso and lower Rio Grande Valley as possible sites for new medical school(s)