

2005 - 2010 TEXAS STATE HEALTH PLAN EXECUTIVE SUMMARY

Innovative Approaches to Health
Workforce Planning for Texas



Statewide Health Coordinating Council

2005-2010
TEXAS STATE HEALTH PLAN
TEXAS STATEWIDE HEALTH COORDINATING COUNCIL
 November 2004

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James A. Endicott, Jr., J.D. <i>1st Vice Chair, Harker Heights</i>	Public Member
David A. Valdez, M.D. <i>2nd Vice Chair, San Antonio</i>	HMO Representative
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Nora Cox, B.A. <i>Austin</i>	Texas Health and Human Services Commission
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Elva Concha LeBlanc, Ph.D. <i>Galveston</i>	Community College Representative
Jimmie Lee Mason, C.P.A. <i>Lubbock</i>	Public Member
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Richard Madsen Smith, D.D.S. <i>Amarillo</i>	Health Care Professional
Patricia L. Starck, D.S.N., R.N. <i>Houston</i>	University Representative
Vacant	Texas Department of Mental Health and Mental Retardation

INTRODUCTION

The *Texas State Health Plan* is prepared every six years and updated biennially. The plan serves as a guide to help Texas decision makers formulate appropriate health policies and programs.

The Texas Statewide Health Coordinating Council, a 17-member council with 13 members appointed by the governor and four ex-officio members representing specified state agencies, develops the plan. The Texas Health Planning and Development Act, Chapter 104 of the Health and Safety Code, is the enabling legislation for the Statewide Health Coordinating Council. Under the authority of Chapter 104, the governor with the consent of the senate appoints council members to staggered six-year terms.

The broad purpose of the Statewide Health Coordinating Council is to ensure that health care services and facilities are available to all Texans through health planning activities. Based on these planning activities, the council makes recommendations to the governor and the legislature through the *Texas State Health Plan*. The council provides overall guidance in the development of the *Texas State Health Plan*, submission of the plan to the governor, and promoting the implementation of the plan. The plan is due to the governor for adoption by November 1 of each even-numbered year. Staff in the Center for Health Statistics, with assistance from other program areas at the Texas Department of State Health Services, supports the council's activities.

House Bill 1716 from the 75th Legislature amended Chapter 104 of the Health and Safety Code and focused the council's planning activities on the health professions workforce. The council produced the *1999-2004 Texas State Health Plan*, "Ensuring a Quality Health Care Workforce for Texas," which is the fundamental plan for the previous six year planning cycle. The *2001-2002 Texas State Health Plan Update* was the first update to that document, while the *2003-2004 Texas State Health Plan Update* was the final update. For the purposes of this report, the *2005 – 2010 Texas State Health Plan*, "Innovative Approaches to Health Workforce Planning for Texas," is referenced as the *Texas State Health Plan*.

The *Texas State Health Plan* outlines Texas's interests in health professions workforce issues. The state is a major provider of medical and health education through its system of publicly funded health science centers, universities, and community and technical colleges. Texas is a major purchaser of health care services through the state's Medicaid program and other public health care programs as well as a provider of these services through its system of publicly funded medical

schools and hospitals. Finally, with its citizens, Texas shares responsibility for the health, safety, and welfare of its residents. The *Texas State Health Plan* is submitted as a blueprint for health workforce decision making in the coming decades.

Copies of the 1999–2004 Texas State Health Plan, the 2001–2002 Texas State Health Plan Update, the 2003–2004 Texas State Health Plan Update, and the 2005–2010 Texas State Health Plan can be downloaded from the Web site at <<http://www.TexasSHCC.org>>. Printed copies of the documents are also available from the Texas Department of State Health Services, Center for Health Statistics, at a cost of \$20 per copy. To order a document copy, call (512) 458-7261.

2005-2010 TEXAS STATE HEALTH PLAN RECOMMENDATIONS

Texas must take the necessary steps to achieve education and training in the health professions that will ensure that an appropriately skilled, sufficient, and experienced workforce becomes a reality for the state. This will be achieved through effective and innovative models of education and practice that provide work-ready graduates, improve the participation of minorities in the health professions, and retain trained health professionals in the workforce.

The Statewide Health Coordinating Council believes that the following recommendations are essential to fulfill these workforce goals and thereby ensure a quality health workforce for Texas.

General Workforce Recommendations

1. The Legislature should require all health professions licensing boards to standardize the collection of critical data by implementing the Minimum Data Set developed by the Statewide Health Coordinating Council. (See Appendix E.)
2. The Legislature and regulatory boards should allocate funds to support the collection of health workforce supply and demand data and to support needed research based on these data. (It would be desirable if other health professions could replicate the Nursing Workforce Data Section concept.)
3. The Legislature should realign health workforce licensure and regulatory agencies in a structure that is better able to collaborate and coordinate health workforce planning and data collection to enable Texas to be more responsive to potential funding opportunities.
4. The Legislature should pass legislation to require health professional licensees and applicants to disclose ethnicity information and should instruct regulatory boards and educational institutions to collect, compile and report it, using the U.S. Census ethnicity categories as the basis for collection.
5. The Legislature and the Texas Higher Education Coordinating Board should develop and implement positive financial incentives for schools that create innovative models in education for the health professions that will move toward shared or combined curricula, interdisciplinary classes across health programs, and the use of multidisciplinary faculty or interdisciplinary teams among the health programs.

EXECUTIVE SUMMARY

Statewide Health Coordinating Council

6. The Legislature should continue to support the College for Texans Campaign administered by the Texas Higher Education Coordinating Board to ensure diversity and minority participation in higher education. (For information on the program, visit <http://www.collegefortexans.com> or <http://www.theccb.state.tx.us/SAMC/overview/>).
7. The Legislature should instruct the Texas Higher Education Coordinating Board to develop and implement field of study curricula for additional health profession programs and require adoption of these curricula by public educational institutions to encourage and promote a seamless transition and career mobility within the professions.
8. The Legislature should support initiatives that result in the creation of a representative and culturally competent health workforce for Texas. This could include items such as
 - programs that interest minority students in health careers,
 - curricula for preparing practitioners to recognize health disparities and to implement appropriate interventions,
 - new models for education in the health professions,
 - strategies for reducing the loss of intellectual capital across countries and regions, and
 - the addition of multilingual and technological competencies.
9. The Legislature should direct the regulatory boards for the health professions to permit exceptions to their regulations to facilitate the increase in innovative, outcome-oriented demonstration projects.
10. The Legislature should support initiatives that will promote the application of technology in all areas of health education and all areas of clinical care throughout the health care continuum. This should include applications for initial professional and continuing education, recruitment and retention efforts, health care practice, and community health education.
11. The Legislature should support funding of the Area Health Education Centers to guarantee that vital health career development efforts and recruitment and retention strategies are available in areas not provided through other means or agency efforts.

Nursing Workforce Recommendations

1. The Legislature should increase funding levels to nursing programs throughout the state to increase capacity to admit and graduate nursing students.
2. The Legislature should continue to support the Nursing Innovation Grant Program funded by tobacco earnings from the Permanent Fund for Higher Education Nursing, Allied Health, and other Health-Related Programs and administered by the Texas Higher Education Coordinating Board.
3. The Legislature should instruct health professions and other regulatory agencies and boards to support strategies that would incorporate the use of technology to reduce paperwork and streamline the process required by regulatory agencies to that which is truly necessary for quality patient care.
4. The Legislature should provide institutions with Special Item funding to support enrollment increases in nursing programs and stimulate graduate programs that prepare nursing faculty, and establish procedures that would confirm that these special allocations for nursing programs are spent for these purposes.
5. The Legislature and the Texas Higher Education Coordinating Board should create positive incentives for schools that develop and implement innovative solutions between schools that will result in an increase in the number of entry-level nursing students. This could include the sharing of faculty and classes among nursing degree programs.
6. The Legislature and the Texas Higher Education Coordinating Board should reinforce the implementation of the Field of Study Curriculum for nursing programs to facilitate a seamless, student-oriented articulation from ADN to BSN programs.
7. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage educational institutions to add appropriate accelerated degree programs at all levels of nursing.
8. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage institutions to use technology, preceptors, simulation, etc., to maximize the use of existing and new faculty, while ensuring quality outcomes and increasing student enrollments.

9. The Texas Higher Education Coordinating Board should encourage the development of regional “nursing centers of educational excellence” to consolidate redundant tasks performed by educators at individual institutions.
10. The Legislature should support initiatives that promote healthy workplace environments for nursing personnel.
11. The Legislature and the Texas Higher Education Coordinating Board should study avenues to expand nurse-midwifery educational programs.

Primary Care Recommendations

1. The Legislature should support initiatives that will support public health prevention and education programs in an effort to decrease the incidence and severity of chronic disease in the population by enabling individuals to take personal responsibility for their health.
2. The Legislature should reinstate general revenue funds in support of the Medicaid draw-down of federal funds for graduate medical education to 2002–03 biennial levels as a way of maintaining physician supply.
3. The governor and the Legislature should work with others to actively and urgently seek relief from the Centers for Medicare and Medicaid Services to eliminate the current outdated caps on funding graduate medical education training slots and to increase and to distribute the funds according to geographically equitable calculations.
4. The Legislature should restore general revenue funding for graduate medical education and the Family Practice Residency Program through the trustee funds to the Texas Higher Education Coordinating Board to the 2002–03 biennial levels.
5. The Legislature should provide the Texas Higher Education Coordinating Board new state funding to support 300 new resident positions, to be funded at \$50,000 per position and phased in over a four-year period, and should contain fifth-year continuation funding.
6. The Legislature should increase funding levels for the Physician Education Loan Repayment Program by mandating that all Texas medical schools that receive state funds participate in the “two percent set aside.”
7. The Legislature should provide Special Item funding to support enrollment increases at the state’s pharmacy schools to help relieve the current shortage of pharmacists in the state.

8. The Legislature should continue to support the increase in the numbers of Federally Qualified Health Centers in Texas.
9. The Legislature should support methodologies for the development of innovative models for the delivery of primary care that would include physical, mental, and oral health.
10. Legislature should support demonstration projects that use interdisciplinary teams of health professionals for prevention and management of chronic disease and that utilize a new, correct mix of caregivers and responsibilities.
11. The Legislature should support changes in Medicaid, Children’s Health Insurance Program, and Texas Vendor Drug Program rules and policies to trace outcomes and increase accountability by
 - identifying the practitioner that prescribed the drug instead of the delegating physician,
 - requiring all providers to bill services under their own names, and
 - increasing Medicaid and Children’s Health Insurance Program reimbursement for advanced practice nurses to 92 percent of the physician’s rate.
12. The Legislature should take steps to ensure cost savings by including Advanced Practice Nurses in state health care networks such as Employees Retirement System of Texas, Teacher Retirement System of Texas, and the Texas Workers’ Compensation Commission.
13. The Legislature should direct its Office of State and Federal Relations to encourage federal legislation that allows Nurse Practitioners, Clinical Nurse Specialists, and Physician Assistants to order home health care services, and then change state regulations accordingly.
14. The Legislature should support legislation, regulation, and reimbursement methodologies that will support the training and use of state certified community-level health providers to assist in the cost-effective management of health care.
15. The Legislature should provide positive financial incentives for providers who implement the use of evidence-based health care and the use of outcome-based practice guidelines that have been approved by an agreed upon nationally recognized health association.



Texas Statewide Health Coordinating Council

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2005 - 2010 TEXAS STATE HEALTH PLAN

Innovative Approaches to Health
Workforce Planning for Texas



Statewide Health Coordinating Council



OFFICE OF THE GOVERNOR

RICK PERRY
GOVERNOR

October 6, 2004

Ben G. Raimer, M.D.
Chair
Texas Statewide Health Coordinating Council
1100 West 49th Street
Austin, Texas 78756-3199

Dear Dr. Raimer:

Thank you and all of the members of the Statewide Health Coordinating Council (SHCC), for all of the hard work that went into the preparation of the *2005-2010 Texas State Health Plan* entitled "*Innovative Approaches to Health Workforce Planning in Texas*." This report is a thorough, useful guide for coordinating efforts among the many state agencies and stakeholders who work with our health care system to maintain and improve our health care workforce.

This guide will help build on existing measures that have already been implemented. During the last legislative session, I was proud to sign HB 3126, a comprehensive measure to address the nursing shortage by increasing nursing school enrollments, creating a permanent Nursing Workforce Data Center and adding to the SHCC a member dedicated to the nursing profession. Additionally, SB 718 addresses a variety of steps that Texas can take to enhance the nursing workplace.

The council's recommendations will help to ensure that all Texans have equal access to quality health care. I applaud the SHCC's focus on our vital nursing workforce.

Each of us has a role in our health care system, whether as consumers, patients, providers, or policymakers. Working together in a coordinated fashion ensures efficient and effective use of our resources. SHCC's report will help us go a long way toward building a healthy Texas.

Sincerely,

A large, handwritten signature in black ink that reads "Rick Perry".

Rick Perry
Governor

RP:vfg

STATEMENT OF THE CHAIRMAN

The *1999-2004 Texas State Health Plan*, the state's fundamental health workforce-planning document, developed by the Texas Statewide Health Coordinating Council (SHCC) in 1998, envisioned a Texas in which all citizens were able to achieve their maximum health potential. However, six years later, due to a myriad of factors and circumstances, Texas continues to be challenged to meet its current health care workforce needs and the anticipated needs for future generations.

As the SHCC considered the approach it would take in developing the *2005-2010 Texas State Health Plan*, the members felt that it was necessary to consider a different approach. Rather than continue to look only at the health workforce that would be required to fulfill the requirements of the current traditional medical model, the SHCC chose to consider innovative delivery models and the mix of health professionals that would be required to ensure a quality health workforce under a non-traditional delivery model.

The SHCC conducted an extensive assessment of health workforce issues. Additionally, in March 2004, the SHCC once again hosted the Texas Statewide Health Workforce Symposium. The Symposium provided a forum for health workforce stakeholders to come together to discuss the most critical workforce issues and to entertain possible solutions. Both the result of the literature review and the Symposium support the need for fundamental system change within the health care delivery system and the policy environment that shapes it. Consequently, the *2005-2010 Texas State Health Plan* focuses on innovative approaches to the recruitment and retention, the education and training, and the regulation of the Texas health care workforce.

We are committed to the belief that a healthy Texas can be a productive Texas and envision a Texas in which each person enjoys optimal health status, is informed, and is productive. We believe that the recommendations included in the *2005-2010 Texas State Health Plan* place Texas on the right track in preparing our state for its future.

Ben G. Raimer MD

Ben G. Raimer, M.D., Chairman
Texas Statewide Health Coordinating Council

STATEWIDE HEALTH COORDINATING COUNCIL
A VISION

We envision a Texas in which all are able to achieve their maximum health potential - A Texas in which:

- ★ Prevention and education are the primary approaches for achieving optimal health.
- ★ All have equal access to quality health care.
- ★ Local communities are empowered to plan and direct interventions that have the greatest impact on the health of all.
- ★ We, and future generations, are healthy, productive and able to make informed decisions.

A Healthy Texas is a Productive Texas

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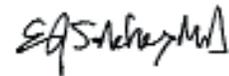
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Co-Chair, Texas State Strategic Health Partnership

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This agency is committed to providing its programs, services, and employment opportunities in a nondiscriminatory manner.

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FOREWORD

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House Bill 1716 from the 75th Legislature amended Chapter 104 of the Health and Safety Code and focused the council's planning activities on the health professions workforce. The council produced the *1999–2004 Texas State Health Plan: Ensuring a Quality Health Care Workforce for Texas*, which was the fundamental plan for the previous six-year planning cycle. The *2001–2002 Texas State Health Plan Update* was the first update to that document, while the *2003–2004 Texas State Health Plan Update* was the final update.

The *2005–2010 Texas State Health Plan* is the initial document and fundamental plan of the next six-year planning cycle and will once again focus on the Texas health workforce. For the purposes of this report, the *2005–2010 Texas State Health Plan* is referenced as the *State Health Plan*.

The *State Health Plan* outlines Texas' interests in issues concerning the workforce in the health professions. The state is a major provider of medical and health education through its system of publicly funded health science centers, universities, and community and technical colleges. Texas is a major purchaser of health care services through the state's Medicaid program and other public health care programs, as well as a provider of such services through its system of publicly funded medical schools and hospitals. Finally, Texas has the responsibility for the health,

safety, and welfare of its residents. In the *State Health Plan*, the council develops and presents policy-level recommendations to ensure that Texas has a workforce with the skills, competencies, and abilities to meet the needs of its growing and diverse population.

The *State Health Plan* will be presented to Governor Rick Perry on October 28, 2004. Copies of the plan will be distributed to state legislators, universities, licensing boards, professional associations, and other interested parties and will be posted on the Web site at <http://www.texasshcc.org>. The *State Health Plan* will serve as the state's fundamental document for information on the health professions and workforce planning. The plan includes input from major stakeholders throughout the state, including professional associations, state agencies, employers of health professionals, educators of health professionals, and numerous other public and private entities.

A complete set of the 2005–2010 Texas State Health Plan's recommendations is presented at the end of Chapter 1.

Copies of the 1999–2004 Texas State Health Plan, the 2001–2002 Texas State Health Plan Update, the 2003–2004 Texas State Health Plan Update, and the 2005–2010 Texas State Health Plan can be downloaded from the Web site at <http://www.TexasSHCC.org>. Printed copies of the documents are also available from the Texas Department of State Health Services, Center for Health Statistics, at a cost of \$20 per copy. To order a document copy, call (512) 458-7261.

INTRODUCTION

The workforce policy question the Statewide Health Coordinating Council (SHCC) addressed in the *1999–2004 Texas State Health Plan: Ensuring a Quality Health Care Workforce for Texas* is whether or not the current and future supply of health care professionals in Texas will be adequate to meet the current and future needs of the population. The *1999–2004 Texas State Health Plan* was the state’s fundamental health workforce-planning document incorporating policy, research, and a strategic plan with goals, objectives and strategies for the previous six years. The *2001–2002 Update* furthered that strategic plan with new strategies to strengthen the systems that support and ensure a quality health care workforce for Texas. The *2003–2004 Update*, the final update to the *Texas State Health Plan*, continued to build on that strategic plan with additional strategies for those areas that continued to present challenges and for new areas that had surfaced as significant workforce issues during the years since the *2001–2002 Update* was published.

In early 2003, as the SHCC began to consider the approach it would take during the next six-year planning cycle, the members felt that it was necessary to take a step back and consider a slightly different approach. Rather than continue to look only at the health workforce that would be required to fulfill the requirements of the current traditional medical model, the SHCC decided to research and consider innovative delivery models and the mix of health professionals that would be required to ensure a quality health workforce under a non-traditional delivery model.

Identification of Issues

In order to establish a basis for the development of the *2005–2010 Texas State Health Plan (State Health Plan)*, an extensive assessment of issues concerning the health workforce was conducted. The SHCC chose to approach the next six-year planning cycle from two perspectives. First, they identified the most critical health workforce issue that remains unresolved from the previous six-year planning cycle: the current and anticipated future critical nursing shortage. The second perspective was to take a step back and consider a more macro or system approach to health care delivery and consider system change as a basis for health workforce planning. This document will discuss and propose possible solutions to the critical nursing shortage in the context of a greater need for system change in the delivery of health care.

The result of the year-long literature review supports the need for fundamental system change within the health care delivery system and the policy environment that shapes it. Major items in support of system change include the following:

- Systemic shortcomings in health care quality;

- Soaring health care costs that include an increase in national health spending as a portion of gross domestic product that is expected to continue for the remainder of the decade;
- Increase in the incidence of chronic disease that will be exacerbated by the “baby boomers” coming of age and the obesity epidemic;
- Critical shortages and maldistribution of health professionals;
- Impact of terrorism on health workforce and on both the public and private health care systems;
- Increase in the number of underinsured and uninsured; and
- Disparities in health care access and quality, especially for racial and ethnic minorities.

The February 2004 issue of *Governing* summarizes the status of the American health care delivery system by stating that Americans are living with first-rate medicine and a third-rate health care system. This trend is expected to worsen. Innovation and creativity in medicine in the United States are being thwarted by federal and state health care systems incapable of delivering those improvements fairly and consistently to much of the American public. The drastic increase in the number of uninsured is a major factor in the crisis. The health care crisis in America is clearly a fiscal problem, with Medicaid being a huge contributor to the crisis. Texas ranked highest in state rankings for uninsured rates among children under age 19 as well as among adults under age 65 in 2001–02.¹

Jordan J. Cohen, M.D., president of the Association of American Medical Colleges (AAMC) delivered the following statement at the AAMC Annual Meeting on November 9, 2003:

Health care in America is in need of major overhaul. Wasteful inefficiencies continue to squander our limited resources; avoidable medical errors reflect our fragmented, un-systematic system and are threatening to undermine public support; inexplicable variations in the processes and outcomes of care are increasingly indefensible.²

Health care spending in the United States grew in 2002 by 9.3 percent over the previous year. This marked the sixth year of accelerating growth in health care expenditures. Health care spending now accounts for nearly 15 percent of the nation’s gross domestic product. This is double the size of health care’s share of the American economy 30 years ago and roughly doubles the amount spent in European countries.³

Demographics

Changes in the rates and sources of population growth, increases in the non-Anglo population, aging of the population, and change in the household composition of Texas families are major demographic trends that will affect the future of health care delivery in Texas. Using the U.S. Census count for 2000, 53.1 percent of the Texas population was Anglo, 11.6 percent was Black, 32.0 percent was Hispanic, and 3.3 percent was Other. Based on the Texas State Data Center's population projection 1.0, in 2040 those numbers will be 24.2 percent white Anglo, 7.9 percent non-Hispanic African-American, 59.1 percent Hispanic, and 8.8 percent others.⁴

Although minority populations are growing at a tremendous pace, they remain seriously underrepresented in the health care professions. In Texas, while Hispanics constitute 32.0 percent of the population, they make up only 7.3 percent of registered nurses and only 11 percent of direct patient care physicians. Non-Hispanic African-Americans constitute 11.6 percent of the population, yet make up only 6.9 percent of registered nurses and 3.9 percent of direct patient care physicians.⁵

The Texas population of those over age 65 is expected to double from 2000 to 2030. Other sources project that this population will triple during this time frame. Health care for persons over 65 is commonly projected to cost three times as much as for those under 65. The aging of the population and the increase in the Hispanic population pose numerous implications for the incidence of chronic disease. It is well documented that treatment for chronic diseases is the most costly aspect of medical care. Some project that 90 percent of Medicare expenditures are spent for the management of chronic disease. At the same time, the incidence of chronic disease is increasing in all age groups due to the obesity epidemic.

Texas is the second-largest state in the United States and continues to be the second- fastest growing state in population. Currently, about 21.5 million people live in Texas. The Texas population is increasing at a rate roughly twice that of the nation as a whole and is second only to California in population growth. Texas has the distinction of having one of the fastest growing youth (18 and under) populations as well as one of the fastest growing aging populations (60 and over). Forecasts predict that the Texas population will reach 31.4 million by 2030.⁶ The projected rates of growth in the youth and elderly populations and in minority populations will result in increased demand for health services. This increase in demand and the special health care needs of these populations must be taken into consideration in the planning and preparation of the health care workforce.⁷

Status of the Texas Health Workforce

Chapter 2 provides detailed information on health professions that are licensed in Texas. In addition to reporting the supply of health professionals practicing in Texas in 2003 for each of these professions, this report also shows the trends in the supply of the various providers over the last two decades, and compares those trends with the national trends. While these comparisons may not indicate whether or not Texas has a shortage of health professionals, they do show where the supply of health professionals in Texas is above or below the national average and whether the supply of those professionals in Texas, and the U.S., has been increasing or declining over the years. Additional information about the individual professions is provided in Appendix C. Most of the data are presented as ratios and reflect the number of providers per 100,000 population. This allows comparisons to be made between areas with different populations, such as the U.S. and Texas, or metropolitan counties and non-metropolitan counties. The provider-per-population ratio is a more accurate indicator of the supply of health providers in a given area than is the raw number of health providers. The higher the ratio, the greater the supply of health professionals available in an area for providing health care services.

Ratios are presented for Texas and the U.S., and for various geographic locations in Texas: metropolitan and non-metropolitan counties, border and non-border counties. The 43-county border area was defined by the state legislature and a map of this area is provided in Figure 2.1. The following is a summary of statistics presented in Chapter 2.

- Supply ratios vary according to geographic location:
 - Metropolitan county ratios are higher than non-metropolitan county ratios.
 - Non-border county ratios are higher than border county ratios.
 - Pharmacist ratios in non-metropolitan areas are decreasing more rapidly than pharmacist ratios in metropolitan areas.
- Over the past decade, Texas supply ratios have differed from U.S. average ratios as follows:
 - PC physician ratios in the U.S. have consistently exceeded the ratios of PC physicians in Texas; however, four years ago, the gap between the two began to widen. Metropolitan ratios are considerably larger than non-metropolitan ratios.
 - Supply ratios for pediatricians per 100,000 children and internal medicine physicians have been well below the U.S. supply ratios over the past 20 years.
 - Supply ratios for family practice physicians have been similar to U.S. ratios.

- Registered Nurse (R.N.) supply ratios in the U.S. have consistently exceeded the supply ratios in Texas for the past 20 years. Texas still lags behind the U.S., but the gap between the two has been narrowing in recent years.
- Licensed Vocational Nurse (L.V.N.) ratios in the U.S. have consistently been lower than the Texas ratios for the past 20 years. In contrast with R.N. ratios, L.V.N. ratios in non-metropolitan areas in Texas are higher than ratios in metropolitan ratios.
- Medical Radiologic Technician ratios were below U.S. average ratios between 1994 and 2001; however, since that time Texas ratios have been increasing faster than U.S. ratios.
- The ratios for most of the other Texas-licensed health professions are below the U.S. average ratios.
- Dentist supply ratios in the U.S. have consistently exceeded the supply ratios in Texas for the past 20 years and the numbers both in the U.S. and Texas have remained virtually flat since 1998.
- Pharmacist ratios in non-metropolitan areas have been lower than the ratios in metropolitan areas for over 20 years. This gap is widening and the supply of pharmacists in non-metropolitan areas appears to be decreasing more rapidly than the supply in metropolitan areas.
- Psychiatrist supply ratios have remained flat in Texas since 1998 and are lower than in 1992.

Some counties in Texas have been chronically short of various health professions; other counties have never had various types of professionals employed in their area and may not have the population to support those professions. L.V.N. is the most widespread profession throughout the state, with only three of 254 counties having no providers from this profession. In contrast, Certified Nurse-Midwife is the least widespread profession with 205 counties not having a representative from this profession.

As far as primary care providers are concerned, non-metropolitan areas have only 11 percent of the state's primary care physicians, but have 13.6 percent of the population. Metropolitan areas have 89 percent of the primary care physicians, but only 86.4 percent of the population. In addition, the growth rate of Nurse Practitioners (N.P.s) and Physician Assistants (P.A.s) in Texas has greatly exceeded the growth rate of primary care physicians. Some of that increased growth rate of P.A.s can be attributed to their increased growth rate in non-metropolitan areas, compared to the rate in metropolitan areas:

- N.P.s increased their supply ratios at a rate eight times faster than physicians (185 percent compared to 23 percent);
- P.A.s increased their supply ratios at a rate nine times faster than physicians (207 percent compared with 23 percent).

78th Legislative Session and Interim Period

During the 78th Legislative Session, there were numerous bills proposed that were identified as relating to the SHCC's recommendations on workforce in the *2003–2004 State Health Plan Update* including telemedicine and telehealth, training for workers who care for the elderly, and health education incentives.

Several bills were filed that addressed the important subject of telemedicine and telehealth as a means to use technology to overcome the distances that many Texas residents must travel to see a health care provider. Of those bills, only Senate Bill 691, relating to the reimbursement for telemedicine medical services under the Medicaid program and other government-funded programs, passed.

Other bills identified as affecting the state's health workforce are as follows:

House Bill 85 — Relating to the establishment of an undergraduate medical academy at Prairie View A&M University.

House Bill 242 — Relating to career and technology education and training.

House Bill 411 — Relating to improvement of science instruction and student performance in public schools.

House Bill 727 — Relating to disease management programs for certain Medicaid recipients.

House Bill 1166 — Relating to the on-line information needs and requirements of licensing agencies and their license holders.

House Bill 1420 — Relating to the use of a portion of medical school tuition for student loan repayment assistance for physicians.

House Bill 1877 — Relating to creating the rural physician relief program.

House Bill 3193 — Relating to the delegation of certain acts by dentists. (Allows delegation by dentist only in medically underserved areas.)

Senate Bill 558 — Relating to immigration visa waivers for physicians.

Senate Bill 610 — Relating to Grants for Federally Qualified Health Centers.

Senate Bill 1549 — Relating to requiring that certain individuals who provide nursing services in a nursing institution receive annual training in caring for people with dementia.

Senate Bill 1642 — Relating to the establishment of a geriatric education and care research center at the University of Texas Health Science Center at Tyler.

Several additional bills passed during the 78th Regular Legislative Session have a direct impact on nursing in Texas.

House Bill 1483 — Abolished the Board of Vocational Nurse Examiners and transferred the function of that agency to the Board of Nurse Examiners.

House Bill 3126 — Increases nursing school enrollments through a number of measures. The bill also gives mission and funding to nursing data collection by creating a permanent Nursing Workforce Data Center. The center is located within the Texas Department of Health, Center for Health Statistics, Health Professions Resource Center (HPRC). The SHCC has oversight of the HPRC as part of their leadership role in Texas health workforce planning. The bill also added to the SHCC a member dedicated to the nursing profession.

Senate Bill 718 — Addresses a variety of issues to enhance the nursing workplace including expanded whistleblower protections for RNs raising patient care concerns, workplace safety, protection of title “nurse” and authorizing the Board of Nurse Examiners to conduct pilots designed to maximize reporting of system errors.

House Bill 1095 — Expands a physician’s authority to delegate prescriptive authority to Advanced Practice Nurses to include Schedule III–V controlled substances. The bill also provides for standardized credentialing by facilities and insurers.

A tracking list of all health workforce–related bills that were introduced during the 78th Regular Texas Legislative Session is available in Appendix D.

Several charges from the Legislative Interim Committee relate to the health workforce:

House Committee on Appropriations — Evaluate all current funding streams for graduate medical education for financial viability and educational effectiveness in light of changes in Medicaid, managed care, and other cost factors, including the impact of uncompensated care. This evaluation shall include a review of the role of the state’s teaching hospitals in the provision of indigent care and the role of graduate medical education in addressing health care needs of underserved regions of the state.

House Committee on Border and International Affairs — Identify areas of health care need that specifically affect the border region or that disproportionately affect the border region, and develop strategies to improve conditions and reduce demand on the health care system.

House Select Committee on Health Care Expenditures — Study the current consumer-directed care models that are in use by the state and look at other states' consumer-directed care models that may benefit Texas in areas such as long-term health care and chronic health care. Place emphasis on the Program of All-Inclusive Care for the Elderly model to ascertain its true potential for both cost-effectiveness and improved health outcomes. Identify barriers to the model's expansion in Texas.

Senate Higher Education Committee — Study and make recommendations on the proper role, scope, and mission of community colleges. Develop innovative approaches to incorporating the community college system into the delivery of K–16 education. Study the feasibility of allowing community college districts to expand their service areas for taxing purposes.

Senate Higher Education Committee — Review and make recommendations relating to the adequacy of funding for graduate medical education, including funding required for professors, facilities, research programs, and students. Review and make recommendations relating to increasing the number of health professionals.

Senate Joint Interim Charge to the Higher Education and Finance Committees — Study and make recommendations relating to the development of a statewide accountability system for higher education that is consistent with funding strategies for higher education. Study and make recommendations evaluating the cost of increasing the number of Tier 1 universities in Texas. Reexamine current and alternative methods of funding regional universities, community colleges, health science centers and their reimbursement for the provision of indigent health care, and universities.

Senate Government Organization — Study consolidation of certain licensing agencies or their administrative functions.

Senate Intergovernmental Relations — Study the unique challenges and opportunities in rural areas from an economic development standpoint. Study the future and unmet needs of rural communities, residents, and businesses and examine the quality of infrastructure, housing, health care, and community involvement. Make recommendations for promoting investment in growth industries in rural areas.

The House Appropriations Committee invited Ben G. Raimer, M.D., SHCC chair, to present expert testimony on their Interim Charge Six relating to graduate medical education at their committee hearing on March 23, 2004. Also, Dr. Raimer was invited to provide expert testimony at the Senate Higher Education Committee hearing on April 8, 2004, relating to their Interim Charge Five pertaining to studying graduate medical education and to increasing the number of health professionals.

In summary, the interim period since the previous *State Health Plan Update* has been busy. Several bills were enacted that respond to the issues addressed in the previous update and many more were considered that might be raised again during the 79th Legislative Session. In particular, the issue of establishing a fair and equitable process for determining changes in scopes of practice, while prominently considered in the 77th Regular Legislative Session, failed passage. Additionally, changes in the scope of practice that would improve access to care and services for medically underserved populations may again require consideration. The lack of access to dental care for numerous rural areas and medically underserved populations is a possible justification for considering changes in scope of practice that could result in improved access.

Other State Health Workforce Initiatives

- Nursing Workforce Data Section and Nursing Workforce Data Advisory Committee

In response to the passage of House Bill 3126 from the 78th Regular Legislative Session, a Nursing Workforce Data Section (NWDS) within the Texas Department of Health, Center for Health Statistics was established in January 2004. A Nursing Workforce Data Advisory Committee (NWDAC) was added to the structure of the Statewide Health Coordinating Council and serves as a steering committee to review policy matters on the collection of data and reports, develop priorities and an operations plan for the NWDS, and review reports and information before dissemination. The funding for the Nursing Workforce Data Section and Nursing Workforce Advisory Committee comes from surcharges made on nurse license renewal fees (\$3 for R.N.s, \$2 for L.V.N.s).

The NWDS serves as a resource for data and research about educational and employment trends concerning the nursing workforce in Texas. One of the roles of the NWDS is coordination with other organizations (such as the Board of Nurse Examiners, the Texas Higher Education Coordinating Board, the Center for Health Economics and Policy, the Texas Nurses Association, the Texas Hospital Association, and regional health care organizations and educational councils) that gather nursing workforce data. The coordination is needed in order to avoid duplication of efforts in gathering data, to avoid overloading employers and educators with completing a large number of duplicative surveys, to share resources in the development and implementation of studies, and to establish better sources of data and methods for providing data to legislators, policy makers, and key stakeholders.

The NWDS is also implementing the Hospital Registered Nurse Staffing Study and the School of Nursing Capacity Study. The results of both studies should provide current and pertinent supply and demand trends on nursing workforce in Texas. In addition, a *Demographics of the Nursing Workforce Texas – 2003* was developed and will be available for public distribution. This report includes supply trends, gender, age, and racial-ethnic data on R.N.s, Advanced Practice Nurses, Licensed Vocational Nurses, Certified Nurse Aides, Medication Aides, and Documented Midwives. Other demographic and data reports will be available on enrollment and graduation trends, characteristics of nursing faculty, and migration of Registered Nurses in and out of Texas.

In the future, a study will be done with qualified applicants who were unable to be admitted to nursing programs. The NWDS is also working with the Board of Nurse Examiners to establish an online system for deans and directors of nursing programs to enter information about their programs, students, and faculty in order that data can be collected and analyzed in a more efficient and effective manner.

- Shared Vision Project

Recognizing the need to develop a shared vision of health and health care delivery for the state of Texas, the Texas Institute for Health Policy Research launched the Shared Vision for Health Care in Texas Project. To create this vision, the Institute is establishing a forum for dialogue among the leaders of Texas' health care providers, payers, and consumers for informed decision making. This collaborative effort is the only statewide effort that brings stakeholders together to provide leadership in developing innovative products and ideas to improve the state's access to health care and that care's quality and cost effectiveness.

As part of that process, the institute identified the following six focus areas: delivery systems, finance, information technology, workforce, rural issues, and community and public health issues. An expert workgroup was created for each of the focus areas. Recognizing that the SHCC has the statutory charge in Texas for making policy recommendations related to the health workforce, the Institute asked the SHCC to serve as the expert workgroup for the workforce area. The SHCC members approved this request in early 2004.

The SHCC and the Institute will co-host the first of the Shared Vision Policy Forums, a health workforce Legislative Policy Forum, on August 17, 2004 in Austin.

- Texas Nurses Association's 2004 Redesign of Nursing Practice and Education

Another current initiative has the potential to greatly impact the status of nursing practice and policy in Texas. The Texas Nurses Association has initiated the 2004 Redesign of Nursing Practice and Education. Two task forces will host multiple stakeholders group meetings to review what reinvented models of nursing and education could look like. They will also attempt to define

what patients will need by 2007 in care planning and delivery, describe the best person to fill this need, identify collaborative imperatives in the new nurse practice model, and prioritize the environmental, legal, administrative, and regulatory changes that will be needed to support the new nursing practice model.

- Texas State Strategic Health Partnership

The Texas State Strategic Health Partnership (Partnership) is a group of public and private organizations convened by the Texas Commissioner of Health to identify priority goals to improve the health of Texans. Six of the goals focus on improving the health status of Texans and six goals focus on improving the public health system.

Two of the Partnership's public health system goals relate to the health workforce for Texas. Goal J states that by 2010, the public health system workforce will have the education and training to meet evolving public health needs. Goal L states that by 2010, the Texas public health system partners will be informed by, and make decisions based on, a statewide, real-time, standardized, integrated data collection and reporting system (s) for demographic, morbidity, mortality, and behavioral health indicators accessible at the local level, while at the same time protecting the privacy of Texans. The SHCC has voted to formally join the Partnership in support of Goals J and L.

- Texas Workforce Commission and Local Workforce Development Boards

The Texas Workforce Commission (Commission) and the Local Workforce Development Boards (Boards) serve as partners in Texas health workforce Development. In 2000, Governor Rick Perry named nursing as one of the state's three targeted occupations. The Commission and the Boards launched several initiatives across the state that focused on the nursing shortage. These initiatives included recruiting and training efforts using the Boards' formula funds, state discretionary funds, and the federal funds, notable federal H-1B grants).

Notes

1. Katherine Barrett, Richard Greene, and Michele Mariani, “A Case of Neglect: Why Health Care is Getting Worse, Even Though Medicine is Getting Better,” *Governing* (February 2004), 22–24.
2. Jordan J. Cohen, “Our Quest for Meaning” (Association of American Medical Colleges President’s Address 2003), quoted in press release, November 9, 2003.
3. Katherine Levit et al., “Trends: Health Spending Rebound Continues in 2002,” *Health Affairs* 23:1 (January–February 2004), 147.
4. Steve H. Murdock, “Projected Proportion of Population by Race/Ethnicity in Texas, 2000–2040” (Texas State Data Center data), presentation to the SHCC, December 9, 2003.
5. Bryan King, Texas Department of Health, Center for Health Statistics, Health Professions Resource Center, e-mail communication to Connie Turney, February 6, 2004.
6. Texas State Data Center, Department of Rural Sociology, Texas A & M University, available online at <http://txsdc.tamu.edu>, Website Statistics.
7. Ibid.

Chapter 1

**THE CASE
FOR HEALTH WORKFORCE
PLANNING IN TEXAS**



2005–2010
TEXAS STATE HEALTH PLAN

INTRODUCTION

The purpose of the *2005–2010 Texas State Health Plan (State Health Plan)* is threefold. First of all, the *State Health Plan* provides a status report on health workforce issues addressed as priorities in the *2003–2004 Texas State Health Plan Update*. Second, the *State Health Plan* outlines the SHCC’s work plan for the next six-year planning cycle. Third, the *State Health Plan* identifies one of the most critical health workforce issues, the nursing workforce shortage, and presents a plan of action for the future. Many of the recommendations proposed in the *State Health Plan* focus on steps to alleviate the current nursing shortage and the anticipated future nursing shortage. These include recommendations that address the recruitment, education, and retention of the nursing workforce as well as recommendations for other related areas of the health workforce continuum.

Additionally, the *State Health Plan* begins to address the recommendations that will be necessary to support a redesigned health care delivery system for the future. These include changes in the way health professionals are educated, changes in the way funding is allocated for health professionals’ education, changes in the practice models used in the delivery of primary care, as well as changes to other health workforce-related systems. A complete set of SHCC recommendations is presented at the end of the chapter.

In an effort to provide Texas leaders with the information they need to prepare for ensuring a quality health workforce, the SHCC created a biennial process, the Statewide Health Workforce Symposium. The Symposium is used to gather accurate and objective information to enable legislators, policy makers, community leaders, and professionals in the private sector to set clear and effective health workforce policies for Texas. The Symposium provides an opportunity for experts in the health workforce field to openly discuss the issues and consider potential policy directions.

As part of the Symposium, the SHCC issued a call for white papers on two related subjects: “Short and Long-Term Solutions to the Critical Nursing Shortage” and “Innovative Primary Care Models to Improve Access and Outcomes.” Copies of those submissions are included as Appendix A and Appendix B, respectively.

To provide a platform for the Symposium, and ultimately for development of the *State Health Plan*, a review of recent literature is conducted on the state of the health workforce. This information, as well as contributions from other health workforce experts in Texas, is incorporated into this *State Health Plan*.

I. STATUS OF PRIORITY ISSUES INCLUDED IN THE 2003–2004 TEXAS STATE HEALTH PLAN UPDATE

Many of the recommendations proposed in the *2003-2004 Texas State Health Plan Update* focused on strengthening four interdependent workforce areas:

- Telemedicine and telehealth;
- General recruitment and retention;
- Ensuring a quality workforce for the aging Texas population; and
- Ensuring a quality public health workforce.

The following paragraphs provide a brief status update on each of these four workforce areas.

Telemedicine and Telehealth

The lack and distribution of available qualified health professionals continue to be major barriers to accessing health care in rural Texas and in many urban areas. Telemedicine technologies, including teledentistry, hold promise for providing greater access to medical care, ensuring quality of care, and containing costs through early diagnosis and intervention.

Telehealth technologies provide an avenue to maximize scarce resources such as faculty and building infrastructure in the education of our future health workforce. Additionally, telehealth extends our capacity to provide educational programs to potential students located in geographic areas that historically have lacked access to health education and training. Other new technologies, such as patient simulation laboratories, can also provide opportunities to increase the number of educated health professionals.

The SHCC continues to view telemedicine and telehealth as a critical strategy to address the numbers and maldistribution of health professionals and to increase access to health care and health education through technology. Although numerous telemedicine and telehealth projects and networks are now functioning throughout the state, there continues to be no designated agency or body to serve as the authority and coordinator for these projects within the state. The Texas Telecommunication Infrastructure Fund Board, which had provided infrastructure funding to many projects related to telehealth and telemedicine within the state, was eliminated by a line-item veto of the General Appropriations Bill in the 78th Regular Legislative Session.

During the 78th Regular Legislative Session, S.B. 691 charged the Texas Health and Human Services Commission (HHSC) with implementing telemedicine in ways that are cost-effective and clinically effective and that parallel Medicare where appropriate. HHSC administers Medicaid

and the Children's Health Insurance Program and has reached the following milestones in complying with S.B. 691:

- met with the Telemedicine Advisory Committee on January 5, 2004;
- submitted a communication and work plan to the Telemedicine Advisory Committee in May of 2004;
- submitted a telemedicine article for publication in the July–August *Texas Medicaid Bulletin*;
- organized a Mental Health and Mental Retardation Telemedicine Sub-Workgroup responsible for implementing initiatives specifically geared toward mental health and mental retardation; and
- drafted a letter to medical associations to step up provider education on the use of telemedicine technology and Medicaid billing guidelines.

General Recruitment and Retention

The importance of recruitment and retention activities to ensuring a quality health workforce cannot be overstated. An adequate supply of quality health care providers is critical to the stability of medical services throughout the state and especially in rural and underserved urban areas, where ensuring an adequate supply has always been a challenge. During the last two years, the state's fragmented programs have made attempts to coordinate their efforts. However, many of these programs that were already underfunded face additional reduction of resources available to accomplish the task. The unfortunate result of this fragmentation and the cuts is that Texas has fallen behind the national averages in the supply of many health professionals. This issue is discussed and detailed at length in Chapter 2 and in Appendix C.

Ensuring an adequate supply of health professionals is the product of three interrelated processes. Recruitment of the workforce is the first step. Strategies are currently being developed and acted upon by educational and professional organizations in order to expand the number of people who enter the health workforce. Numerous public and private agencies and organizations have made strides in the last decade to develop and expand the pool of young people who are ready to enter the health workforce. Unfortunately, in the nursing workforce within the last year, the number of qualified applicants has far exceeded the educational system's ability to admit and graduate the students. The greatest reason is the lack of qualified nursing faculty. This is expected to worsen, as the average age of nursing faculty is even higher than the average age of the nursing workforce.

The second step to ensuring an adequate supply of health professionals is to guarantee that systems are in place to support those students who have chosen to enter a health profession. In order to accomplish this, it is necessary to address the shortage of faculty and educational infrastructure to support these students, as mentioned above. It is equally important to address and attempt to fulfill the financial, personal, and cultural needs of these persons. The Texas health workforce does not currently reflect the ethnicity of the state. All health professions fall short of having the optimal numbers of minority-group members represented in their ranks. Chapter 2 and Appendix C provide racial-ethnic data on various health professions where that information is available. Several health professions still do not collect and report racial/ethnic data. However, it is imperative that these data be collected in the future to allow policy leaders and educators the information that is necessary to plan for a culturally representative and culturally competent workforce for Texas.

The third and final step to ensuring a quality health workforce is to guarantee that systems are in place to retain health professionals to practice in Texas. To be effective in this three-step process, the state must accomplish the following: strengthen the systems for collecting and coordinating health workforce supply and demand data, faculty and enrollment data, migration study data, and retention data; improve the coordination efforts in health workforce development and in recruitment and retention; improve systems to increase minority recruitment and systems to guarantee success; and support community-level recruitment and retention efforts throughout the state.

The state's three Area Health Education Center (AHEC) programs continue to serve a vital role in the recruitment and retention of health professionals within the state. The AHECs cover mutually exclusive geographic service areas through 16 fully operational regional centers. Three additional centers are in development in West Texas.

This community-based network conducts extensive programming on health careers promotion and recruitment; community-based education for health professions students; practice entry and support for community health professionals; health literacy for residents of communities; and assessment and refinement of community health delivery systems.

Funding for graduate medical education (GME) was severely cut during the 78th Regular Legislative Session, negatively impacting the state's ability to attract physicians. The cuts resulted in stress to existing GME providers and negatively impacted their ability to provide residency programs to medical graduates. Several of the current residency programs are at risk of closing due to these cuts. Many of our state's medical graduates are leaving Texas for their residency training, and many of them are choosing to remain in other states to practice, resulting in a huge financial burden and a huge loss of intellectual capital for our state's medical and educational system.

Research indicates that the location of the training program for residents and fellows is a major determining factor for where they ultimately establish a medical practice. According to a recent Texas Medical Association Committee on Physician Distribution and Health Care Access, those who graduated from a Texas medical school and completed residency or fellowship training in the state were close to three times as likely to remain in the state as medical school graduates from other states or countries.¹

Workforce for the Aging Texas Population

The issues impacting our state's ability to provide an economically feasible health workforce to provide quality care to the aging Texas population are compounding. A growing population of elderly combined with an increase in the incidence of obesity, and the related increases in chronic disease associated with obesity, paint a very challenging picture for Texas and the nation as well. Recent program funding cuts have further reduced our state's ability to meet the future health workforce needs of our aging population.

All involved in Texas health workforce planning must consider alternative health care delivery systems that will concentrate on the prevention of chronic disease and the efficient management of chronic disease through evidence-based health care and proven treatment guidelines. Empowering individuals to accept responsibility for their own wellness through prevention and education programs is also critical. Determining the optimal type, mix, and number of health care providers, the optimal number of health care providers, and the competencies desirable for those providers to possess are the critical challenges that Texas must meet.

Ensuring a Quality Public Health Workforce

To ensure the health of all Texans, we must have a strong public health infrastructure, and a competent public health workforce is an essential component in meeting this challenge. As a result of the urgency surrounding bioterrorism preparedness, Texas continues to receive additional resources to build and improve the public health workforce capacity. The Texas public health infrastructure as a whole is stronger and more capable of meeting all public health challenges and emergencies as a result of this influx of funding related to bioterrorism preparedness.

Also, consideration must be given to the impact terrorism will have on the health professions workforce. First of all, the threat of terrorism will dictate the numbers and types of health professionals needed and the type of education and training they should receive. The demand for physicians and registered nurses in the acute care setting will be further exacerbated in the face of a large-scale disaster that results from an act of terrorism. The health professions workforce should

be a part of regional planning efforts to prepare for an act of terrorism, so that they can prepare to fulfill their identified future role in managing an event.

The public health workforce will also continue to be an important partner in the effort to prevent and manage chronic disease in the population. Education and prevention efforts, which have long been the tools of the public health workforce, provide an avenue that can produce huge savings in the delivery of health care by teaching “wellness” to individuals in the community.

II. IDENTIFICATION AND PRIORITIZATION OF CURRENT TEXAS HEALTH WORKFORCE ISSUES

As described in the Introduction to this *State Health Plan*, the SHCC envisions using the current six-year planning period to identify, study, and evaluate innovative primary care delivery models that are outcome oriented and rely on evidence-based health care. This decision is based on an extended assessment that included an extensive literature review; solicitation of local, state, and national stakeholder evaluations of health workforce issues; and a review of current health policy issues impacting the health workforce. Throughout this six-year process, the SHCC will continue to build upon a health workforce plan that will ensure that the correct numbers and types of health providers are recruited, educated, and trained and that they possess the required competencies and skills to ensure quality health outcomes at the lowest cost for all Texans.

Although the SHCC has outlined this overriding process for the next six years, it has also realized the need to devote a portion of the *State Health Plan* to a current critical health workforce issue in Texas: the current and anticipated future nursing workforce shortage. The *State Health Plan* will discuss and propose possible solutions to the shortage in the context of a greater need for system change in the delivery of health care.

Current Status of the Nursing Workforce

The 2.8 million licensed nurses and 2.3 million nursing assistants providing patient care in this country represent approximately 54 percent of all health care workers and provide patient care in virtually all locations in which health care is delivered.²

The 201,194 licensed nurses and 93,342 certified nurse aides providing patient care in Texas represent 53.5 percent of the total health workforce. Licensed vocational nurses represent 10.9 percent of the total and registered nurses represent 25.6 percent.³ Although numbers vary from study to study, most concur that the nursing shortage is the most severe health workforce shortage existing in the nation and the state. It is anticipated that this shortage will only worsen

due to the changing demographics of the state and the increased role of nurses in the health care delivery system. To meet the demand for nurses, the state will initially need to develop short-term solutions. However, long-term solutions will also be required to sustain the supply of nurses.

A survey conducted by the Texas Hospital Association in February 2003 confirmed vacancy rates for registered nurses in several areas, including vacancy rates of 14.6 percent in critical care areas, 14.0 percent in medical-surgical areas, 11.8 percent in psychiatric areas, 10.1 percent in emergency departments, 7.4 percent in home health, and 5.8 percent in neonatal ICUs. The total average vacancy rate was 11.0 percent for all areas. This represented 2,843 vacant registered nurse positions.⁴

Demand for registered nurses in the acute care setting has increased recently and is likely to continue in the longer term. The demand for registered nurses created by a terrorist event, especially a biological event, would be significant. Population growth in general, the aging of the population, especially people over age sixty-five, economic growth, and advances in technology are expected to greatly accelerate the future demand for hospital-related services and thus for registered nurses. Recent predictions estimate the demand for registered nurses will increase 40 percent over the next two decades, with most of this employment growth occurring in hospitals.⁵

According to a July 2002 report by the Health Resources and Services Administration, 30 states were estimated to have shortages of registered nurses in the year 2000. This shortage is projected to intensify over the next two decades, with at least 44 states expected to have registered nurse shortages by the year 2020.⁶ According to the latest projections from the U.S. Bureau of Labor Statistics, more than one million new and replacement nurses will be needed by 2010.⁷

Ability to meet the demand for registered nurses is negatively impacted by the current shortage of nursing school faculty. Additionally, fewer new nurses are entering the profession, thus causing an increase in the average age of the registered nurses.

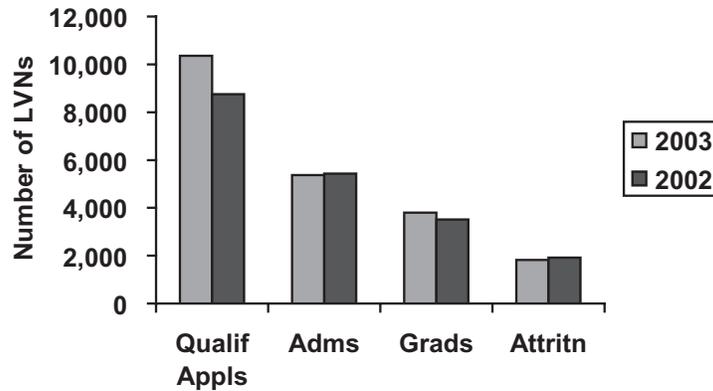
Nursing Education Programs in Texas

Vocational Nursing Programs

There are 109 sites throughout Texas where vocational nursing (VN) programs are offered. The majority of VN programs are in community colleges. Figure 1.1 depicts the number of qualified applicants for the VN programs as well as the admission, graduation, and attrition rates from September 1, 2002 to August 31, 2003, as compared to 2001–2002. The primary reason for withdrawal from VN programs was academic failure (1,825 students in 2003 and 1,916 students in 2002).

Figure 1.1

**Vocational Nursing Programs in Texas:
Trends in Qualified Applicants, Admissions, Graduates & Attrition, 2003 and 2002**



Data source: Texas Board of Vocational Nurse Examiners
Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, May 30, 2004

Professional Nursing Programs

As of September 2003, there were 82 professional undergraduate nursing programs in Texas:

- Two diploma programs are based in hospitals and are three years in length.
- 50 associate degree in nursing programs (ADN) are based in community colleges and are two years in length.
 - 44 ADN programs offer ADN degrees either to unlicensed students or to both unlicensed students and LVNs.
 - Six ADN programs are LVN-to-ADN track programs that only enroll LVNs.
- 25 Bachelor of Science in Nursing (BSN) programs are based in universities and are four years in length. BSN programs offer baccalaureate degrees to either unlicensed students or unlicensed students and RNs.
- One alternate-entry basic master's degree in nursing program offers a Master of Science in Nursing (MSN) degree to unlicensed students.
- Four baccalaureate-degree nursing programs for RNs only enroll RNs.

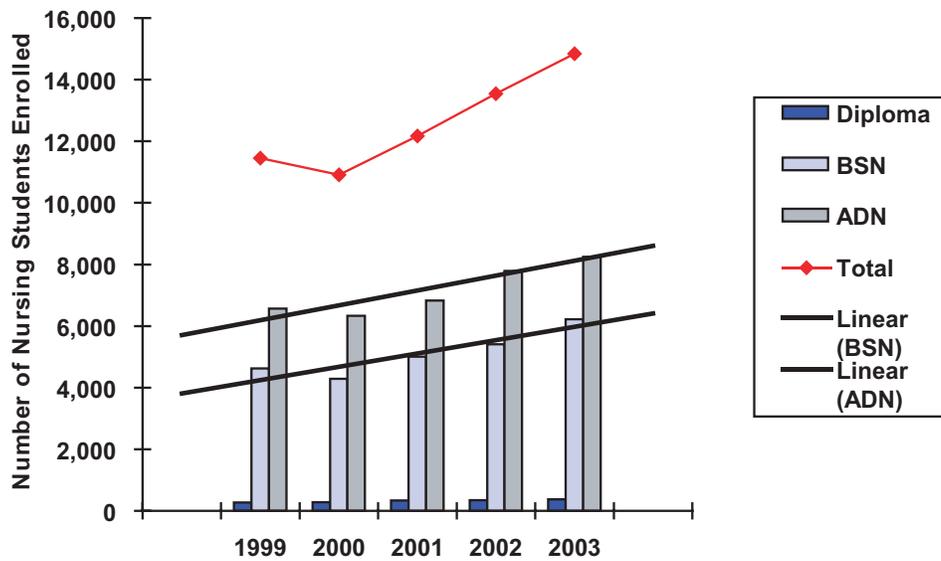
In addition to these undergraduate nursing programs, there are 18 schools of nursing that offer master's-level degree programs in nursing. Some of the areas of study in the master's programs include nursing–health care systems administration, nurse practitioner, clinical nurse specialist, midwifery, public health, and nursing education. Ten schools of nursing now offer a special track in nursing education.

There are currently six educational institutions that offer doctoral programs in nursing including Texas Woman’s University, the University of Texas at Austin, the University of Texas Medical Branch at Galveston, the University of Texas Health Science Center at Houston, the University of Texas Health Science Center at San Antonio, and the University of Texas at Arlington. The Texas Tech University Health Science Center provides access to the doctoral nursing program through a cooperative agreement with Texas Woman’s University.

Enrollment and Graduation Trends in Professional Nursing Programs

Figure 1.2 reflects the five-year enrollment trend in professional nursing programs in Texas. This trend shows a parallel rate of enrollment increase between the ADN and BSN programs with the greatest increase in enrollment occurring from 2001 to 2003.

Figure 1.2
 Five-Year Enrollment Trend in Texas RN Programs, 1999–2003



Data Source: Texas Board of Nurse Examiners
 Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, April 27, 2004

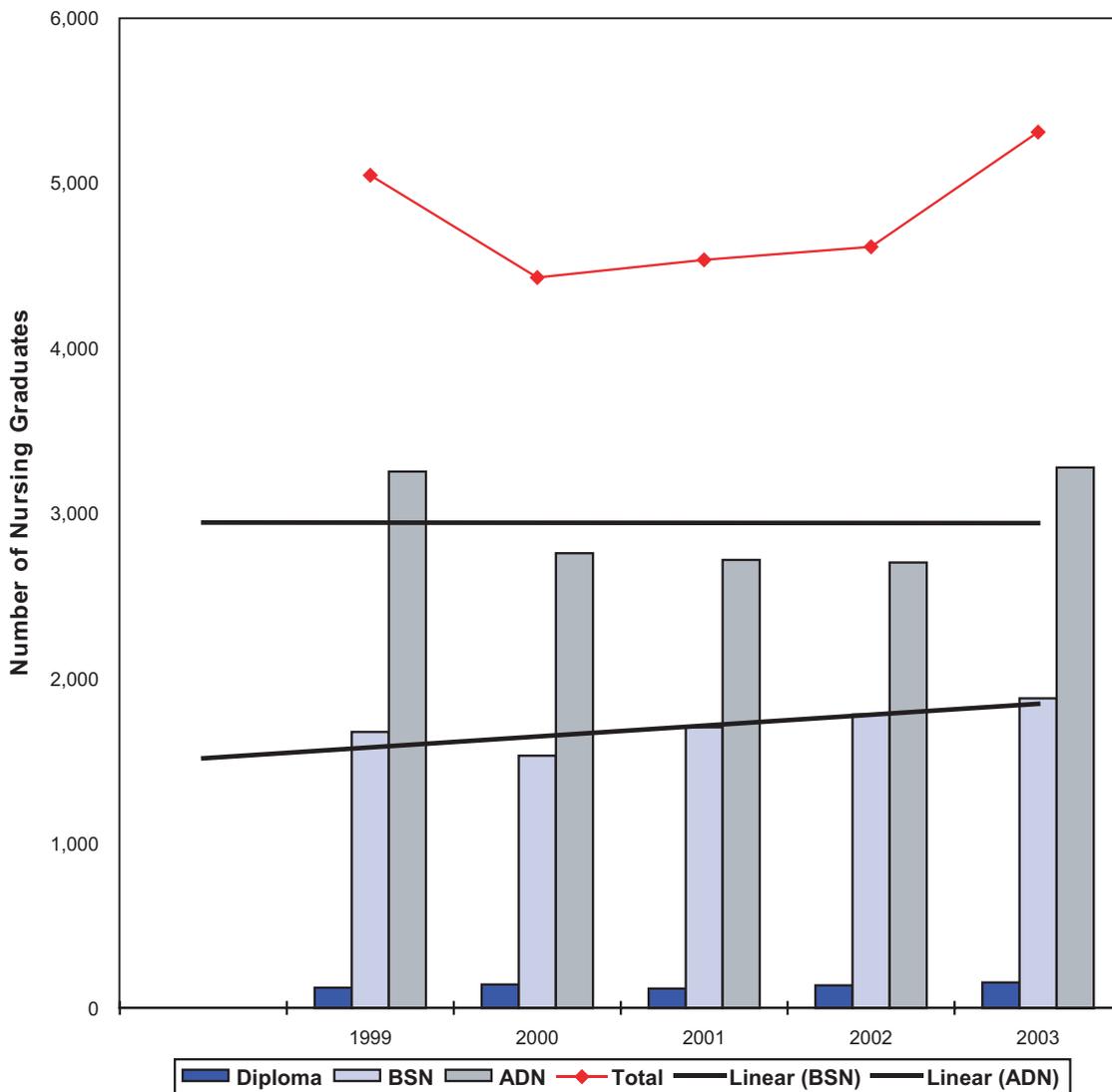
The Texas Higher Education Coordinating Board reported that there were 2,278 declared nursing majors in master’s degree programs in public universities and health science centers in Texas in the fall of 2003. The largest number of graduate nursing students (1,251) were in the track for family practice nurse practitioners. The enrollments of graduate nursing students in other specialty areas are as follows: master’s programs where specialty not specified (462), nurse anesthetist (184), nursing administration (176), clinical nurse specialist (115), nursing education (41), adult health nursing (20), nurse midwifery (16), public health nursing (10), maternal and child health nursing (2), and nursing science (1). In 2003, the Coordinating Board reported 302 declared nursing majors in doctoral programs in public universities and health science centers in Texas.

Figure 1.3 reflects a five-year graduation trend in professional undergraduate nursing programs in Texas. The ADN programs showed the greatest increase in graduation in 2003, a 17.6 percent (576) increase from 2002. The BSN programs showed the greatest increase in graduation from 2000 to 2001, a 10 percent (172) increase.

In 2002–03, there were a total of 463 graduates who received master’s degrees in nursing from Texas public universities and health science centers. Of these graduates, 313 were prepared as nurse practitioners in family practice. The graduation of master’s nursing students in other specialty areas are as follows: clinical nurse specialist (52), nurse anesthetist (50), nursing administration (27), nursing education (10), nursing midwifery (8), and public health nursing (3). In the same academic year, 24 graduates received doctorates in nursing from Texas public universities and health science centers.

Figure 1.3

Five-Year Graduation Trend in Texas RN Programs, 1999–2003

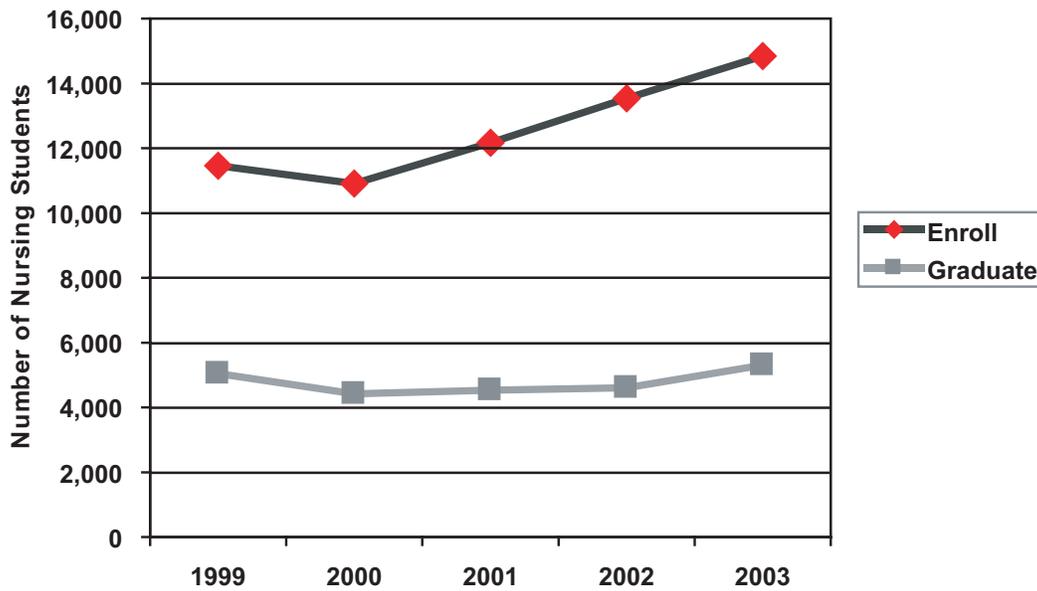


Data Source: Texas Board of Nurse Examiners
 Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, April 27, 2004

Figure 1.4 shows a comparison of the total enrollment and graduation trends over a five year period in professional undergraduate nursing programs. This comparison shows that, although the enrollment has increased in such programs, that does not indicate a corresponding increase in nursing graduates. Many educators would say that the major reason for attrition of students from professional nursing programs is academic failure. Other factors causing attrition include personal and financial problems. Currently, the Board of Nurse Examiners does not collect data on attrition in nursing programs. However, the School of Nursing Capacity Study that the Nursing Workforce Data Section is currently conducting will include some data on attrition, including the amount occurring in an academic year as well as the reasons for it.

Figure 1.4.

Comparison of Total Enrollment and Graduation Trends, 1999–2003

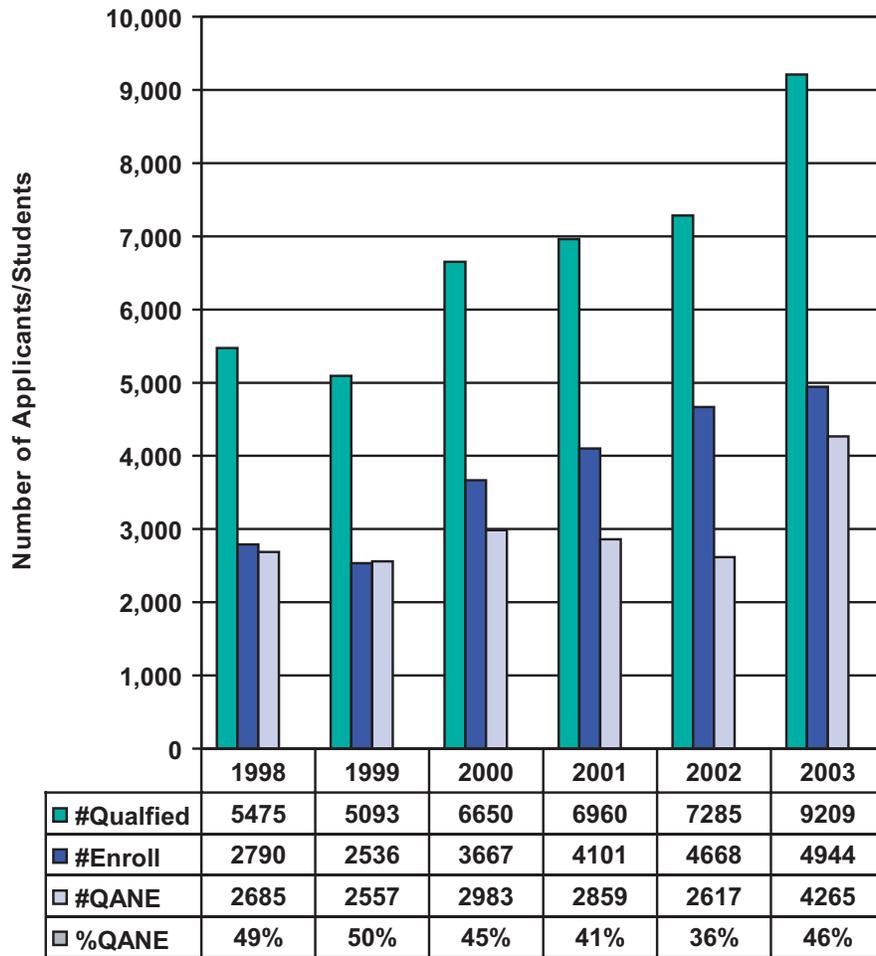


Data source: Texas Board of Nurse Examiners
Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, April 27, 2004

Figure 1.5 depicts the trends from 1998 through 2003 for ADN programs, and Figure 1.6 shows the trends from 1998 through 2003 for BSN programs regarding the number of qualified applicants, the number of applicants who enroll in the nursing programs, and the number of qualified applicants not enrolled. It should be noted that candidates for admission may apply to and be accepted by more than one nursing program, so these data may represent some duplicated counts of individuals.

Figure 1.5

Associate Degree Nursing Programs in Texas

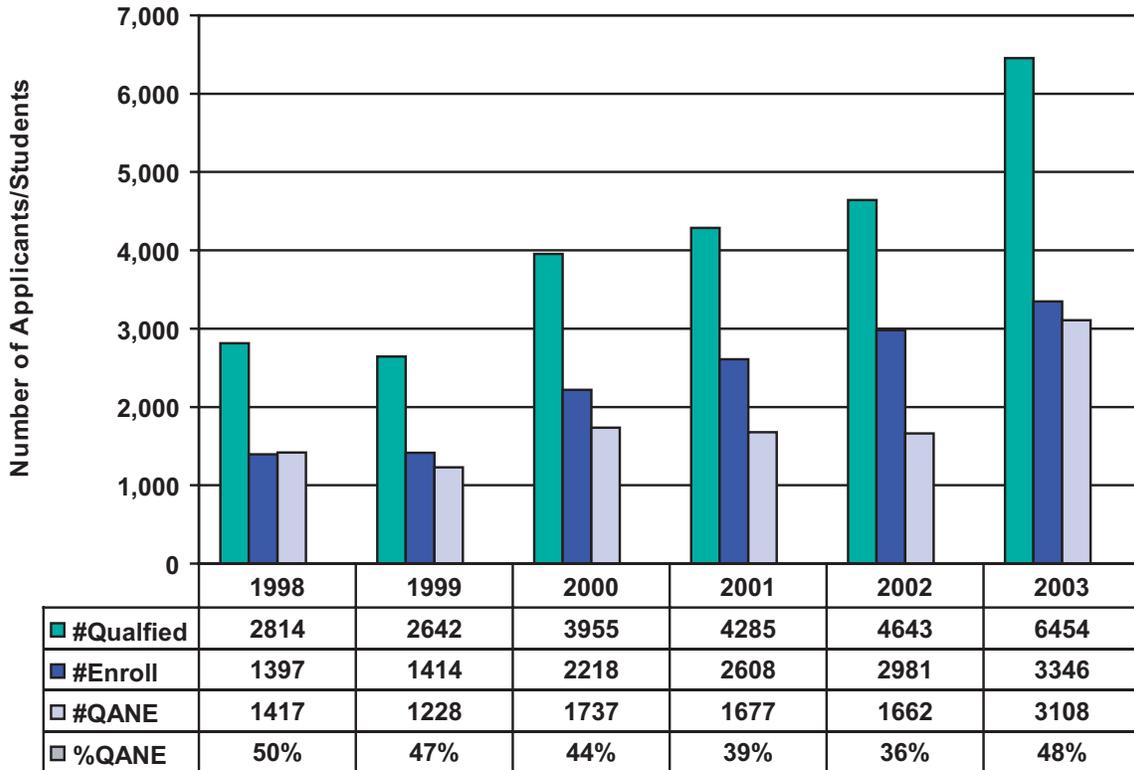


QANE = Qualified Applicant Not Enrolled

Data Source: Texas Board of Nurse Examiners
 Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, April 27, 2004

Figure 1.6.

Baccalaureate Nursing Programs in Texas



QANE = Qualified Applicant Not Enrolled

Data Source: Texas Board of Nurse Examiners
 Prepared by: Nursing Workforce Data Section, Center for Health Statistics, Texas Department of Health, April 27, 2004

In the Board of Nurse Examiners' 2003 report on professional nursing education programs, the nursing programs reported that the most frequent reason for not admitting qualified applicants was a lack of budgeted faculty positions.⁸ The other most common reasons were a lack of qualified faculty applicants, limited classroom space, and a lack of clinical spaces.⁹ The School of Nursing Capacity Study will also obtain data as to what additional human, physical, and financial resources are needed in order for nursing programs to be able to increase enrollment by 20 percent.

Field Of Study Curriculum

The Coordinating Board approved the Field Of Study Curriculum (FOSC) for Nursing in July 2002. This allows students who complete a set of courses at any Texas public college, university, or health science center to be able to transfer these courses to another Texas public college, university, or health science center. Students who have not finished their ADN would have a seamless transfer of credit where they would not have to repeat course work they have already completed. For students who graduated with an ADN, they would be able to complete a one-semester bridge course for the

ADN-to-BSN transition. For transfer students in BSN programs, completion of the FOSC will save them up to two years of repetitive course work. The Coordinating Board will be evaluating the FOSC in nursing programs for effectiveness in providing a smooth articulation and transfer from one public educational institution to another and in improving graduation rates and the length of time it takes to graduate.¹⁰

Articulation and Mobility Options in Professional Nursing Programs

In the Board of Nurse Examiners' 2003 Annual Report on nursing education, a total of 73 (90 percent) of 81 nursing programs (this does not include the alternate entry master's program) reported using some type of articulation option, which is a planned process between two or more educational systems to assist students in making a smooth transition from one level of education to another without duplication in learning.¹¹ In 2003, the two diploma programs and 46 ADN programs reported having some type of mobility option for LVNs to progress through the nursing program in a shorter period of time. There were nine ADN programs that also offered a mobility option for paramedics. In addition to the four RN-to-BSN programs, 22 BSN programs offered a mobility plan for RNs to obtain a BSN degree. All of the nursing programs, except for two ADN programs, have some type of mechanism in place to grant advanced placement. It is interesting to note that there was a decrease between 2002 and 2003 of two ADN programs (39 vs. 37) and one RN-to-BSN program (4 vs. 3) that do not grant credit by direct transfer — the first decrease in five years. The number of programs granting advanced placement with a transition course (53 vs. 47) or with completion of a designated course (40 vs. 35) also decreased compared to the previous year's data.¹²

Innovations in Nursing Programs

As of October 2003, 22 nursing programs offered courses at 44 locations other than their institution's main campus. The Board of Nurse Examiners approves these locations as distance education initiatives (DEIs), where a single course, multiple courses, or an entire identical curriculum could be offered. Ten of the ADN programs operated 13 DEIs, 11 BSN programs operated 30 DEIs, and one RN-to-BSN program operated one DEI. In 2003, there were 610 unlicensed students enrolled (4 percent of total enrollment) in DEIs and 177 (3 percent of total graduates) unlicensed students (3 percent of total graduates) involved in DEIs who graduated.

In 2003, there was an increase in the number of nursing programs that offered online courses to students. Sixteen (32 percent) of the ADN programs and 13 (52 percent) of the BSN programs reported to the Board of Nurse Examiners that they offered one or more courses through the Internet. This reflects an increase from 2002, when 12 (24 percent) ADN programs and 9

(36 percent) BSN programs offered Internet courses.

The Nursing Innovation Grant Program (NIGP), which is administered by the Texas Higher Education Coordinating Board, provided \$3.04 million in the 2002–03 biennium and \$3.9 million in the 2004–05 biennium to support nursing programs that offer innovative solutions for increasing nursing enrollments, retaining nursing students (including minority students), and recruiting and retaining nursing faculty.¹³ For 2004–05, 42 grants were awarded. Additional grants in the fall of 2004 will fund large pilot projects through 2007.

The University of Texas Medical Branch (UTMB) in Galveston is one of the health science centers that serve as beta sites for the development and testing of a nurse residency program. UTMB's Nurse Residency Program includes a series of learning and work experiences designed to support BSN graduate nurses as they transition into their first professional position, and is designed for direct care roles in acute care health science centers. The program is provided through a collaboration with the health science center and a baccalaureate school of nursing. The program is one year in length and includes a curriculum with units on leadership, patient outcomes, and the professional role. Throughout the residency, there is a strong focus on critical thinking skills, using actual case scenarios with the guidance of resident facilitators. The resident facilitators are clinical nurse specialists, educators, senior clinical nurses, managers, and clinical faculty from schools of nursing. The objectives of the UTMB Nurse Residency Program are to:

- Transition from advanced beginner nurse to competent professional nurse in the clinical environment.
- Develop effective decision-making skills related to clinical judgment and performance.
- Provide clinical nursing leadership at the point of care.
- Strengthen commitment to nursing as a professional career choice.
- Formulate an individual development plan.
- Incorporate research-based evidence linked to outcomes in clinical nursing practice.
- Decrease new graduate turnover rates.¹⁴

Nursing Workforce Impact on Patient Safety

It has been well documented through research that a strong correlation exists between adequate levels of registered nurse staffing and safe patient care. According to a study published in May 2002, a higher proportion of nursing care provided by registered nurses and a greater number of hours of care by them per day is associated with better outcomes for hospitalized patients.¹⁵

In an August 2002 report released by the Joint Commission on Accreditation of Healthcare

Organizations (JCAHO) entitled *Health Care at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis*, its authors found that a shortage of nurses in America's hospitals is putting patient lives in danger. The JCAHO examined 1609 hospital reports of patient deaths and injuries since 1996 and found that low levels of nursing staff were a contributing factor in 24 percent of the cases.¹⁶

More recently, the Institute of Medicine (IOM) released a report in 2004 entitled *Keeping Patients Safe: Transforming the Work Environment of Nurses* that built upon the recommendations and findings in two prior IOM reports, *To Err Is Human: Building a Safer Health System* (2002) and *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001). Numerous recommendations are included in this latest report that, if implemented, IOM believes will create the necessary patient safeguards in the work environment of nurses.¹⁷

In summary, the SHCC's intent is to discuss and propose possible solutions to the critical nursing shortage in the context of a greater need for system change in the delivery of health care. Numerous projects are being conducted within the state and nation to address nursing issues such as implementation of recruitment and retention strategies, identification of new sources of nurses, and proposing improvements in the nursing faculty infrastructure. The SHCC acknowledges that these are critical issues that must be addressed and fully supports these efforts. However, the intent of the recommendations contained in this document is to speculate as to how nurses can best address patient needs in a new model of health delivery that will be required to both produce better outcomes and cost less.

Nurses will continue to serve a critical role in delivering care in the acute care setting due to their level of critical thinking skills and their training and education. Future models will likely place a huge value on nurses in the management and prevention of chronic disease. Public health nurses and school nurses could play a significant role in the prevention of chronic disease. Future health care models should emphasize having the right health professional in the right place, at the right time, with the right skills, competencies, and training. For maximum results, interdisciplinary health professional teams could be used to manage chronic disease at the community level. Health professionals, lay providers, and volunteers could enhance patient education and care reinforcement at levels throughout the continuum. The level of intervention and the training of the person providing the intervention would be determined by the acuity level or the stage of the patient's disease. Technology could be used in many ways to monitor patient compliance, assess the patient's condition, and improve access to care. Technology could also be used to educate consumers and to improve the health literacy of the population.

A new division of labor in health care delivery could be considered that would strategically place the right health professionals, trained with the appropriate competencies, within the health care

delivery continuum, where they could make the largest contribution to patient outcomes at the least cost. All would agree that mechanisms must be in place to guarantee patient safety. These could come in the form of treatment guidelines that are developed from evidence-based medicine and taught to health professionals throughout their training and educational programs. Medical and continuing education programs could reinforce the use of these guidelines and introduce new guidelines as well as providing a system for health professionals to demonstrate continued mastery of the designated competencies for their profession.

Guidelines should be reviewed and adopted by an interdisciplinary team of appropriate medical specialists for each disease category and related diagnoses. Methods and processes for the ongoing collection of outcome data should be implemented from the beginning to provide continuous quality assurance. This scientific approach could set the stage for exploring successful delegation within the existing scopes of practice. It could also open dialogue for possible areas in which a change in the scope of practice might prove desirable and feasible. These considerations would interrelate with numerous other issues such as reimbursement, liability, and definition of the individual patient's responsibility in the continuum.

In future models, establishing the initial diagnosis, developing the treatment plan, and prescribing medications would probably occur similarly to current models, except these activities will occur much more frequently using technologies such as telehealth. Acute episodes of illness and skilled services would also be managed similarly to current models. However, new models could differ from existing models in the coordination of care from the point of diagnosis and in the long-term management of chronic disease. Models that successfully manage chronic disease in the community, while simultaneously involving the patient in the management of his/her disease, will have the maximum potential to produce savings for the health care system. Prevention of chronic disease will be a second arena that will maximize returns on investment, while having the value-added aspect of improving patients' quality of life.

Current Status of Primary Care Delivery in the United States and Texas

The delivery of primary care and the design of primary care are strategically situated within the larger health care delivery system. Changes to the primary care delivery system have the potential to have the greatest positive effect on the overall health status of the population and on the cost of providing care to any population. The obvious reason is that the primary care provider is the first point of contact and the ongoing medical home for most patients. Numerous studies suggest that patients with a primary care home benefit with improved outcomes and decreased cost to the health care system as a whole. The primary care environment is the most effective and/or efficient point for managing chronic disease, which represents the highest ongoing cost of health care delivery.

Documented research in chronic disease management substantiates the need to incorporate evidence-based practice guidelines in the treatment of chronic disease. Models can support adherence to evidence-based medical practice guidelines by providing medical treatment guidelines to physicians and other providers, by reporting the patient's progress in compliance with guidelines, and by providing support services to assist the physician in monitoring the patient. Additionally, services to enhance patient self-management and adherence should be built into health services. Consideration should be given to cost-effective technology to improve health outcomes. Ultimately, the collection and analysis of measures of process and outcomes must be incorporated from the beginning and continue over time.

Although family physicians, nurse practitioners, and physician's assistants function interdependently within the primary care delivery system, very little has been accomplished in terms of coordinated growth of the primary care workforce. The quality of state and national data varies from profession to profession and from state to state. Consequently, very little factual information is available about the primary care workforce. Although we do know that tremendous growth has taken place in the production of these health professionals in the last ten years, such growth has taken place in an environment without any obvious attention to coordination.

The American Academy of Family Physicians, in a one-pager brief published in 2001, substantiates the lack of coordinated planning. In this article, the Academy stresses that family physicians, nurse practitioners, and physician's assistants are distinctly different in their clinical training, yet they function interdependently. Together, they represent a significant proportion of the primary care workforce. Although the training capacity for these three professions has increased rapidly over the past decade, almost no collaborative workforce planning has occurred.¹⁸

In Texas, the supply of family practice physicians increased from 2,951 in 1990 to 4,932 in 2003, representing an increase of 67.1 percent. Nurse practitioners increased from 964 in 1991 to 4,185 in 2002, for an increase of 438.9 percent. Likewise, the number of physician assistants increased from 622 in 1991 to 2,880 in 2003, for an increase of 363 percent.¹⁹ As at the national level, no apparent collaborative workforce planning occurred. It should be noted that if Texas moves toward integrated models as a way to improve quality and decrease cost, it is imperative for these professions to consider looking collaboratively at workforce planning.

Policy in Texas: Projects Affecting Primary Care Delivery

Several major projects that relate directly or indirectly to primary care delivery are being conducted within the state. The Texas Medicaid and CHIP Medicaid Reform Workgroup is currently studying possible proposals to increase the efficiency of and create cost savings in the Medicaid program. Numerous other cost control strategies resulted from the 77th and 78th Legislative

Sessions, including attempts to employ disease management programs to improve patient outcomes and decrease cost to the program.

Also, Texas is working to implement the recommendations included in the President's New Freedom Commission on Mental Health's final report, *Achieving the Promise: Transforming Mental Health Care in America*, issued in July 2003. A New Freedom Commission summit was held in Austin on October 20–21, 2003 to discuss methods that Texas can use to ensure that the recommendations contained in the report are successfully implemented. Under Goal 5: Excellent Mental Health Care Is Delivered and Research Is Accelerated, Recommendation 5.3 emphasizes that states should work to improve and expand the workforce, providing evidence-based mental health services and supports.

In 2002, the Texas Department of Health first convened partners in Texas' public health system to identify shared priorities and actions for improving the health of Texans. The Texas State Strategic Health Partnership is comprised of public and private organizations that have come together to share responsibility and accountability for creating a healthier Texas. Highlights of partnership activities include:

- identifying 12 priority public health improvement goals;
- issuing the *Texas Declaration for Health*, committing partnership agencies; and
- establishing work groups to identify strategies to reduce health risks for Texans.

The Texas State Strategic Health Partnership focuses on enhancing the essential public health services to benefit all Texans and on making prevention of diseases and illnesses a priority.

Recognizing the need to develop a shared vision of health and health care delivery for the state of Texas, the Texas Institute for Health Policy Research launched the Shared Vision Project. To create this vision, the Institute is establishing a forum for dialogue among the leaders of Texas' health care providers, payers, and consumers for informed decision making. This collaborative effort is an important statewide effort that brings stakeholders together to provide leadership in developing innovative products and ideas to improve the state's access to health care and the quality and cost effectiveness of that care.

The project is producing Texas' first Shared Vision for Health Care and is grounded on two premises. First, there is no model of delivery of health care services or vision for what a model should be in Texas. Second, all stakeholders are dissatisfied, to varying degrees, with the current "system" of health care delivery.

Finally, the Federally Qualified Health Center (FQHC) Incubator Program, administratively located within the Texas Department of State Health Services, was funded during the 78th Regular

Legislative Session. The program seeks to increase new access point funding as well as funding for service expansion and expanded medical capacity. The strategy of the program is to increase local capacity in a sustainable manner. Therefore, the Incubator Program stresses securing FQHC look-alike status in the process of pursuing full FQHC funding.

Conclusion

Primary care is in crisis and the crisis will likely continue due to the dramatic changes occurring in the population and in the increased incidence of disease associated with that change. Leaders in primary care urge a concerted, national effort to reconstruct primary care in order to care for our increasingly older, chronically ill, and diverse population. Without a major reconstruction in the way primary care is provided, a very costly medical, financial, and human crisis is inevitable.²⁰

Health care must become patient centered and must serve the needs of the patient. The goal of primary care systems should be the delivery of the highest quality care as documented by measurable outcomes. Quality outcomes in primary care should be based on evidence-based medicine and enhanced by the use of practice guidelines and clinical guidelines.

Information technology should be used not only to increase provider reimbursement but also to better manage patient care over time and to improve access and decrease disparities in the delivery of health care. However, careful studies will be required to implement the use of electronic technology in a manner that enhances practice workflow and division of labor.²¹

As the delivery system for primary care is redesigned, it is imperative that special attention be paid to health workforce planning. Careful consideration should be given to the numbers and types of health professionals and also to the competencies that each type of health professional should acquire during education and training. Emphasis should also be given to ongoing mastery of the competencies throughout the health professional's career. Additional consideration must be given to revitalizing primary care education and training to include patient-centered, outcome-oriented, interdisciplinary team-based care. In an effort to reduce racial-ethnic disparities in primary care, attention should be paid both to policies aimed at improving potential access and to providing linguistically appropriate services.²² The Institute of Medicine report, *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce*, released on February 5, 2004, recommends that health education institutions and state governments take immediate steps to increase and enhance diversity in the health professions.²³

Coordinated health workforce planning should emphasize having the right health professional with the right competencies strategically placed within the health care continuum. This will ensure that a health care delivery system is in place that will provide the most cost-effective, highest quality health care to all.

III. RECOMMENDATIONS

Texas must take the necessary steps to achieve education and training in the health professions that will ensure that an appropriately skilled, sufficient, and experienced workforce becomes a reality for the state. This will be achieved through effective and innovative models of education and practice that provide work-ready graduates, improve the participation of minorities in the health professions, and retain trained health professionals in the workforce.

The Statewide Health Coordinating Council believes that the following recommendations are essential to fulfill these workforce goals and thereby ensure a quality health workforce for Texas.

General Workforce Recommendations

1. The Legislature should require all health professions licensing boards to standardize the collection of critical data by implementing the Minimum Data Set developed by the Statewide Health Coordinating Council. (See Appendix E.)
2. The Legislature and regulatory boards should allocate funds to support the collection of health workforce supply and demand data and to support needed research based on these data. (It would be desirable if other health professions could replicate the Nursing Workforce Data Section concept.)
3. The Legislature should realign health workforce licensure and regulatory agencies in a structure that is better able to collaborate and coordinate health workforce planning and data collection to enable Texas to be more responsive to potential funding opportunities.
4. The Legislature should pass legislation to require health professional licensees and applicants to disclose ethnicity information and should instruct regulatory boards and educational institutions to collect, compile and report it, using the U.S. Census ethnicity categories as the basis for collection.
5. The Legislature and the Texas Higher Education Coordinating Board should develop and implement positive financial incentives for schools that create innovative models in education for the health professions that will move toward shared or combined curricula, interdisciplinary classes across health programs, and the use of multidisciplinary faculty or interdisciplinary teams among the health programs.
6. The Legislature should continue to support the College for Texans Campaign administered by the Texas Higher Education Coordinating Board to ensure diversity and minority participation in higher education. (For information on the program, visit <<http://www.collegefortexans.com>> or <<http://www.theccb.state.tx.us/SAMC/overview/>>.)

7. The Legislature should instruct the Texas Higher Education Coordinating Board to develop and implement field of study curricula for additional health profession programs and require adoption of these curricula by public educational institutions to encourage and promote a seamless transition and career mobility within the professions.
8. The Legislature should support initiatives that result in the creation of a representative and culturally competent health workforce for Texas. This could include items such as
 - programs that interest minority students in health careers,
 - curricula for preparing practitioners to recognize health disparities and to implement appropriate interventions,
 - new models for education in the health professions,
 - strategies for reducing the loss of intellectual capital across countries and regions, and
 - the addition of multilingual and technological competencies.
9. The Legislature should direct the regulatory boards for the health professions to permit exceptions to their regulations to facilitate the increase in innovative, outcome-oriented demonstration projects.
10. The Legislature should support initiatives that will promote the application of technology in all areas of health education and all areas of clinical care throughout the health care continuum. This should include applications for initial professional and continuing education, recruitment and retention efforts, health care practice, and community health education.
11. The Legislature should support funding of the Area Health Education Centers to guarantee that vital health career development efforts and recruitment and retention strategies are available in areas not provided through other means or agency efforts.

Nursing Workforce Recommendations

1. The Legislature should increase funding levels to nursing programs throughout the state to increase capacity to admit and graduate nursing students.
2. The Legislature should continue to support the Nursing Innovation Grant Program funded by tobacco earnings from the Permanent Fund for Higher Education Nursing, Allied Health, and other Health-Related Programs and administered by the Texas Higher Education Coordinating Board.

3. The Legislature should instruct health professions and other regulatory agencies and boards to support strategies that would incorporate the use of technology to reduce paperwork and streamline the process required by regulatory agencies to that which is truly necessary for quality patient care.
4. The Legislature should provide institutions with Special Item funding to support enrollment increases in nursing programs and stimulate graduate programs that prepare nursing faculty, and establish procedures that would confirm that these special allocations for nursing programs are spent for these purposes.
5. The Legislature and the Texas Higher Education Coordinating Board should create positive incentives for schools that develop and implement innovative solutions between schools that will result in an increase in the number of entry-level nursing students. This could include the sharing of faculty and classes among nursing degree programs.
6. The Legislature and the Texas Higher Education Coordinating Board should reinforce the implementation of the Field of Study Curriculum for nursing programs to facilitate a seamless, student-oriented articulation from ADN to BSN programs.
7. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage educational institutions to add appropriate accelerated degree programs at all levels of nursing.
8. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage institutions to use technology, preceptors, simulation, etc., to maximize the use of existing and new faculty, while ensuring quality outcomes and increasing student enrollments.
9. The Texas Higher Education Coordinating Board should encourage the development of regional “nursing centers of educational excellence” to consolidate redundant tasks performed by educators at individual institutions.
10. The Legislature should support initiatives that promote healthy workplace environments for nursing personnel.
11. The Legislature and the Texas Higher Education Coordinating Board should study avenues to expand nurse-midwifery educational programs.

Primary Care Recommendations

1. The Legislature should support initiatives that will support public health prevention and education programs in an effort to decrease the incidence and severity of chronic disease in the population by enabling individuals to take personal responsibility for their health.
2. The Legislature should reinstate general revenue funds in support of the Medicaid draw-down of federal funds for graduate medical education to 2002–03 biennial levels as a way of maintaining physician supply.
3. The governor and the Legislature should work with others to actively and urgently seek relief from the Centers for Medicare and Medicaid Services to eliminate the current outdated caps on funding graduate medical education training slots and to increase and distribute the funds according to geographically equitable calculations.
4. The Legislature should restore general revenue funding for graduate medical education and the Family Practice Residency Program through the trustee funds to the Texas Higher Education Coordinating Board to the 2002–03 biennial levels.
5. The Legislature should provide the Texas Higher Education Coordinating Board new state funding to support 300 new resident positions, to be funded at \$50,000 per position and phased in over a four-year period, and should contain fifth-year continuation funding.
6. The Legislature should increase funding levels for the Physician Education Loan Repayment Program by mandating that all Texas medical schools that receive state funds participate in the “two percent set aside.”
7. The Legislature should provide Special Item funding to support enrollment increases at the state’s pharmacy schools to help relieve the current shortage of pharmacists in the state.
8. The Legislature should continue to support the increase in the numbers of Federally Qualified Health Centers in Texas.
9. The Legislature should support methodologies for the development of innovative models for the delivery of primary care that would include physical, mental, and oral health.
10. The Legislature should support demonstration projects that use interdisciplinary teams of health professionals for prevention and management of chronic disease and that utilize a new, correct mix of caregivers and responsibilities.

11. The Legislature should support changes in Medicaid, Children’s Health Insurance Program, and Texas Vendor Drug Program rules and policies to trace outcomes and increase accountability by
 - identifying the practitioner that prescribed the drug instead of the delegating physician,
 - requiring all providers to bill services under their own names, and
 - increasing Medicaid and Children’s Health Insurance Program reimbursement for advanced practice nurses to 92 percent of the physician’s rate.
12. The Legislature should take steps to ensure cost savings by including Advanced Practice Nurses in state health care networks such as Employees Retirement System of Texas, Teacher Retirement System of Texas, and the Texas Workers’ Compensation Commission.
13. The Legislature should direct its Office of State and Federal Relations to encourage federal legislation that allows Nurse Practitioners, Clinical Nurse Specialists, and Physician Assistants to order home health care services, and then change state regulations accordingly.
14. The Legislature should support legislation, regulation, and reimbursement methodologies that will support the training and use of state certified community-level health providers to assist in the cost-effective management of health care.
15. The Legislature should provide positive financial incentives for providers who implement the use of evidence-based health care and the use of outcome-based practice guidelines that have been approved by an agreed upon nationally recognized health association.

NOTES

1. Roland A. Goertz, “Results of the 2003 Texas Medical Association Survey of Residents and Fellows Completing Training,” *Report of Committee on Physician Distribution and Health Care Access*, delivered at the May 12, 2004 meeting of the Texas Medical Association, Council on Medical Education.
2. Brian King, Texas Department of Health, Center for Health Statistics, Health Professions Resource Center, e-mail communication to Connie Turney, February 6, 2004.
3. Health Professions Resource Center, Texas Department of Health, Center for Health Statistics, “Master Professions Master Licensure Files, 2002” (spreadsheet).
4. “Hospital Workforce Study” (Austin: Texas Hospital Association, 2004).
5. Peter I. Buerhaus, Douglas O. Staiger, and David L. Auerbach, “Trends: Is the Current Shortage of Hospital Nurses Ending?” *Health Affairs* 22:6 (November–December 2003), 196.
6. National Center For Health Workforce Analysis, “Projected Supply, Demand, and Shortages of Registered Nurses: 2000–2020,” July 2002 Available online at: Bureau of Health Professions, <ftp://ftp.hrsa.gov/bhpr/nationalcenter/rnproject.pdf>, accessed February 12, 2004.
7. Daniel E. Hecker, “Occupational Employment Projections 2000–2010,” *Monthly Labor Review Online* (November 2001), available online at: Bureau of Labor Statistics, <http://www.bls.gov/opub/mlr/2001/11/art4full.pdf>, accessed February 12, 2004.
8. *Summary and Analysis of 2003 Annual Report Data: Professional Nursing Education Programs* (Austin: Board of Nurse Examiners)
9. Ibid.
10. *Update on State Nursing Shortage: What Has Texas Done, and What Is It Doing?* (Austin: Texas Higher Education Coordinating Board), March 29, 2004.
11. *Summary and Analysis*.
12. Ibid.
13. *Update on State Nursing Shortage*.
14. *Nurse Residency Program Update: The Power of Collaboration*, PowerPoint Presentation, University HealthSystem Consortium, January 8, 2004.
15. Jack Needleman et al., “Nurse-Staffing Levels and the Quality of Care in Hospitals,” *New England Journal of Medicine* 346:22 (May 20, 2002), 1715–22.
16. Joint Commission on Accreditation of Healthcare Organizations, “Health Care at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis” (August 2002), available online at: <http://www.jcaho.org/about+us/public+policy+initiatives/health+care+at+the+crossroads.pdf>, accessed February 12, 2004.

17. Ann Page, ed., “Keeping Patients Safe: Transforming the Work Environment of Nurses,” Committee on the Work Environment for Nurses and Patient Safety, Board on Health Care Services, Institute of Medicine of the National Academies, available online at: <<http://www.nap.edu/books/0309090679/html/>>, accessed February 12, 2004.
18. Robert Graham Center for Policy Studies in Family Practice and Primary Care, “Uncoordinated Growth of the Primary Care Workforce,” *One Pager*, Web Page of the Robert Graham Center. Number 8, February 27, 2001, available online at: <<http://www.aafppolicy.org/x163.xml>>, accessed February 10, 2004.
19. King, op. cit.
20. Gordon Moore and Jonathan Showstack, “Primary Care Medicine in Crisis: Toward Reconstruction and Renewal,” *Annals of Internal Medicine* 138:3 (February 4, 2003), 245–47.
21. Thomas Bodenheimer and Kevin Grumbach. “A Spark to Revitalize Primary Care,” *Journal of the American Medical Association* 290:2 (July 9, 2003), 259–64.
22. Michael Seid, Gregory D. Stevens, and James W. Varni, “Primary Care and Workforce Issues: Parents’ Perceptions of Pediatric Primary Care Quality: Effects of Race/Ethnicity, Language, and Access,” *Health Services Research* 38:4, 1009–31.
23. Brian D. Smedley, Adrienne Stith Butler, and Lonnie R. Bristow, eds., “In the Nation’s Compelling Interest: Ensuring Diversity in the Health Care Workforce,” Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Health Care Workforce, available online at: National Academic Press, <<http://books.nap.edu/books/030909125X/html/1.html#pagetop>>, accessed February 10, 2004.

Chapter 2

**STATUS OF THE
HEALTH WORKFORCE
IN TEXAS**



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

This chapter and Appendix C 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 of the number of providers in a given health profession to 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 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. For both Texas and the U.S., 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. Because of the absence of U.S. supply data for 2002 and 2003, these points on trend lines were estimated using available data for past years and a linear regression model. The supply ratios for providers in each county for all available years may be found online at: <<http://www.tdh.state.tx.us/dpa/coverpg.htm>>.

Texas population numbers used to calculate ratios were estimates provided by the Texas A&M University State Data Center (TAMSDC, <<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 TAMSDC. The population data used for national statistics were obtained from the U.S. Bureau of the Census.

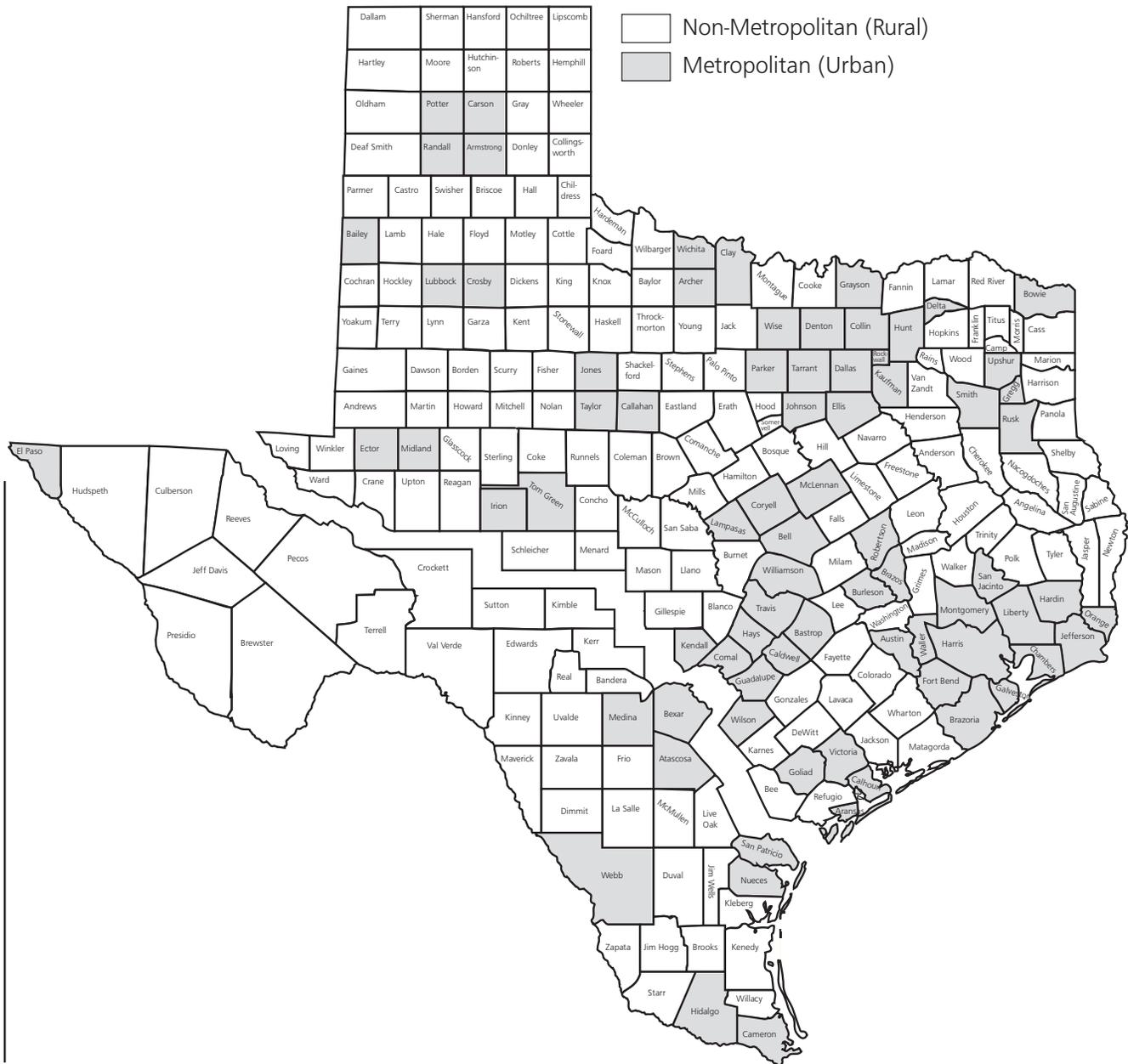
The classification of counties as either metropolitan (77 counties) or non-metropolitan (177 counties) was based on reports from the U.S. Office of Management and Budget. The identification of 43 Texas counties as border counties was based on SB 1378 of the 76th Texas Legislative Session. (See Figure 2.1) For many of the analyses presented in this chapter or Appendix C, the 254 counties were categorized as border metropolitan, non-border metropolitan, border non-metropolitan, and non-border non-metropolitan counties. In 2003, 86.4 percent of the Texas population lived in metropolitan counties and 13.6 percent in non-metropolitan counties. Also, 68.8 percent of the state population lived in non-border metropolitan counties, 17.5 percent in border metropolitan counties, 2.4 percent in border non-metropolitan counties, and 11.3 percent in non-border non-metropolitan counties. Overall, 19.9 percent of the Texas population lived in the 43-county border area.

Health Professional Shortage Areas (HPSAs)

The designation of a county as a primary medical care, dental, or mental health Health Professional Shortage Area indicates that 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. In Appendix C, when referring to HPSA designations, the facility designations are not included, and the partial-county geographic designations and the special-population designations are combined as “part of county” designations. The Health Professions Resource Center (HPRC) administers the federal HPSA program in Texas in collaboration with the Texas Primary Care Office and the Shortage Designation Branch, National Center for Health Workforce Analysis, U.S. Department of Health and Human Services. Lists of designated areas can be found at <<http://www.tdh.state.tx.us/dpa/hpsa.htm>>. Detailed information about HPSA designations is presented for primary care physicians, dentists, and psychiatrists in this chapter and Appendix C.

Figure 2.1

Border and Metropolitan Counties in Texas, 2003



Border Counties (43)

2003 Population Statistics:

211 Non-Border Counties — 80.1 percent of total Texas population

68.8 percent in metropolitan non-border counties

11.3 percent in non-metropolitan non-border counties

43 Border Counties — 19.9 percent of total Texas population

17.5 percent in metropolitan border counties

2.4 percent in non-metropolitan border counties

MEDICAL PROFESSIONS

- **Physicians**
 - Direct patient care (DPC)
 - Primary care (PC)
 - Internal medicine
 - Pediatrics
 - Family practice
 - Obstetrics and gynecology
 - Psychiatry – included in the section on Mental Health Professions
- **Physician’s Assistants**
- **Chiropractors**
- **Podiatrists**

DPC Physicians

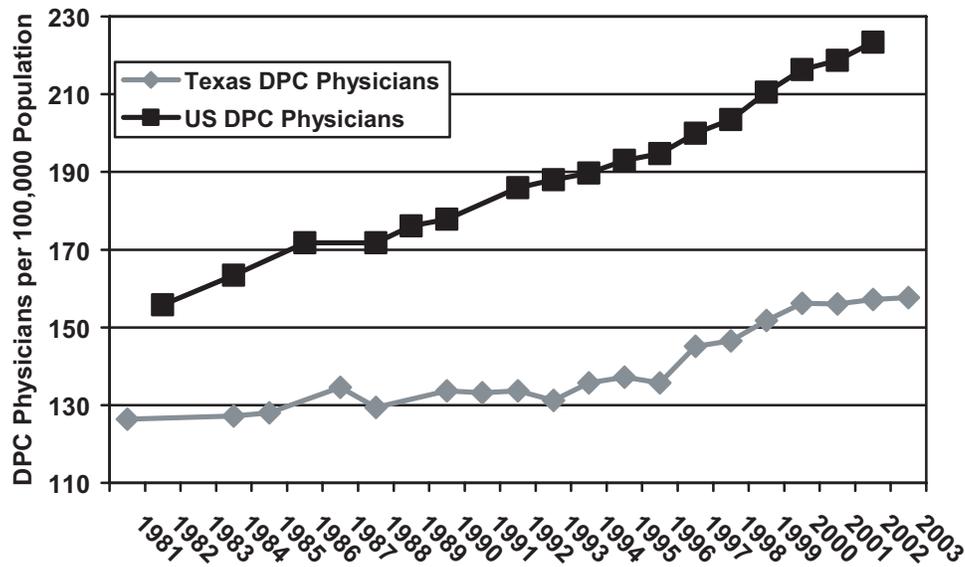
The term *DPC physician* includes both allopathic and osteopathic physicians who are licensed by the Texas State Board of Medical Examiners (TSBME), but excludes physicians with a practice type of medical teaching, administration, research, or “not-in-practice.” Other physicians who are excluded from 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 more than 70 “general” or “specialist” specialties.

The supply of DPC physicians increased between 1994 and 2003 by an average of 1,180 per year. In September 2003, there were 34,432 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 (Appendix C, item 1); however, in 1997, the ratios for both metropolitan and non-metropolitan counties began to increase and this change has persisted through 2003. Non-metropolitan counties in Texas still tend to have much smaller supply ratios than do metropolitan counties.

In 2003, there were 21 counties with no DPC physicians; and, there were seven counties that did not have a DPC physician in 1993, but had at least one in 2003. DPC ratios decreased in 72 counties between 1993 and 2003. 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.

Figure 2.2

DPC Physicians per 100,000 Population: U.S. and Texas, 1981–2003



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

PC Physicians

The term *PC physician* includes physicians who are trained in one of five specialties of the more than 70+ specialties included under the umbrella of DPC — family practice, general practice, general internal medicine, obstetrics, gynecology, and general pediatrics. Of the 34,432 DPC physicians in Texas in 2003, 15,278 were PC physicians, an increase of 19.6 percent over the number practicing in Texas in 1998. In 2003, 14 percent of the over 20 million Texans were located in the 177 non-metropolitan counties and 86 percent in the 77 metropolitan counties. By comparison, only 11 percent of the PC physicians were practicing in non-metropolitan counties and 89 percent in metropolitan counties. Twenty-two of the state’s 254 counties had no PC physicians in 2003 and 16 counties had only one PC physician.

Sources of PC physicians

In 2003, only one-half (47.2 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 (20.2 percent) or other countries (32.6 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

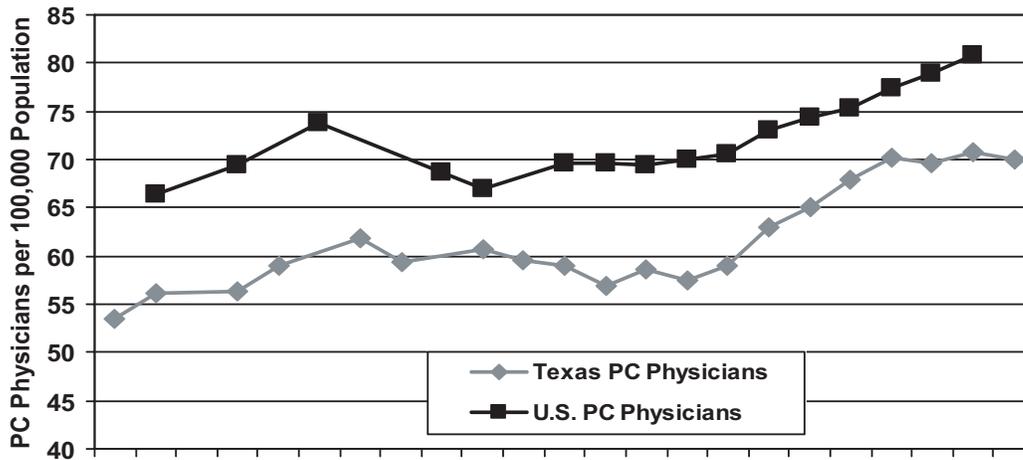
The PC physician supply increased by an average of 502 physicians per year between 1993 and 2003. Although the state's population also increased during this time, the PC physician ratios remained in the range of 57 to 70. Compared to a national benchmark ratio of 60 to 80, Texas remained in the lower range of the national benchmark, sometimes even dropping below the minimum benchmark value. The supply of PC physicians could be even more marginal since some of the physicians listed in the 2003 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). Four 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 C, item 2). Beginning in 1997, the ratios in both areas began to increase. Although the ratios in metropolitan counties appeared to stabilize about four years ago, the supply ratios in non-metropolitan areas have continued to increase. In 2003, 22 counties had no PC physicians and 10 counties did not have a PC physician in 1993 but had at least one in 2003. The lowest supply ratios were associated with the 43 border counties, West Texas, and South Texas. The highest ratios were in Central or East Texas.

Figure 2.3

PC Physicians per 100,000 Population: U.S. and Texas, 1981–2003



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

Location

In 2003, there were fewer physicians per 100,000 people in non-metropolitan counties than in metropolitan counties. The ratio of 55 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 (72) 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 (72), and very low PC physician supply ratios were observed in non-metropolitan non-border (56.3) and non-metropolitan border (47.6) locations (table 2.1).

Practice settings

In 2003, 36 percent of the PC physicians were employed in solo practices, 48 percent in partnership or group practices, 11 percent in hospitals, and 1 percent in Health Maintenance Organizations (HMOs). A small number of PC physicians did not report their practice settings.

Table 2.1

PC Physician Ratios for Non-metropolitan, Metropolitan, Border, and Non-border Locations: Texas, 2003

Location	Population	PC Physicians Per 100,000 population
Statewide	21,825,569	70.0
Metropolitan border	3,823,816	64.7
Metropolitan non-border	15,025,989	74.3
Non-metropolitan border	514,389	47.6
Non-metropolitan non-border	2,464,375	56.3

Source (physician data): Texas State Board of Medical Examiners, September 2003
Source (population data): Texas State Data Center, Population Estimates & Projection Program, Texas A&M University.

Primary care specialties

In 1991, the specialty mix was 45 percent primary care specialties to 55 percent specialist specialties among Texas physicians. In 2003, the ratio was 44 percent primary care to 56 percent specialists. One-half (49.2 percent) of the PC physicians in non-metropolitan counties were family practice physicians and almost one-fourth (23.7 percent) were general internal medicine physicians (Table 2.2). However, in metropolitan counties, two-thirds of the physicians were trained in family practice (30.3 percent) and general internal medicine (30.1 percent).

Table 2.2

PC Physicians by Primary Specialty and Practice Location, Texas, 2003

Physicians By Specialty	2003 PC Physicians Total	% Metropolitan	% Non-metropolitan
Family Practice	4,932	30.0	49.2
General Practice	906	5.3	10.8
General Internal Medicine	173	30.1	23.7
General Pediatrics	2,735	19.0	8.9
Obstetrics & Gynecology	2,210	15.3	7.4
TOTAL	15,278	100.0	100.0

Source: Texas State Board of Medical Examiners, 2003

Age

The median age of PC physicians in 2003 was 47 years, two years less than in 2000. This difference could be partially attributed to the increasing number of female physicians, who tend to be younger than male physicians. 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, 49 years. The median age for PC physicians in both border and non-border counties was 47 years.

Gender

In 1995, 80.8 percent of the PC physicians were male; however, that percentage has steadily decreased to 70 percent in 2003. The increasing number of women in the physician workforce raises some concern that non-metropolitan physician supplies might dwindle if women show a preference for settling more in metropolitan than non-metropolitan counties. In 2003, one-third (31 percent) of the PC physicians in metropolitan and non-border counties were female. However, only 18 percent in non-metropolitan and 27 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 physicians report pediatrics as their primary specialty (29.6 percent) than do male physicians (12.9 percent) (Table 2.3). The two most prevalent specialties in non-

metropolitan counties, family practice and general internal medicine, are not as well represented among female physicians (51.6 percent of females are practicing in these two specialties) as male physicians (66.2 percent).

Table 2.3

PC Physicians by Primary Specialty and Gender, Texas, 2003

Physicians By Specialty	2003 PC Physician Total	% Male	% Female
Family Practice	4,932	34.6	26.8
General Practice	906	7.2	2.9
General Internal Medicine	173	31.6	24.4
General Pediatrics	2,735	12.9	29.6
Obstetrics & Gynecology	2,210	12.4	16.3
TOTAL	15,278	100	100

Source: Texas State Board of Medical Examiners, 2003

Race-Ethnicity

In 2003, the majority (62 percent) of the state’s PC physicians were white, down from 68.3 percent in 1993 (Table 2.4). Although Hispanics made up the largest minority population of physicians in 1993, Asians–Pacific Islanders were the largest in 2003. The physician workforce that was non-Hispanic African American in 2003 was about six percent smaller than the percentage of this group in the general population, and the physician workforce that was Hispanic in 2003 was about 20 percent smaller than the percentage of Hispanics in the general population.

Table 2.4

Race and Ethnicity Trends for Primary Care Physicians, Texas, 1993 and 2003

Race / Ethnicity	1993 PC Physician %	1993 Population %	2003 PC Physician %	2003 Population %
White	68.3	59.3	62.0	51.4
Black	3.1	11.7	5.1	11.5
Hispanic	9.8	26.7	13.4	33.6
Asian / Pacific	8.6	2.3	17.4	3.5
American Indian / Alaskan Native	0.2		0.2	
UNKNOWN	10.0	0	1.9	0

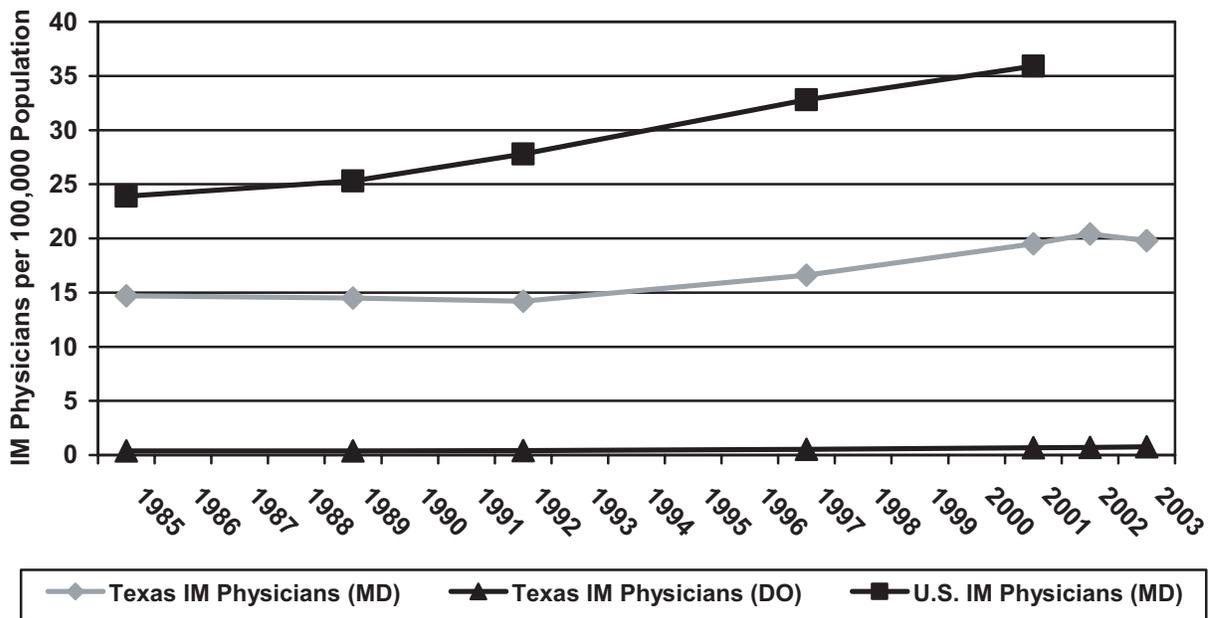
Data sources: Texas State Board of Medical Examiners, 1993 and 2003; (Texas population): Texas State Data Center

General Internal Medicine (IM)

In Figure 2.4, the supply of IM physicians in Texas is separated into Doctor of Osteopathy (D.O.) and Medical Doctor (M.D.) lines because national data were not available for D.O.s. As shown in the graph, the IM supply ratios for M.D.s in Texas have been lower than the U.S. average ratios for the past two decades. The ratios for D.O.s have remained stationary.

Figure 2.4

Internal Medicine Physicians per 100,000 Population, U.S. and Texas, 1981–2003



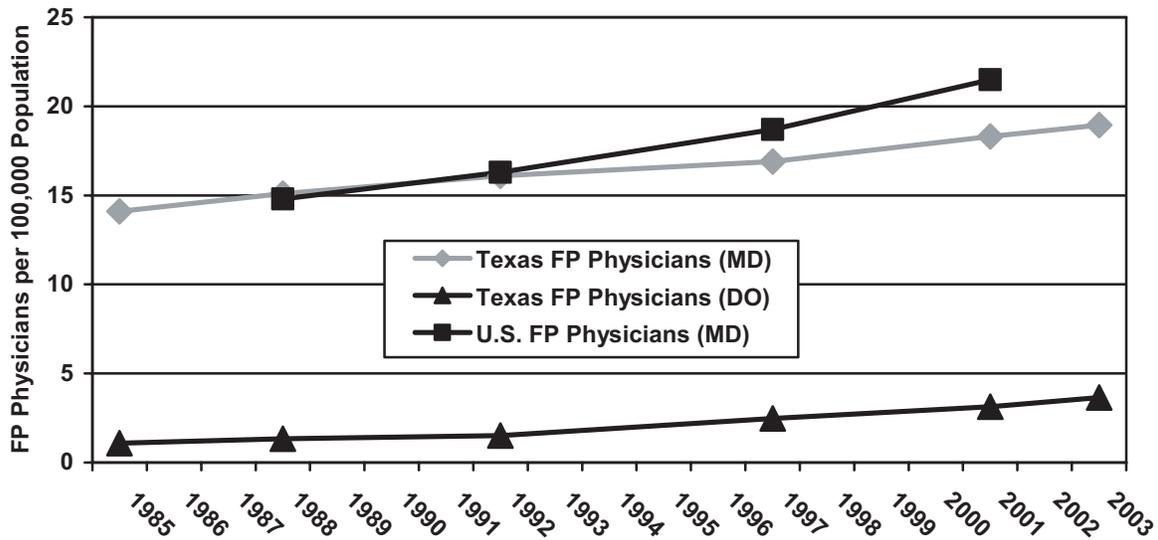
Sources: Texas State Board of Medical Examiners (M.D. and D.O.); American Medical Association (U.S. M.D.); HRSA, Bureau of Health Professions

Family Practice (FP)

In Figure 2.5, the supply of FP physicians in Texas is separated into D.O. and M.D. trend lines because national data were not available for D.O.s. Prior to 1992, the FP ratios in the U.S. 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 M.D.s have increased more rapidly than the ratios for D.O.s.

Figure 2.5

Family Practice (FP) Physicians per 100,000 Population,
 U.S. and Texas, 1981–2003



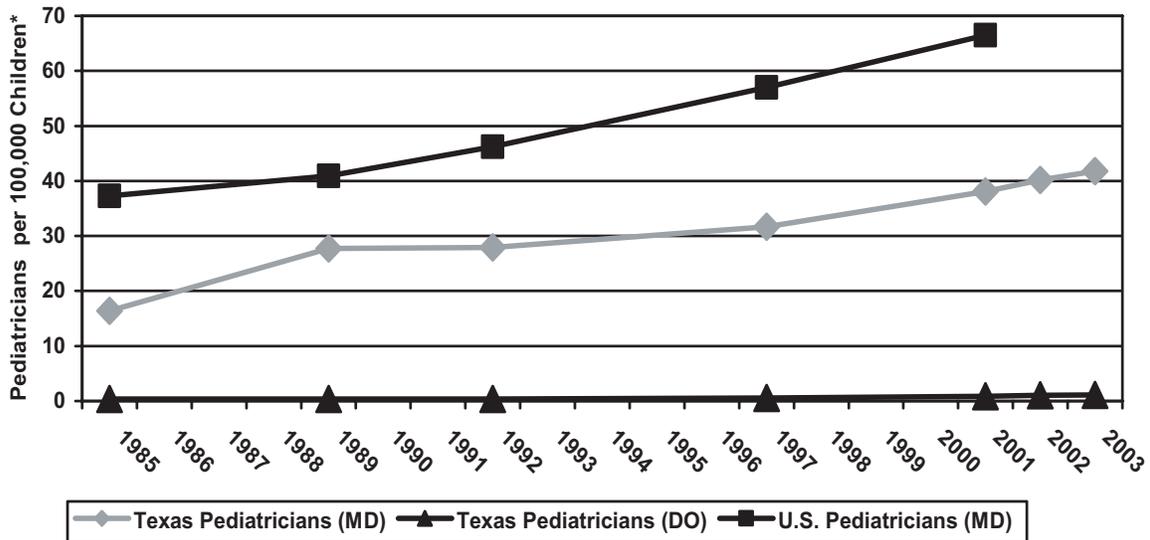
Sources: Texas State Board of Medical Examiners (M.D. and D.O.); American Medical Association (U.S. M.D.); HRSA, Bureau of Health Professions

Pediatrician (PD)

In Figure 2.6, the supply of PD physicians in Texas is separated into D.O. and M.D. trend lines because national data were not available for D.O.s. The PD supply ratios for M.D.s 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 D.O.s have remained fairly constant.

Figure 2.6

Pediatricians per 100,000 Children (0–18 years), U.S. and Texas, 1985–2003



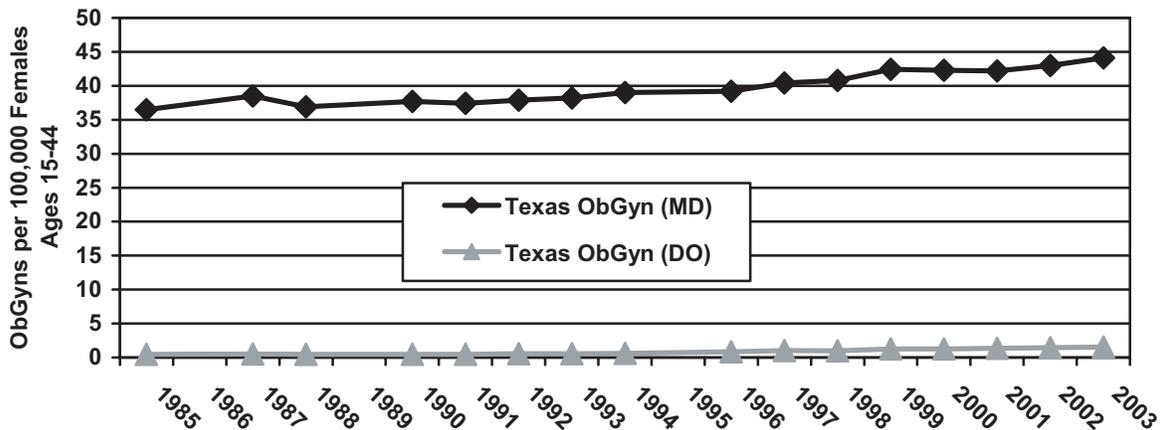
Sources: Texas State Board of Medical Examiners (M.D. and D.O.); American Medical Association (U.S. M.D.); HRSA, Bureau of Health Professions

Obstetrics and Gynecology (Ob/Gyn)

In Figure 2.7, the supply of Ob/Gyns in Texas is separated into D.O. and M.D. trend lines to be consistent with previous graphs for FP, IM, and PD physicians. However, national Ob/Gyn supply ratios were not available for this graph. Ob/Gyn supply ratios for M.D.s have increased slightly over the past two decades, but the ratios for D.O.s have remained fairly constant.

Figure 2.7

Ob/Gyn Physicians per 100,000 Females Ages 15–44, Texas, 1985–2003



Source: Texas State Board of Medical Examiners

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 populations are experiencing shortages of PC physicians and qualify as federal shortage areas. In March 2004, 69.7 percent of the counties in Texas had either whole (131) or partial-county (46) HPSA designations (Appendix C, item 23). Seventy-five percent of the “whole county” HPSA designations were for non-metropolitan counties and 24 percent were border counties. Most of the partial-county HPSA designations were located in metropolitan counties. It should be noted that 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.

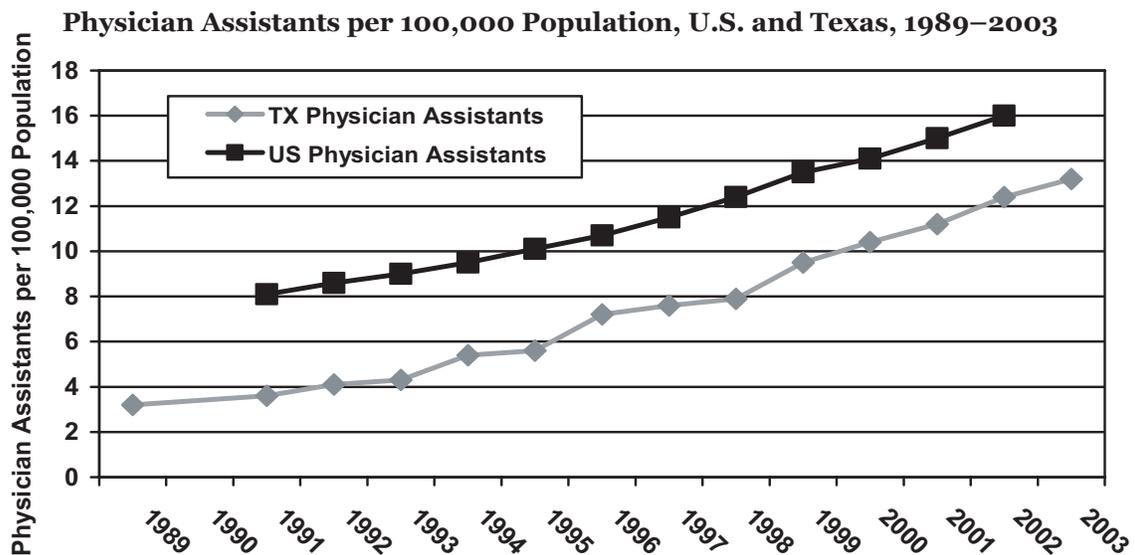
Physician's Assistants (P.A.s)

According to the 2003 TSBME licensure data, there were 2,880 P.A.s licensed to practice in Texas and not all of them were practicing in primary care areas. Examples of non–primary care practice areas for P.A.s include emergency medicine, general surgery, and pediatric, surgical, and internal medicine sub-specialties. Because licensure data collected on P.A.s in Texas does not include specialty data, national survey statistics were used to estimate the distribution of P.A.s in Texas by specialty.¹

In 2003, 87 percent of the P.A.s practiced in metropolitan counties and almost 20 percent practiced in border counties. The supply of P.A.s per 100,000 population for the U.S. (14.1 in Year 2000) has been consistently higher than the ratios for Texas (10.4 in Year 2000), and both ratios have been rising at a comparable rate (Figure 2.8). The ratios for the non-metropolitan areas have been higher than those for the metropolitan areas since 1994; however, the metropolitan areas have sustained a steady increase, while the ratios for the non-metropolitan areas have fluctuated (Appendix C, item 3).

Eighty-four counties that did not have a P.A. in 1993 had one in 2003. In 2003, the counties with the highest supply ratios were in West Texas and the Panhandle, and there were 61 counties with no P.A.s. 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. Twenty-one 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.

Figure 2.8



Sources: Texas State Board of Medical Examiners, American Academy of Physician Assistants

Age, gender, and race-ethnicity

In 2003, three-fourths (76 percent) of the P.A.s were white, followed by Hispanic P.A.s at 11.6 percent of the total (Table 2.5). Males and females were almost equally represented in the profession. The median age of P.A.s in the state was 41 years. The median age of P.A.s in non-metropolitan counties was several years greater than the median age of P.A.s in metropolitan counties (46 years versus 40 years, respectively). The median age of P.A.s in border counties was 42 years, a year older than that of P.A.s in non-border counties. A disparity in age and gender exists among P.A.s based on their practice location: 55 percent of the P.A.s in metropolitan counties were female, but only 38 percent in non-metropolitan counties were female. In the border counties, only 38 percent of the P.A.s were female, compared to 56 percent in the non-border counties.

Table 2.5
Distribution of P.A.s by Gender and Race-Ethnicity, Texas, 2003

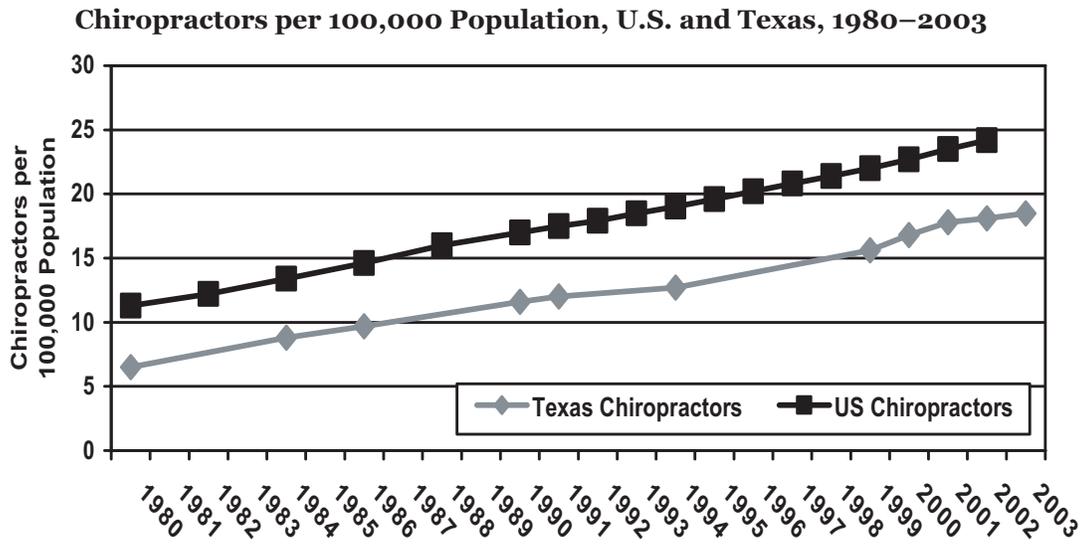
Characteristic	Variable	%
Gender	Male	47.5
	Female	52.5
Race / Ethnicity	White, not Hispanic	76.0
	Black	5.4
	Hispanic	11.6
	Asian-Pacific Islander	4.4
	American Indian-Alaskan Native	0.6
	Ethnicity	1.9

Source: Texas State Board of Medical Examiners, 2003.

Chiropractors

The supply ratio of chiropractors per 100,000 population in the U.S. 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 C, item 4). Since that time, the ratios for chiropractors in metropolitan counties have greatly increased and exceeded the rates for non-metropolitan counties. In 2003, there were 80 counties in the state that did not have a chiropractor. Eighteen counties that did not have a chiropractor in 1991 had at least one in 2003. However, 16 counties that had chiropractors in 1991 had no chiropractors in 2003. 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



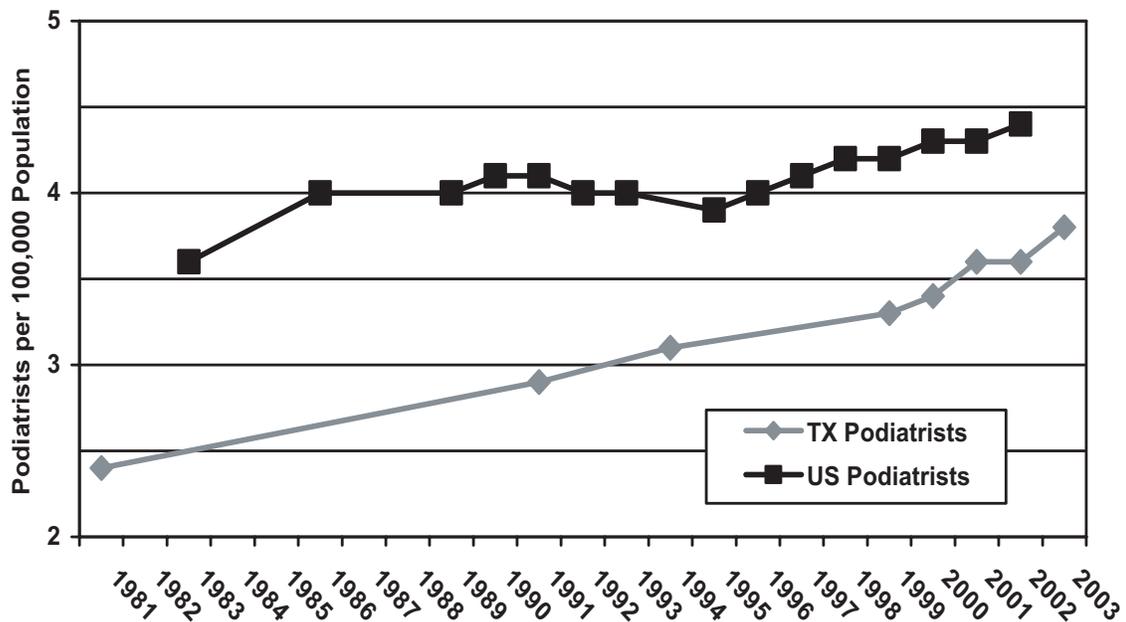
Sources: Texas State Board of Chiropractic Examiners; HRSA, Bureau of Health Professions

Podiatrists

There are no schools of podiatry in Texas and only eight accredited schools nationally. That may partially explain why Texas lags behind the U.S. in podiatrist supply ratios, although the gap has decreased slightly in the last few years (Figure 2.10). The ratios are greater in metropolitan areas than in non-metropolitan areas (Appendix C, 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-nine counties that did not have a podiatrist in 1994 had at least one in 2003, while only four counties lost all of their podiatrists over that time. In 2003, Texas had 167 counties without a podiatrist.

Figure 2.10

Podiatrists per 100,000 Population, U.S. and Texas, 1981–2003



Sources: Texas State Board of Podiatric Medical Examiners, 1981–2002; U.S. Bureau of the Census

NURSING PROFESSIONS

- Registered Nurses
- Advanced Practice Nurses
 - Nurse practitioners
 - Certified nurse midwives

- Nurse anesthetists
- Clinical nurse specialists
- **Licensed Vocational Nurses**

Registered Nurses (R.N.s)

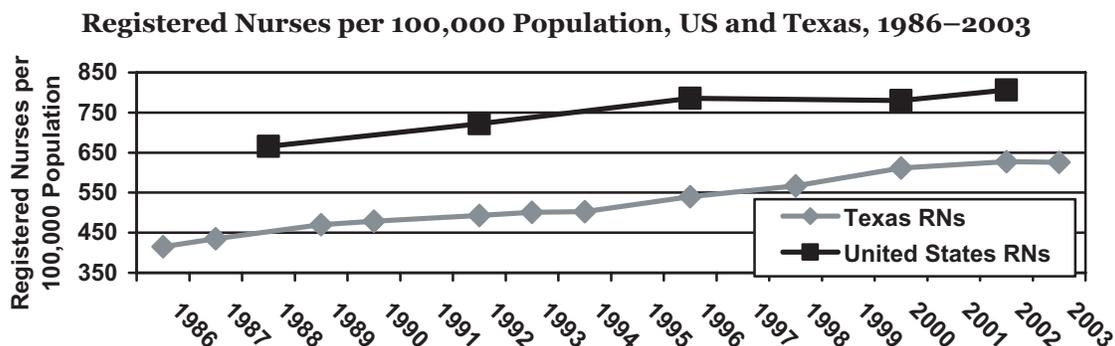
All of the R.N.s included in the statistics for this chapter and Appendix C, item 6 held active licenses and were employed either part time or full time in nursing. Although some R.N.s were employed as teachers or administrators and may not provide direct patient care, they were included in the overall supply totals for Texas R.N.s.

Supply

According to the Texas Board of Nurse Examiners (TBNE) licensure file for 2003, there were 136,660 active R.N.s practicing in Texas — 85 percent were employed full-time and 15 percent were employed part-time in nursing. The 136,660 R.N.s give Texas a supply ratio of 626.1 R.N.s per 100,000 population. The Texas supply ratios (611.9 in Year 2000) have been below the U.S. supply ratios (780.4 in Year 2000) for years, but the gap has been narrowing in recent years (Figure 2.11).

Metropolitan counties have consistently had a much higher ratio of nurses than the non-metropolitan counties (Appendix C, item 6). There were only four counties that did not have an R.N. in 2003 but those four counties had a combined population of only 7,459 people. Since 1993, 204 of Texas’ 254 counties have seen an increase in the supply ratio of R.N.s, and two counties that did not have an R.N. in 1993 had at least one in 2003. 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 2003, the R.N. population in Texas was predominantly female; only 9.2 percent of the nurses were male.

Position type and employment field

A majority (64.6 percent) of the R.N.s who were actively employed as nurses in Texas were working in hospitals — the others being primarily employed in home health (5.3 percent), physicians’ or dentists’ offices and clinics (5.0 percent), school or college health clinics (4.2 percent), nursing homes or extended care facilities (3.4 percent), business or industry (2.4 percent), community and public health (2.1 percent), freestanding clinics (2.0 percent), schools of nursing (1.7 percent), temporary agencies (1.1 percent), self-employed or in private practice (1.0 percent), or in other employment fields (7.3 percent).

Since the majority of R.N.s were working in hospitals in 2003, 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 4.5 percent of all nursing positions for active nurses in Texas.

Table 2.6

Distribution of Actively Employed R.N.s in Texas by Position Type, 2003

Position Type	Number	%
Head Nurse, Staff Nurse, General Duty Nurse, or Assistant	87,964	64.4
Administrator/Supervisory/Assistant	15,528	11.4
School/Office Nurse	8,968	6.6
Nurse Practitioner	3,539	2.6
Faculty/Educator	3,084	2.3
Consultant	2,319	1.7
Nurse Anesthetist	1,547	1.1
Clinical Nurse Specialist	804	0.6
In-service/Staff Development	874	0.6
Certified Nurse Midwife	245	0.2
Other	11,788	8.7

Source of data: Texas Board of Nurse Examiners, September 2003

Education — basic and highest degrees

In 2003, one-third (33.1 percent) of the active R.N.s listed as their *basic degree* the baccalaureate degree in nursing (BSN), 43.7 percent listed associate degree in nursing (ADN), and 22.7 percent listed diploma in nursing. The majority listed ADN as their *highest degree* (39.4 percent) followed by the BSN degree (34.8 percent), and the diploma in nursing (12.0 percent). Only 5.9 percent had a master of science in nursing and 0.3 percent, a doctorate in nursing. A small percentage of R.N.s

had their highest degree in a field other than nursing (7.6 percent) and a few did not provide the BNE their highest degree.

Of those nurses with a diploma degree, 18.4 percent had progressed to a BSN, 4.6 percent to an MSN, and 0.3 percent to a doctorate in nursing. Of those nurses with ADN as their basic degree, 8.8 percent progressed to a BSN, 2.4 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, 10.6 percent advanced to MSN and 0.6 percent advanced to a doctorate in nursing.

Work area

The most common work areas for active R.N.s in Texas were medical-surgical (14.6 percent), intensive care-critical care (11.3 percent), obstetrics and gynecology (8.2 percent), and operating/recovery care (7.7 percent) (Table 2.7).

Table 2.7

Distribution of Active R.N.s in Texas by Their Work Area, 2003

Position Type	Number	%
Medical/Surgical	19,893	14.6
Intensive Care/Critical Care	15,399	11.3
Obstetrics and Gynecology	11,240	8.2
Operation/Recovery Care	10,523	7.7
Pediatrics	8,600	6.3
Emergency Care	7,881	5.8
Home Health	6,508	4.8
General Practice	6,285	4.6
Geriatrics	5,769	4.2
Neonatology	5,328	3.9
Psychiatric/Mental Health/Substance Abuse	4,715	3.5
Community/Public Health	4,346	3.2
Oncology	3,882	2.8
Rehabilitation	2,903	2.1
Anesthesia	1,602	1.2
Occupational/Environmental	694	0.5
Other	20,305	14.9
Missing	787	0.6

Source: Texas Board of Nurse Examiners, September 2003

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 two research studies in 2000 and 2002 on Registered Nurses (R.N.s) in Texas. The following reflects the results of the 2002 CHEP study of 1,090 R.N.s with some

comparison to the 2000 study results in regard to factors that affect retention and re-entry of nurses in the nursing workforce:

- While 72 percent of the R.N.s reported general satisfaction with their work, 72 percent reported exhaustion and 59 percent reported frustration.
- Commitment to employers remained high, but R.N.s wanted more help to effectively manage their workload, minimize harassment by physicians, improve patient care support, and provide training for new technologies.
- 11 percent more R.N.s (55 percent) were dissatisfied with pay than in 2000.
- 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.
- The most frequently reported work environment issues included: paperwork (82 percent), severity of patient illness (70 percent), government regulations (64 percent), R.N. turnover (61 percent), need for second language skills (58 percent), voluntary overtime (53 percent), pressure to reduce time "on the clock" (51 percent), and an increase in the number of patients assigned (55 percent).
- Nurses in the survey were asking for assistance with and support for their work, for due respect, and for input into decisions made at the unit and organization levels.²

Aging of the Registered Nurse workforce

The aging of the Registered Nurse workforce will have an impact on future nursing workforce trends. R.N.s from the Baby Boomer generation entered nursing in large numbers in the 1960s and 1970s and represent the largest cohort of R.N.s today. In conjunction with this, a declining percentage of young R.N.s is entering the workforce.³ In a national study done by Buerhaus, Staiger and Auerback (*JAMA*, 2000), recent workforce trends were used to forecast long-term age and employment of Registered Nurses. 60,386 R.N.s from 23 through 64 years of age participated. Some of the results are as follows:

- The average age of working R.N.s increased by 4.5 years between 1983 and 1988.
- There has been a 35 percent decrease in the number of full-time equivalent R.N.s in recent cohorts than observed at similar ages that entered the labor market 20 years earlier.

- Over the next two decades, this trend will lead to a further aging of the R.N. workforce because the largest cohorts of R.N.s will be between age 50 and 69.
- Within the next ten years, the average age of R.N.s is forecast to be 45.4 years.
- The total number of full-time equivalent R.N.s per capita is forecast to peak around the year 2007 and then to continue to decline as the largest cohorts of R.N.s retire.
- By the year 2020, the R.N. workforce is forecast to be roughly the same size as it is today, declining nearly 20 percent below projected R.N. workforce requirements.⁴

In the Texas Department of Health report *Demographics of the Nursing Workforce Texas — 2003*, (Health Professions Resource Center and Nursing Workforce Data Section, Center for Health Statistics, 2004), the median age of both female R.N. and L.V.N. groups was 46, with non-metropolitan nurses being slightly older on average (47 years) than metropolitan nurses (45 years). R.N.s and L.V.N.s were among eight professions with the median age of licensees being over 40. The other professions include dentists, pharmacists, direct patient care physicians, primary care physicians, physician assistants and social workers. Nurses in border counties were slightly younger (45 years) than nurses in non-border counties (46 years). The median age of nurses in Texas has been increasing over the past decade, as it has in the U.S. A recent publication reported that the average age of R.N.s increased by 4.5 years between 1983 and 1998.⁵ Another recent report, *Health and Nurses in Texas — The Supply of Registered Nurses: First Look at Available Data*,⁶ verifies that the age of the R.N. workforce in Texas is increasing, wages are stagnating, and R.N.s are withdrawing in increasingly larger numbers from the active workforce.

In the 2002 CHEP study, the R.N.s who were surveyed indicated the following work plans:

- R.N.s age 46–55 intend to retire at age 61.
- R.N.s age 56 and above intend to retire at age 65.
- Approximately 7 percent of R.N.s 56 and above plan to retire within the next year.
- Over 4 percent of R.N.s planning to leave nursing for another type of work are in the “30 and below” and “46–55” age groups.
- Rural R.N.s average age of intended retirement decreased by more than three years, from age 66 in 2000 to age 63 in 2002.
- The percentage of border R.N.s intending to decrease work hours for next year increased from 11 percent in 2000 to 19 percent in 2002.⁷

In a study done in 2000 on schools of nursing in Texas, the following age-related trends among faculty could have an impact on the capacity of schools of nursing to produce more graduates over the next 20 years (Rains and Tschirch, 2000):

- In 1999–2000, the mean (51.8) and median (51) age of all nurse faculty in Texas based on the Board of Nurse Examiners biennial re-licensure data has increased from 49.36 in 1994.
- The nurse faculty workforce in Texas has a higher median age than the R.N. workforce as a whole.
- From 1994 to 1999, the percentage of nurse faculty in Texas 40 years of age or over steadily increased while the percentage of nurse faculty below the age of 40 steadily declined.
- If 65 years of age is considered standard retirement age, almost 57 percent (922 faculty) of all nurse faculty in 1999 were 50 years of age or older and will reach retirement age within 10 years.⁸

In the 2003 BNE master file, there were 3,084 R.N.s 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 3,084 R.N. faculty or educators, there were 1,817 who worked in schools of nursing. The median age of faculty or educators who worked in schools of nursing was 53 years of age. This is consistent with the study done by Rains and Tschirch in 2000 where the cohort of nursing faculty continues to age without a significant increase in recruiting younger nurses into nursing education.

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.

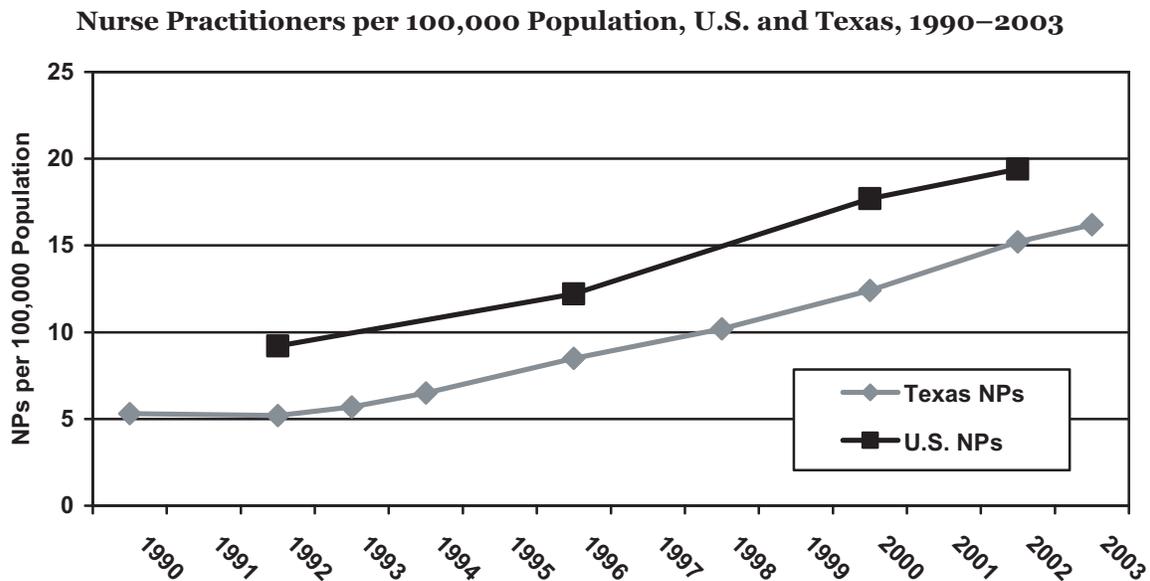
Nurse Practitioners (NPs)

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 2003 R.N. master licensing file. The “position type” on the file has variables for *administrator, school nurse, researcher, nurse practitioner, clinical nurse specialist, nurse anesthetist, nurse midwife, and other*. An R.N. 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 2003, there were 3,539 active NPs practicing in Texas. The importance of NPs in the delivery of health care is indicated by their increasing supply, an increase of 117 percent between 1996 and 2003.

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. Overall, the average ratios of NPs in metropolitan counties were higher than in non-metropolitan (Appendix C, item 7). Eighty-four counties that did not have an NP in 1993 had at least one in 2003. In 2003, 68 counties had no NPs.

Figure 2.12



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

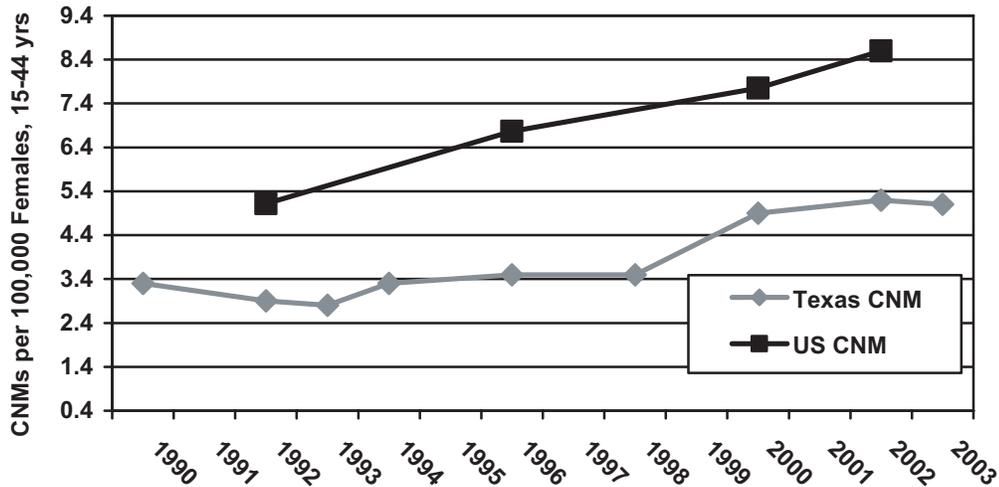
Certified Nurse-Midwives (CNMs)

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: Documented Midwives and CNMs. Documented Midwives are persons 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 R.N. background. They are regulated by the Board of Nurse Examiners.

In Texas, in 2003, there were 245 CNMs. The data for CNMs were obtained from the 2003 R.N. master licensing file (for position types, see "Nurse Practitioners," above). An R.N. 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 numbers increased by 58 percent between 1996 and 2003 (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.

Figure 2.13
**Certified Nurse Midwives per 100,000 Females Ages 15–44,
 U.S. and Texas, 1990–2003**



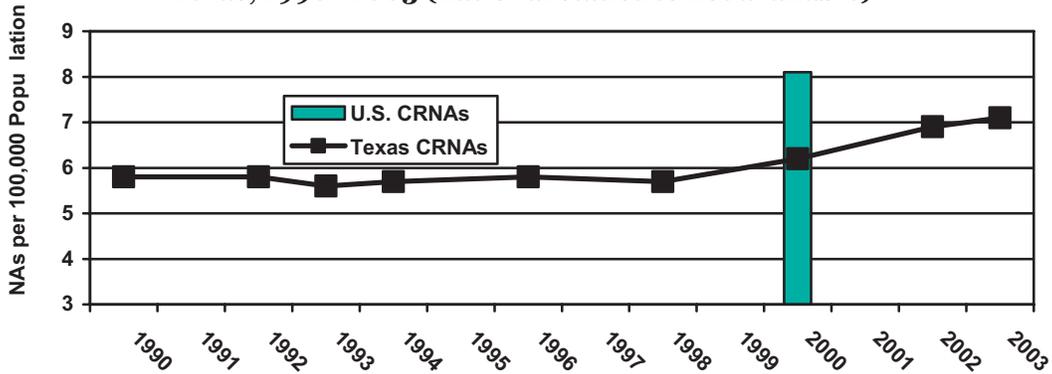
Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

Certified Registered Nurse Anesthetists (CRNAs)

CRNAs were primarily located in the metropolitan areas of Texas. Their ratios increased by 40 percent between 1996 and 2003 (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 2003, there were 122 counties that did not have a CRNA.

Figure 2.14

Certified Registered Nurse Anesthetists per 100,000 Population, Texas, 1990–2003 (national statistics not available)



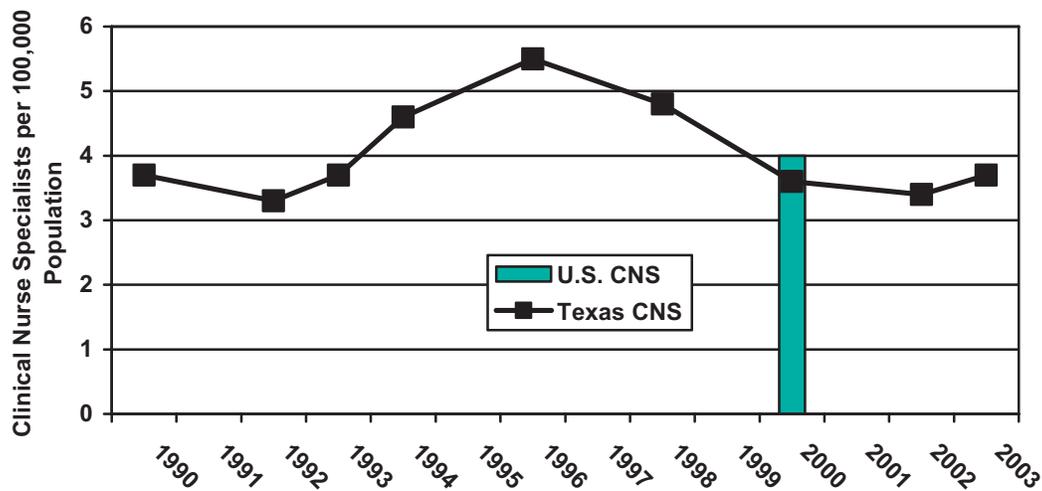
Sources: Texas Board of Nurse Examiners; HRSA, Bureau of Health Professions

Clinical Nurse Specialists (CNSs)

CNSs are primarily located in the metropolitan areas of Texas. Their ratios decreased by 23.8 percent between 1996 and 2003 (see Figure 2.15). U.S. statistics were not available except for the year 2000. The Texas and U.S. supply ratios for that year were similar in magnitude. Twenty-three counties that did not have a CNS in 1993 had at least one in 2003. In 2003, there were 173 counties in Texas that did not have a CNS.

Figure 2.15

Clinical Nurse Specialists per 100,000 Population Texas (National Statistics not available), 1990–2003



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

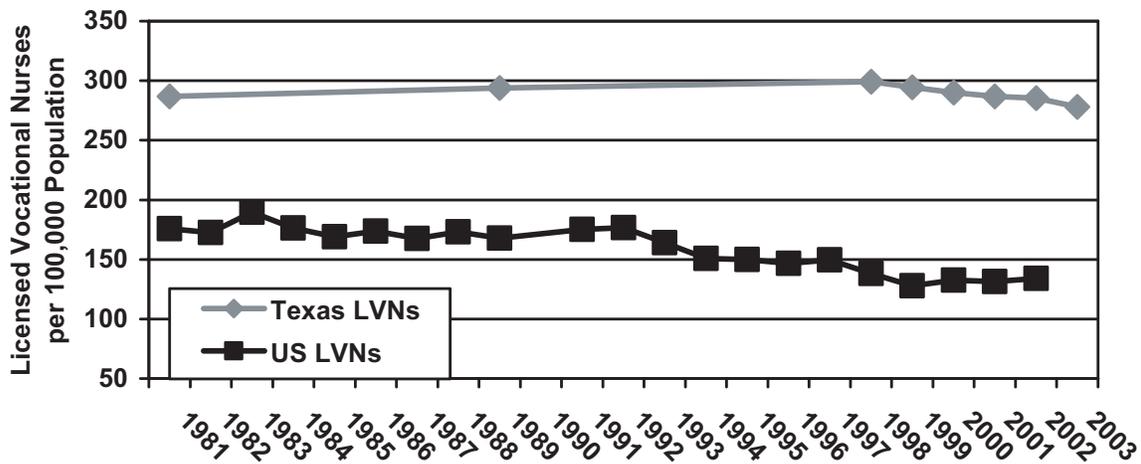
Licensed Vocational Nurses (L.V.N.s)

L.V.N.s provide nursing care under the direction of a registered nurse, a physician, or another authorized health care provider. According to the Texas Board of Vocational Nurse Examiners (TBVNE) licensure file, there were 60,807 active L.V.N.s practicing in Texas in 2003, a supply ratio of 277.9 L.V.N.s per 100,000 population. The L.V.N. 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 five years while the U.S. ratios have stabilized. The general trend in both the U.S. and Texas has been toward a decline in the supply of L.V.N.s.

In contrast with most other professions, the ratios for L.V.N.s are higher in non-metropolitan counties than metropolitan counties, and the gap between the two has been increasing (Appendix C, item 11). The trend has been toward the increased use of L.V.N.s in non-metropolitan counties relative to the use of R.N.s. The supply ratios of L.V.N.s are lower in both the metropolitan-border counties and the non-metropolitan border counties than in the rest of the state. Three of the five counties that did not have an L.V.N. in 1994 had at least one in 2003. In 2003, there were only three counties that did not have an L.V.N., and, in the last decade, 138 counties have experienced growth in the supply of L.V.N.s relative to the population.

Figure 2.16

Licensed Vocational Nurses per 100,000 Population: U.S. and Texas, 1981–2003



Sources: Texas Board of Vocational 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 dentists who are non-federal, non-resident, and non-administrative.

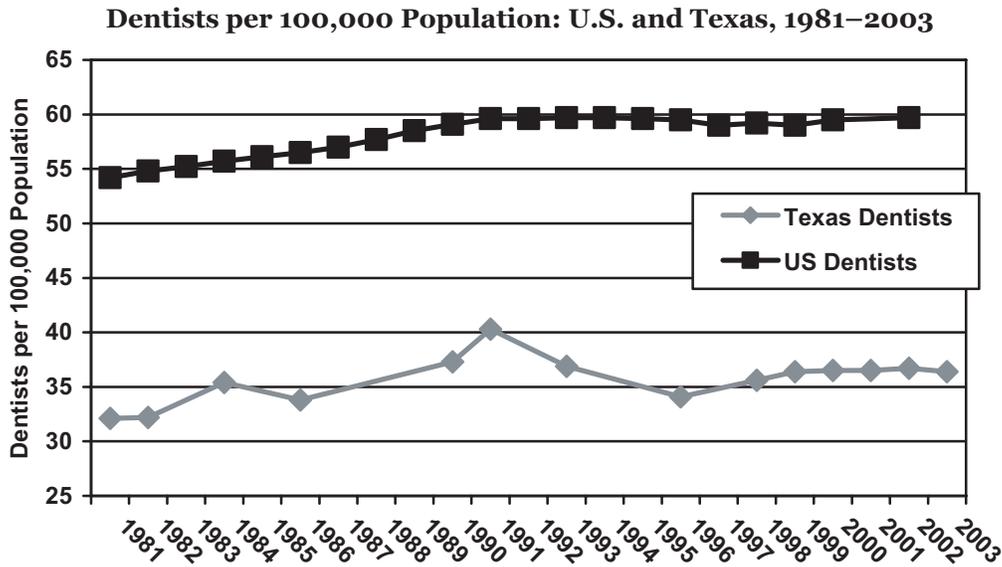
In 2003, there were 7,939 non-federal, active general dentists in private practice in Texas. The supply ratios of dentists per 100,000 population have remained fairly constant over the last two decades and have lagged behind the U.S. average ratios (Figure 2.17).

In 2003, the average supply ratio for dentists in Texas was 36.4 per 100,000 population (Appendix C, item 12). There were more general dentists employed in metropolitan counties (ratio of 38.3) than in non-metropolitan counties (24.4). 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 1993 and 2003, 143 counties experienced a decline in their ratios, while only 17 counties experienced an increase in ratios of 50 percent or greater, which is considerably less than for most other health professions. Three counties that did not have a dentist in 1993 had at least one in 2003. In 2003, there were 46 counties with no dentists.

Age and Gender

In 2003, almost three-quarters (78.3 percent) of the dentists were males and 60 percent of the dentists statewide were below the age of 50 years, the median age being 47 years (Appendix C, item 12). The average age of a male dentist in Texas was 49, and of a female dentist, 38. In non-metropolitan counties, only one in ten dentists were females, compared to one out of three dentists in metropolitan counties. Nineteen percent of the dentists in the border counties were female, while 22 percent in the non-border counties were female.

Figure 2.17



Sources: Texas State Board of Dental Examiners 1981–2002; HRSA, Bureau of Health Professions

Dental HPSAs

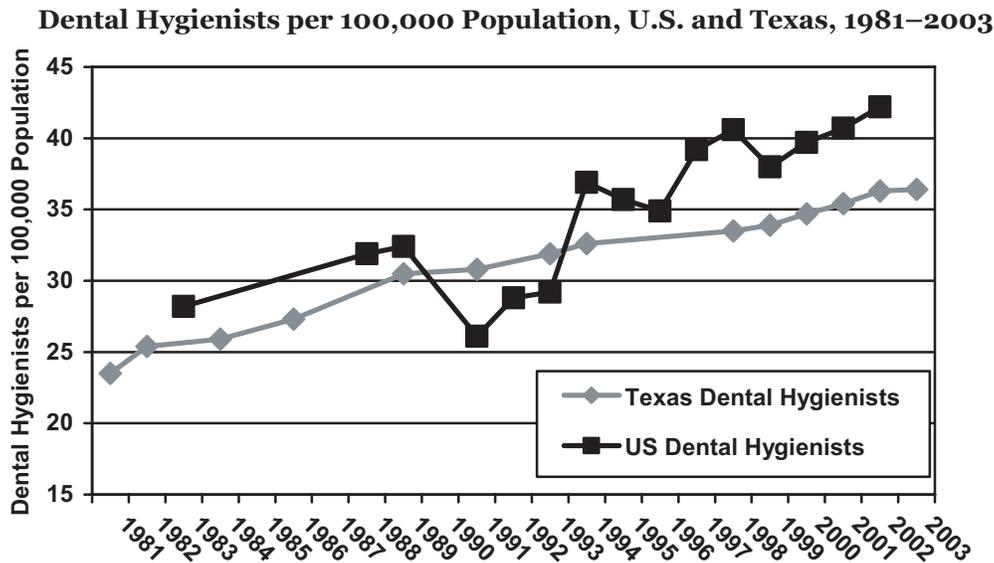
In March 2004, 107 counties in Texas had some type of HPSA designation that indicated the area or population was experiencing a shortage of dentists. Seventy-nine of these designations were for whole counties (Appendix C, item 24).

Dental Hygienists

These health professionals work under the direct supervision of a dentist and 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.

Because dental hygienists must practice with a supervising dentist in Texas, their geographic distribution is linked to that of dentists. Thus, the ratios for dental hygienists were much higher in metropolitan than in non-metropolitan counties in 2003 (Appendix C, item 13). Most of the border counties have very low supply ratios. Between 1993 and 2003, 80 counties experienced a decline in their ratios, while the ratios for 15 counties more than doubled. Between 1993 and 2003, 13 counties lost all of their dental hygienists, just as 13 counties lost all of their dentists. Twenty counties that did not have a dental hygienist in 1993 had at least one in 2003. In 2003, there were 58 counties with no dental hygienists, and 46 counties with no dentists.

Figure 2.18



Sources: Texas State Board of Dental Examiners, 1981–2002; HRSA, Bureau of Health Professions.

ALLIED HEALTH PROFESSIONS

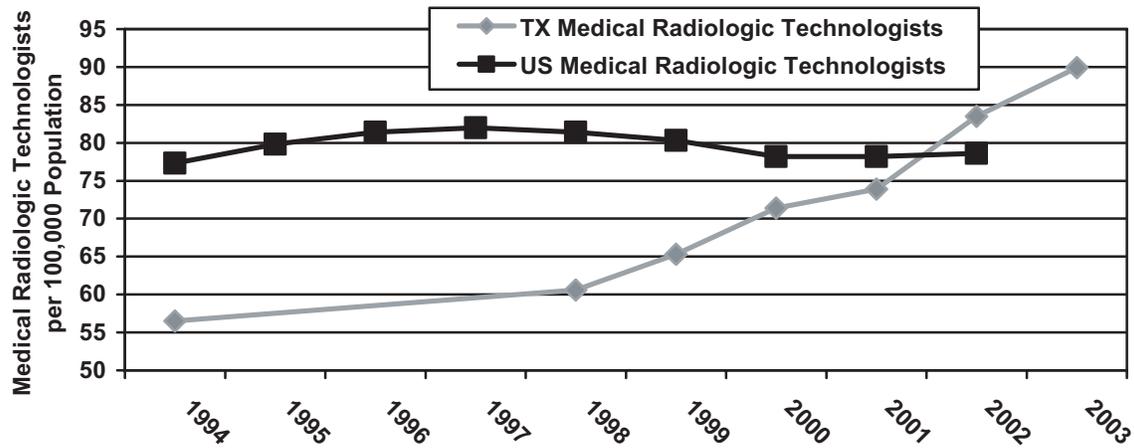
- Medical Radiologic Technologists
- Occupational Therapists
- Optometrists
- Pharmacists
- Physical Therapists

Medical Radiologic Technologists (MRTs)

MRTs are certified by the Texas Department of State Health Services. They administer radiation for medical purposes under the direction of a practitioner. The definition includes diagnostic radiography, nuclear medicine, and radiation therapy. Over the last decade, the supply ratios of MRTs per 100,000 population in Texas have 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 U.S. (Figure 2.19). Non-metropolitan counties had lower supply ratios than metropolitan counties (Appendix C, item 14) and, in general, the border counties had lower ratios than the rest of the state. In particular, the counties in West Texas, with the exception of El Paso, had very low ratios. Since 1994, ratios have grown in counties distributed throughout the state, including the border counties, and five counties that did not have an MRT in 1994 had at least one in 2003. However, 12 counties that had RTs in 1994 did not have any in 2003. In 2003, there were 38 counties with no RTs.

Figure 2.19

**Medical Radiological Technologists per 100,000 Population:
 U.S. and Texas, 1994–2003**



Sources: Texas Department of Health, Division of Professional Licensing and Certifications 1994–2002; American Registry of Radiologic Technologists

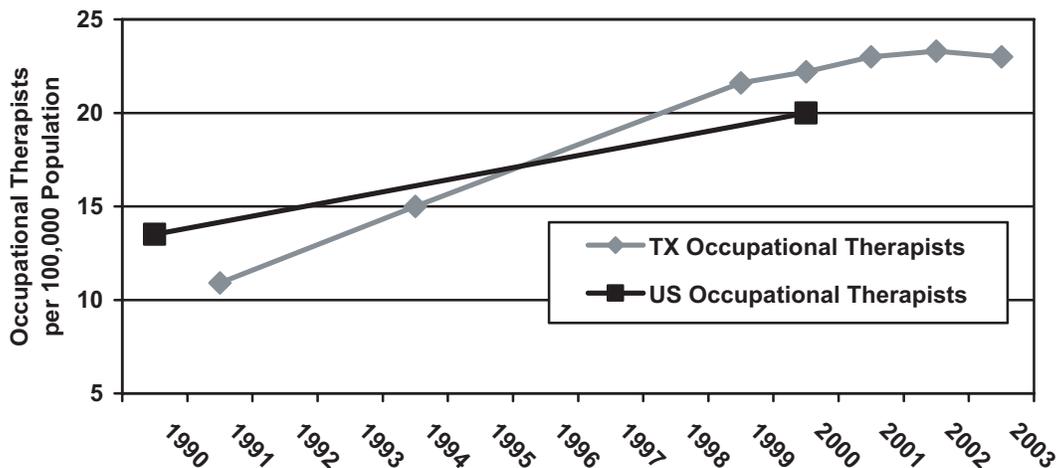
Occupational Therapists (O.T.s)

The supply ratios of O.T.s 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).

In 2003, the ratios for O.T.s 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 C, item 15). Since 1994, 136 counties have experienced an increase in their O.T. ratios; however, in 2003, there were 97 counties that did not have an O.T. Fifty-four counties that did not have an O.T. in 1994 had at least one in 2003.

Figure 2.20

Occupational Therapists per 100,000 Population, U.S. and Texas, 1990–2003



Sources: Texas Department of Health, Division of Professional Licensing and Certification; HRSA, Bureau of Health Professions

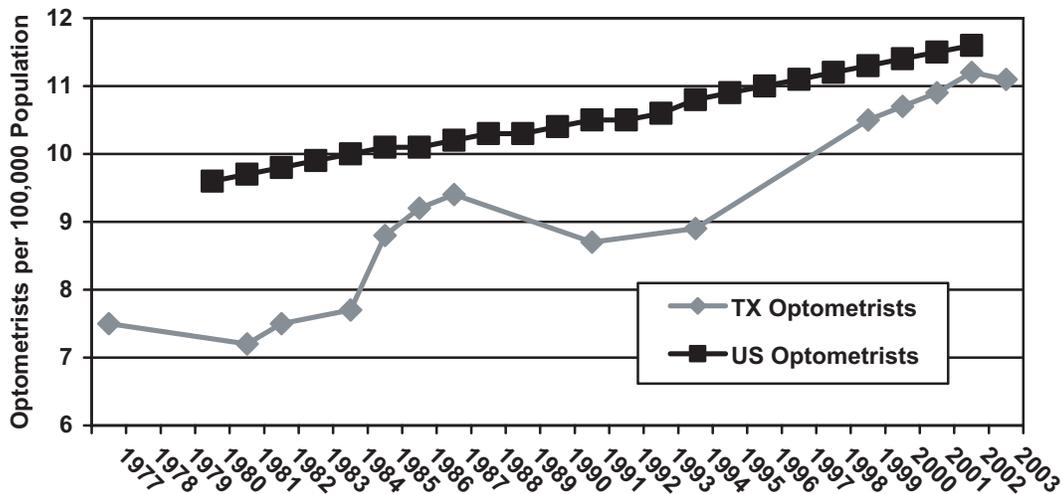
Optometrists

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).

Optometrists are more likely to practice in metropolitan counties than non-metropolitan counties, but this hasn't always been the case (Appendix C, 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. Nine counties that did not have an optometrist in 1994 had a least one in 2003; however, 14 counties that had optometrists in 1994 did not have any in 2003. In 2003, there were 110 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.

Figure 2.21

Optometrists per 100,000 Population, U.S. and Texas, 1977–2003



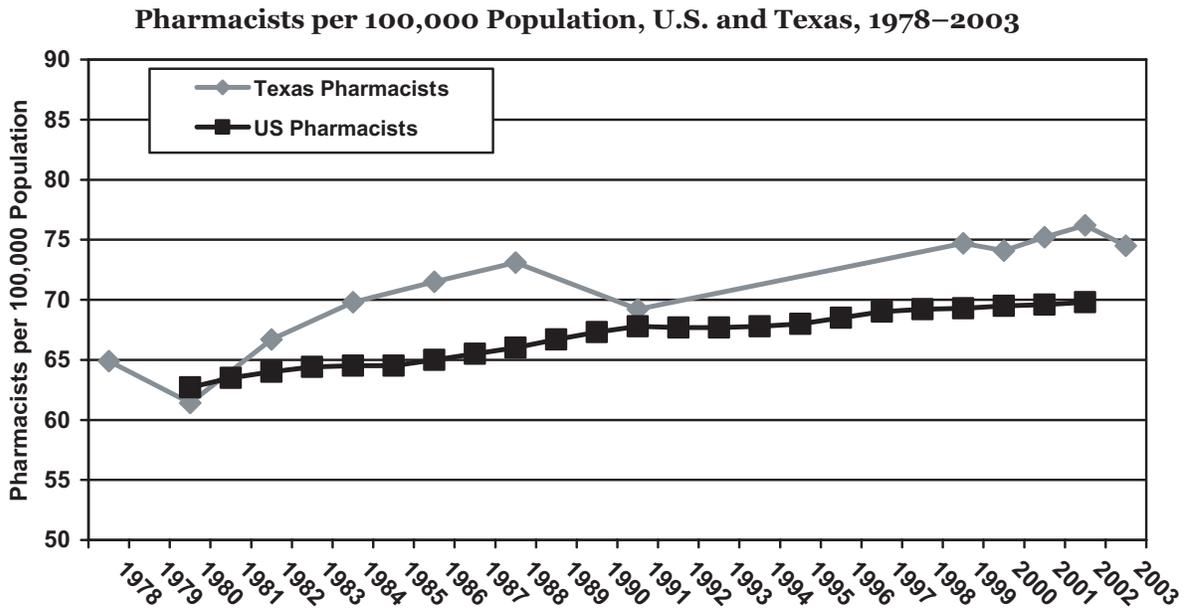
Sources: Texas Department of Health, Division of Professional Licensing and Certification; HRSA, Bureau of Health Professions

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 U.S. and Texas have been static, the Texas ratio in 2003 actually being lower than the rate in 2002 (Figure 2.22).

The ratios for pharmacists are higher in the metropolitan counties than in the non-metropolitan counties (Appendix C, item 17). However, the ratios are lower for the border counties, both metropolitan and non-metropolitan. The majority (201) of counties in Texas have experienced a decline in the ratios since 1994. However, two counties that did not have a pharmacist in 1994 had at least one in 2003. In 2003, there were 18 counties that did not have a pharmacist).

Figure 2.22



Sources: Texas State Board of Pharmacy, 1978–2002; HRSA, Bureau of Health Professions

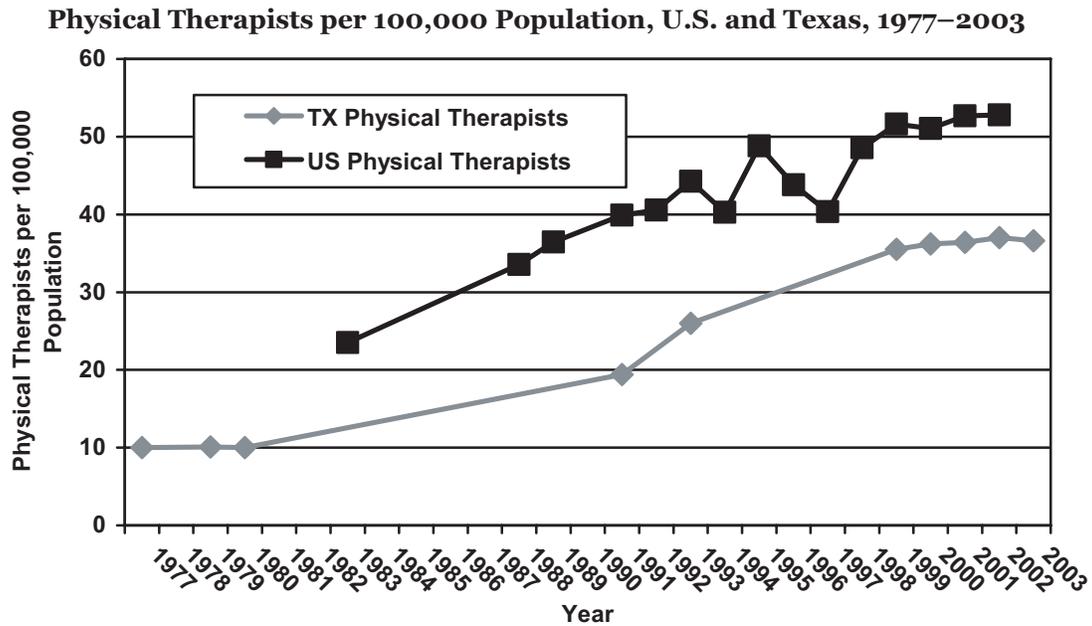
Physical Therapists (P.T.s)

There are no bachelor’s degree programs for P.T.s in Texas. The state requires that P.T.s hold at least a master’s degree from an accredited P.T. program and pass a national exam administered by the Executive Council of Physical Therapy and Occupational Therapy Examiners. There are eleven accredited P.T. educational programs in the state.

The supply ratios for P.T.s 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).

The supply ratios have generally been higher in metropolitan counties, with the exception of the border counties, which generally have much lower ratios (Appendix C, item 18). Between 1993 and 2003, the ratios increased in 163 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. Thirty-one counties that did not have a P.T. in 1993 had at least one in 2003. In 2003, 61 counties did not have a P.T.

Figure 2.23



Sources: Texas Department of Health, Division of Professional Licensing and Certification; HRSA, Bureau of Health Professions

MENTAL HEALTH PROFESSIONS

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

Psychiatrists

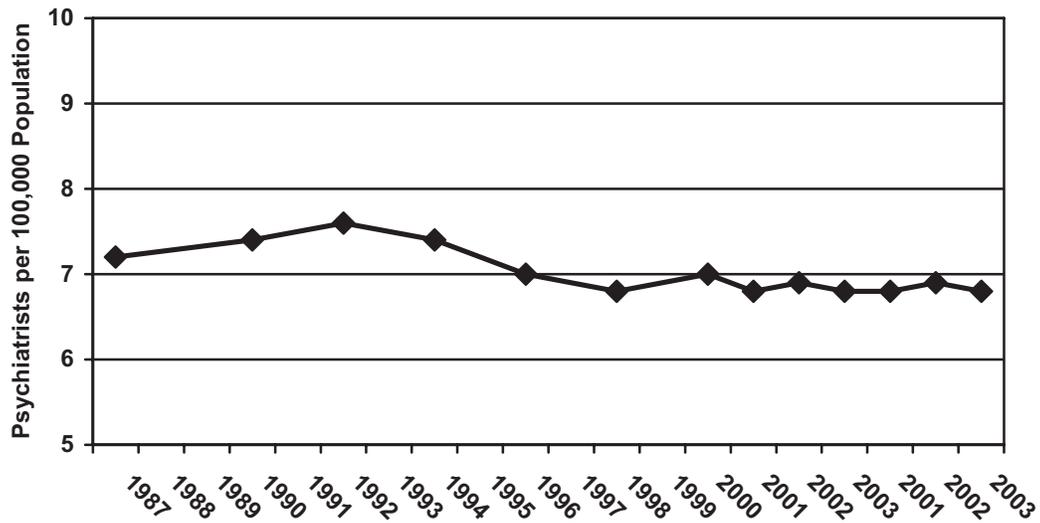
There were 1,480 psychiatrists licensed by the Texas State Board of Medical Examiners in September 2003. In addition to physicians practicing in the specialty of psychiatry, physicians in

the specialty of child psychiatry 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 (Figure 2.24). For the past 8 years the ratios in Texas have again stabilized. For comparative purposes, national supply ratios for psychiatrists were not available for this report.

Nearly three out of every four (68.7 percent) of Texas’ psychiatrists were male in 2003; and, more than one-half of the psychiatrists were over 50 years of age (Appendix C, item 19). The supply ratios for psychiatrists per 100,000 population were the largest in metropolitan counties. Border counties had lower supply ratios than did non-border counties.

Figure 2.24

Psychiatrists per 100,000 Population: Texas, 1987–2003



Source: Texas State Board of Medical Examiners

Mental Health HPSAs

In March 2004, there were 189 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. One county had a “low-income population” designation (Appendix C, item 25).

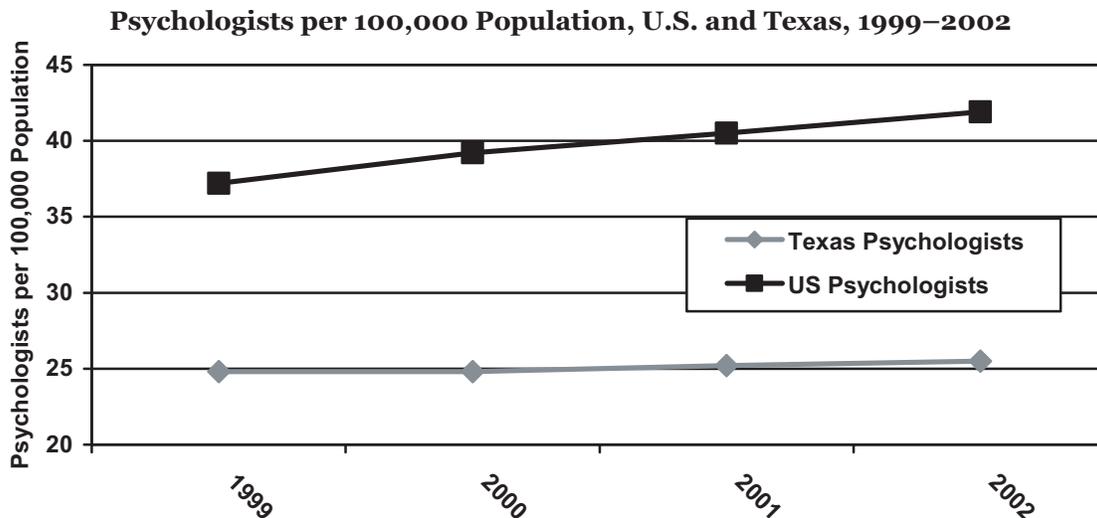
Psychologists

In Texas, there are four categories of psychologists: 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 types of psychologists. Only psychologists’ license numbers and location (metropolitan, non-metropolitan) were available for

analysis in 2003 because the Texas State Board of Examiners of Psychologists (TSBEP) is one of only a few boards that does not collect data on age, gender and race-ethnicity on its licensees. Of the four types, licensed psychologists were in greatest supply in 2003. Since 1999, the psychologist supply ratios have been higher for the U.S. than for Texas (Figure 2.25).

The supply ratios have been greater in Texas metropolitan counties than in non-metropolitan counties. In 2002 (Appendix C, item 20), 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 2002. Most of the growth in supply ratios was in Central Texas. Between 1999 and 2002, 78 counties experienced an increase in ratios, while 70 experienced a decrease. Fourteen counties that had no psychologists in 1999 had at least one in 2002. Despite these gains, 118 counties had no psychologists in 2002.

Figure 2.25



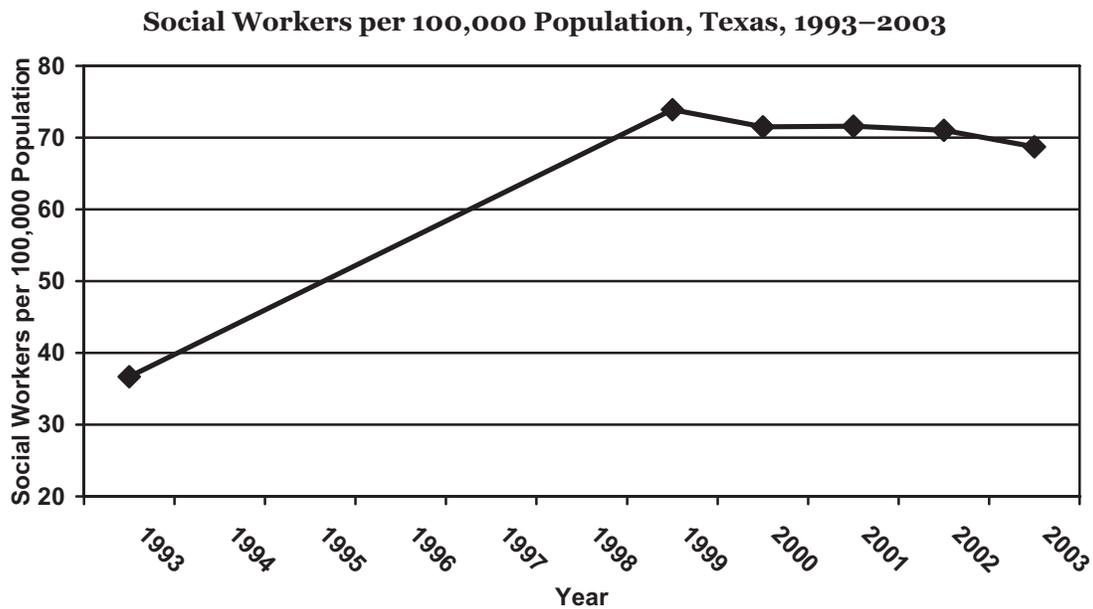
Sources: Texas State Board of Examiners of Psychologists, 1999–2002; U.S. Bureau of the Census

Social Workers

The Texas State Board of Social Worker Examiners (TSBSWE) issues licenses to social workers in Texas. The ratios of social workers per 100,000 population over the last five years have been fairly constant; however, the overall trend appears to be favoring a slight decline in the magnitude of the ratio (Figure 2.26). Data on age, gender, and race-ethnicity are not available from the TSBSWE.

In 2003, there were 51 counties with no social workers, compared to 104 in 1993 (Appendix C, item 21). However, 22 counties that had social workers in 1999 did not have any in 2003, while six counties that did not have social workers in 1999 had at least one in 2003.

Figure 2.26



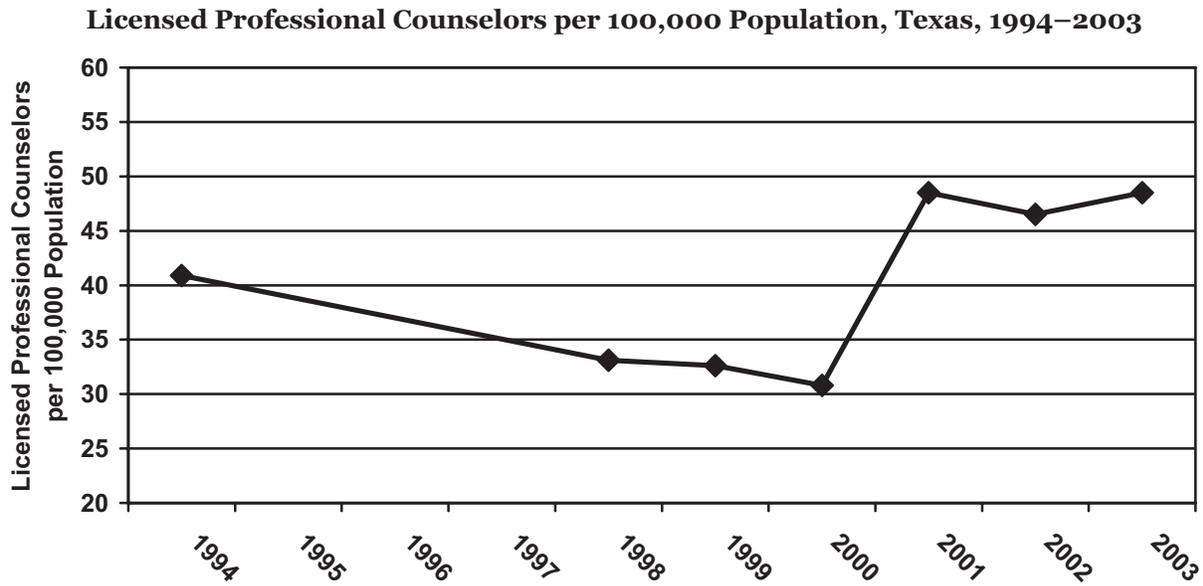
Source: Texas Professional Licensing and Certification Division, TDH

Licensed Professional Counselors

The Division of Professional Licensing and Certification at the Texas Department of Health issues licenses to professional counselors in Texas. The ratio of counselors per 100,000 population declined between 1994 and 2000. In 2001, the ratios rapidly increased and have remained stationary for the past three years (Figure 2.27).

In 2003, there were 52 counties with no Licensed Professional Counselors, compared to 72 in 1994 (Appendix C, item 26). However, 14 counties that had counselors in 1994 did not have a counselor in 2003. Thirty-four counties that did not have a counselor in 1994 had at least one in 2003.

Figure 2.27



Source: Texas Professional Licensing and Certification Division, TDH

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 2003, there were 77 NPs with Psychiatric / Mental Health recognitions, an increase from 2000, when there were 43 NPs with P/MH recognitions. Clinical Nurse Specialists may be recognized in one of 14 clinical areas. In 2003, there were 322 CNSs with P/MH recognitions, a decrease from 2000, when there were 372 CNSs with P/MH recognitions.

Notes

1. 1999 AAOA Physician Assistant Census Survey for Texas (Alexandria, VA: American Academy of Physician Assistants).
2. Carol Reineck, Antonio Furino, Joseph Lucke, and Robert Wood, 2002 Survey of Texas Registered Nurses, *Health and Nurses in Texas* 2:2 (fall, 2002) (San Antonio: Texas Institute for Health Policy and Research and the Center for Health Economics and Policy at the University of Texas Health Science Center at San Antonio, in partnership with the Texas Nurses Foundation).
3. Anna Pearl Rains and Poldi Tschirch, “Nursing Education: An Assessment of Educational System Capacity to Meet Workforce Demands,” in *The Future of Nursing: Data for Action, Health and Nurses in Texas* 3:1 (fall, 2000) (San Antonio: Texas Institute for Health Policy and Research and the Center for Health Economics and Policy at the University of Texas Health Science Center at San Antonio, in partnership with the Texas Nurses Foundation).
4. Peter I. Buerhaus, Douglas O. Staiger and David I. Auerbach, “Implications of an Aging Registered Nurse Workforce,” *Journal of the American Medical Association* 283:22 (June 14, 2000).
5. Ibid.
6. Don R. Miller, *The Supply of Registered Nurses: First Look at Available Data, Health and Nurses in Texas* 1:1 (winter, 2000) (San Antonio: Texas Institute for Health Policy and Research and the Center for Health Economics and Policy at the University of Texas Health Science Center at San Antonio, in partnership with the Texas Nurses Foundation).
7. Buerhaus et al., op. cit.
8. Reineck et al., op. cit.

Appendix A

**NURSING
INNOVATION PROJECT
WHITE PAPERS**



Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

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***Program Title:* ACCELERATED ASSOCIATE DEGREE NURSING PROGRAM**

Summary: The accelerated ADN program option is the result of a partnership between Austin Community College, St David's Healthcare Partnership, and two local Workforce Development Boards. The goals of the accelerated ADN program model are to:

- reduce the amount of time required to complete the nursing portion of the nursing program
- target displaced workers for rapid career redesign
- provide web-based course delivery for maximum flexibility
- provide financial support to qualified applicants from funds available through financial aid, HCA Cares®, and the Texas Workforce Commission
- provide online academic support services comparable to those available onsite to enhance participant success

The accelerated program will be offered in four consecutive 15-week trimesters rather than four non-consecutive 16-week semesters. The trimesters will be separated by breaks of two weeks each, thus permitting the qualified applicant to complete the nursing program in 16 consecutive months rather than 21-24 nonconsecutive months typically required in a traditionally scheduled program.

The accelerated ADN program model will use web-based, online course delivery for theory courses, which have been traditionally taught in the onsite classroom setting. Lab learning experiences will be taught onsite at the college's nursing skills lab and clinical learning experiences will be taught at local clinical agencies that are affiliated with the nursing program.

Intensive screening processes will assure that participants receive all financial support available to them. A nursing faculty tutor will be available to assist participants online or onsite.

How will your model improve outcomes without increasing health care costs?

The accelerated ADN program model produces graduate nurses in a shorter period of time, which directly benefits health care institutions by decreasing costs associated with agency or traveling nurse staffers. Health care institutions may choose to invest these cost savings in the nursing education program to help support implementation of the accelerated model.

The asynchronous online mode of course delivery decreases barriers for many students, such as, distance, childcare, and work schedules. Web-based delivery also allows for more creative scheduling for clinical experiences with the hospital partners.

What process is in place to collect and analyze process and outcome measures?

Accrediting agencies require every ADN program to develop and implement a program evaluation plan that carefully examines every aspect of the nursing program – administration, curriculum, faculty, students, and resources. This plan of evaluation is sufficient to collect and analyze process and outcome measures related to the accelerated ADN program model. In addition, the partners are tracking various aspects of the project pertinent to the services offered by the agency represented.

Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

How can technology be used to enhance the solution?

Technology is essential to the success of the accelerated ADN program model. Online course delivery adds an element of flexibility to the program that is rarely available in typical onsite course delivery.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

None

What changes in the education process will be required?

- **Administrative processes:** The greatest obstacle to innovation in higher education is the bureaucratic approval process. If community colleges are going to be truly responsive to the needs of the health care community that they serve, the approval process for pilot projects must be streamlined. In addition, project planning and implementation must occur within the nursing program with support and assistance from college resources. Colleges with centralized organizational decision-making structures may be unsuccessful in implementing this model.
- **Support services:** The registration process may be affected by non-traditional course periods. Students enrolled in non-traditional schedules may need additional assistance accessing support services.
- **Program costs:** The length of nursing faculty contracts (usually 9 – 10 ½ months) must be extended unless adjunct faculty will be used to cover the 12-month schedule. The costs associated with faculty coverage must be considered when implementing the accelerated ADN program model.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

The accelerated ADN program model will contribute to diversity in the workplace to the degree that the program graduates are culturally diverse. The ethnicity of the 44 fall 2003 graduates included: 61% White, 23% Hispanic, 4.5% Black, 4.5% Asian, and 7% other. Every ADN program includes content on providing culturally sensitive care within the nursing curriculum. Two ADN faculty members are developing a cultural competence module that will be completed by each student enrolled in the ADN Program.

Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

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Program Title: NURSING ACADEMY: RECRUITING THE BEST AND THE BRIGHTEST

Summary: The Nursing Academy is a collaborative effort in the greater Austin Community to recruit the “best and brightest” junior high and high school students into healthcare. The Health Industry Steering Committee (HISC) is a community partnership of industry, education and community workforce development to increase the supply of healthcare workers. Members of the HISC want to promote nursing as a desirable health care profession. With hospitals responding to the nursing shortage by creating more flexible and nurse friendly environments, including increasing salaries, there is every reason to pursue this eager and impressionable group of students.

The Nursing Academy targets middle school and high school students as well as high school counselors. The goals of the Nursing academy are:

- Expose students and counselors to the breadth of opportunities in nursing.
- Explain the academic preparation of pre-requisites and nursing course work.
- Educate and prepare counselors to interest and advise students in nursing careers.

The Nursing Academy is offered three times a year for counselors, high school students and 7th/8th grade students. Participating members of the HISC (St. David’s Healthcare Partnership, Seton, Heart Hospital of Austin, Central Texas Medical Center, University of Texas and Austin Community College) rotate the location of the academies. Each Nursing Academy is a one-day event. The morning covers the challenges and need for nurses, and the afternoon involves exposure to diverse nursing opportunities.

- Critical thinking in nursing practice
- Who makes a good nurse?

What is the good news for our high school students?

- It’s all so confusing: LVN vs. RN vs. BSN vs. Advanced Practice!
 - * Degrees which take three years or less to achieve
 - * Degrees which take 4 years or more to achieve
- Great News: Tons of employment opportunities in Central Texas
- Show Me the Money: Financial aid
- Meet ACC and UT Nursing Students: Life as a Nursing Student
- Where do nurses work in the hospital?
- Follow “a patient” as they are admitted to the hospital (via the respective departments), and learn/address skills that are critical to nursing.

How will your model improve outcomes without increasing health care costs?

The goal of the Academies is to encourage young people to pursue a nursing career thus increasing the pipeline to the profession. The Nursing Academy taps into already existing programs such as the health science technology programs at Central Texas high schools.

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What process is in place to collect and analyze process and outcome measures?

Pre and post assessment tools have been developed and completed by Academy attendees along with program evaluations that have been summarized and incorporated into future planning. Longitudinal studies are in place to determine if the Academies are increasing the pipeline to nursing. The HISC will meet semi-annually to review the program and make recommendations.

How can technology be used to enhance the solution?

Technology in healthcare is growing at a rapid rate. Academy participants are exposed to this technology, computer charting, monitoring devices and various skills instruction at the nursing schools.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

There is a need for more money for nursing school tuition in the form of scholarships and tuition forgiveness programs. In addition, money needs to be continued to high schools for funding their Health Science Technology programs.

What changes in the education process will be required?

The Nursing Academy creates awareness of possibilities for early acceptance into nursing school, as well as streamline the prerequisites needed for acceptance into nursing school. The profession of nursing is approached as a "top" career choice for men as well as women; it is thought of as desirable as any other health care profession.

Many factors discourage young people from pursuing careers in math and science. Research shows that the middle school years are critical - Many students lose their interest and self confidence in math and science during that time."

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

Health science technology students, middle school students and high school counselors are recruited throughout Central Texas to attend; the Nursing Academy allows a variety of young people to be exposed to nursing.

Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

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***Title:* NORTH TEXAS NURSING PROJECT**

Summary: The North Texas Nursing Project is a multi-pronged approach for addressing the high vacancy rate for nurses in our hospitals (16% in critical care), a shortage of nursing faculty, the rapid addition of beds in North Texas, and the inability of nursing schools to meet the demand for nurses.

This project is a result of a new and unique partnership involving over 35 hospitals and 13 nursing schools called the Nursing Workforce Collaborative. The following five workgroups meet regularly to address the specified issues:

1. Capacity- Increasing the capacity of area nursing schools,
2. Retention - Keeping the nursing students in school through graduation,
3. Transition - Preparing the nurse graduates to be "hospital ready" and transition to the acute care setting,
4. Destination of Choice - Making North Texas a preferred area for nursing and nursing faculty,
5. Distance Learning- Exploring online alternatives in nursing education.

The goals of the Collaborative are to:

- Increase the number of nursing student admissions by 800 over two years.
- Decrease the attrition rate of nursing students by 10%.
- Prepare 40 foreign-trained professional nurses to take the NCLEX.
- Attract nurses and nursing faculty to North Texas to practice and teach.
- Implement a pilot program for at least 10 North Texas students in an online RN program.

To help us achieve these goals, the North Texas Nursing Project includes these initiatives, many which are already underway:

1. Loaned Faculty Program: This initiative involves hospitals lending qualified employees to nursing schools to serve as faculty.
2. An online common hospital orientation for nursing students, freeing valuable teaching time for nursing faculty.
3. A centralized scholarship database for nursing students.
4. Implement proven retention programs for at-risk nursing students.
5. NCLEX review courses for 40 foreign-trained nurses. Thirty-eight nurses have completed the course and 6 have passed the NCLEX thus far.
6. Develop a website that will be a "one-stop place" for practical and current information on nursing in North Texas.
7. Continue the development of a partnership with an online RN program and put at least 10 students through the program.

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Short and Long-Term Solutions to the Critical Nursing Shortage

How will your model improve outcomes without increasing health care costs?

This model will not increase health care costs because it provides for the sharing of resources among schools and hospitals. We plan to create standardized orientations, rotations, and internships which will create efficiencies and improve overall results. All innovations are focused on maintaining the high-level of quality within our nursing schools while significantly increasing the output.

What process is in place to collect and analyze process and outcome measures?

The Data Initiative is a component of the Dallas-Fort Worth Hospital Council that supports 65 hospitals with comparative reporting of data on over 70 measures of patient safety and quality. Therefore, the measures are in place to analyze the North Texas Nursing Project outcomes as they relate to patient safety. There are significant challenges to doing this with current regulatory TDH & JCAHO standards. However, the Data Initiative drives a proactive workgroup to address linking staffing to patient safety and outcomes and is attempting to find solutions to creating meaningful linkages.

How can technology be used to enhance the solution?

This project will utilize technology by the following:

- online hospital orientation for nursing students
- online partnership with nursing schools and hospital systems
- online demand survey for determining vacancy rates
- nursing student email mentoring retention program
- online community via a Listserv to support students and mentors
- Data Warehouse with online interactive webportal for patient safety indicators

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

Statewide budget cuts have adversely affected nursing schools. Requirements for nurse educators may need to be re-examined. Standardized methods for linking shortages to patient care are yet to be developed.

What changes in the education process will be required?

Innovations in the education process, cooperation among hospitals and nursing schools, and collaboration between all partners must occur. Our model seeks to address all of the above.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

The North Texas Nursing Project will increase diversity with the Foreign nursing initiative that adds bilingual nurses to the workforce.

Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

Theresa M. Brandon, Regional Executive Assistant, Dallas, Texas

Laura Ginsburg, Employer and Labor Services Specialist, Washington, D.C.

Department of Labor's Office of Apprenticeship, Training and Employer Services

Program Title: Using Apprenticeship to Build and Fill Career Paths in Health Career

Summary:

Healthcare Crises

For the past two years, the U.S. Department of Labor's Office of Apprenticeship Training, Employer and Labor Services (ATELS) has focused on the healthcare industry as a direct result of the chronic workforce shortage in the health care field, particularly in nursing. A crisis of this magnitude calls for a multitude of new ways to address these issues. Many health care leaders, together with the public workforce and educational leaders are grappling with the problem and experimenting with new ideas. The traditional mindset of rigid rules needs to be replaced with a fresh vision and a willingness to be flexible enough to consider the "what ifs". It is incumbent for the nation's welfare that the healthcare system creates partnerships with government and education in ways that are both innovative and accessible to resolve these problems.

Challenges

Changing paradigms is never an easy prospect. We have faced, and continue to face, many challenges within various arenas, such as:

- Acceptance of apprenticeship within healthcare
- Identification of educational partners willing to modify their programs to meet apprenticeship parameters and articulate with national on-line course providers
- Barriers posed by individual state regulation of certification and training
- Need to train and orient public workforce system personnel about healthcare jobs and skill needs to better assure a pipeline of screened and appropriate candidates

Registered Apprenticeship Training Model

The registered apprenticeship model is not a panacea, rather it is one additional approach to help address the shortage facing our nation. It is incumbent upon all of us to not only address the short-term issues, but look at the long range features of building a system which provides reciprocity given the mobility of the populace. With the growing expansion of distance learning opportunities and other web-based training, the flexibility of the apprenticeship program will provide some assistance with the capacity issue. We need to be able to expand our classrooms in a virtual manner to better ensure the widest possible connection to all nursing students. This is particularly true for rural communities.

A Nursing Career Path Model

One example of how the U.S. Department of Labor is addressing the nursing shortage is through a demonstration project with a unique, holistic approach. The Council for Adult and Experiential Learning (CAEL) was awarded a grant to work with health care providers, educational institutions and the public workforce system in five sites across the nation to create a career lattice using the apprenticeship training model and distance learning for Certified Nursing Assistant (CNA), Licensed Vocational Nurse (LVN) and Registered Nurses.

Statewide Health Workforce Symposium

Short and Long-Term Solutions to the Critical Nursing Shortage

Under this model, a local partnership is formed consisting of the three entities to leverage all their resources to resolve the shortage. The program:

- links recruitment for new hires to the workforce system;
- leverages available (or creating new) student support services (WIBs, One Stops) to meet the full range of adult learning challenges for incumbent adult healthcare workers at each stage of the model;
- builds additional collaborative partnerships between healthcare and higher education;
- encourages application of best practices in workforce development throughout the healthcare industry utilizing the Registered Apprenticeship Training Model;
- promotes careers in nursing and healthcare, particularly among demographic groups traditionally underrepresented within the industry.
-

A White Paper:

Introduction:

For the past two years, the U.S. Department of Labor's Office of Apprenticeship Training, Employer and Labor Services (ATELS) has focused on the healthcare industry as a direct result of the chronic workforce shortage in the health care field, particularly in nursing. Nationally, the health care industry is expected to account for one out of every six new jobs created by 2012, adding 3.5 million additional workers (Source: U.S. Bureau of Labor Statistics). During that same time period, 15 of the 30 fastest growing occupations are concentrated in health services. These positions include personal and home care aides (48 percent growth), medical assistants (59 percent growth), physician assistants (49 percent growth), and medical records and health information technicians (47 percent growth) (U.S. Bureau of Labor Statistics).

These numbers are exacerbated by the aging baby boomers who have already begun to retire and are placing a greater demand on the health care system than any previous generation. Some issues that have come to the forefront as a result of this crisis:

- Growth of healthcare professionals and the aging population are diametrically opposed; hence, there is a much greater need for more healthcare professionals than ever before.
- Traditional training methodologies cannot keep up with the needed capacity to maintain status quo.
- Training, recruitment and retention of health professionals, especially in rural settings, are growing problems.
- Many educational facilities are currently at capacity and do not have the faculty and/or space to take additional students.
- A need for greater reciprocity and portability of credentials is critical to the future health and economic well-being of our nation.

A crisis of this magnitude calls for a multitude of new ways to address these issues. Many health care leaders, together with the public workforce and educational leaders are grappling with the problem and experimenting with new ideas. The traditional mindset of rigid rules needs to be replaced with a fresh vision and a willingness to be flexible enough to consider the "what ifs". It is critical for the nation's welfare that the healthcare system creates partnerships with government and education in ways that are both innovative and accessible to resolve these problems.

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Short and Long-Term Solutions to the Critical Nursing Shortage

Why Apprenticeship Training

The Registered Apprenticeship model has existed for a long time, traditionally associated with the construction industry. Many tend to dismiss it as an irrelevant and outdated methodology for training purposes. But the basic components of the model are suitable to many occupations in healthcare. As a matter of fact, many occupations currently use the apprenticeship model for training without calling it that. The apprenticeship model helps participants attain high performance through a cohesive process which links formal education in the form of a degree or certification with a standardized process of delivering and measuring hands-on/on-the-job learning (OJL). For decades, registered apprenticeship programs have been successful using the two-pronged method of combining on-the-job learning with classroom theory supported by a strong mentoring component. The apprentice goes through a structured program established by the employer that includes incremental wage increases until he or she completes the course of training.

To address recruitment and retention issues, employers need to minimize the risk of hiring new employees through an antiquated system of assessment. That is, the traditional reliance of reviewing resumes and conducting interviews continues to be a hit-or-miss approach with varying degrees of success. The value of the apprenticeship model is the flexibility that the employer has in establishing the standards of proficiency required of their professionals. The apprentice or intern learns the job under the supervision of a mentor and attends formal classroom training throughout the tenure of the program. This serves the employer in that the pay is commensurate with the level of skill and ensures that the specific skills needed are covered in the program. One of the most attractive features of the model is that it is an “earn while you learn” model. This allows an individual the opportunity to begin receiving a paycheck on his/her first day as an apprentice. With a chronic worker shortage in many fields, many more recruits will be available knowing they can start earning a living. This can be very appealing to displaced workers or others who may want an opportunity to move into a new field of interest.

While the Registered Apprenticeship model can be helpful in most settings, it is particularly useful in rural settings because it resolves many of the problems that rural areas face. Adequate staffing can be problematic for any organization, but in rural areas it can be daunting given the competition with other businesses for a small or diminished pool of workers. With registered apprenticeship, rural citizens don’t need to leave their communities to go away to school to learn skills. They can take their courses through distance or on-line learning provided by many community colleges. The ability to earn while they learn allows rural apprentices to begin working at the local health care facility without having to leave the community. This model also eliminates the need to recruit individuals through training or monetary enticements which are both costly and can be ineffective in the long run.

ATELS has been actively pursuing and successfully developing such innovative approaches to workforce development in conjunction with other high level professions, such as the Information Technology Industry. According to the Chief Learning Officer (CLO) Executive Briefings found at <http://www.clomedia.com/common/newscenter/newsdisplay.cfm?id=2577>, NITAS (National IT Apprenticeship System), a new joint effort between CompTIA (the IT industry association) and the U.S. Department of Labor, is an excellent example of government and industry coming together to develop an innovative approach to help the U.S. become more globally competitive by providing better training and assessment tools. According to the January 29, 2004, CLO article,

“The NITAS program strengthens connections between workforce investment and educational systems in the United States, said Neill Hopkins, vice president of workforce development and training for CompTIA, and an editorial board member for Chief Learning Officer magazine. Research conducted by the Department of Labor and by CompTIA indicates that on-the-job training is much more

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effective when combined with classroom instruction than when either is delivered on its own, he said. The combination of structured on-the-job training delivered under the guidance of an experienced worker, and complementary related classroom instruction, ensures a worker's employability and competency."

Challenges

Changing paradigms is never an easy prospect. USDOL/ATELS staff across the country have been working to establish a grass-roots connection to the health care community. The registered apprenticeship model is not a panacea, rather it is one additional approach to help address the shortage facing the nation. It is incumbent upon all of us to not only address the short-term issues, but look at the long range features of building a system which provides reciprocity given the mobility of the populace. With the expansion of distance learning opportunities and other web-based training, the flexibility of the apprenticeship program will provide some assistance with the capacity issue. We need to be able to expand our classrooms in a virtual manner to better ensure the widest possible connection to all nursing students. This is particularly true for rural communities.

The following are some issues that have surfaced as the USDOL's Apprenticeship Office and workforce system address the shortages in healthcare—

- Acceptance of apprenticeship within healthcare;
- Identification of educational partners willing to modify their programs to meet apprenticeship parameters and articulate with national on-line course providers;
- Barriers posed by individual state regulation of certification and training; and
- Need to train and orient public workforce system personnel about healthcare jobs and skill required to better assure a pipeline of screened and appropriate candidates.

Development of a new registered apprenticeship model within the healthcare industry requires the participation of numerous systems operating both at state and national levels. Medical associations, certifying bodies, state licensing groups, the U.S. Department of Labor's apprenticeship office are all partners in this endeavor and must be involved in program design to make a successful effort. ATELS staff have been working to better link the workforce development system to the healthcare arena through discussions on the advantages of the apprenticeship model as a long-term solution to recruitment and retention as opposed to the more traditional short-term job placement. By working with the state or local workforce system, ATELS can help providers recruit nontraditional pool of workers such as dislocated workers—those who have lost their job through downsizing. The apprenticeship model is particularly attractive to this group because it allows them an opportunity to retrain in a new occupation while continuing to earn a living. There are not many individuals who have the luxury or means to completely place their lives on hold to go back to college full-time.

A Nursing Career Path Model

One example of how the U.S. Department of Labor is addressing the nursing shortage is through a demonstration project with a unique, holistic approach. The Council for Adult and Experiential Learning (CAEL) was awarded a grant to work with health care providers, educational institutions and the public workforce system in five sites across the nation to create a career lattice using the apprenticeship training model and distance learning for Certified Nursing Assistant (CNA), Licensed Practical Nurse/Licensed Vocational Nurse (LPN/LVN) and Registered Nurses.

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Under this model, a local partnership is formed consisting of the three entities to leverage all their resources to resolve the shortage. The program:

- links recruitment for new hires to the workforce system;
 - leverages available (or creates new) student support services (WIBs, One Stops) to meet the full range of adult learning challenges for incumbent adult healthcare workers at each stage of the model;
 - builds additional collaborative partnerships between healthcare and higher education;
 - encourages application of best practices in workforce development throughout the healthcare industry utilizing the Registered Apprenticeship Training Model; and
 - promotes careers in nursing and healthcare, particularly among demographic groups traditionally underrepresented within the industry.
- Sites include:
- Harris County Hospital District: Three trauma centers; 13 clinics;
 - Evangelical Good Samaritan Society: a national, nonprofit long term care provider. They are piloting the program in South Dakota, North Dakota, Iowa, Minnesota, and Nebraska;
 - Chicago: A consortium of hospitals and long-term care providers;
 - Seattle: A consortium of hospitals and long-term care providers;
 - Maryland: A consortium of hospitals and long-term care providers.

The project is building a career “lattice” rather than “ladder” where employees can enter or exit at any level. The career path does not have to be linear. Apprentices may enter as newly hired nursing assistants or they could be current employees who work in housekeeping or the food service who want to move over to the clinical side. They can start as a nursing assistant and remain in that capacity acquiring some of the CNA specializations that are being developed under the project—including geriatrics, restorative care, pediatrics, cardiology, orthopedics and out patient care—or choose to advance to LPN/LVN, RN and beyond. They may even decide to take a different career path after completing the nursing assistant program, such as, radiology technician, dental assistant or another field, if they have the basic skills.

The model intends to address the shortage of qualified workers at the entry levels of the nursing profession. Without the development of a clear and logical career lattice system that links CNA and LPN/LVN apprenticeships in conjunction with other training methodologies, the chances of successfully addressing the nursing shortage are severely limited. Many healthcare facilities look at this model as a way to backfill RN positions and build a steady pool of employees who can advance to an RN or higher, or remain at the CNA or LVN level.

Two of the five selected CAEL sites have designed innovative apprenticeship models for CNA. One model developed with the Good Samaritan Society (GSS), a national, nonprofit long-term care provider, focuses on the CNA for long-term care facilities in South Dakota. The other model is a more traditional approach for the CNA in a hospital and/or clinic setting with the Harris County Hospital District, in Houston, Texas.

The Good Samaritan Society

One third of all employees at the Good Samaritan Society are CNAs, or roughly 8,000 staff. The Society has more than 250 nursing homes, assisted living facilities and other long-term care operations in 26 states, predominantly in rural communities where recruiting and retaining trained, quality employees is difficult. They are experiencing a nursing shortage and high turnover rates in many of their facilities. To address the staffing shortages for RNs, GSS partnered with the University of South Dakota to provide nursing curriculum via distance learning. Students are able to take their classes at the facilities where they work. They call their program “Growing Your Own” to promote the idea of career advancement from LPN to RN. The apprenticeship model fit well into this program by

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addressing the high turnover rates of CNAs and offering upward mobility towards LPN and RN. The Society is creating a new pool of employees to retain in the CNA level as well as build a pipeline to the more advanced LPN and RN positions. Another interest in the apprenticeship model is how it addresses each of the Society's hallmark values grounded in their religious beliefs. By improving the training of their staff, the quality of care to the residents is vastly improved, which, in turn, provides stability to the local community. With the training provided via distance learning, the local community benefits by keeping their citizens there, working and learning. Many pieces fit into a vision that GSS had already created for its workforce.

The Good Samaritan CNA Apprenticeship Model

The Good Samaritan Society and the USDOL developed a 4-tiered certification process for the CNA to better qualify staff to meet the needs of long-term care patients. Apprentices will receive a wage increase upon completion of each certificate. Some sites were concerned about licensing issues. An apprenticeship program is within the regulations of the Centers for Medicare and Medicaid Services, HHS, 42 CFR Chapter IV (10-1-02 Edition): Section 483.75 A (e)(2), which states that an individual can work as a nurse aid at a facility for up to four months before taking the qualification exam for a certified nursing assistant.

Level 1, Certificate of CNA Training

Trains and takes the state exam; 175 hours of both didactic and clinical training which can be applied towards next level.

Level 2, Advanced Certificate

1000 hours of on-the-job learning and a competency-based evaluation (can apply towards next level). After completing this level (roughly six months,) individual will have the core competency need to perform all CNA duties at a high level of performance.

Level 3, Certificate of Apprenticeship Completion

A CAN with a Level 2 certificate will be able to pursue a specialization that requires roughly 1,000 hours each. GSS developed specializations in Dementia, Geriatrics, and Restorative Care. The program includes on-the job learning and competency-based evaluation. (Acute care facilities at some of the other CAEL sites are developing specializations in Pediatrics, Cardiology, Out Patient Care, and Orthopedics.)

Level 4, Mentor, Optional Certificate

After completing the first three levels, a CNA can study for a Mentor certificate that is about 600 hours. This course qualifies a CNA to mentor Certified Nursing Assistants 1 and 2.

The first cohort of trainees begin March 2, 2004. Some 40 advanced CNAs will take the Mentor training. After completion of mentor training, the first group of CNAs will begin in April 2004, with the newly trained CNA mentors.

GSS hopes to reap several benefits from this creative career path which focuses on an investment in their workforce. They expect to instill the continuous learning process and possibilities of career advancement for their staff which should result in higher quality service to patients. They also hope to replicate the model throughout the GSS network with the ability to develop and retain new staff and link to other USDOL opportunities.

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Harris County Hospital District

The Harris County Hospital District (HCHD) is a pioneer in providing integrated health care to the community. HCHD is the fourth largest metropolitan public healthcare system in the U.S. It comprises three hospitals – Ben Taub General Hospital, Lyndon B. Johnson General Hospital and Quentin Mease Community Hospital; 11 neighborhood health centers; a dental center; an HIV/AIDS facility; four school-based clinics; 13 satellite homeless shelter clinics; and five mobile health units. The system started as a teaching hospital for Baylor University and now encompasses the University of Texas Health Science Center in Houston. HCHD provides access to cost-effective, quality health care delivered in a compassionate manner to all residents of Harris County, regardless of their ability to pay. The challenge for HCHD is training its incumbent workforce and recruiting qualified nursing staff to a large public system. Many nurses prefer to work for private healthcare systems instead of a county or public healthcare provider.

The HCHD CNA Apprenticeship Model

The program is a competency-based registered apprenticeship program designed to draw enrollees from HCHD's healthcare facilities as well as new employees. HCHD is working with the local workforce investment board, the Greater Houston Area Health Education Center (AHEC), as well as two primary educational entities: Houston Community College System Southeast and San Jacinto College North.

The apprenticeship model for the CNA Apprenticeship fit well into the new job description hierarchy that was developed by HCHD in 2003. HCHD had inserted a tier within the CNA job description titled, "Patient Care Technicians, I, II and III." The apprenticeship model provided incumbent workers with a pathway for advancement on the nursing career lattice that blended with HCHD's desire to motivate employees to move up the nursing ranks.

Initial Training

144 hours of training including didactic and clinical training. Training is enhanced by emphasis on interpersonal skills, stress management, accountability and organizational skills. Obtains state certification.

Patient Care Tech I

Trains with basic nursing skills and takes the state exam. Training includes 98 hours of didactic and 48 clinical hours. Uses current college curriculum in basic nursing skills (CNA) with added enhancements such as communication and interpersonal skills and on-the-job training for a three-month probationary period. This can be applied to the next level.

Patient Care Tech II

Trains for one of the specializations combining didactic and clinical hours as specified in the college curriculum.

- Phlebotomy: 80 hours classroom; 120 hours of clinical;
- EKG: 64 hours of classroom; 112 clinical;
- Sterilization procedures: still under development with employer and college.

Patient Care Tech III

Trains for all three specializations and continues to build on-the-job training to complete a full apprenticeship program. Receives a certificate of apprenticeship upon completion of the program.

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Mentor/Preceptor

Still under development.

The initial cohort of participants is recruited from the HCHD community health centers. At the end of February 2004, there were more than 60 potential students from within HCHD who had expressed interest in the CNA apprenticeship training. Some would like to advance up the rungs of the lattice. In addition to training incumbent employees, HCHD has an on-going need to recruit and train new employees as CNAs, LVNs and RNs. This opens a unique opportunity to partner with the Worksource Centers, the Texas public workforce system. For all potential participants, the CNA apprenticeship program opens an opportunity to them for education and skill development that will strengthen their commitment and loyalty to HCHD.

In the short-term, HCHD is using the flexibility of the apprenticeship model to design a program to fit the needs of both the community and the health system's diverse sites. The hospital district wants to expand training opportunities for its staff without the need to recruit from outside the community, as well as link to educational opportunities through better use of technology. The long term strategy is to create new pools of employees from the Texas workforce system rather than hiring away trained professionals from other healthcare providers; expand the CNA career lattice to increase the supply of LVNs and RNs; and raise the bar on the quality of patient care, as well as providing the satisfaction and pride of serving in an honorable career.

Conclusions

The project is still at the early stages of development, so there are no conclusions to report at this date. Resource sharing is imperative to our success in serving as many communities as possible. The flexibility of the registered apprenticeship model can serve the healthcare profession, as well as other highly skilled occupations. Using this model in conjunction with other programs can help enhance and/or extend limited resources to higher levels of success. Recognizing the shift in the workforce and building a model to capture the underemployed will create a new pool of potential healthcare professionals who have already proven their ability to be trained and work at a high level occupation.

The USDOL's Office of Apprenticeship will track all the individuals who go through the program to see if the model is successful at addressing several workforce issues—

- Reduction in costs of recruitment and retention;
- Improvement in the quality of the workforce trained through the apprenticeship model;
- Diversification of the healthcare workforce;
- Success with the tiered model for Certified Nursing Assistant;
- Success with the career lattice approach;
- Success in bringing together the workforce system, education and health care providers to resolve the workforce shortage; and
- Success in creating a model that can be replicated in other communities throughout the country.

Appendix A

NURSING CAREER LATTICE PROGRAM: Good Samaritan Society/CAEL/DOL

PROGRAM OBJECTIVES AND OUTCOME MEASUREMENTS

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Program Goals:

To address healthcare worker shortage by implementing apprenticeship programs that will:

1. Improve the image of CNA positions, particularly in the nursing home industry.
2. Develop enhanced performance standards to improve the quality and consistency of care provided.
3. Improve nursing recruitment strategy by providing growth opportunities and specialty options.
4. Develop career lattice that offers options for career development and staff recognition that will improve retention of nursing assistants and therefore decrease the costs associated with turnover.
5. Increase customer satisfaction (employees and residents/families).

Program objectives:

1. Develop apprenticeship model that provides support to new nursing assistants, enhances skills, and provides additional competence based training
2. Utilize the apprenticeship model for currently certified nursing assistants to gain an advanced credential as CNA I. These individuals could then select specialty areas of interest to further develop skills with an option to pursue career paths for nurse licensure. Mentors would continue to provide direction, support, and evaluate competence.
3. Develop distance learning option for mentor training in conjunction with DOL registered apprenticeship program.
4. Develop mentor support network and system for best practice sharing.
5. Develop standardized, competency-based training for each specialty credential as an option for centers in which to enroll individuals. Some courses may be delivered through the GSS distance learning network, others through self-study, and others may be provided locally following standardized lesson plans. The mentors, during on the job apprenticeship, will verify clinical competencies. Duration of apprenticeship will be 1000 hours with eight hours per month of coursework for six months.
6. Establish a GSS CAEL site Advisory Committee that will be involved in strategic planning and outreach for the program.
7. Develop links with nursing programs at pilot sites and pursue credits for skills/courses that could apply for those pursuing higher education (Growing Our Own initiative, etc.).
8. Implement program in pilot regions across GSS, track enrollment and program status.
9. Utilize the apprenticeship model as a marketing strategy: i.e., “we provide training and support to our nursing staff that is a recognized competency-based model that ensures quality, consistent care to our residents – this program provides credentials to staff through the department of Labor”.

Potential Outcome measurements:

- Retention rates for CNAs
- Occupancy rates
- QI's/QM's (Quality Indicators/Quality Measures) of involved facility
- Customer satisfaction surveys (staff/residents)

Appendix B

NURSING CAREER LATTICE PROGRAM: HCHD/CAEL/DOL Program Objectives and Outcome Measurements

Program Goals:

To address the healthcare worker shortage by implementing Apprenticeship programs that will:

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1. Provide formal training to experienced Patient Care Technicians in the community health centers.
2. Provide CNAs in the hospital setting and at the community health centers with the opportunity to grow as CNAs with specializations to assist in advancing in their job responsibilities and wages.
3. Open career lattice pathways offering options for development and recognition, so as to improve retention of nursing staff.
4. Increase customer satisfaction for employees, clients, and families.

Program Objectives:

1. Develop a CNA Apprenticeship model that provides support to incumbent and new nursing assistants, enhances skills, and provides additional competence based training.
2. Utilize the apprenticeship model for currently certified nursing assistants to gain an advanced credential as CNA I, II, or III (Patient Care Technician I, II, or III). These individuals could then select specializations required to move up the lattice (I, II, III) to further develop skills with an option to pursue career paths for nurse licensure.
3. Develop a mentor/preceptor support network and system for best practice sharing, as well as provide direction, support, and evaluate competence.
4. Develop standardized competency based training for each specialty credential as an enrollment option for centers, with courses delivered through the colleges' specialization (e.g., Phlebotomy, EKG) or provided by HCHD following standardized lesson plans. The mentors/preceptors during on-the-job apprenticeship will verify clinical competencies. Duration of Apprenticeship is 2000 hours, with 144 hours of initial basic nursing assistant training from the community colleges.
5. Establish a HCHD/CAEL site Advisory Committee that will be involved in strategic planning and outreach for the program and in establishing an apprenticeship committee.
6. Develop links with other nursing programs in the Houston Metropolitan area and pursue credits for skills/courses that could apply for those seeking higher education.
7. Implement program in pilot region across Houston and Harris County areas, track enrollment and program status.
8. Utilize the Apprenticeship model as a marketing strategy for establishing partnerships with other healthcare systems, stating, for example, "We provide training and support to our nursing staff in a recognized competency-based model that ensures quality, consistent care to our residents and provides credentials to staff through the U.S. Department of Labor."

•Potential Outcome measurements

- Improve retention rates for CNAs
- Create opportunities for CNAs to move up the career lattice
- Collect and evaluate customer satisfaction surveys (staff/residents)

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Short and Long-Term Solutions to the Critical Nursing Shortage

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***Program Title:* INNOVATION FOR HEALTHCARE WORKFORCE ENHANCEMENT**

Summary: Much has been written relative to the current and pending shortage of skilled healthcare personnel. Like their counterparts in other regions of Texas and the nation, many San Antonio healthcare facilities are experiencing workforce shortages among the nursing and allied health professions.

Over the past year or two, colleges and other educational institutions, workforce, human service and economic development agencies, and employer groups in San Antonio have realized that a regional healthcare workforce partnership has great potential for solving the skilled personnel shortage in the healthcare industry. This paper describes recent efforts by these groups to work in collaboration to support individual advancement and meet employer education and training needs in the healthcare industry.

Four goals are described relative to “short and long-term solutions to the critical nursing shortage.” Methodist Healthcare System and University Health System describe specific and positive outcomes experienced by their hospitals as a result of this collaborative effort.

- Build the Employment Pipeline. Create external partnerships with local Schools of Nursing to increase enrollments and graduates.
- Enhance nursing school curriculums.
- Support employees in their pursuit of the initial RN or advanced RN degrees.
- International Recruitment.

The initial partnership began to expand rapidly in the spring of 2003. To date, funding was secured from healthcare systems, federal and state agencies, and private foundation sources. The partnership grew rapidly to include more education and healthcare institutions and allied health programs. Instructional delivery methods are discussed.

It is anticipated that this partnership will continue to grow at a rapid pace. Thus, a “lessons learned” thus far and a vision for the future are discussed.

The paper concludes that partnerships of colleges and other educational institutions, workforce, human service and economic development agencies, and employer groups working together are worth pursuing. There is tremendous synergy when institutions work together to support individual career advancement and meet employer education and training needs.

How will your model improve outcomes without increasing health care costs?

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This partnership of colleges and other educational institutions, workforce, human service and economic development agencies, and healthcare employer groups in San Antonio have combined resources to leverage external funds for nursing education students.

What process is in place to collect and analyze process and outcome measures?

Accountability is driven by our funding sources: individual healthcare facilities, state and federal agencies, and private foundations.

How can technology be used to enhance the solution?

The partnership utilizes existing Internet courses developed as part of college healthcare instructional programs for customized multi-skill training. Still, need exists to develop additional on-line courses in basic nursing and allied health curriculum where appropriate. For example, great potential exists to offer on-line training of JCAHO and OSHA safety requirements for all health care personnel.

The partnership recognizes the advantages of “blended” instruction that includes traditional, on-line, and teleconference technologies. This approach will better serve rural hospitals, and will also be beneficial to urban area hospitals to enable additional staff training on the hospitals’ campuses.

St. Philip's College utilizes both Laerdahl and METI patient simulators through the Nursing Education Department's Frank Bryant Patient Simulation center. St. Philip's encourages the use of this center by its partner colleges and healthcare facilities.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

Colleges are hampered from expanding their allied health and nursing programs because the State's share of the cost of instruction has been gradually reduced each year for many years.

Accrediting groups and state regulatory agencies need to work with colleges to design career pathways programs designed for adults who work and support families.

What changes in the education process will be required?

Blended instruction that includes traditional, on-line, and teleconference technologies, and ESL instruction must be supported.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

A culturally diverse workplace will greatly enhance culturally sensitive care. The partnership strives to advance employees from the lower tiers of the health careers pathway beyond a "working wage" to the high-skill/high-wage professional ranks.

The following quote from a Methodist Healthcare System scholarship program recipient sums-up our workforce development approach. “I still have not gotten over the excitement of having been selected for the nursing scholarship. I started as a nurse’s aide in 1996. Then I obtained my LVN license in 1997. Now as a registered nurse, I’m better able to help my patients. This is a dream come true.” Claudia, RN.

All four of the colleges of the Alamo Community College District are classed Hispanic Serving Institutions by the U.S.DOE. U.S.DOE classifies St. Philip's as both Hispanic Serving and Historically Black. St. Philip's is the only two-year college in the U.S. to qualify for both classification.

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Title: A MODEL OF COOPERATION: ADVANCING NURSES IN EAST TEXAS (ANET)

Summary: The current national and Texas attrition rate for nursing programs are 40% and 30% respectively. (TNA Fact Sheet 2001, Deans & Directors' Meeting). According to Christine Tanner (2002); the nursing education system, as currently designed, is near capacity for number of students. Consequently Tanner (2002) states that new partnerships among educational institutions for sharing laboratory and faculty resources must be developed to deal with the nursing shortage and to address retention issues. Since enrollment is at its maximum, programs to improve retention at the three schools must be developed in order to increase the number of graduates to meet the demand in East Texas. ANET, an innovative and cooperative project will develop a partnership between Angelina College (AC), Panola College (PC), Stephen F. Austin State University (SFASU) and the Piney Woods Area Health Education Center (AHEC) to develop a retention program (Advancing Nurses in East Texas, A-NET) which will impact up to 180 "at risk students."

At risk students will be identified at each partner school using established criteria. Many studies identify two critical times when students are at most risk of failing or becoming discouraged and dropping out. Those critical times are first semester and the semester including medical-surgical nursing. Students will participate in a series of activities and courses to increase their chance of successful completion of the nursing program. At risk student will participate in on-line pharmacology and health assessment courses with appropriate clinical experiences to lighten the first semester load and provide an appropriate knowledge base. Students with failing or near failing scores will repeat medical-surgical nursing in a cooperative summer class, allowing them to continue nursing school and remain in their cohort group without a lengthy delay.

Factors to be studied include demographic, academic and environmental variables predictive of attrition in ADN and BSN programs; and variables that discriminate between successful and non successful ADN and BSN students in the A-NET retention program.

It is expected that a significant number of students will be retained, increasing the effectiveness of the nursing programs and increasing the qualified employee pool for east Texas.

How will your model improve outcomes without increasing health care costs?

Sharing faculty, facilities and equipment among the three institutions reduces educational costs.

What process is in place to collect and analyze process and outcome measures?

Extensive data will be gathered and analyzed. Data includes student surveys and the SPA, NET and HESI tests. Data will be gathered for each school and compared to each other as a group with the goal of identifying the factors that make students successful in nursing programs.

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How can technology be used to enhance the solution?

At risk students will enroll in web-based courses to lessen the first semester load and allow students to work at their own pace, increasing the chance for mastery.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

A working partnership between the four partners was established well before submitting any proposals. The only concerns, involving reimbursement to faculty, at each school have been solved through the respective business offices.

What changes in the education process will be required?

A strong partnership is the basis for cooperation. Each school is deeply concerned with retention. Jointly, the schools can offer options and programs to students that may not be possible individually. Faculty will share in course development and instruction for all students. Furthermore, in the current economic environment, it is wise to share resources.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

The profiles of BSN students at SFA differ from the profiles of ADN students at Angelina College and Panola College. A shared didactic experience provides the opportunity for increasing all students' awareness of cultural and economic differences.

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Short and Long-Term Solutions to the Critical Nursing Shortage

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Title: A RECRUITMENT PROJECT TO ANNUALLY ADMIT 200 NEW ETHNICALLY DIVERSE NURSING STUDENTS

Summary: Our goal has been accomplished to develop an applicant pool that both reflects the ethnic diversity of our city of Arlington (population in excess of 320,000) and is sufficiently robust to permit admission of 100 freshmen students each fall and spring semester.

Our second objective was to increase knowledge about and interest in nursing among students, ages 13-17, while they are in the process of exploring career options. Four handouts were designed specifically to appeal and inform students ages 13-17. We attended 13 junior high and senior high career day events at schools where student populations were in excess of 500 and always ethnically diverse. In addition to career day events, we applied for and received membership to the Texas Association of Collegiate Registrars and Admissions Officers (TACRAO), the professional educational organization that establishes dates and times of College Day/Night events. During the grant period the University of Texas at Arlington, School of Nursing attended 34 College Day/Night events throughout the Dallas-Fort Worth Metroplex. During College Day/Night events more than 1550 high school students came to the School of Nursing exhibits to inquire about a career in professional nursing.

Our second objective was to establish communication and provide easy access about nursing education to adults within the community and school personnel who assist students with career decisions. We mailed freshmen information packets to 252 high school counselors and health science technology instructors along with an open invitation to contact us to provide speakers or schedule group tours of the School of Nursing facilities. We continue to receive requests for additional packets and have conducted 33 group tours at the UTASON with a total of 402 students in attendance.

Through the process of providing age appropriate information, personal contact, and increased visibility we have seen a substantial increase in not only freshmen applicants but increased interest in all levels of our nursing program. We have demonstrated that interaction with students early during their career decision-making process, combined with access to reliable, entry level information, is essential to young students making informed career choices.

How will your model improve outcomes without increasing health care costs?

Recruitment strategies to enhance ethnic diversity can be incorporated into the current recruitment plans of Schools of Nursing. The following free materials are available to other Schools as an outcome of this project:

- PowerPoint Presentation Educational Options to Become A Nurse
- Frequently Asked Questions and Answer Web page
- Information Brochure for Junior/Senior High School Students “Thinking about Nursing?”
- Freshmen Nursing Majors Elective Class Flyer
- Nursing Quiz

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- Three Nursing courses available to all university students
- Los Suenos Realizan -Videotape to recruit Hispanic students(produced by DrWendy Barr and funded by a THECB grant)
-

What process is in place to collect and analyze process and outcome measures?

Each School of Nursing has a program evaluation process related to Accreditation Standards. The outcomes of the recruitment strategies can be evaluated as a part of this current and on-going process.

How can technology be used to enhance the solution?

The use of computers, videotapes and email can all be used as apart of the communications with potential nursing students and the middle and high school personnel that are the recruitment sites. The Recruitment videotape is available free of charge to individuals and groups.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

The recruitment model does not need additional funds unless the Schools of Nursing do not have adequate personnel to leave their programs and spend time in recruitment activities not only during the day but also on evenings and weekends.

What changes in the education process will be required?

Equally important to the need for enhanced recruitment is the assurance that the qualified students who are recruited have access to entry into a Nursing Program. This means funding for new faculty salaries at sufficient levels to be competitive with other states and additional resources within the school if the numbers of new students are large enough to require additional learning resources and retention services.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

Disparities in health care are at least partly attributable to the cultural "mismatch" between the professionals who provide care and patients they serve. Have a nursing workforce that reflects the cultural background of the patients who are being served is an important goal in Texas. We must especially increase the numbers of African American and Hispanic students who will be future nurses.

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Short and Long-Term Solutions to the Critical Nursing Shortage

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***Title:* RETAINING THE MATURE REGISTERED NURSE IN THE WORKFORCE ON THE TEXAS/MEXICO BORDER**

Summary: In the years ahead, by 2020, the nation faces a shortage of nearly 800,000 registered nurses (Buerhaus, 2003). Today, Texas alone has a shortage of 26,000 nurses. Greatly due to nursing faculty shortages, the supply of new nurse graduates is not keeping pace with large numbers of RN retirements. Migration of RNs out of the border area compounds the problem. From 1996-2001, 258 more RNs migrated out of than came into the border counties. One viable solution to the escalating and critical nursing shortage in Texas is to establish programs to enhance the likelihood that Registered Nurses over age 56 will choose to remain in the nursing workforce instead of retire or migrate. More than 68% of RNs in the U.S. are over age 40 (DHHS, 2000). The average age of intended retirement among this age group or RNs in Texas is 60.8 years. This fact offers Texas a unique opportunity to be among the first states in the nation to boldly affirm this senior group of experienced RNs with distinct work environment improvements that will delay, prevent, or reverse retirement and migration decisions.

The 2002 Texas Registered Nurse (RN) Career Fulfillment Survey (CFS) was administered by the Regional Center for Health Workforce Studies (RCHWS) at the Center for Health Economics and Policy (CHEP), University of Texas Health Science Center at San Antonio. Findings from the CFS revealed that across Texas, 61.8% of RN's age 56 and above are primary wage earners, and 77.6% are employed full-time. On the Texas/Mexico border, even greater percentages of RNs are primary wage earners and working full-time than in non-border regions. This age group indicates intentions regarding future work hours that are of concern. There exists a strong economic need to work among this age group. Economic compensation, however, is not the only driver behind labor force participation decisions, especially for the nurses nearing retirement. Equally important is the nature of the RN's work environment in terms of its physical, mental, and other support for more senior professional nurses.

Strategies that may prevent, delay, or reverse retirement or migration decisions among the RNs age 55 and above include (1) providing greater support for the demands of nursing work, (2) offering health benefits that fully cover chronic health conditions, and (3) funding refresher training for those who have retired to return to the workforce.

How will your model improve outcomes without increasing health care costs?

Implementing strategies to retain the mature nurses in the workforce will actually decrease health care costs. The cost of losing and then replacing one registered nurse is equal to the annual salary of that nurse, or an average of \$45,000. Retaining the registered nurse will prevent this outlay of unnecessary expenditure.

In a review of outcomes of Medicare patients, Aiken (2002) found that every patient added to a medical-surgical nurse's workload after four patients increased the mortality rate by 7%. Retaining the

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nursing workforce will improve the probability that the nurses will have a safe number of patients for whom to care. This will improve outcomes for both nurses and patients.

What process is in place to collect and analyze process and outcome measures?

The biennial Texas RN Career Fulfillment Survey will be administered in 2004 and in even years. The survey contains specific items that will measure the degree to which nurses over age 56 (and in all age groups) are intending to stay in their position, have coverage for chronic health conditions, and find that employers are making changes to support the physical and mental demands involved in nursing work. The Regional Center for Health Workforce Studies at the Center for Health Economics and Policy conducts its own statistical analysis and reporting of this data with the partial support of limited resources made available by HRSA.

How can technology be used to enhance the solution?

Technology plays a pivotal role in supporting the mature, experienced registered nurse with the physical and mental demands of work. One example is the computerized patient record which can prevent medical errors if physician order entry programs are in place. The computer CRTs (screens) themselves often have very small font size, however, which often makes them difficult to read and work with. Providing terminals in the patient's room can greatly reduce the number of steps required to document the patient's clinical condition. This also increases the amount of time the nurse can spend in the patient's room, which is generally a satisfier, in that nurses want to spend more time with patients and less at the central desk. Patient lifts and more spacious rooms will assist and support all nurses with the increasingly obese patient population, laden with increasing numbers and types of equipment (e.g. pumps, monitors, walking aids, respiratory and physical therapy equipment) at the bedside.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

The proposed model to support the mature nurse to delay, prevent, or reverse retirement or migration will not require significant financial measures as much as legislative mandates relating to human resources management at the hospital or health care agency level.

What changes in the education process will be required?

Refresher courses to bring back nurses from retirement should be offered on a regular basis, funded by other than the individual nurse. Registered Nurses highly value and need continuing education, which has unfortunately been cut or reduced in many facilities.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

Mature registered nurses have generally experienced a wide variety of patient care and life experience situations which may prepare them to be role models, teachers, and mentors for culturally sensitive care. Retaining the experienced and senior Registered Nurse in the border health care workforce must be a priority as the Legislature attends to this vulnerable population of citizens.

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Short and Long-Term Solutions to the Critical Nursing Shortage

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***Title:* NURSING SHORTAGE: AGGRESSIVE APPROACH TO AN OLD PROBLEM**

Summary: Nursing shortage has gone from acute to a chronic problem; this can be attributed to several factors. Low public image, poor faculty salaries, and especially, very low presence of minority faculty and students in nursing schools are top on the list. Solution to this disturbing picture calls for a different approach to an old problem. Increasing diversity in our nursing schools, both at the student and Faculty levels will be key to future solutions. Numerous studies have shown that nurses are not necessarily motivated by money, but by knowing that they are respected, valued and appreciated as important members of the healthcare team. Many nurses have left the profession for other less stressful jobs, more prestige, better hours and opportunities for growth. Past efforts to attract nurses have however, focused on offering nurses more money or recruiting from other countries! Time is ripe for a complementary home-grown approach.

Short term strategies: a.) Better pay and incentives for Nursing professors and standard growth ladder for clinical nurses, rather than reactive bonuses b.) Strengthen the undergraduate curriculum by including core business courses to enhance the administrative and financial management skills of nursing graduates. c.) Enlarge class sizes d.) Mount an aggressive public campaign to bolster nursing image and highlight the critical role they play in healthcare. e.) Provide financial incentives to minority students and to institutions committed to minority advancement.

Long Term: a) Good faith effort by nursing schools to increase minority student enrollment, and attract qualified minority faculty. b) Approving and opening more nursing schools c.) Ongoing data gathering, and analysis of the composition of nursing schools enrollees and graduates. d.) Investing in minority faculty to pursue terminal degrees in Nursing and related disciplines. e.) Developing dual-focused "bridge" programs that will enhance the awareness of high school students and kindle their interest in nursing as a career; identify a nurse role model to mentor such students. e.) Forge partnership with school systems and Funding Agencies focused on nursing education and other healthcare disciplines.

These approaches will not only help to combat nursing shortage, but will have a collateral benefit of generating a new crop of nurses who are skilled in providing culturally sensitive and competent care in our ever growing multiracial and multicultural society.

How will your model improve outcomes without increasing health care costs?

Higher pay for faculty will decrease turnover, attract more qualified people into teaching, and ensure quality of nursing education. Creating a career ladder will offer opportunities for growth for clinical nurses. Increasing opportunities for minorities will ensure a more representative workforce. While these may appear costly initially, they will ensure a more diverse and stable workforce. Associated cost may actually be much cheaper than the current cost of recruitment from other countries, overtime costs and Agency related staffing.

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What process is in place to collect and analyze process and outcome measures?

I do not know what process is in existence at this time, but a survey can be conducted to find out what is available and what needs to be developed. Future actions in this direction can be staged through existing nursing schools and the Board of Nursing.

How can technology be used to enhance the solution?

I am not sure that technology will have much role in solving this unique problem. Nursing education needs hands on exposure. While computer assisted education have been known to be valuable at an advanced level, it is important that nursing education at the grassroots level be less dependent on computer assisted learning. Students still need practical experiences.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

There needs to be Legislation that will allow more nursing schools to be opened, enhance nursing image, and mandate increase in enrollment of more minorities in nursing schools and presence of more minority Faculty in schools.

What changes in the education process will be required?

To my knowledge, none will be required in relation to this proposal.

How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

Creating opportunities for more minority students, and investing in minority faculty will certainly enhance delivery of culturally sensitive and competent care. Health disparities have been shown to exist in all aspects of healthcare; including minorities in education, decision-making and equipping them to participate in care, will go a long way toward solving the health disparity problems that have received national attention in recent years.

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Short and Long-Term Solutions to the Critical Nursing Shortage

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Title “JUNTOS PODEMOS” (TOGETHER WE CAN)

Summary: “Juntos Podemos” was created to help minority students be successful in their nursing educational program. “Juntos Podemos” is a mentoring program twice funded by the Texas Higher Education Coordinating Board and presently on second year of a three-funded project from Health Resources and Services Administration. This project is seen as a continuum of caring and called a Protégé-to-Mentor Program. Initially this program was started by 1st semester students being protégés and 2nd semester students being mentors. The concept was that these protégés would be so enthused about being involved in “Juntos Podemos” that when they became 2nd semester students they would continue in a dual role, protégé/mentor, thus a cycle of mentors would be developed. Now in its 4th year of existence, “Juntos Podemos” has grown from 20 to 115 participants. As mentors, participants serve as tutor, counselor, and resource person to their protégé. As protégés, they receive support and learn from their mentors to promote the essentials for success in completing their academic program. “Juntos Podemos” focuses on enhancing self-esteem and confidence, increasing personal satisfaction, leadership and critical thinking skills. Mentors must be passing academically, be multicultural aware, and have a willingness to continue personal and professional growth. Two priorities were identified for this project. First, a Leadership Council, comprised of leaders of agencies whose mission is to serve educationally and/or economically disadvantaged youths, was created with the concept of “community empowerment”, a process involving citizens to improve community health. The Leadership Council actively participates in “Juntos Podemos” and both focus on the Healthy People 2010 goal “to eliminate health disparities among different segments of the population” by increasing the diversity of baccalaureate nurses. The second priority was to include the family in “Juntos Podemos” activities by having education/information sessions with them, family orientation programs, and family dinners. The Leadership Council, “Juntos Podemos”, and Hispanic Faculty Association collaborated to conduct seminar series with families and school counselors addressing issues such as growing health disparities among Hispanics, shortage of Hispanic health professionals, high attrition rate of Hispanic health career students, and lack of tenured faculty in institutions of higher learning.

How will your model improve outcomes without increasing health care costs?

“Juntos Podemos” ultimately will help decrease health care costs by diversifying the nursing workforce. Healthy People 2010 cites two broad goals for the American people: 1) help individuals of all ages increase life expectancy and improve their quality of life; and 2) eliminate health disparities among different segments of the population. “Juntos Podemos” can address both of these national priorities by ensuring the academic success and increasing the retention rate of minority nursing students thus increasing the diversity of nurses who complete baccalaureate education and are prepared to work in rural and/or medically underserved areas and health profession shortage areas. This project also meets one of the goals of the Texas State Health Plan 1999-2004 which is to reduce disparity in health status among all population groups and enhance their access to quality health care by developing a diverse and culturally competent workforce.

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What process is in place to collect and analyze process and outcome measures?

“Juntos Podemos” programmatic aspects are evaluated for consonance between planned goals and actual outcomes, inclusive of student satisfaction (as indicated on formative evaluation tools and by willingness to continue post-graduation as mentors), family satisfaction, student success in the program as measured by GPA, progression, and retention rates, and the conduct of individual exit interviews with students lost to attrition and graduating seniors. Recruitment outcomes are evaluated by counting numbers of agency and individual contacts, and by calculating the ratio of potential and actual applicants. Each community-based agency and hospital contact serves as the level of evaluation for satisfaction with students. The number of graduates that are employed in medically underserved areas and health profession shortage areas are also evaluated. Project success is also measured by looking at the number of protégés and mentors who are academically successful; number of previous protégés who become mentors; number of participants who attend required meetings and who attend community-based activities.

How can technology be used to enhance the solution?

To increase the success and retention of minority students, “Juntos Podemos” faculty developed an innovative enrichment program which was also funded. This project is developing and providing supplemental web-based activities inclusive of interactive videos to increase self-confidence, self-esteem, self-efficacy, and critical thinking skills. Customized software that is culturally sensitive continues to be developed. Web-enhanced and interactive video tutorials related to critical thinking, study skills, conflict resolution, time management, and test-taking strategies are being developed and made available on CD-ROMs. The interactive videos, which will be web-based, will present case studies and scenarios with a critical thinking quiz for each one. A chat room will be in place for mentors, protégés, and faculty to engage in conversations. This will provide a forum for peer interaction and shared support. One way of measuring the success of this program will be using the Holistic Critical Thinking Scoring Rubric as a pre-/post-assessment tool to determine if students attained/increased critical thinking skills. Further measurements will be the number of protégés and mentors who utilize computer, CD-ROMs, and internet and the number of protégés and mentors who are academically successful.

What legislative/regulatory/reimbursement issues will need to be addressed to implement your proposed model?

The only reimbursement issue that needs to be addressed with “Juntos Podemos” is that many of the activities for this project are around meal times and/or providing snacks. It would benefit programs such as “Juntos Podemos” to change regulations regarding reimbursement for food since presently neither Federal nor State monies allow this. Also, it would help if the legislators would provide money to higher institutions that have this type of program, in particular if the institution is helping meet needs of disadvantaged students.

What changes in the education process will be required?

Educational institutions need to recognize that tradition learning environments do not work for most non-traditional students. More money needs to be allocated to specific retention programs for higher education. Faculty that are involved in retention programs/projects need to have less teaching responsibilities than those faculty who are not involved in such projects. Administrators need to recognize the importance of retention programs if disadvantaged and/or non-traditional students are to be academically successful.

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How will your model increase diversity in the workplace and improve the delivery of culturally sensitive care?

“Juntos Podemos” increases the number of baccalaureate prepared minority nurses who will practice in medically underserved areas and health profession shortage areas of Texas. This project diversifies undergraduate enrollment and retains culturally diverse nursing students who are from educationally and/or economically disadvantaged backgrounds through pre-entry (recruitment), retention, and work placement or employment programs. This project has prepared more culturally competent nurses by developing and implementing a course titled “Cultural Aspects of Nursing” which is theoretically and clinically based. This course is in its second year. Furthermore, one of the main focuses of “Juntos Podemos” is to address cultural competence in the nursing curriculum and to assist in the recruitment and retention of both minority students and faculty. Since the inception of “Juntos Podemos”, the retention rate of minority students has increased thus there is a more diversified student graduating who will ultimately become a registered nurse.

Appendix B

PRIMARY CARE MODELS WHITE PAPERS



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Innovative Primary Care Models to Improve Access and Outcomes

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***Title:* GALVESTON COMMUNITY HEALTH ACCESS PROGRAM**

Summary:

Historically, the University of Texas Medical Branch at Galveston (UTMB) has served indigent Galveston County residents for health care needs. As the federal funds to offer free services have been reduced, the importance for these residents to become established in a medical home at the local Federally Qualified Health Center (FQHC) or Health District has emerged. Galveston Health Care Access Program (CHAP), formerly Galveston Community Access Program, was funded for the purpose of facilitating access to and demonstrating adherence to treatment in a medical home.

Our CHAP program proposed to integrate a cooperative health and social services multidisciplinary model. One element of the approach includes case-management for more appropriate medical care access and better disease management. This is a system reengineering between two hospital Emergency Departments and the county FQHC for the case management and direct referral of clients out of the ER system and into a medical home. FQHC case management follows up getting clients enrolled in the clinic and for other eligible programs including pharmacy assistance. Clinical case management is also a part of mental health management and a comprehensive diabetes education program. The development of a self-care education program for people with diabetes includes a culturally sensitive curriculum and Action Plan that can be delivered at the health district or in a variety of community settings using community health workers and other lay or retired health professionals. The East Texas Area Health Education Center (AHEC) works with the training and deployment of community health workers.

CHAP has worked with the Gulf Coast Center to provide transportation services to clinic appointments. CHAP has supported the expansion of an Information System (Web Care) to track the delivery of social services to homeless and others in need. Used primarily by the Jesse Tree, training on the use of the system has been done to increase use by other services.

Our Model relies on the use of a Stakeholder group who meets twice a year in a retreat format and the reliance on a Planning Group that meets bi-monthly. The 3rd year effort has been the development of Task Forces to continue communication for Programs and support sustainability. Programs have been developed and evaluation systems are being implemented.

How will your model improve outcomes without increasing health care cost?

- 24/7 health care triage (Hotline)
- Increase ID of eligible patients
- Increase early intervention
- Reduce ER, pharmacy utilization and cost
- Reduce duplication of services
- Increase use of disease management guidelines
- Increase use of community resources

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- Increase use of community health workers
- Increase use of community education
- Increase use of preventive programs

Several best practices emerged to improve service and contain costs.

- First, a case management program was established in the two county Emergency Rooms (Mainland Medical Center (MMC) and UTMB) to screen and refer individuals and families eligible for enrollment into the County FQHC. MMC hired a full time case manager yet this cost was offset by the immediate savings appreciated by reducing ER visits. MMC has expanded this program by incorporating a mental health case manager and offering free space in their hospital for a resource coordinator from the Jesse Tree, Inc., a social support organization making the approach to care holistic. UTMB followed by dedicating a part-nurse to this duty and has since elevated this position to a full time social worker.
- Second, an Information System software program, Web Care, was greatly enhanced. Used primarily by the JesseTree (JT), the coordination and tracking of social services by resource coordinators is now documented by the JT and hopefully other organizations will join this network. JT has worked to leverage faith based funding for client needs.
- Third, a comprehensive education program for diabetics is in place to reduce the cost of diabetic care. The creation of a culturally and literacy appropriate curriculum that uses an action plan to develop self-care skills was developed and translated into Spanish. Now in modular format, community health workers and others can use the material in community settings for free. Clients in the program have increased compliance with appointment keeping for routine eye and foot checks and forced the CAP Coalition to find test strips at an affordable cost.
- Hiring a CAP case manager for mental health clients at the Health District has been a necessary expense due to the overwhelming number of clients presenting in the ERs with serious problems. Due to the lack of treatment programs, this program may reduce cost by helping clients work on ways to reduce ER visits.

What process is in place to collect and analyze process and outcome measures?

Web care, a software produce of the Jesse Tree, tracks the quantity of social services delivered by resource coordinators at the Jesse Tree. Increased use of Web Care by other agencies could help improve our knowledge of the depth and range of services offered.

- The Hospitals and the FQHC currently track the number of individuals identified and referred to the Health District for enrollment into primary care. Hospitals track the number of indigents seen and the number referred to the case manager from the financial screeners. Hospital case managers track the number of referrals to 4C's. Case managers also track the number of times the client may show back up in the ER. The 4Cs clinic tracks the number of phone calls needed to reach clients referred and number of follow-up appointments at 4C's. The system has not begun to track health outcomes for these individuals but will have that capacity.
- The Health district also screens clients and tracks enrollment into other programs such as CHIP, Qualified Medical Benefits (QMB) and pharmacy assistance programs.
- The health district enrolls clients into Diabetes Education and tracks attendance. They are now including 3 levels of evaluation for Diabetes Education: clinical (monitoring of HA1C, frequency of visits for eye, foot and other routine exams) patient satisfaction and collaboration. This third level of evaluation is process evaluation looking at the strength of the social network agencies aiding people with diabetes.

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- AHEC works with the Health District to coordinate community based education and reports the activity of training and deploying Community health workers in this area.
- Current monitoring of the CHAP website give us a hit count of the number of authorized personnel who access the Health District formulary and Disease Management guidelines for the treatment of Diabetes.
- The Health Care Hotline reports the number and type of calls received daily.
- Aside from the bimonthly CAP meetings, several Task Forces have formed to discuss the process for different programs.
- These measures are currently reported to the CAP PI and reported to HRSA as part of the grant evaluation -in this third year of the grant, each entity has assumed the responsibility of collecting and sharing data from their programs to the Coalition.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

Yes. The Multidisciplinary Model stresses the use of disease management guidelines, a formulary and self-care. This model emphasizing a holistic approach with medical and mental health services delivered in FQHC.

How will this model be used to create a "wellness model" rather than an "illness model"?

- By creating a health care delivery system change that facilitates the focus of health care delivery from the ER to the Health District, primary care in a medical home is emphasized.
- Enrollment into a Diabetic Education class that uses a self-management approach to lifestyle change is supported (nutrition classes)
- Community health workers are currently active in area public schools that have greater than 56% of children on federally subsidized school lunches with oral health classes and materials.
- AHEC smoking cessation classes, increased community walking (exercise) programs
- Community health awareness about risk factors

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

Will recognize collaboration with multidisciplinary teams

- Will need workforce willing and able to use available and new technologies (smart cards, palm pilots, electronic medical records and other data collection applications (Clin Web and Web Care)
- Integrated delivery system requires doctors, advanced practitioners (nursing and physician assistants, health educators, case managers, lay health workers

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

- Community health workers, educators and volunteers are from the ranks of the populations we are reaching
- Leverage resources from faith based organizations

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How will your model improve the culturally sensitive delivery of health care?

- Cultural competence and linguistic appropriateness are fundamental to the programs and are emphasized through training and educational programs
- Care delivery and educational programs targeting Hispanics

How will your model improve health disparities and access to care?

- Improvement of access includes programs designed to reduce barriers to care, such as transportation systems, language, and eligibility for services, use of community based resources and care coordination and follow-up involving a focus on establishing a medical home.
- Health disparity reduction is targeted to education of specific at risk populations and increase awareness of issues among health professionals.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Web based systems improve tracking of patients and sharing information within the system.

- Use of Telehealth improves access among at risk populations to specialty care
- 24/7 phone service provides appropriate triage of patients and caregivers to right point of care and disease information.
- Web site provides navigation system for patients seeking health care resources. Site offers access for health professionals and caregivers to formularies, disease management guidelines and community resources.

What are the barriers to implementing your model?

- Like all systems, sustainable funding is an ever-present issue
- The slowness and resistance in system change
- Training and education

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

- Medicaid, CHIP and County contract reimbursement for indigent health care
- Expansion of care for families of eligible clients
- Specific funding to sustain prevention and education programs
- Funding of care management and resource coordination programs including Telehealth

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Innovative Primary Care Models to Improve Access and Outcomes

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***Title:* ROCKWALL AREA HEALTHCARE GENERAL CLINIC**

Summary: The Rockwall Area Healthcare, General Clinic was established to assure that the chronically ill and acutely ill uninsured, lower income residents of Rockwall County had a safety net. Income guidelines for care are set by the 200% of Federal poverty guideline amount. Each person presenting for care is assessed using a tool and accepted for care, whether or not they can pay the minimum care fee at the time of service.

The umbrella organization of social services is Rockwall County Helping Hands. This organization refers the clients to the clinic and in some cases, depending on need, underwrites the office visit. Patients are asked to pay what they are able to pay and to make payments if they cannot pay.

Services are provided by volunteer medical doctors and contract advanced practice nurses. Lab services are provided at Clinic cost. Ancillary personnel are paid by the Non-profit Clinic through funds privately raised and donated. Many medication samples are donated and other long term prescription needs are referred to an assistance program (also housed in the Clinic.)

Clinic hours are Monday through Thursday from 5PM to 6PM by appointment. Volunteer doctor clinics are held three mornings each month. The clinic is housed in an existing clinic facility that is used for Title V and Title XX services and for Texas Vaccines for Children. Because these services end at 5pm, the general clinic can be held in the same space, with the same ancillary staff. Because the clinic hours are long, the clinic is open only four afternoons a week with Friday off. The volunteer doctor clinics are scheduled around the Titled Program Clinic hours.

Contract employee salaries and supplies are paid for with the fees collected and many community donations (exam tables, lamps, dressing supplies, syringes)are used.

How will your model improve outcomes without increasing health care cost?

The acutely ill are treated at a minimum cost prior to exacerbation of the illness requiring hospital care. Preventive health teaching is incorporated into each visit. Chronically ill persons are assisted with medication preventing exacerbation of their conditions and do not require hospital care.

What process is in place to collect and analyze process and outcome measures?

A quality assurance document tracks the request for care, the date of service and outcomes are measured by return visit assessments.

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Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

Yes.

How will this model be used to create a "wellness model" rather than an "illness model"?

By incorporating health and wellness teaching with each patient encounter. By encouraging patients to maintain health.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

Volunteer medical doctors will be needed to expand service hours. It would be possible to keep a doctor occupied every morning of the week. For now, our growth is limited by the clinician availability.

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

The community will continue to support the Clinic financially, by volunteering to work in the Clinic and by participating in Board of Director oversight.

How will your model improve the culturally sensitive delivery of health care?

Interpreters are used for all non English speaking clients seeking care. No patient is turned away due to ethnicity or racial background.

How will your model improve health disparities and access to care?

Yes, by providing a low cost home for acute and chronically ill persons who have not had access to care.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Electronic medical records would reduce the time spent by Clinicians on records and allow more persons to be seen. Software for the Patient Medication Assistance piece would enhance service delivery.

What are the barriers to implementing your model?

We need more volunteer medical doctors. We need a stronger financial cushion.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

If we expand to accept Medicare patients, our facility will have to be modified to pass the requirements for Medicare providers.

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Innovative Primary Care Models to Improve Access and Outcomes

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***Title:* PEER REVIEW PROGRAM FOR SMALL RURAL HOSPITALS**

Summary: The Rural and Community Health Institute (RCHI) recognizes the need to support the peer review process for rural hospitals in the state of Texas. Rural hospitals, especially hospitals with less than 100 beds, have limited numbers of specialty physicians on staff, and the hospital peer review process may be complicated by conflict of interest, lack of internal expertise, issues related to utilization of new technology, confusion if peer review committee members come to conflicting recommendations, and need of an expert opinion in cases of potential malpractice suit. RCHI offers an effective, economical, and reliable option for rural medical staffs to objectively evaluate the quality and appropriateness of patient care.

The peer review program is administered by RCHI and the process is internal in nature since all peer reviewers are staff of the participating hospitals. The process provides for objective and impartial peer review from reviewers that are not in direct competition with the reviewed physician, have expertise in the same specialty and are practicing under the same or similar circumstances in rural hospitals. RCHI also offers participating hospitals the service of medical documentation review for physicians who do not have problematic cases. Reviewing a certain number of cases per physician annually allows developing of “profile reports” per physician and assists hospitals in physician recredentialling. The Peer Review program also includes criteria to identify safety system issues. By considering all variables that may have impacted the outcome of a case, the RCHI process is seen as non-punitive and promoting systems thinking and learning.

Through its Peer Review Program for Small Rural Hospitals RCHI promotes the incorporation of quality improvement methods and approaches into peer review; provides objective and impartial reviews; assists rural hospital staffs in meeting the increasing and dynamic requirements of care review and fulfilling their legal obligation to provide quality care to patients; disseminates information regarding peer review standards, criteria and practices; and fosters improvement in quality of care.

RCHI’s Peer Review program is in compliance with HIPAA regulations and ensures protections afforded by peer review statutes. Longitudinal results of the peer review program for rural hospitals will provide basis for trending of entities and individual providers, as well as data in support of legislative recommendations.

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How will your model improve outcomes without increasing health care cost?

Our model utilizes resources already allocated to peer review within healthcare organizations. Our services include activities such as but not limited to managing peer review committees consisting of physicians with like specialties from different rural hospitals, preparation of reports to peer review committee members and final reports to participating facilities, committee agendas, outcome measurement, providing clinical guidelines, and promoting of quality improvement methodology for healthcare improvement.

What process is in place to collect and analyze process and outcome measures?

RCHI is developing a database to collect, analyze and report on disease specific outcomes of care. Additionally, RCHI provides analysis of peer review outcomes for trending the clinical performance of individual physicians and facilities.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

Our peer review model utilizes evidence-based medicine practice models. For each case reviewed, best practices and clinical guidelines are provided to the peer review committees to support their decision process.

How will this model be used to create a "wellness model" rather than an "illness model"?

By regularly providing physician committee members with clinical protocols and best practices, we expect that over time, as these best practices are followed, we will shift from acute care to prevention healthcare model.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

Our program targets physicians' peer review and our model ensures a shift of the paradigm from a punitive method of evaluating peers to a proactive quality-based approach.

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

N/A

How will your model improve the culturally sensitive delivery of health care?

Our process is focused on physicians. Should there be a cultural bias on part of a reviewer, the blinding of the medical record prevents it. The blinding of records submitted for review includes blinding of patient identifiable information, physician, facility and other healthcare professionals identifiable information.

How will your model improve health disparities and access to care?

Our peer review model identifies whether the appropriate care was provided at the appropriate time and level.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Technology is a key foundation to our model, allowing cost-effective, timely and secure transfer of information between rural hospitals, some of which are more than 100 miles apart.

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What are the barriers to implementing your model?

The key barrier is working with physicians to ensure their buy-in into a non-traditional model of peer review.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

No additional regulatory, legislative or reimbursement issues are required to implement or expand our peer review model. However, we must be very cognizant not to violate peer review protections.

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Innovative Primary Care Models to Improve Access and Outcomes

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Title: COMMUNITY ACCESS PROGRAM

Summary: The STN Community Access Program is a collaborative effort of roughly 100 regional health care and service providers, local government, education, ministerial, civic and community organizations and individuals. We serve ten Southwestern and South Central Texas counties: Atascosa, Bexar, Dimmit, Edwards, Kinney, Maverick, Real, Uvalde, Val Verde, and Zavala. The geographic area consists of 14,679 square land miles and is based in the HRSA designated U.S.-Mexico Border Health Region. Together, we work in diverse groups toward the common goal of improving mental and medical health care access throughout our service area.

STNcap has eight major objectives for addressing the needs of target uninsured and underinsured persons. These persons are under 65 years of age and represent roughly 26 % of the total population (1,448,407 persons). The objectives are:

1. Integrate mental health services into primary care as a means to improve access, quality, and cost of care.
 - a. Community Health Center Model
2. Improve awareness and access to available medical, mental and oral health services.
 - a. HealthyMindConnection.org
 - b. TIRN
3. Improve transportation for medical, mental and oral health services.
 - a. Matching funds for van purchases
4. Develop a regional database, FQHC-based practice management system, and data repository.
 - a. Software purchases
5. Assist in the recruitment and retention of service gap providers.
 - a. Primary care providers
 - b. Mental health providers
6. Enhance clinical development and community education
 - a. ASIST suicide prevention training
 - b. Cultural sensitivity training
 - c. Coding training
 - d. HIPAA training
 - e. Privacy and security assessments
7. Increase the availability of pro bono mental health services; provide manned referral lines to enhance access

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- a. Clinic Without Walls Project
 - c. Referral lines
8. Provide application and renewal assistance for Children’s Health Insurance (CHIP) and Medicaid appropriate children.
- a. CHIP education and assistance

The goals and objectives of the consortium are centered on helping our communities overcome the stigma of mental illness, improving community awareness of treatment choices, helping community partners address mental health and family medicine shortages, facilitating entry into treatment, and making strides to reduce some of the financial barriers to treatment. Key programs and activities:

HealthyMindConnection.org:

In partnership with the Mental Health Association in Greater San Antonio, an interactive website has been developed to provide online referral and information access for professionals and the general public.

Developed to ease the frustration and difficulty of searching for psychiatrists, psychologists, behavioral health services, psychotherapy, and support groups, users can use the site's database to locate mental health providers in 10 counties. Similar to physician referral models, users complete an online preference questionnaire that helps match them to select service providers. Users may also query the database by personal preferences for gender, city or county location, language spoken, cultural expertise, service need, and the provider's willingness to accept sliding fees or health plan reimbursement. Approximately 600 therapists are listed on the site.

Persons anticipating the need for mental health services use the website to access self-assessment questions and guidelines that help them find services that fit their needs. They can also find practical information about how to select a mental health professional, the types of treatment available in their area, regional pricing for therapy, guides for assessing the service quality of mental health professionals, how to participate in self-help groups, and how to file a complaint when there is suspicion of wrongdoing. There are links to over 35 mental health Internet sites to assist with additional questions or topics not otherwise covered on the website.

A unique feature of this website is its use of a business model for self-financing beyond grant support. The website charges mental health providers to list on the website and proceeds from these listings, banner ads and other listings are used to perpetuate and improve the project.

Pro Bono Mental Health "Clinic Without Walls"

Again partnering with the Mental Health Association in Greater San Antonio and dozens of professional and community partners, the STNcap collaborative has enlisted pro bono services of mental health providers to provide no-fee services to low income persons without access to mental health services, specifically:

- Low Income Without Access to Services
- Families without abuse issues
- Working poor parents
- People not receiving services through any other provider
- People with incomes at or below 200% of poverty level

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People ineligible for other mental health benefits
Women 21 years old and older

People With Issues Responsive to Brief Therapy
Adults with depressive issues
Adults with anxiety disorder
Adults with anger issues (without violence)
Non-chronic/non-severe mental disorders
Victims of domestic abuse
Persons with willingness to be treated
Adults with adjustment issues or life stress
Recent single parents
Groups (bereavement/loss, parenting issues, divorce)

The Clinic Without Walls project provides gap services. Perhaps more intensely than other areas of health and medicine, mental health is hampered by disparities in the availability of and access to its services. These disparities can be viewed in terms of racial and cultural diversity, age, and/or gender. But the key disparity common to all groups of persons is financial status. Financial barriers block needed mental health care from far too many people--whether they are persons that have health insurance with inadequate mental health benefits, or they are one of the 41.2 million Americans who lack any mental health insurance coverage.

Specific client populations were chosen for this project because there are public mental health entities organized and receiving local, state and/or federal funds to provide mental health services. These agencies provide various pieces of the service continuum for our project area and have a coordinating body and oversight boards to see that services are provided on contract. Because there is simply not enough money to meet the needs of all persons, the most ill are served first and we have programs in place that are designed with the needs of these patients in mind. Unfortunately, persons who are experiencing short term difficulties or have not been diagnosed at a level that qualifies as a "priority" are pushed far down on the waiting list of publicly funded agencies or never make the list.

We know that four out of five uninsured persons are in working families with a full-time worker or part-time worker. Low-wage workers are at greater risk of being uninsured, as are unskilled laborers, service workers, and those employed in small businesses--the bulk of our regional population. There are disproportionately more adults than children among the uninsured, as coverage for Medicaid and CHIP primarily assist children. Therefore, the Clinic Without Walls project best serves low-income adults who run the highest risk of being uninsured, are less likely than all other groups to have other resources to obtain services, and are responsive to brief therapy.

The Clinic Without Walls project is for persons more likely to respond to brief therapy because we have a mechanism in place to refer persons with very serious, disabling, and chronic conditions or illnesses to other providers. Pro Bono providers are volunteers who give of their time and services and it is not the intention of this program to ask them to provide treatment for clients who need long-term care that is currently available throughout the communities by other established resources.

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Services Provided:

- Recruit and coordinate volunteer provider pool
- Client intake, information line and referral service
- Clinic site coordination
- Screening clients for eligibility
- Matching clients with providers; scheduling
- Maintain, store and secure access to client charts
- Provide medication access
- Data collection and management

The Community Health Center Model for Mental Health Delivery is currently in its initial stages of development and will be made available post implementation.

How will your model improve outcomes without increasing health care cost?

Service integration is an especially important strategy for our rural areas. There is limited availability and accessibility to mental health and specialty services. In polling our partners we realized that the rural areas lack specialty and mental health professionals. Physical distance and lack of public transportation presented barriers to care even when resources are available; particularly urban resources. Many residents of rural areas are unwilling to access mental health treatment services because of the stigma and concerns about confidentiality. Lacking sufficient financial resources to produce new services, we developed a form of service integration to assure access to services that are currently available and we are in the process of developing community health center-based services, particularly mental health services, to assure access to these services in an environment that is currently known and trusted by residents.

Our model improves outcomes by creating working partnerships with healthcare centers, community organizations, and federal/private funding sources. Direct costs to uninsured persons has been augmented through sliding fee scales provided by community health centers and pro bono mental health services through the Clinic Without Walls project. OB and Family Practice providers have been successfully recruited for the community health centers, adding accessible providers and services. Additionally, mental health providers have been recruited to develop and implement our community health center mental health model.

Referral line services have strengthened the communication lines between established providers. Each of the community health centers and the Mental Health Association in Greater San Antonio now operate full service referral lines for primary and mental health services.

Transportation issues have been addressed by providing matching funds to the Community Council of South West Texas and Atascosa Health Center. By providing matching funds these community partners were able to purchase 6 transport vehicles to provide additional routes and services at no additional cost to consumers.

What process is in place to collect and analyze process and outcome measures?

The networked practice management system was purchased in year one and has steadily improved the billing and information capture at two of the FQHCs. Reporting formats are being standardized for all 3 FQHCs to facilitate operational management, patient accounting and new program development. Shared information technology services, particularly those of the CIO have helped the two rural centers access a level of expertise that was not otherwise financially feasible for their

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operations. Implementation of the practice management system has increased staff awareness of internal practices, the failure of inaccuracy, and the vital need for consistent data. By taking a long, hard look at how data is gathered and stored, and ultimately discovering why it must be recorded and reported in a systematic and consistent manner, this allowed staff to identify inadequate practices, makes changes and improve their functional skills and operational contributions.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

This segment of the model is currently being addressed through trials with the community health center-based mental health program and through the Pro Bono Clinic Without Walls project.

How will this model be used to create a "wellness model" rather than an "illness model"?

The objective of this model of integration is to provide a comprehensive spectrum of mental and medical health care services. The model is founded on community health center and public health models that emphasize wellness, health education and prevention. The approach is proactive versus reactive and is designed as an ongoing project to fully integrate local primary and mental health services.

Using the public health model, major elements include:

- Early detection and assessment
- Prompt and effective treatment
- Prevention measures
- Comprehensive health education

These elements form the basis for community health center service delivery, referral practices to primary and specialty providers, and coordination of services and education through outreach activities, education, web-education and clinical development activities.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

High demand is recognized for the following:

Obstetricians	Psychologists	ACP
Pediatricians	LMSW	
Psychiatrists	LPC	

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?) N/A

How will your model improve the culturally sensitive delivery of health care?

Training and education offerings are underway, beginning with 5 Cultural Sensitivity Training sessions throughout the service area. These training sessions have been contracted with the Center for Health Policy Development.

How will your model improve health disparities and access to care?

The outcomes of integrating primary care and mental health services address access, quality and cost of care provision. By creating a formal, coordinated system of health and mental health delivery, integration has the potential to increase access to health care for those who need it, improve care quality, and provide a more cost-effective use of

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available services while new services and service providers are being introduced into the communities.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

The impact on service delivery is being tracked through a practice management system. The system is in need of sufficient upgrades to incorporate mental health services into the primary setting. Technological access to continuing medical education and provider training would be an asset for the model.

Another area for consideration is telemedicine. The use of interactive video has the potential to bridge the gap between primary care physicians and urban specialists. Similar linkage between rural physicians and urban-based mental health specialists could considerably improve access to urban-based consultation. This technology would allow primary care consultation while developing professional relationships.

What are the barriers to implementing your model?

The geographic barriers are great and could be easily overcome by breaking into smaller county groups of 3-5 rural counties versus the 9 in our collaborative. Smaller groups would allow a more focused, individualized approach to integration.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

Expanded Medicaid and Childrens Health Insurance coverage will be required to expand the mode.

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Innovative Primary Care Models to Improve Access and Outcomes

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***Title:* The School Dental Hygienist**

Summary: The profession of dental hygiene was envisioned by Dr. Alfred C. Fones, the Founder of Dental Hygiene, as a distinct profession positioned in dental public health versus working solely in private dental practices. The purpose was to provide oral health education and preventive services to school children. Dr. Fones created the first school of dental hygiene in Connecticut in 1913. In 1914 he began a demonstration program to have dental hygienists provide educational services and preventive treatment in the Connecticut public schools, which successfully reduced oral disease rates of these children. The model suggested for Texas is this original model. Unsupervised public health dental hygienists practicing in schools can provide ongoing oral health education, oral prophylaxis (teeth cleaning), fluoride treatments, fluoride varnish, dental sealants, screening for oral disease, and referral for dental treatment. The safety and efficacy of such a program has been demonstrated with the original model that Dr. Fones created as well as with several programs in the U.S. where dental hygienists are able to establish independent or collaborative practices to provide preventive care for the untreated low-income children and establish referral programs for children who would not otherwise seek dental treatment. The funding for these programs comes from the ability of dental hygienists to file for Medicaid and other insurance to support the program. Referral relationships are established between the dental hygienist and dentists in order to provide diagnosis of disease and continuing care. Such a program would require a change of law and regulations. First, the supervision requirement would need to be changed to allow the dental hygienist in such a setting to practice unsupervised by the dentist. Second, the dental hygienist would need to be able to file for Medicaid and other insurance in order to generate funding for the program.

How will your model improve outcomes without increasing health care cost?

The children who need preventive care the most would benefit from it. Research demonstrates that provision of cleaning, fluoride, sealants, and classroom oral health education, in combination, reduces disease in a population. Low-income children do not have access to preventive care because of cost barriers. This program would bring preventive care to those who need it the most. The program can be paid for with Medicaid dollars and other insurance benefits that are now being used for more expensive examinations and treatment provided by dentists in private practice.

What process is in place to collect and analyze process and outcome measures?

The program itself would provide the process to collect and analyze outcome measures. Children would be screened annually to document lower disease rates, and number of children treated with fluoride varnish and sealants would be tracked.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

Yes. It is based on evidence-based practice for dentistry and dental hygiene and public health literature on school dental health programs. Oral health instruction in the classrooms provides the instruction and reinforcement necessary to motivate and reinforce appropriate self-care. Numerous

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studies have demonstrated that dental sealants, fluorides, and fluoride varnish prevent dental caries, and these treatments in combination provide greater benefits.

How will this model be used to create a "wellness model" rather than an "illness model"?

The program would emphasize the prevention of oral disease and referral for early treatment of disease to prevent more severe disease and loss of teeth.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

The model would utilize dental hygienists who are already in the work force. The state has an adequate number of dental hygiene programs to provide the work force. The excessive need for restorative services in the underserved community would be lessened and therefore ameliorate the problem of a shortage of dentists to treat these children.

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

The community is utilized by placing the program in the public schools. Public school personnel would become aware of the need and be a part of encouraging and reinforcing good preventive oral care. Involvement of parent/teacher organization and other community leaders would help to empower the community.

How will your model improve the culturally sensitive delivery of health care?

All cultures are represented in the public schools. All children, regardless of cultural background, would benefit from the program. Lower SES is more prevalent among minority groups, and these children would benefit the most from this model.

How will your model improve health disparities and access to care?

All children will have equal access to preventive care to improve oral health disparities among children. The population that needs care the most, the lower SES children, would benefit the most.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

The model includes the placement of dental sealants and fluoride varnish, which reflect current technology.

What are the barriers to implementing your model?

Current supervision laws limit the ability of dental hygienists to provide preventive care for the population who do not visit the dentist. Current law does not allow a dental hygienist to be employed by a school district to provide clinical preventive services. In addition, administrative code prevents dental hygienists from being awarded Medicaid "provider" status and from being reimbursed by other insurance programs.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

Changes in supervision laws and reimbursement regulations for dental hygienists will be required to be able to implement the model.

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Innovative Primary Care Models to Improve Access and Outcomes

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Title: Health Promotion Specialists: School Based Oral Health Program

Summary: Mission Statement: To insure every child has the right to total health through oral health by access to quality, caring, preventive services regardless of socioeconomic status.

Advantages of HPS Public/Private Partnership: Nondiscriminatory, offer services to all children with a parent/guardian permission, little to no cost to state depending on program i.e. Connecticut/ South Carolina models.

Why school based? You can't teach a child that isn't healthy, no transportation problems, existing relationship with the school creates less anxiety, less classroom time is missed, and earlier intervention.

HPS program emphasis is access to care and prevention. Early treatment, pain prevention, maintaining optimal oral health reduces need for costly treatment.

HPS core competencies: Access, Educate, Provide, Manage, And Measure.

Program Components:

1. Research: Oral Health assessment, data collection i.e. K, 3rd, 7th grades, system to record data such as medical history, how many seen, types of procedures performed
2. Prevention: Dental Health Education and Promotion, Tobacco Intervention and Cessation Education, X-rays, Prophylaxis, Fluoride, and Sealants
3. Restoration: Referral coordination, Mobile Dental van

HPS in South Carolina has screened over 33,000 children; over 28,000 children have received preventive services (cleanings, sealants and fluoride). Children have had their pain alleviated and oral health awareness has been increased for both children and parents. Consent forms are sent home to parents using second grade reading level, no treatment is performed without consent. Consent forms are valid for the entire time child is in school. Letters of referral goes with each child with lists of dentists (and those that are Medicaid providers) to refer. The HPS does not replace the restorative care a DDS provides, but statistics have shown with early intervention, less restorative care is needed.

Models that are proven: Connecticut has had a program in place since 1910; both dentists and dental hygienists are providers. The program is school based with clinics in the school or utilizing mobile vans. They are self-sufficient in that they run completely off reimbursement from Medicaid, HUSKY, and private insurance along with grants to cover the uninsured. South Carolina is independent of the school where as the HPS are responsible for all facets of the program.

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How will your model improve outcomes without increasing health care cost?

Depending on the program model chosen, South Carolina would be more independent than the Connecticut model. The Connecticut model the RDH is the provider and an employee of the school, and the school receives reimbursement of services. The South Carolina model allows for the provider (RDH) to be reimbursed directly.

What process is in place to collect and analyze process and outcome measures?

A computer program would need to be utilized to collect the data and to do analysis. Dental record would be kept on each child seen and data entered into the program as to procedures provided.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

The following are accreditation standards for all accredited hygiene programs:

- Standard 2-18 Graduates must be competent in providing dental hygiene care for the child, adolescent, adult, geriatric and medically compromised patient.
- Standard 2-19 Graduates must be competent in providing the dental hygiene process of care, which includes:
 - •Assessment
 - •Planning
 - •Dental hygiene diagnosis
 - •Dental hygiene treatment plan
 - •Implementation
 - •Evaluation
 - •Subsequent treatment needs
 - •Continuing care
 - •Referral
 - •Standard 2-22 Graduates must be competent in assessing, planning, implementing and evaluating community-based oral health programs, including health promotion and disease prevention.

How will this model be used to create a "wellness model" rather than an "illness model"?

This model emphasizes the need for early intervention; more costly services as well as needless pain, suffering, and lost school days could be avoided with patient education and preventive care.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

With the growing population of RDH's in the field, they are an under utilized workforce that would be utilized to their fullest potential. Better utilization of the RDH as demonstrated in these models could address or reduce the growing need for dental care that is not expected to be met by projections of the current methods. This would allow hygienists' to stay in the field because the hours would correspond with their children's school hours. Dental assistants would be utilized as well in record keeping and insurance filing.

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How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

Parents would be encouraged to visit the HPS during their child's visit. RDH's are the only licensed professional that can perform prophylaxis besides DDS, at this time no extenders would be trained.

How will your model improve the culturally sensitive delivery of health care?

There would be no cultural boundaries; all children would be welcome to utilize services. Accreditation standards for dental hygiene programs include Standard 2-21 Graduates must be competent in interpersonal and communication skills to effectively interact with diverse population groups. Forms will be in second grade reading level and in languages pertinent for the areas.

How will your model improve health disparities and access to care?

All children will be eligible, most programs start where the free lunch programs are the highest, these children are most likely to be on Medicaid or uninsured.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Mobile dental units, mobile dental vans, portable x-ray units, computers to record and collect data for analysis would all be utilized. Teledentistry can be utilized in recording the data and including the DDS for diagnosis.

What are the barriers to implementing your model?

Statute requirement that a dentist must examine a child before the RDH sees the child again. Current regulation states that the state board must approve employment. The practice act allows a RDH to provide one set of services with a referring dentist; the patient must then have a dental exam before any other preventive procedure is performed. The SBDE rules also state that a dentist must be on staff at a school or institution that a RDH is employed or works at.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

RDH must be able to become providers to be reimbursed by Medicaid and private insurance plans. Changes in the practice act to allow dental hygienists to become collaborative partners with dentists to provide the needed services. Allow local anesthesia administration by RDH to be able to alleviate pain if needed during treatment. The practice act would need to be revised to allow hygienists to properly care for the preventive needs of the children.

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Innovative Primary Care Models to Improve Access and Outcomes

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Title: Nurse Managed Health Centers: Lights under the Bushel

Summary: Nurse-Managed Health Centers (NMHCs) are safety-net primary health care providers in urban and rural areas. The majority of nurse-run health centers have been established by non-profit, university-based schools of nursing to meet the needs and interests of community members and to prepare qualified graduates with the skills to work in medically underserved areas with medically underserved populations.

Nurse-managed health centers provide a full range of health services, including primary care, health promotion and disease prevention, primarily to low-income, underinsured and uninsured individuals. Primary care and comprehensive health education are provided by nurse practitioners, clinical nurse specialists, registered nurses, health educators, community outreach workers, and collaborating physicians. Traditionally, nurse-managed centers offer health care to medically underserved populations and those least likely to be engaged in ongoing health care services. In the areas where they exist, these health centers have become recognized for their high quality services.

The nation's approximately 200 Nurse-Managed Health Centers are community-based nonprofit health centers managed by nurses in partnership with the communities they serve.

How will your model improve outcomes without increasing health care cost?

By using a preventive approach in the delivery of health services, NMHCs reduce Medicaid costs. National data from Medicaid managed care organizations demonstrate that patients receiving care at NMHCs experience significantly fewer emergency room visits, hospital inpatient days, and specialist visits, and are at a significantly lower risk of giving birth to low-birth weight infants compared to patients in conventional health care. These are just a few examples of improved health outcomes that overall, save costs not only within the programs, but most significantly, for third party payors as well.

What process is in place to collect and analyze process and outcome measures?

The National Nursing Centers Consortium (NNCC), a national organization that represents majority of NMHCs in the country, collects and shares data across participating centers in a Data Project Network Centers initiative. NNCC identifies quantifiable outcome and cost analysis data for use in research, advocacy related activities, grant seeking and promoting nurse-managed health centers as an effective and economically sensible model of health care.

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Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

Many NMHCs operate disease management programs to manage chronic diseases in their populations. For example, the Wellness Center at the Texas Tech University Health Sciences Center School of Nursing, there are formal chronic disease management programs for diabetes, hypertension, obesity and asthma. Advanced Practice Nurses use benchmarked clinical guidelines in implementing algorithms for the management of clients with these conditions. This is supplemented by a Case Management and Outreach Program that help to facilitate adherence to protocols by everyone involved. The diabetes disease management program in this center utilizes diabetes self-management training for clients enrolled in the program as a necessary adjunct to the overall management of the condition.

How will this model be used to create a "wellness model" rather than an "illness model"?

NMHCs provide more comprehensive services than the traditional medical model of primary care. NMHCs differ from other health providers by integrating mental health, gynecological, and midwifery services with primary care. Due to their intensive prenatal programs, NMHCs have remarkable healthy baby outcomes in high-risk populations. Program outcomes have shown that 85% of mothers gave birth to an infant of normal weight; over 90% completed their goal of four prenatal appointments; 50% of the infants were breastfed; and 100% of mothers and infants were linked to primary care providers. By the first year of life, 84% of the infants had an adequate number of well child visits, and 100% of children were school-ready at age five due to on-time completed immunizations.

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

Because the NMHC is a nursing model, it promotes the image of nurses as leaders in promoting primary care. NMHCs directly address two factors that influence the nursing shortage problem: providing training sites for students, and presenting a positive image of the nursing profession. The majority of NMHCs are operated by schools of nursing. In these academic NMHCs, nurse faculty members provide positive role models for the nation's future nurses and research opportunities for future nurse-researchers, and they present positive images of the professional nurse.

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

NMHCs are critical components of America's health care surveillance system. The current and future positioning of nurses in this country, given the threats to public health, will require community-based, nurse-managed models to meet the challenge of preserving the nation's health. Many NMHCs incorporate the use of community health care workers as an extension of their clinical services. For example, NMHCs outreach workers play a critical role in caring for and immunizing the nation's underserved. Due to the aggressive outreach and follow-up efforts of NMHC staff, primary care visits have more than doubled among vulnerable urban men. NMHCs also see their clients twice as often for primary care compared to other primary care providers, which indicates that their clients understand how to use primary care appropriately.

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How will your model improve the culturally sensitive delivery of health care?

Health centers have achieved impressive health outcomes because of the cultural appropriateness of the programs they provide and their relationships with the communities they serve. Because of the embeddedness of the NMHCs within the communities they serve, they are seen as part of the community. Oftentimes, employees of these centers reside in these communities, and speak in the same voice as their clients. In a recent patient satisfaction survey of randomly selected clients, NMHCs scored "Very good" to "Excellent" on all categories. Additionally, all survey participants indicated that they plan to return to the health centers. As a testament to the effectiveness of NMHCs as culturally competent essential safety-net providers, the U.S. Department of Health and Human Services recognized this entity through both "Models that Work" and "Community Service" awards.

How will your model improve health disparities and access to care?

The demographics of medically underserved populations make it inevitable that majority of clients of NMHCs belong to low-income and predominantly ethnic groups. As such, health disparities and barriers to health care access plague these groups. NMHCs are oftentimes the safety nets that allow them access to care, which help to eliminate and reduce health disparities. Clients are educated about how to appropriately use the health care system. Primary care clients are evaluated to determine program eligibility for Medical Assistance, CHIP and other supportive programs like WIC and subsidized childcare. They are given assistance with and follow-up during and after the application process.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Access to electronic management information systems is crucial to the success of the NMHC model. Use of an integrated information system that interfaces electronic practice management, electronic medical records and report generating systems from constructed databases will significantly improve effectiveness of this model. At the same time, national organizations like the NNCC must promote the maintenance and expansion of existing data warehouse services for sharing of information that can document the quality of care provided in these centers, as well as the cost effectiveness of such services.

What are the barriers to implementing your model?

NMHCs constantly face the challenge of financial sustainability, because the client mix is most often skewed towards those who do not have any source of third party coverage. Thus, this is the single most dominant barrier to the implementation of this model: that these centers do not have a stable source of federal or state funding and struggle to survive from year to year with help from the U.S. Department of Health and Human Services, Division of Nursing Special Project grants, state and local government public health service contracts, and foundation donations, which provide 80% of NMHC funding. The economic crisis of nurse-managed health centers must be addressed. While the federal government recognizes the importance of community-based care and sustains Community Health Centers with federal funding authorized through the Public Health Service Act (PHSA), Title III, some NMHCs are ineligible for the Federally Qualified Health Center (FQHC) status required to receive this funding because they are governed by a university board.

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What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

At the state level, there must be a change in the paradigm that provides majority of the assistance for obtaining Bureau of Primary Care monies to existing FQHCs in local communities. The Texas State Primary Care Office must seek out these NMHCs and provide all the support they need to competitively seek and obtain FQHC designation, even in places where there are existing FQHCs. At the federal level, since Congress has encouraged the Secretary to work through the Health Resources Services Administration Bureau of Primary Health Care to assist NMHCs with achieving permanent community health center status, we would like to get assistance from HRSA in gaining access to a 5% set-aside funding for public entities. Many of these NMHCs belong to systems that are designated as public entities.

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Innovative Primary Care Models to Improve Access and Outcomes

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***Title:* A SUMMER ELECTIVE TO IMPROVE FUTURE HEALTH CARE PROVIDER CULTURAL COMPETENCY**

Summary: This two-week summer elective in Mexico provides a total immersion experience in the Mexican culture, family, and customs for future health care provider students. Students use Purnell's model for cultural study and participant observation to analyze sociocultural beliefs, values and practices relevant to health practice behaviors. Students live with Mexican families, attend Spanish language school and have attend lectures on traditional medicine beliefs in Mexico and the role of religion in health and Mexican life. Student learning is further enhanced by their own field work in a selected topic area of their choice. Field trips to modern Mexican hospitals and meetings with health care personnel further enhance their understanding of today's Mexican health care system. Hands on health provider practice is discouraged, as the program focus is on the student as culture learner, not health provider.

How will your model improve outcomes without increasing health care cost?

Research shows that health care agencies would prefer that health workers arrive on the job already culturally aware and competent. This model decreases health care agency costs by providing a culturally aware worker prior to agency employment, thus decreasing training time for cultural competency issues.

What process is in place to collect and analyze process and outcome measures?

Course evaluations are completed after every class. Some follow up research has been conducted, verifying the desired outcomes of cultural awareness and beginning cultural competency.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

N/A

How will this model be used to create a "wellness model" rather than an "illness model"?

N/A

What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

N/A

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

N/A

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How will your model improve the culturally sensitive delivery of health care?

Students report that their cultural awareness and sensitivity is raised by this program. Students learn at least basic Spanish, health vocabulary to improve patient communication, and potential health beliefs of their clients, enabling them to blend our model of care with their patient's model of care.

How will your model improve health disparities and access to care?

Our model will potential lessen health disparities because our students understand another culture's potential health values and beliefs. Students will potentially communicate more effectively with patients because of language skills and have more empathy because of their prolonged experience of having been "the other" in an unfamiliar culture.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

N/A

What are the barriers to implementing your model?

Costs for students to attend the program.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

Increased assistance with tuition for students.

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Innovative Primary Care Models to Improve Access and Outcomes

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Title: Primary Care Telemedicine: Increased Patient Satisfaction and Decreased Costs

Summary: The Telehealth Center, part of the University of Texas Medical Branch at Galveston, currently operates clinics in the Brazoria and Liberty counties in southeast Texas. These primary care telemedicine clinics were established to improve healthcare delivery to indigent populations of the two counties. This program seeks to develop several other telemedicine clinics in southeast Texas to provide primary care to county residents, who cannot travel to UTMB for their primary care visits and who are unable to access primary care locally. The targeted areas will almost certainly be Health Professional Shortage Areas and Medically Underserved Areas. The health care team for the clinics would be composed of clinical staff (registered nurse and hospital technical assistant) and primary care professionals (advanced practice nurse or physician). A clinic manager and a technical support person at the Telehealth Center in Galveston would also be available for consultation and troubleshooting.

The use of a case management model of health care delivery makes an important contribution to the success of the existing telemedicine clinics. The nurses and hospital technical assistants (HTAs) assist the patients through each phase of their health care and maintain frequent contact with patients via telephone. This attention helps patients by assuring continuity of care. Telehealth Center staff also facilitates access to treatment alternatives such as the patient assistance programs offered through the major pharmaceutical companies.

- Overall patient satisfaction collected by the Telehealth Center in these clinics indicates that the overwhelming majority of patients are very satisfied with the care they receive via telemedicine and would recommend telemedicine to their family and friends. In general, patients save considerable travel time and money by using the services offered through the UTMB Telehealth Center.

How will your model improve outcomes without increasing health care cost?

With this model, patients will receive treatment closer to home, rather than traveling to UTMB for their primary care visits. The patients will also receive more comprehensive care with the benefits of better case management. Telemedicine patients have fewer ER visits than they did before their association with the clinic. The ER visits the patients do have are more necessary, since they no longer need to use the ER for their primary care. The technology allows for the development of teams that include physicians and/or non-physicians to increase the cost-effectiveness of the intervention. This model results in fewer missed appointments as the patients have a shorter distance to travel. The nurse facilitates and improves communication between the patient and health care provider. The HTA and/or nurse assist the patients through each phase of their health care and maintain frequent contact with patients via telephone. From our experience, this contact allows for a closer follow-up of patients. It also helps avoid situations in which diseases go untreated and conditions worsen, thereby decreasing long-term costs for the patient and the health care system.

What process is in place to collect and analyze process and outcome measures?

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Patient satisfaction surveys and other data collection are already integrated into each clinic visit. Data is being collected in existing clinics to evaluate the overall patient satisfaction, the patient's perception of the provider, and the patient's perception of the presenter. Outcomes measures being evaluated in addition to patient satisfaction data are:

1. Number of ER visits and hospitalizations before and after being seen at the telemedicine clinic.
2. Measure of patient acuity when patient enters clinic system and at specified points thereafter.
3. Number of new patients vs. follow-ups.
4. Number of missed appointments compared with the traditional clinics at UTMB.

Does your model emphasize standard treatment protocols (evidence-based practice guidelines) and patient instruction and reinforcement concerning self-care?

The case management model emphasizes patient education, especially for the management of chronic diseases. The nurse and HTA educate patients and explain the procedures, as well as answer any questions the patients have regarding their medications or treatment. The presenters are equipped with laptops so they can provide internet-based teaching materials on demand. Patients also have a "take-home" medical record that includes all of the important patient information, such as medications, laboratory results, and upcoming appointments. Through the use of this tool, the patient becomes a more active participant in their own care and begins to accept more responsibility for their health outcomes.

All the telemedicine providers, who work with the Telehealth Center, are meeting once a month to discuss telemedicine practice issues. At the present time, the group is developing protocols for primary and specialty care telemedicine. Standard, evidence-based guidelines form the basis for these protocols.

How will this model be used to create a "wellness model" rather than an "illness model"?

This model will promote wellness by:

1. Improving access: patients are more likely to have and keep routine appointments, such as "well woman" exams.
2. Educating patients to make them more aware of health-related challenges before the challenges become debilitating.
3. Helping patients take more control of their health, become more involved in their healthcare decision-making, and more responsible for their health outcomes.
4. Working to overcome barriers of poverty and a lack of education. Services, such as the patient assistance programs associated with pharmaceutical companies, are coordinated for patients by clinic staff.

These factors help patients receive care when and where they need it, which leads them to a better understanding of the importance of preventative care.

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What effect will your model have on the demand for health workforce in the future? (What numbers and types of health professionals will be needed?)

This model will have the following effects on the health workforce:

1. Multidisciplinary teams composed of an RN, a HTA, and a health care provider (physician, advanced practice nurse, or physician's assistant-more varied types of health care providers) will make it easier to provide healthcare to Medically Underserved Areas & Health Professional Shortage Areas.
2. More jobs will be provided in the clinics: there will be a need for more nurses, HTAs, technical support personnel as the number of telemedicine clinic increases.
3. Telemedicine requires a different skill set in addition to traditional practice competence. These practitioners need enhanced communication skills to understand the importance and uses of the various types of equipment as well as the technical expertise to operate the equipment. The nurse presenters need more sophisticated assessment skills and the ability to practice more independently.

How will the community be utilized to improve the health of the community? (Will lay people be trained as extenders?)

No lay people will be used in the clinics, initially. However, moving the clinic from UTMB to the community places more responsibility on county/community. The UTMB Telehealth Center can help the community serve disadvantaged groups by providing better access to healthcare closer to home. The Telehealth Center can also be utilized as an intermediary between the existing local support programs and underserved populations in the community. The improved access to health care in the patient's community allows for more participation by the patient's family and extended support network. At a future point, some local community volunteers could be used to help staff the clinics.

How will your model improve the culturally sensitive delivery of health care?

Since The UTMB Telehealth Center has created a large network of telemedicine and distance education programs to serve special populations, it recognizes the cultural components of health and health care. The center is open to the possibility of alternative and indigenous practice as part of the healing process. Some patients might be intimidated by the use of telemedicine equipment and technology; but, with good case management, this barrier is usually easy to overcome. This model allows easier access to communities with disadvantaged and minority populations. It also gives the University the opportunity to use culturally competent personnel, some of whom will be from the local community.

How will your model improve health disparities and access to care?

Medical Underserved Areas and Health Professional Shortage Areas are already served by the UTMB Telehealth Center through the telemedicine clinics in the Brazoria and Liberty counties. These patients are indigent and prior to the Telehealth Center clinics, they had no access to primary care within their own community. This program provides better and much-needed services with a significantly decreased travel distance for the patients. Patients will also have greater access to specialty care. With this model, patients can access care when needed. Prior to this, these patients needed to travel to UTMB. Given the costs and inconvenience of that situation, many patients neglected their health by not seeking primary care. These patients also used the local emergency departments more often and more inappropriately.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

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The program will reduce the distance between patients and their healthcare facility. By consequence, the patients will save travel time by being seen in a telemedicine clinic closer to their home. The clinics already in place save counties money by eliminating travel costs to see providers for routine care, and reduce the number of unnecessary emergency room visits by using a nursing care coordinator to triage patients' concerns after the telemedicine visit. This model will decrease wait times for appointments in existing primary care clinics.

What are the barriers to implementing your model?

1. Cost of equipment and clinic set-up.
2. Limited resistance to telemedicine concept.
3. The rules about Medicare and Medicaid reimbursement need to be expanded to include telemedicine practice, including a more flexible definition of who constitutes a health care provider.
4. Licensure can be a problem if the patient and provider are in different states.

The state of Texas has initiated several aggressive telehealth programs, but this form of healthcare delivery still remains highly fragmented and disorganized in this state. Although the advanced statewide health telecommunications network is being rapidly deployed, close collaboration among the many public and private entities committed to implementing telehealth services has yet to materialize, and telehealth has just begun to fulfill its real potential for advancing the healthcare for the citizens of Texas.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

1. Reimbursement from Medicare and Medicaid need to be expanded for telemedicine practice.
2. Elimination of the physician presenter requirement.

Due to reimbursement concerns, health care providers may hesitate to initiate the start-up of a telemedicine clinic program. As the use of telemedicine increases, health care providers will recognize telemedicine as an option for delivering quality health care services from a distance while ensuring cost benefits to rural and medically underserved communities.

Specific provisions to promote telemedicine reimbursement are:

- * Eliminate the licensed physician presenter requirement (unless deemed medically necessary by the consulting physician or practitioner at the distant site).
- * Allow full payment to the consulting physician and the payment of a \$20 facility fee to the originating site.
- * Broadcast areas that are eligible for telemedicine services to nonmetropolitan statistical areas from health professional shortage areas.
- * Endorse home health care agencies' use of telemedicine under the prospective pay system.
- * Include "store and forward" as part of telemedicine practice.
- * Pursue further studies to look at the cost-effectiveness of telemedicine care.
- * Secure funding for pilot programs.
- * Secure funding for studies of telemedicine practice.

Innovative Primary Care Models to Improve Access and Outcomes

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Title: The Respiratory Care Practitioner and the COPD Patient

Respiratory Care Practitioners (RCP) are a distinct profession dating back to the 1930's. During each of the seventy-plus years of working with patients with lung disease, no group has potentially benefited more than those with Chronic Obstructive Lung Disease (COPD). Initially, RCPs simply provided oxygen to this patient while hospitalized, usually via an oxygen tent or face mask. But during these seven decades of improved equipment, medication and monitoring the RCP has become not only the provider of respiratory therapy but the most qualified educator for this chronically ill population.

COPD is a major cause of chronic morbidity and mortality throughout the state of Texas. It ranks as the fourth leading cause of death in the United States. Further, due to the aging population increases in the prevalence and mortality of the disease can be predicted in the coming decades. A unified effort of education, research and treatment is required to reverse this trend.

Recently the World Health Organization issued the following statement regarding tobacco use: "Current projections show a rise of 31% in tobacco-related deaths during the next twenty years, which will double the current death toll, bringing it to almost ten million a year," said WHO Director-General Dr LEE Jong-wook to countries attending the Intergovernmental Working Group.

It is the belief of this group that the state of Texas could be the leader in the United States to form throughout the state COPD education groups with its essential tobacco cessation program. This could save the state of Texas millions of dollars in Medicaid expenditures over the next few years.

COPD is a disease state where airflow is limited and no medication will fully reverse that condition. The airflow limitation is usually both progressive and associated with an abnormal response to noxious particles or gases. The diagnosis of COPD should be considered in any patient who has symptoms of cough, sputum production, or shortness of breath and/or a history of exposure to risk factors for the disease. The diagnosis can be confirmed by pulmonary function testing. All physicians are being encouraged to perform simple spirometry on their patients who exhibit the above symptoms. Once even a diagnosis of even mild COPD is made the patient would be referred to the RCP for education and monitoring.

The purpose of ongoing patient education groups is to allow the COPD patient to learn more about the disease. It has been well-documented in peer reviewed literature that ongoing education of the patient about the disease process improves outcomes. The program would consist not only of education regarding disease management and expectations but also a very important component of smoking cessation. It is estimated that over 50% of patients diagnosed with COPD continue to use tobacco.

COPD patient education groups are scattered, at best, throughout the state. Although there are several very successful groups, these tend to be located in the larger metropolitan areas, sponsored by hospital-based respiratory care departments. The goal of this COPD program would be to provide both group education as well as ongoing support education via DVD and/or the internet.

In 1981, the American Thoracic Society gave its first Statement on the efficacy and scientific foundation of pulmonary rehabilitation programs. Since then it has become firmly established that strategies employed by pulmonary rehabilitation programs are now an integral part of the clinical management and health maintenance of patients with COPD who remain symptomatic or continue to have decreased function despite standard medical management. Since pulmonary rehabilitation programs are not available in all areas of the state, we propose that respiratory care practitioners provide a COPD education program including a tobacco education segment.

How will your model improve outcomes without increasing health care cost?

The patients enrolled in these programs are those who would most benefit from it. Prevalence and morbidity data greatly underestimate the total burden of COPD because the disease is usually not diagnosed until it is clinically apparent and moderately advanced.

What process is in place to collect and analyze process and outcome measures?

The program is developed to collect outcome measures. Patients not actively attending group education classes will be contacted via telephone or internet as to well-being and other outcome measures (e.g., ER visits, hospitalizations, unscheduled physician visits, non-routine prescriptions).

Does your model emphasize standard treatment protocols (evidence-based practice guidelines and patient instruction and reinforcement concerning self care)?

It is noted throughout the literature that those patients who have improved knowledge of their disease, exposures that trigger exacerbation utilize fewer healthcare services. An effective COPD management plan includes four components:

1. Assessment and monitoring;
2. Reduction of Risk Factors;
3. Management of Stable COPD and;
4. Management of Exacerbations.

The goals of effective COPD management include: prevention of disease progression, relief of symptoms, improvement in exercise tolerance, improve health status, prevent and treat complications, prevent and treat exacerbations and reduce mortality. The Global Initiative for Chronic Obstructive Lung Disease or GOLD Book defines the global strategy for the diagnosis, management and prevention of COPD. This book is the executive summary of the NHLBI/WHO workshop.

How will this model be used to create a “wellness” model rather than an “illness” model?

This program would emphasize the prevention of COPD through the tobacco cessation segment. Since it is known that passive exposure to cigarette smoke may also contribute to respiratory symptoms and COPD by increasing the lung’s total burden of inhaled particulates and gases, tobacco cessation classes should be able to reduce this exposure.

Smoking during pregnancy may also pose a risk for the fetus, by affecting lung growth and development of the fetus. It would be suggested that upon determination of pregnancy, a tobacco-using female should be referred to a smoking cessation program.

What effect will your model have on the demand for health workforce in the future?

The model would utilize respiratory care practitioners acting on the referral of a physician, physician's assistant or nurse practitioner. The state currently has an adequate number of RCPs to provide the work force.

How will the community be utilized to improve the health of the community?

Communities will be involved through use of community social programs promoting and setting up smoking cessation classes and offer continuing support for their citizens through open communication, public service announcements and publication of success stories. Additionally, we could train and develop lay people for this through a training program. The community is involved by placing the program within the hospitals and/or medical centers. Other healthcare providers would become more aware of the program, encouraging and reinforcing participation. Involvement of community leaders by disallowing smoking in public buildings would help to empower the community and the participants in tobacco cessation.

How will your model improve the culturally sensitive delivery of health care? All cultures develop COPD, all cultures use tobacco. Many materials are now available in English, Spanish and Vietnamese.

How will your model improve health disparities and access to care?

With successful education in the four components of education the COPD patient will need less emergent care, less hospitalization and decreased physician office visits.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Once patients are evaluated by the RCP for understanding of the program and the program is implemented, much of the outcomes monitoring and ongoing education and information could be done via mail or internet.

What are the barriers to implementing your model?

Currently, the numbers of programs are very limited and physicians do not readily refer patients to COPD education programs and smoking cessation programs. If programs were available at the majority of community hospitals and/or medical centers in an ongoing or rotating basis, patients would have much improved access.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

Reimbursement for patient education would be necessary for this population as it is for the patient with diabetes. Thus changes in reimbursement regulations would be required.

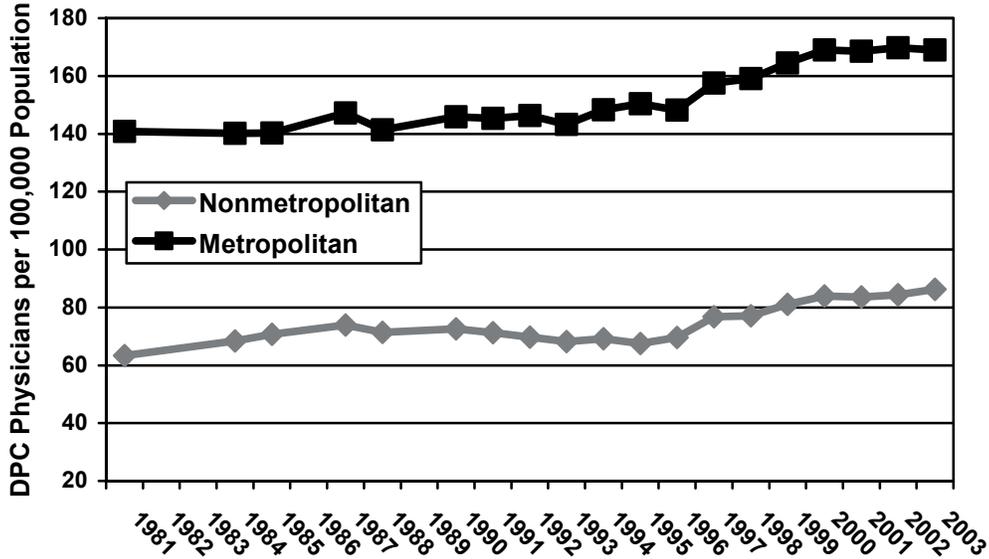
Appendix C

HEALTH WORKFORCE DATA



APPENDIX C-1
Direct Patient Care Physicians

DPC Physicians per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas State Board of Medical Examiners
Source for metropolitan–non-metropolitan definition: Office of Management and Budget
Figures include all licensed, active, non-federal, non-resident in training physicians

2003 Texas Direct Patient Care Physician Facts:

White	69.7%	Male	77.6%	Median Age Male	49
Black	3.9%	Female	22.4%	Median Age Female	43
Hispanic	11.0%				
Other	15.4%				

Number of Counties with no Direct Patient Care Physicians 21

Providers/100,000 Population

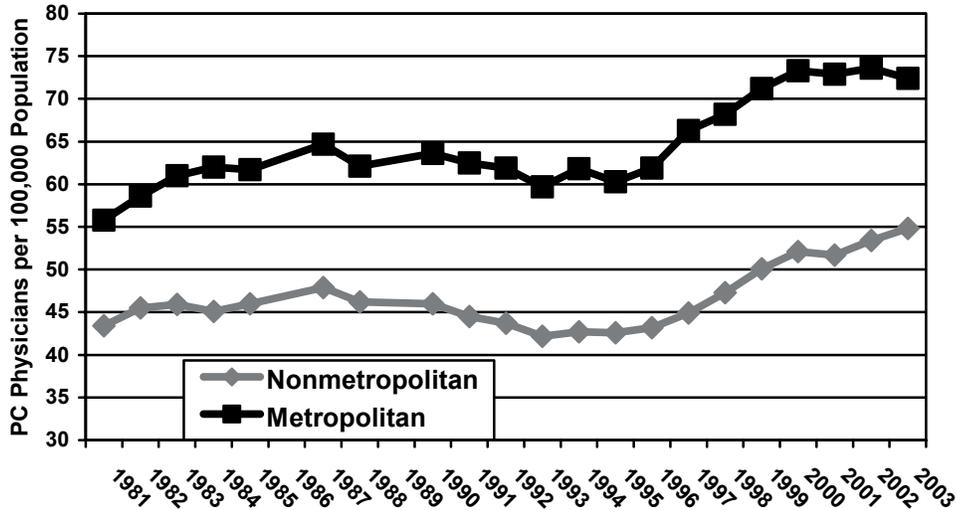
Border Metropolitan	146.8
Non-Border Metropolitan	174.7
Border Non-Metropolitan	70.4
Non-Border Non-Metropolitan	89.5

Trends:

Year	Number	Providers/100,000 Population
1990	22,711	133.7
1995	25,683	137.2
2000	31,769	156.2
2003	34,432	157.7

APPENDIX C-2
 Primary Care Physicians

PC Physicians per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas State Board of Medical Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, non-federal, non-resident in training physicians

2003 Texas Primary Care Physician Facts:

White	63.2%	Male	70%	Median Age Male	49
Black	5.2%	Female	30%	Median Age Female	41
Hispanic	13.7%				
Other	17.9%				

Number of Counties with no Primary Care Physicians 22

Providers/100,000 Population

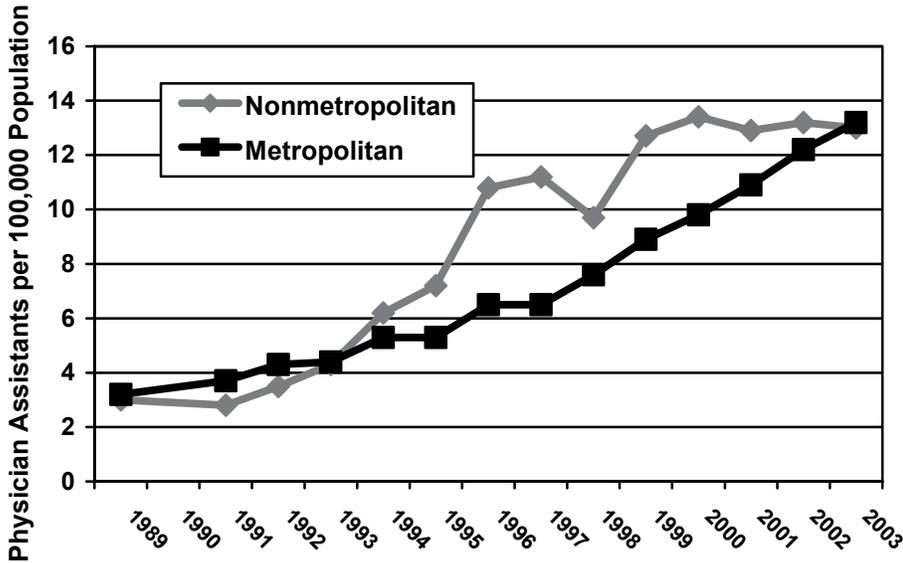
Border Metropolitan	64.7
Non-Border Metropolitan	74.3
Border Non-Metropolitan	47.6
Non-Border Non-Metropolitan	56.3

Trends:

Year	Number	Providers/100,000 Population
1990	10,308	60.7
1995	10,763	57.5
2000	14,268	70.1
2003	15,278	70.0

APPENDIX C-3
 Physician Assistants

Physician Assistants per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1989–2003



Source: Texas State Board of Medical Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state physician assistants

2003 Texas Physician Assistant Facts:

White	76.0%	Male	47.5%	Median Age Male	44
Black	5.4%	Female	52.5%	Median Age Female	37
Hispanic	11.6%				
Other	7.0%				

Number of Counties with no Physician Assistants 61

Providers/100,000 Population

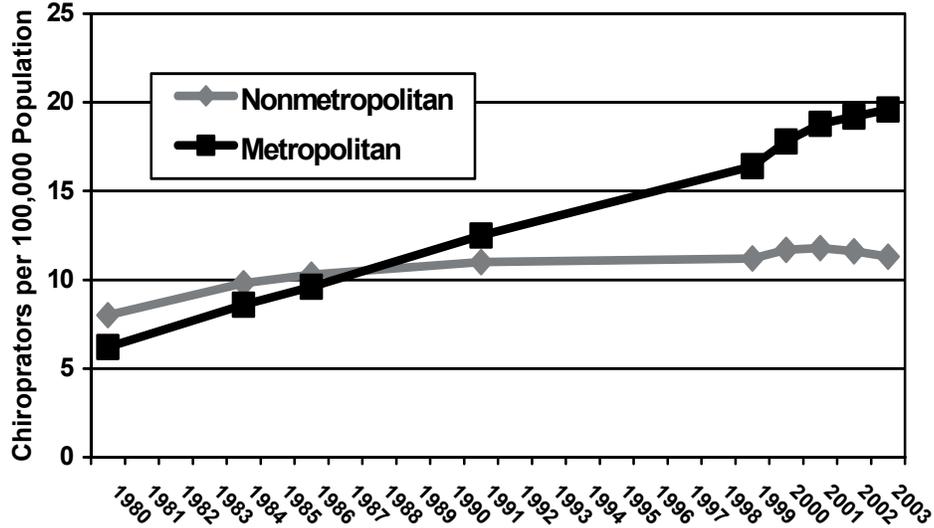
Border Metropolitan	13.0
Non-Border Metropolitan	13.3
Border Non-Metropolitan	13.4
Non-Border Non-Metropolitan	12.9

Trends:

Year	Number	Providers/100,000 Population
1991	622	3.6
1995	1,052	5.6
2000	2,106	10.4
2003	2,881	13.2

APPENDIX C-4 Chiropractors

Chiropractors per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1980–2003



Source: Texas State Board of Chiropractic Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state chiropractors

2003 Texas Chiropractor Facts:

Race-ethnicity data not available

Male	78.5%	Median Age Male	41
Female	21.5%	Median Age Female	39

Number of Counties with no Chiropractors 80

Providers/100,000 Population

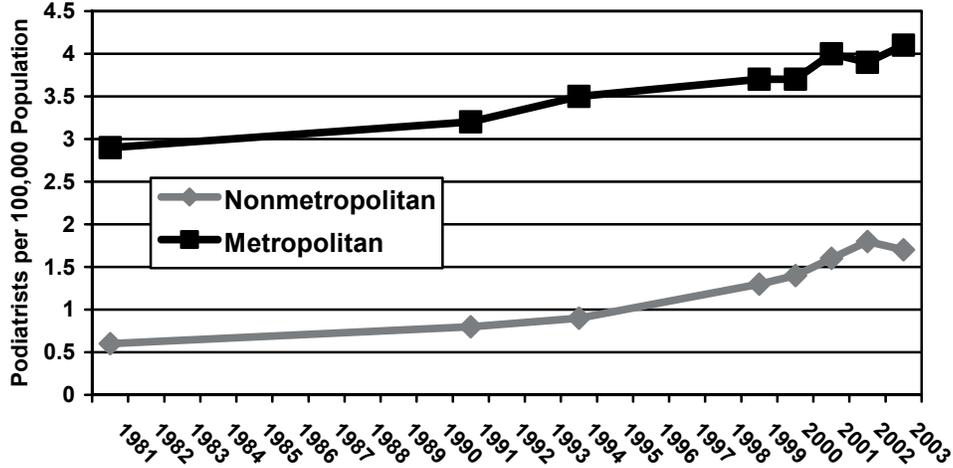
Border Metropolitan	11.1
Non-Border Metropolitan	21.8
Border Non-Metropolitan	6.2
Non-Border Non-Metropolitan	12.3

Trends:

Year	Number	Providers/100,000 Population
1990	1,972	11.6
1994	2,325	12.7
2000	3,426	16.8
2003	4,033	18.5

APPENDIX C-5
Podiatrists

Podiatrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas State Board of Podiatric Examiners
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state podiatrists

2003 Texas Podiatrists Facts:

White	78.4%	Male	81.8%	Median Age Male	45
Black	9.0%	Female	18.2%	Median Age Female	35
Hispanic	4.9%				
Other	7.6%				

Number of Counties with no Podiatrists 167

Providers/100,000 Population

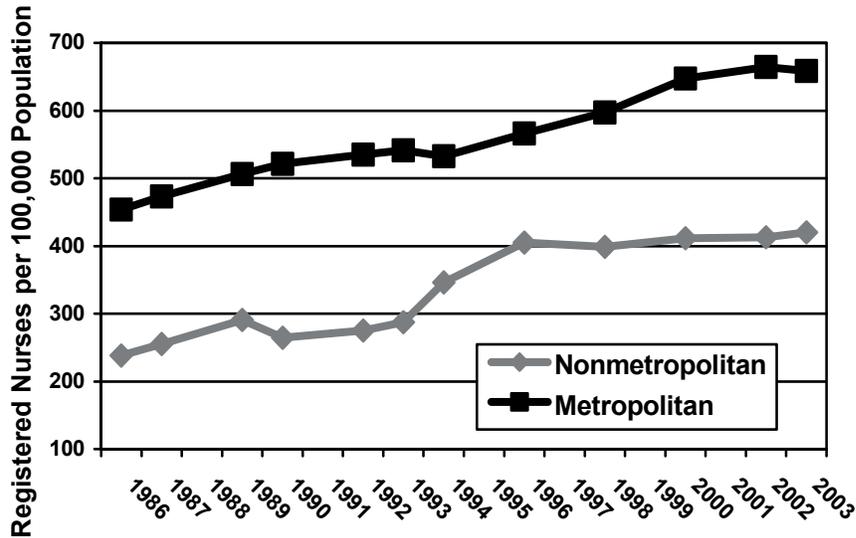
Border Metropolitan	4.3
Non-Border Metropolitan	4.0
Border Non-Metropolitan	2.3
Non-Border Non-Metropolitan	1.6

Trends:

Year	Number	Providers/100,000 Population
1991	496	2.9
1994	567	3.1
2000	682	3.4
2003	823	3.8

APPENDIX C-6
 Registered Nurses

Registered Nurses per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1986–2003



Source: Texas Board of Nurse Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state registered nurses

2003 Texas Registered Nurse Facts:

White	76.6%	Male	9.2%	Median Age Male	43
Black	7.2%	Female	90.8%	Median Age Female	46
Hispanic	7.8%				
Other	8.4%				

Number of Counties with no Registered Nurses 4

Providers/100,000 Population

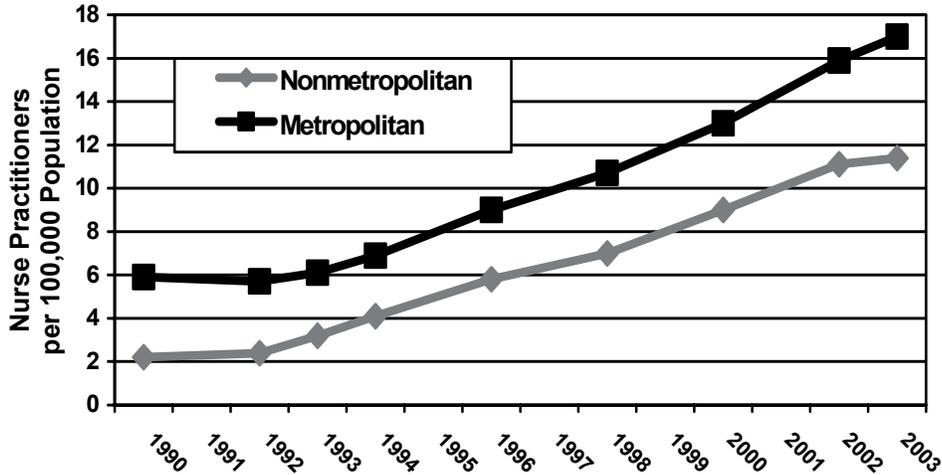
Border Metropolitan	600.4
Non-Border Metropolitan	673.4
Border Non-Metropolitan	295.1
Non-Border Non-Metropolitan	446.1

Trends:

Year	Number	Providers/100,000 Population
1990	81,320	478.7
1996	103,358	540.3
2000	124,495	611.9
2003	136,660	626.1

APPENDIX C-7
 Nurse Practitioners

Nurse Practitioners per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003



Source: Texas Board of Nurse Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state nurse practitioners

2003 Texas Nurse Practitioner Facts:

White	84.6%	Male	7.4%	Median Age Male	44
Black	4.7%	Female	92.6%	Median Age Female	47
Hispanic	6.9%				
Other	3.8%				

Number of Counties with no Nurse Practitioners 68

Providers/100,000 Population

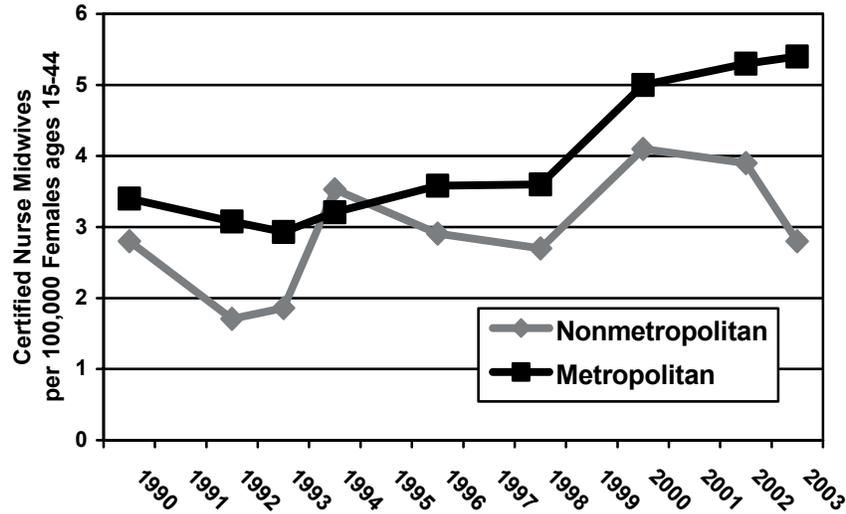
Border Metropolitan	13.6
Non-Border Metropolitan	17.8
Border Non-Metropolitan	9.1
Non-Border Non-Metropolitan	11.9

Trends:

Year	Number	Providers/100,000 Population
1991	964	5.6
1996	1,633	8.6
2000	2,517	12.4
2003	3,539	16.2

APPENDIX C-8
Certified Nurse Midwives

Certified Nurse Midwives per 100,000 Females ages 15–44, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003



Source: Texas Board of Nurse Examiners
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state certified nurse midwives

2003 Texas Certified Nurse Midwife Facts:

White	91.0%	Male	0.4%	Median Age Male	43
Black	5.3%	Female	99.6%	Median Age Female	48
Hispanic	2.4%				
Other	1.3%				

Number of Counties with no Certified Nurse Midwives 213

Providers/100,000 Females Ages 15–44

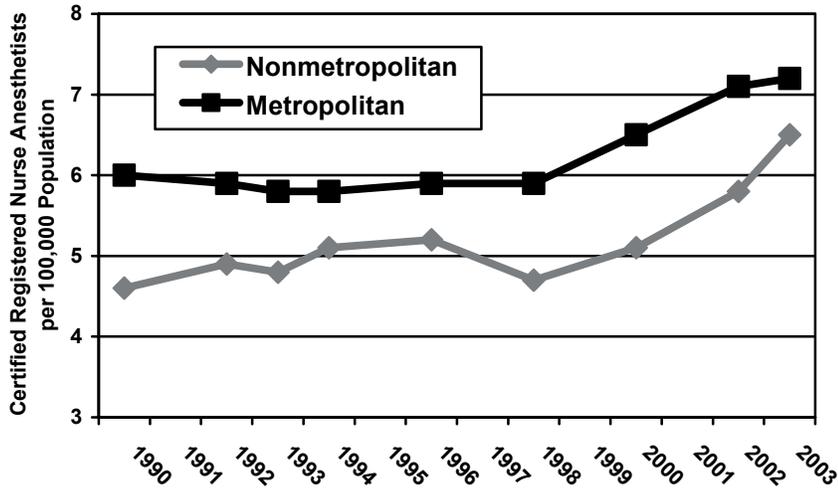
Border Metropolitan	5.2
Non-Border Metropolitan	5.4
Border Non-Metropolitan	1.9
Non-Border Non-Metropolitan	3.0

Trends:

Year	Number	Providers/100,000 Females Ages 15–44
1990	135	3.3
1996	155	3.5
2000	231	4.9
2003	245	5.1

APPENDIX C-9
 Certified Registered Nurse Anesthetists

Certified Registered Nurse Anesthetists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003



Source: Texas Board of Nurse Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state certified nurse anesthetists

2003 Texas Certified Registered Nurse Anesthetist Facts:

White	91.5%	Male	43.6%	Median Age Male	50
Black	2.7%	Female	56.4%	Median Age Female	49
Hispanic	3.0%				
Other	2.8%				

Number of Counties with no Certified Registered Nurse Anesthetists 118

Providers/100,000 Population

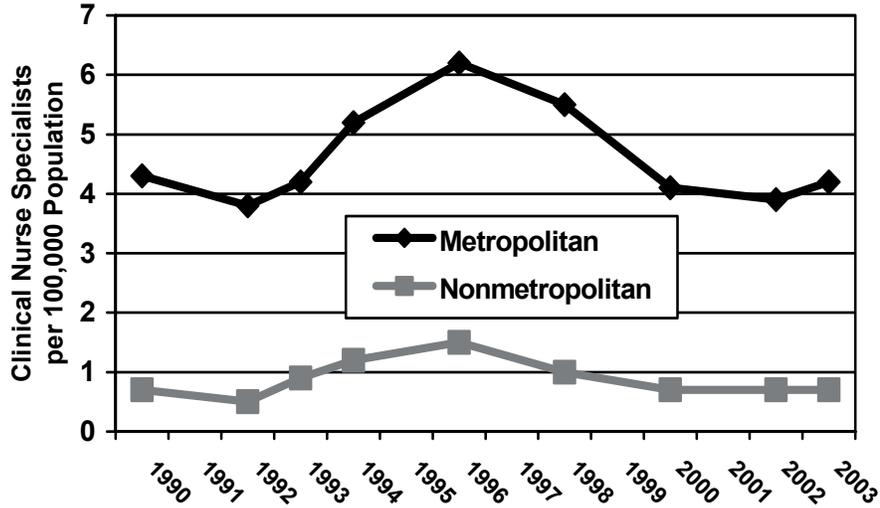
Border Metropolitan	4.9
Non-Border Metropolitan	7.8
Border Non-Metropolitan	4.5
Non-Border Non-Metropolitan	6.9

Trends:

Year	Number	Providers/100,000 Population
1990	983	5.8
1996	1,108	5.8
2000	1,274	6.2
2003	1,547	7.1

APPENDIX C-10
 Clinical Nurse Specialists

Clinical Nurse Specialists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1990–2003



Source: Texas Board of Nurse Examiners
 Source for metropolitan–non-metropolitan definition: Office of Management and Budget
 Figures include all licensed, active, in-state clinical nurse specialists

2003 Texas Clinical Nurse Specialist Facts:

White	83.7%	Male	7.7%	Median Age Male	49
Black	6.7%	Female	92.3%	Median Age Female	51
Hispanic	6.3%				
Other	3.3%				

Number of Counties with no Clinical Nurse Specialists 190

Providers/100,000 Population

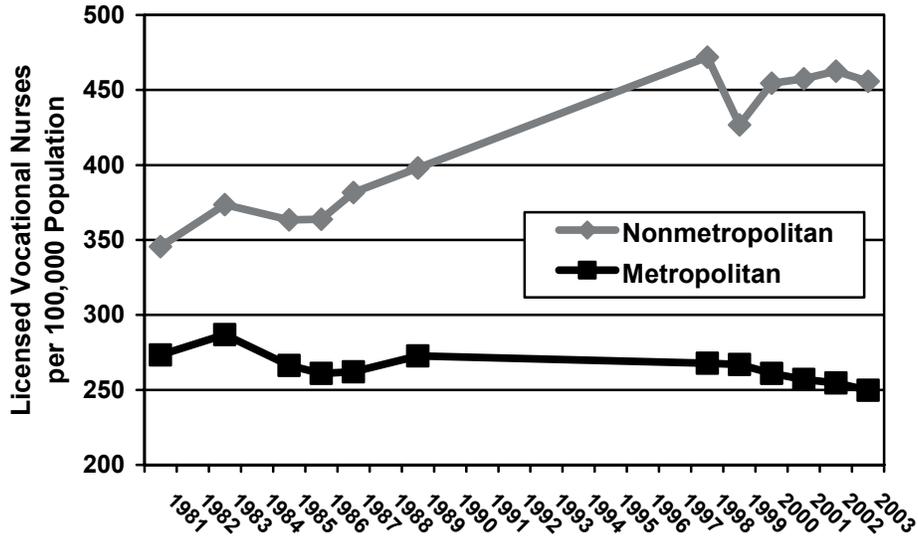
Border Metropolitan	4.3
Non-Border Metropolitan	4.1
Border Non-Metropolitan	0.0
Non-Border Non-Metropolitan	0.9

Trends:

Year	Number	Providers/100,000 Population
1990	631	3.7
1996	1,055	5.5
2000	724	3.6
2003	804	3.7

APPENDIX C-11
 Licensed Vocational Nurses

Licensed Vocational Nurses per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas Board of Vocational Nurse Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state licensed vocational nurses

2003 Texas Licensed Vocational Nurse Facts:

White	60.7%	Male	9.0%	Median Age Male	41
Black	18.9%	Female	91.0%	Median Age Female	46
Hispanic	17.9%				
Other	2.6%				

Number of Counties with no Licensed Vocational Nurses 3

Providers/100,000 Population

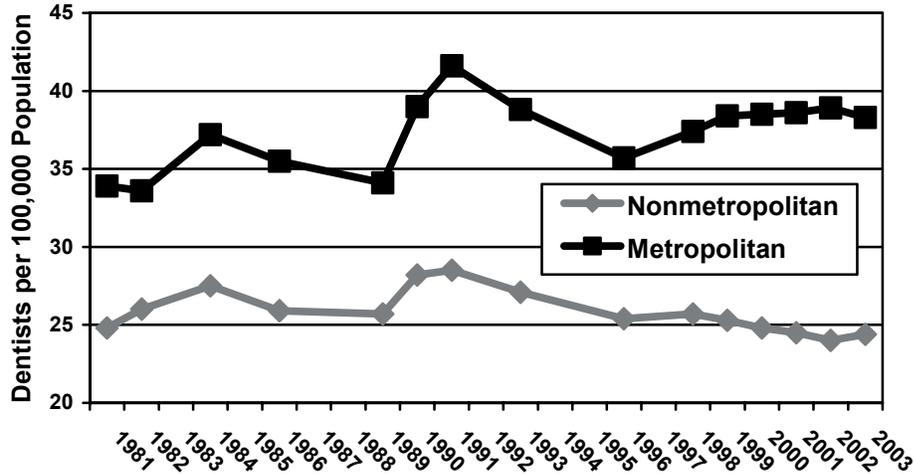
Border Metropolitan	274.8
Non-Border Metropolitan	243.4
Border Non-Metropolitan	373.3
Non-Border Non-Metropolitan	473.1

Trends:

Year	Number	Providers/100,000 Population
1989	49,389	293.9
1998	58,795	299.2
2000	59,034	290.2
2003	60,666	277.9

APPENDIX C-12
Dentists

Dentists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas State Board of Dental Examiners
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state, non-federal dentists

2003 Texas Dentist Facts:

Race-ethnicity data not available

Male	78.3%	Median Age Male	49
Female	21.7%	Median Age Female	38

Number of Counties with no Dentists 46

Providers/100,000 Population

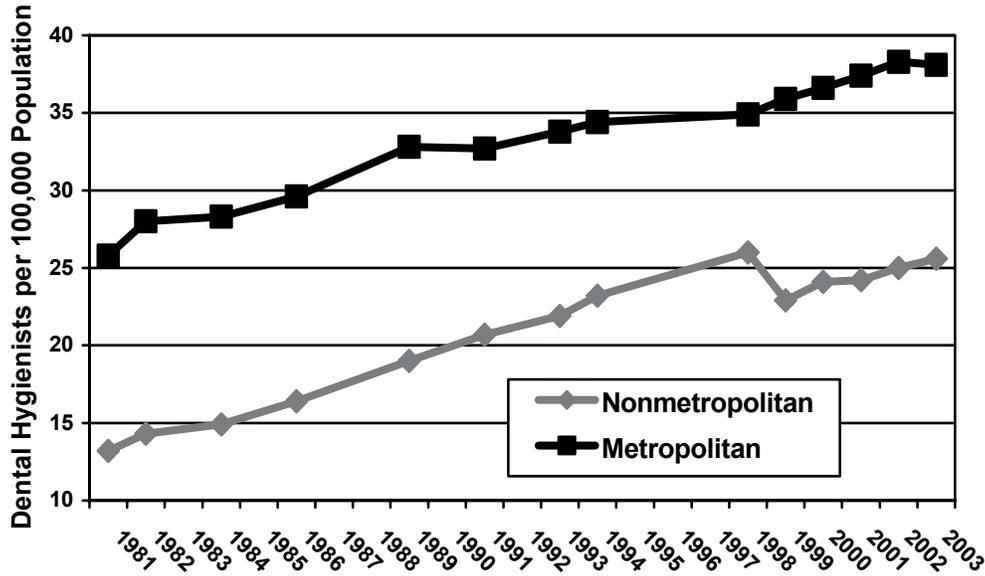
Border Metropolitan	27.8
Non-Border Metropolitan	40.9
Border Non-Metropolitan	17.7
Non-Border Non-Metropolitan	25.8

Trends:

Year	Number	Providers/100,000 Population
1990	6,320	37.2
1996	6,518	34.1
2000	7,417	36.5
2003	7,939	36.4

APPENDIX C-13
 Dental Hygienists

Dental Hygienists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1981–2003



Source: Texas State Board of Dental Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state, dentists

2003 Texas Dental Hygienist Facts:

Race-ethnicity data not available

Male	1.5%	Median Age Male	35.5
Female	98.5%	Median Age Female	40.0

Number of Counties with no Dental Hygienists 58

Providers/100,000 Population

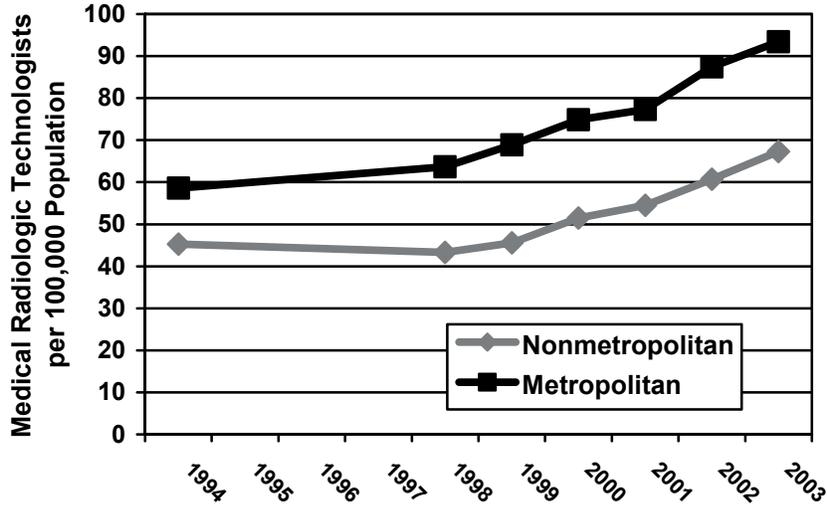
Border Metropolitan	28.0
Non-Border Metropolitan	40.7
Border Non-Metropolitan	14.2
Non-Border Non-Metropolitan	28.0

Trends:

Year	Number	Providers/100,000 Population
1991	5,338	30.8
1994	5,987	32.6
2000	7,057	34.7
2003	7,948	36.4

APPENDIX C-14
 Medical Radiologic Technologists

Medical Radiologic Technologists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1994–2003



Source: Professional Licensing and Certification Division, TDH
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state medical radiologic technologists

2003 Texas Medical Radiologic Technologists Facts:

Race-ethnicity and gender data not available

Median Age 42

Number of Counties with no Medical Radiologic Technologists 38

Providers/100,000 Population

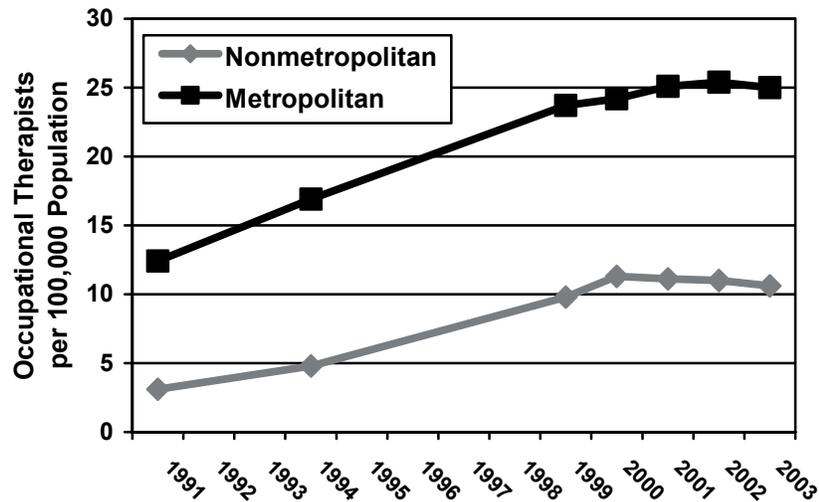
Border Metropolitan	91.5
Non-Border Metropolitan	93.3
Border Non-Metropolitan	48.4
Non-Border Non-Metropolitan	71.3

Trends:

Year	Number	Providers/100,000 Population
1994	10,385	56.5
1998	11,906	60.6
2000	14,517	71.4
2003	19,614	89.9

APPENDIX C-15 Occupational Therapists

Occupational Therapists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1991–2003



Source: Texas Board of Occupational Therapy Examiners
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state occupational therapists

2003 Texas Occupational Therapist Facts:

White	77.7%	Male	11.9%	Median Age Male	37
Black	3.9%	Female	88.1%	Median Age Female	38
Hispanic	10.9%				
Other	7.5%				

Number of Counties with no Occupational Therapists 97

Providers/100,000 Population

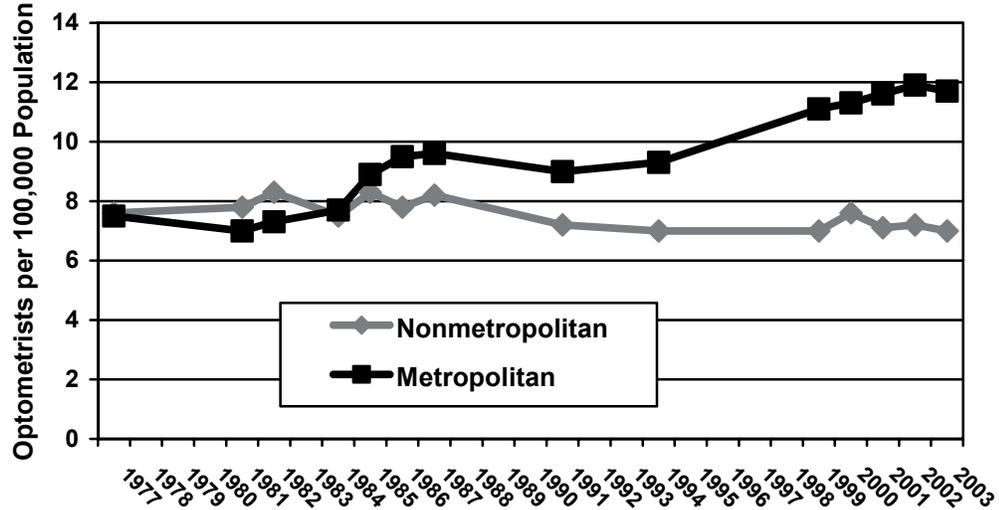
Border Metropolitan	20.8
Non-Border Metropolitan	26.0
Border Non-Metropolitan	8.0
Non-Border Non-Metropolitan	11.1

Trends:

Year	Number	Providers/100,000 Population
1991	1,894	10.9
1994	2,756	15.0
2000	4,526	22.2
2003	5,019	23.0

APPENDIX C-16 Optometrists

Optometrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1977–2003



Source: Texas Optometry Board

Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget

Figures include all licensed, active, in-state optometrists

2003 Texas Optometrist Facts:

White	72.9%	Male	64.9%	Median Age Male	47
Black	2.5%	Female	35.1%	Median Age Female	35
Hispanic	7.9%				
Other	16.7%				

Number of Counties with no Optometrists 110

Providers/100,000 Population

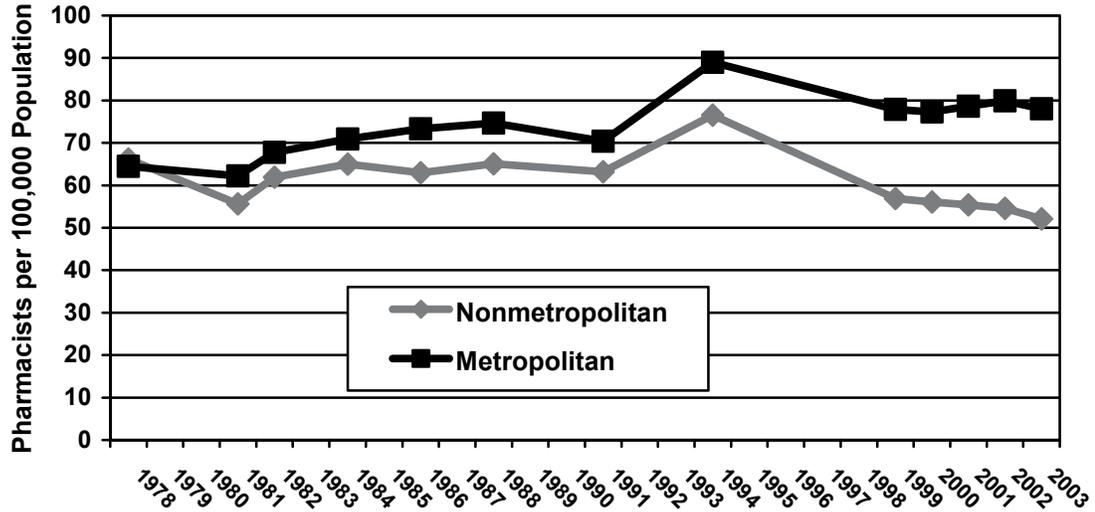
Border Metropolitan	8.4
Non-Border Metropolitan	12.6
Border Non-Metropolitan	5.8
Non-Border Non-Metropolitan	7.2

Trends:

Year	Number	Providers/100,000 Population
1991	1,513	8.7
1994	1,644	8.9
2000	2,177	10.7
2003	2,419	11.1

APPENDIX C-17
Pharmacists

Pharmacists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1978–2003



Source: Texas State Board of Pharmacy
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state pharmacists

2003 Texas Pharmacist Facts:

White	60.9%	Male	53.7%	Median Age Male	51
Black	12.1%	Female	46.3%	Median Age Female	39
Hispanic	8.7%				
Other	14.3%				

Number of Counties with no Pharmacists 18

Providers/100,000 Population

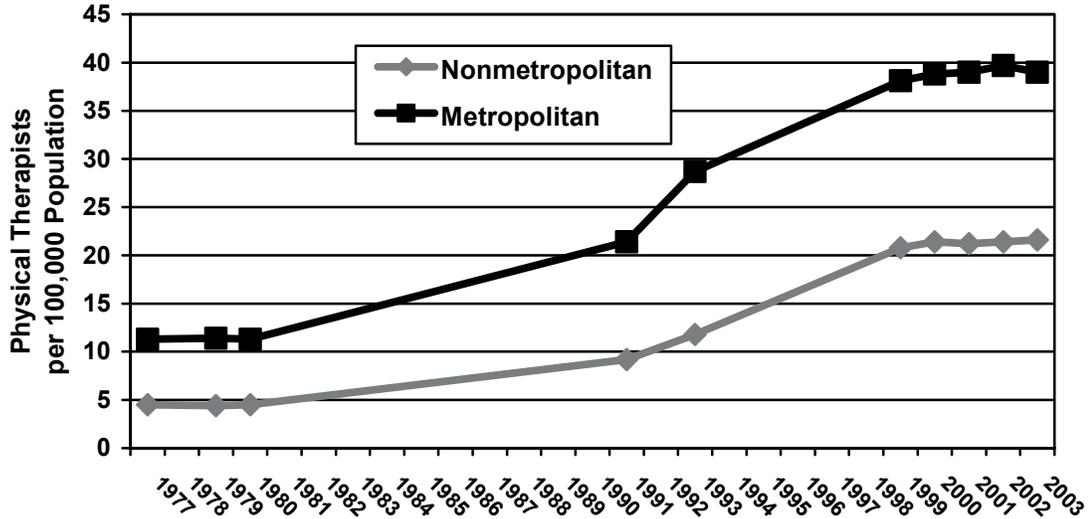
Border Metropolitan	58.1
Non-Border Metropolitan	83.1
Border Non-Metropolitan	40.6
Non-Border Non-Metropolitan	54.5

Trends:

Year	Number	Providers/100,000 Population
1991	12,020	69.2
1999	14,931	74.7
2000	15,071	74.1
2003	16,262	74.5

APPENDIX C-18
 Physical Therapists

Physical Therapists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1977–2003



Source: Texas Board of Physical Therapy Examiners
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state physical therapists

2003 Texas Physical Therapist Facts:

White	79.9%	Male	28.9%	Median Age Male	38
Black	2.1%	Female	71.1%	Median Age Female	38
Hispanic	5.2%				
Other	12.7%				

Number of Counties with no Physical Therapists 61

Providers/100,000 Population

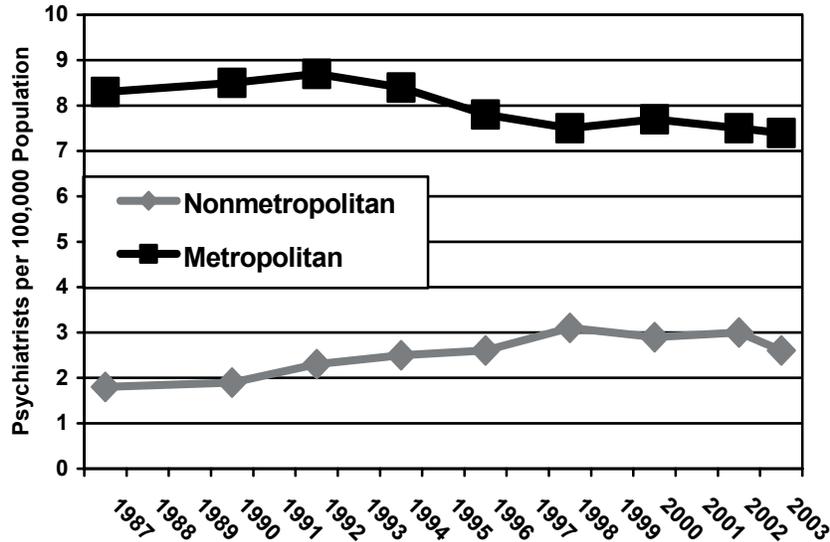
Border Metropolitan	30.3
Non-Border Metropolitan	41.2
Border Non-Metropolitan	15.4
Non-Border Non-Metropolitan	22.9

Trends:

Year	Number	Providers/100,000 Population
1991	3,373	19.4
1993	4,681	26.0
2000	7,358	36.2
2003	7,992	36.6

APPENDIX C-19 Psychiatrists

Psychiatrists per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1999–2003



Source: Texas Board of Medical Examiners

Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, non-federal, non-resident in training psychiatrists

2003 Texas Psychiatrists Facts:

White	70.1%	Male	68.7%	Median Age Male	54
Black	3.7%	Female	31.3%	Median Age Female	48
Hispanic	13.0%				
Other	13.3%				

Number of Counties with no Psychiatrists 179

Providers/100,000 Population

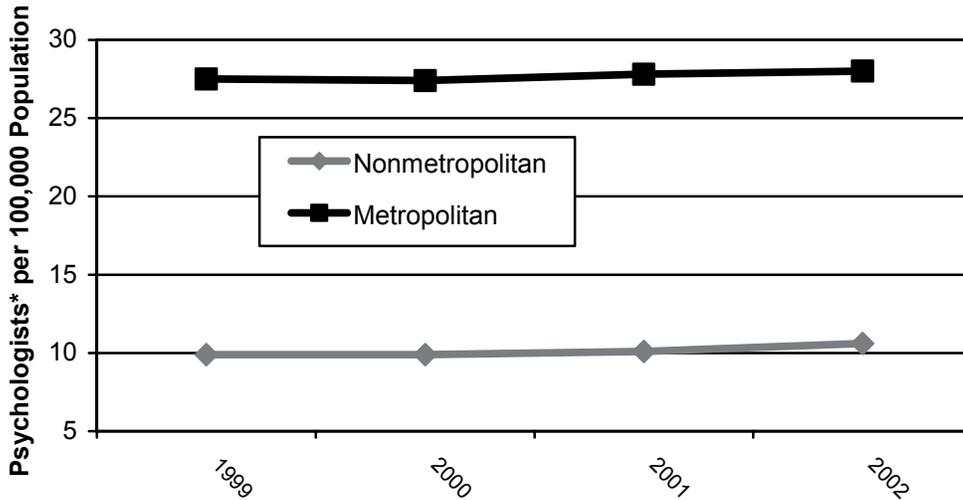
Border Metropolitan	6.5
Non-Border Metropolitan	7.7
Border Non-Metropolitan	2.7
Non-Border Non-Metropolitan	2.5

Trends:

Year	Number	Providers/100,000 Population
1990	1,264	7.4
1996	1,336	7.0
2000	1,422	7.0
2003	1,480	6.8

APPENDIX C-20
Psychologists*

Psychologists* per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1999–2002



Source: Texas State Board of Examiners of Psychologists
Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
Figures include all licensed, active, in-state psychologists*

2003 Texas Licensed Psychologist* Facts:

Race-ethnicity, age, and gender data not available

Number of Counties with no Licensed Psychologists 151

	Providers/100,000 Population
Border Metropolitan	11.2
Non-Border Metropolitan	17.9
Border Non-Metropolitan	3.7
Non-Border Non-Metropolitan	4.6

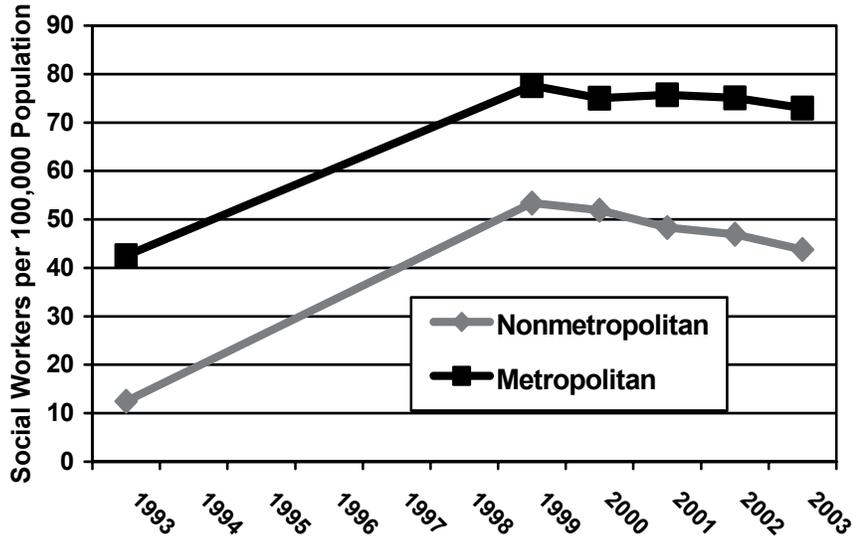
Trends:

Year	Number	Providers/100,000 Population
1993	1,715	9.5
2000	3,088	15.2
2003	3,254	14.9

*Note: There are four types of Psychologists in Texas: Licensed Psychologists (LP), Provisionally Licensed Psychologists (PLP), Licensed Psychological Associates (LPA), and Licensed Specialists in School Psychology (LSSP). An LP, PLP, or LPA may also be an LSSP. The data reflected in the graph above were derived from an unduplicated count of the sum of all four professions. The information in the 2003 Texas Licensed Psychologist Facts table applies to Licensed Psychologists only.

APPENDIX C-21
 Social Workers

Social Workers per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1993–2003



Source: Professional Licensing and Certification Division, TDH
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state social workers

2003 Texas Social Worker Facts:

Race-ethnicity data not available

Male	17.8%	Median Age Male	51
Female	82.2%	Median Age Female	45

Number of Counties with no Social Workers 51

Providers/100,000 Population

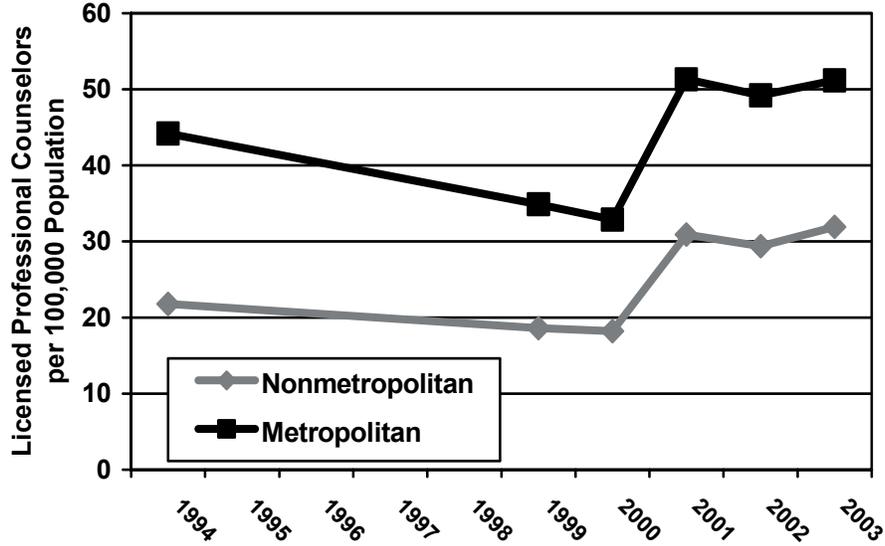
Border Metropolitan	66.1
Non-Border Metropolitan	73.8
Border Non-Metropolitan	34.4
Non-Border Non-Metropolitan	49.4

Trends:

Year	Number	Providers/100,000 Population
1993	6,783	37.6
2000	14,549	71.5
2003	15,003	68.7

APPENDIX C-22
 Licensed Professional Counselors

Licensed Professional Counselors per 100,000 Population, Metropolitan and Non-Metropolitan Counties, Texas, 1994–2003



Source: Professional Licensing and Certification Division, TDH
 Source for *metropolitan–non-metropolitan* definition: Office of Management and Budget
 Figures include all licensed, active, in-state licensed professional counselors

2003 Texas Licensed Professional Counselor Facts:

Race-ethnicity and gender data not available

Median Age 53

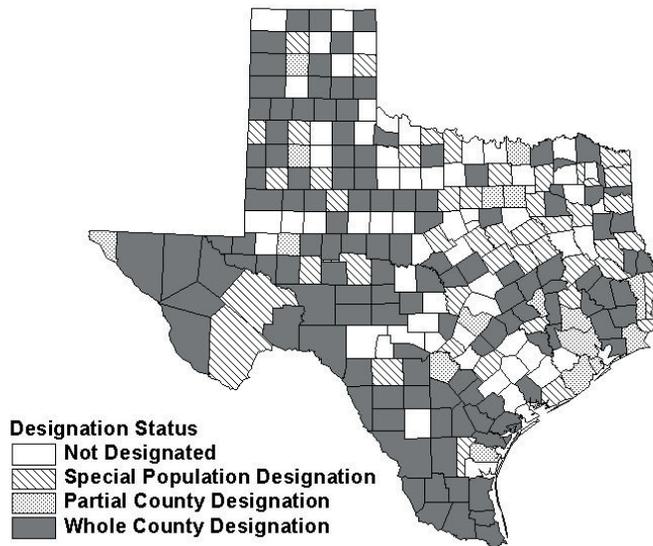
Number of Counties with no Licensed Professional Counselors 52

	Providers/100,000 Population
Border Metropolitan	42.8
Non-Border Metropolitan	53.3
Border Non-Metropolitan	25.1
Non-Border Non-Metropolitan	33.1

Trends:

Year	Number	Providers/100,000 Population
1994	7,514	40.9
1998	6,513	33.1
2000	6,269	30.8
2003	10,596	48.5

APPENDIX C-23
Federally Designated Primary Care Health Professional Shortage Areas in Texas,
March 2004

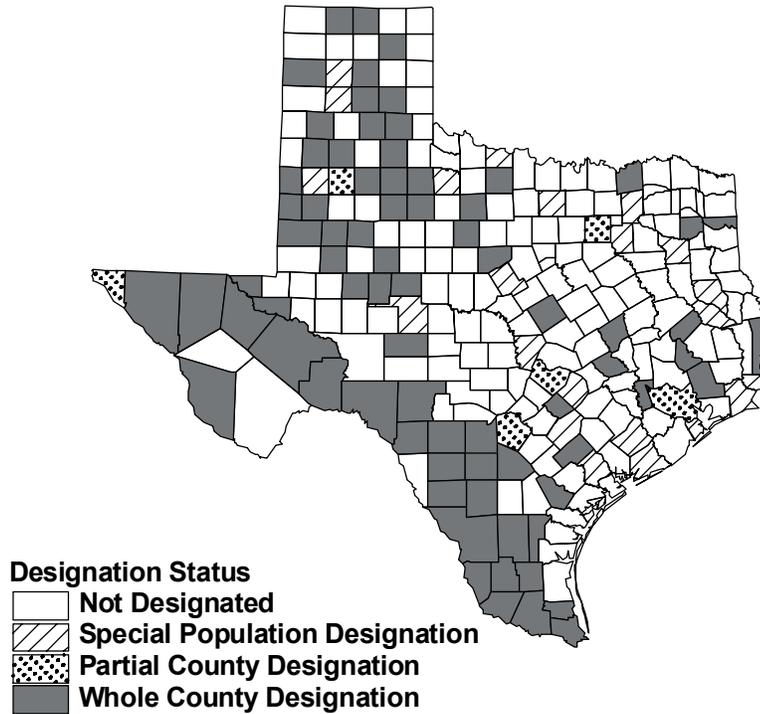


Prepared by:
Health Professions Resource Center
Center for Health Statistics
Texas Department of Health
Data Source:
Shortage Designation Branch
United States Department of Health and Human Services
March 2004

Federal “Primary Medical Care” Health Professional Shortage Areas (HPSAs)

The U.S. Department of Health and Human Services HPSA designation program is administered in conjunction with the Health Professions Resource Center. The designation program uses population-to-PC physician ratios to identify counties having shortages of PC physicians. In March 2004, 69.7 percent of the counties in Texas (131 whole counties; 46 partial counties) had either whole- or partial-county HPSA designations. Seventy-five percent of the 128 “whole county” HPSAs were rural counties, and 24 percent were border counties. In addition to geographic area designations, the HPSA designation program also provides for the designation of special population groups within geographic areas and for the designation of facilities under certain circumstances.

APPENDIX C-24 Federally Designated Dental Health Professional Shortage Areas in Texas, March 2004



Prepared by:
Health Professions Resource Center
Center for Health Statistics
Texas Department of Health
Data Source:
Shortage Designation Branch
United States Department of Health and Human Services
April 2004

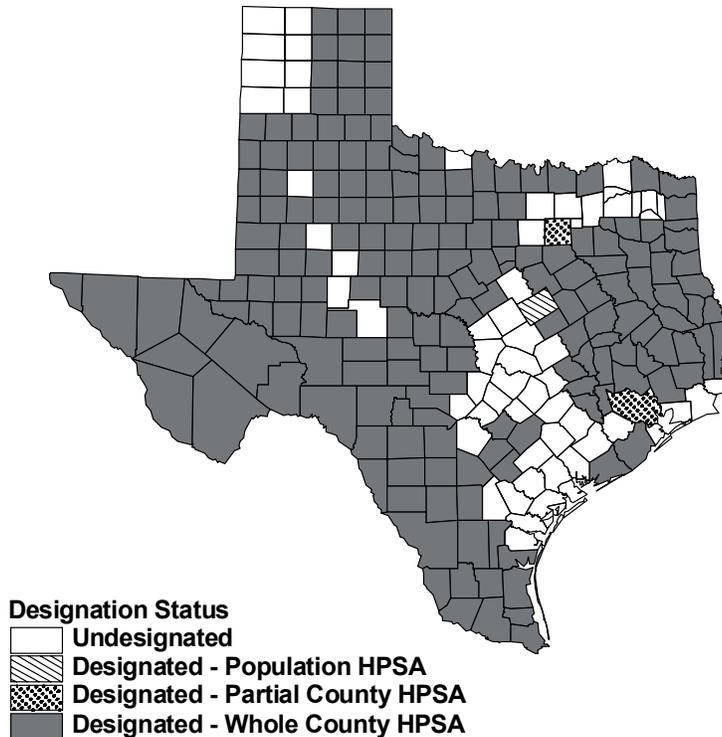
Federal Dental Health Professional Shortage Areas (HPSAs)

The U.S. DHHS HPSA designation program uses population-to-general dentist ratios to identify counties with a shortage of dentists. In addition to geographic area designations, the HPSA designation program also provides for the designation of special population groups within geographic areas and for the designation of facilities under certain circumstances.

In March 2004, 107 counties in Texas had some type of designation by the U.S. Department of Health and Human Services as experiencing a shortage of dentists. Seventy-nine of these designations were for whole counties.

APPENDIX C-25

Federally Designated Mental Health Professional Shortage Areas in Texas, March 2004



Prepared by:
Health Professions Resource Center
Center for Health Statistics
Texas Department of Health
Data Source:
Shortage Designation Branch
United States Department of Health and Human Services
April 2004

Mental Health Professional Shortage Areas

The U.S. DHHS Health Professional Shortage Area designation program uses population-to-psychiatrist ratios to identify counties with a shortage of psychiatrists. In addition to geographic area designations, the HPSA designation program also provides for the designation of special population groups within geographic areas and for the designation of facilities under certain circumstances. In March 2004, there were 189 counties designated by the U.S. DHHS as whole-county mental-health HPSAs in Texas, and two counties designated as partial-county mental-health HPSAs. Also, one county has a designation for low-income population.

Appendix D

**78th REGULAR
LEGISLATIVE SESSION
BILL TRACKING**



**Statewide Health Coordinating Council: Bill Track for the 78th Texas Legislature
 Status as of June 26, 2003**

Bill	Comp. Bill	Author	Caption	SHCC Strat	Ref. to Comm	Out of Comm.	Engro.	Ref. to Comm.	Passed Out of Comm.	Passed 2nd House	Enrolled	Signed or Vetoed
HB 3		Nixon	Relating to Health Care.	3.1.1	Civil Practices							
HB 4		Nixon	Relating to reform of certain procedures and remedies in civil actions.	3.1.1	Civil Practices	4-Mar	28-Mar	State Affairs	14-May	16-May	2-Jun	11-Jun
HB 6	SB 104	Allen	Relating to the regulation and enforcement of the practice of medicine by the State Board of Medical Examiners.	1.1.1	Public Health	26-Feb						
HB 46	SB 124	Turner	Relating to the continuance of the Telecom-munications Infrastructure Fund Board and the limitation on deposits to the telecommunications infrastructure fund.	3.1.1	Reg-Industry							
HB 85	SB 1009	McClendon	Relating to the establishment of an undergraduate medical academy at Prairie View A&M University.	6.2.2	Higher Ed	23-Apr	1-May	Education	23-May	28-May	31-May	20-Jun
HB 150		Chavez	Relating to the establishment of a geriatrics research academy at the Texas Tech University campus in El Paso.	5.2.5 6.1.2	Higher Ed							
HB 242	SB 112	Seaman	Relating to career and technology education and training.	4.2.3 4.4.1	Higher Ed	17-Mar	1-Apr	Education	28-Apr	6-May	7-May	16-May
HB 273	SB 55	Naishat	Relating to forensic evidence training for students enrolled in certain medical or nursing degree programs.	6.1.2	Higher Ed							
HB 311	SB 241	Villarreal	Relating to the regulation of licensed vocational nurses.	1.1.1 3.2.2 4.1.1 6.2.1	Public Health	14-Apr	30-Apr	HHS				
HB 350		Dutton	Relating to participation in cooperative career and technology education programs by certain high school students.	4.2.3 4.4.1	Public Ed							
HB 411	SB 142	Grusendorf	Relating to improvement of science instruction and student performance in public schools.	4.4.1	Public Ed	11-Apr	24-Apr	Education	20-May	24-May	2-Jun	20-Jun
HB 493	SB 262	Jones, Jesse	Relating to the continuance of the Texas Department on Aging.	5.2.5 5.2.6	Human Services	4-Apr	24-Apr	Govt Org.				
HB 525	SB 309	Noriega	Relating to providing health care services without regard to a person's immigration status.		State Health Care Exp							
HB 579	SB 158	Eiland	Relating to limiting liability of physicians and health care providers for charitable care.		Civil Practices							
HB 649		Keffer, J	Relating to creating an interagency work group on rural issues.	3.2.2	Land & Resource Mgmt	24-Mar	5-May	State Affairs	23-May	28-May	31-May	20-Jun

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HB 697	SB 102	Gutierrez	Relating to procedures and standards for providing health care services in public schools.	6.2.2 4.4.1	Public Ed							
HB 720		Eiland	Relating to the regulation and prompt payment of health care providers under certain health benefit plans.		Insurance	Incorporated into SB 418						
HB 727	SB 327	Delisi	Relating to disease management programs for certain Medicaid recipients.		State Health Care Exp	24-Mar	10-Apr	HHS	21-May	28-May	2-Jun	16-Jun
HB 764	SB 343	Wohlgemuth	Relating to health of school-age children.	4.4.1	Public Health	Incorporated into SB 474						
HB 770	SB 1028	Solis	Relating to Community Center Loan Program.		Public Health	Incorporated into SB 610						
HB 910	SB 263	Gallego	Relating to the continuation of the State Board of Dental Examiners.	3.2.3	Public Health	Substituted by SB 263						
HB 918		Eiland	Relating to the authority of certain counties to implement a pilot program to provide certain indigent health care services and to the funding of the program.		Local Govt Ways	1-Apr	10-May	Finance				
HB 930	SB 398	Chavez	Relating to rates and expenditures under the Medicaid program and the state child health plan program in certain strategic investment areas.		Public Health	Portions incorporated into HB 2292						
HB 1016	SB 342	Gallego	Relating to health care for certain Texans.	4.2.3	Border & Int'l	Substituted by SB 474						
HB 1074	SB 438	Rodriguez	Relating to disease control programs to reduce the rise of certain communicable diseases.		Public Health	Substituted by SB 610						
HB 1093	SB 474	Capelo	Relating to nutrition and health programs for public school children.	6.2.2 4.4.1	Public Health	Substituted by SB 558						
HB 1094	SB 610	Capelo	Relating to Grants for Federally Qualified health centers.		Public Health	29-Apr	10-May	Administration	Substituted by SB 610			
HB 1095	SB 612	Capelo	Relating to the authority of advanced practice nurses and physician assistants to administer, provide and carry out or sign a prescription drug order.		Public Health	14-Mar	3-Apr	HHS	29-Apr	6-May	16-May	20-May
HB 1130	SB 558	Hardcastle	Relating to immigration visa waivers for physicians.	3.2.2	Border & Int'l	Substituted by SB 558						
HB 1166		Solomons	Relating to the on-line information needs and requirements of licensing agencies and their license holders.		State Affairs	23-Apr	2-May	Govt Org.	23-May	28-May	31-May	20-Jun
HB 1212		Wilson	Relating to limitations on the number of foreign students who may be enrolled in a graduate or professional degree program at a public institution of higher education.		Higher Ed							

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HB 1325		Kefffer, J	Relating to the rural physician assistant loan reimbursement program.	3.2.2	Land & Resource Mgmt							
HB 1383		Solis	Relating to the issuance of a license to practice medicine to certain graduates of a foreign medical school.	3.2.2	Public Health							
HB 1386	SB 622	Hamric	Relating to creating an on-line central customer service center for licensing activities regulated by the state.		Government Reform							
HB 1420		Hardcastle	Relating to the use of a portion of medical school tuition for student loan repayment assistance for physicians.	3.2.2	Higher Ed	14-Apr	24-Apr	Education	23-May	28-May	2-Jun	18-Jun
HB 1483		Allen	Relating to the regulation of the practice of nursing by the Board of Nurse Examiners and to the abolition of the Board of Vocational Nurse Examiners and the transfer of the functions of that agency to the Board of Nurse Examiners.		Public Health	16-Apr	9-May	HHS	24-May	28-May	31-May	20-Jun
HB 1599		Madden	Relating to the creation and operation of the advisory committee on health care coverage issues.		Insurance							
HB 1614	SB 659	Truitt	Relating to the reporting of medical errors by certain hospitals, ambulatory surgical centers, and mental hospitals.		Public Health		30-Apr	HHS	24-May	28-May	2-Jun	20-Jun
HB 1635		King	Relating to the uses of the telecommunications infrastructure fund.	3.1.1	Reg. Industry							
HB 1694		Chavez	Relating to required training in gerontology for certain health care practitioners.	5.2.5 5.2.6	Public Health							
HB 1735		Delisi	Relating to disease management services under certain state-funded or state-administered health plans.		State Health Care Exp	24-Mar	2-Apr	HHS	7-May	20-May	22-May	20-Jun
HB 1757		Smithee	Relating to rate filing and rate rollbacks for professional liability insurance for physicians and health care providers.		Insurance							
HB1785	SB 1642	Merritt	Relating to the establishment of a geriatric education and care research center for the Texas-Louisiana border region.	5.2.5, 5.2.6	Higher Ed							
HB 1810	SB 418	Smithee	Relating to the regulation and prompt payment of health care providers under certain health benefit plans.		Insurance							
Elements incorporated into HB 1166												
Governor eliminated TIFB by a line item veto of appropriation in HB 1.												
Substituted by SB 1642												
Substituted by SB 418												

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HB 2977	SB 722	Chavez	Relating to a program to provide incentives for certain persons earn doctorate degree and enter the faculty and administration of institutions of higher education.	3.2.2	Higher Ed	10-May						
HB 2985		Cabelo	Relating to the establishment of an office of patient protection within the Health Professions Council.	7.1.1	Public Health	14-Apr	30-Apr	HHS	23-May	28-May	31-May	18-Jun
HB 2986	SB 1167	Cabelo	Relating to increasing the number of registered nurses and other health care professionals.	3.2.2	Public Health							
HB 3008	SB 769	Cabelo	Relating to the licensing and regulation of surgical assistance.		Public Health							
HB 3059		Jones, Jesse	Relating to the administration and functions of the Department of Aging and to the transfer of certain programs and activities to the Department on Aging.	5.2.5 5.2.6	Human Services							
HB 3078		West, Buddy	Relating to state agency action to identify and address disproportionately high and adverse human health.		Natural Resources							
HB 3093		Madden	Relating to improving access to health care for the citizens of Texas by providing for the reimbursement and use of particular health care practitioners who are licensed by the state to provide certain services.		Insurance							
HB 3122	SB 428	Truitt	Relating to the establishment of locally based demonstration project to provide health care benefits to certain low-income parents.		Public Health	25-Apr	9-May	HHS	22-May	28-May	31-May	20-Jun
HB 3126	SB 1167	Truitt	Relating to increasing the number of registered nurses and other health care professionals.	3.2.2	Public Health	24-Apr	5-May	Administration	13-May	20-May	22-May	20-Jun
HB 3163		Cabelo	Relating to rates for professional liability insurance for physicians and health care providers.		Insurance							
HB 3181		Delisi	Relating to the creation of the Commission for State Health Care Expenditures.		State Health Care Exp	6-May						
HB 3182		Delisi	Relating to establishment of a consumer-directed care demonstration program.		State Health Care Exp	7-May						
HB 3193		Uresti	Relating to the delegation of certain acts by dentists. [Allows delegation by dentist only in medically underserved areas only].	3.2.3	Public Health	29-Apr	6-May	HHS	22-May	28-May	31-May	20-Jun
HB 3231	SB 1353	Smith, Todd	Relating to operations of the Health Professions Council.	1.1.1	Government Reform							
HB 3297		Chavez	Relating to the Office of Rural and Border Affairs.	3.2.2	Border & Int'l	23-Apr						
Elements added to HB 2292												

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SB 112	HB 242	Van de Putte	4.2.3 4.4.1	Education	13-Mar		Substituted by HB 242				
							Governor eliminated TIFB by a line item veto of appropriation in HB 1.				
SB 124	HB 46	Shapleigh	3.1.1	Finance							
SB142	HB 411	Ellis, R.	4.2.3 4.4.1	Education	14-Apr		Substituted by HB 411				
SB 158	HB 579	Nelson.		State Affairs			Incorporated into HB 4				
SB 208		Harris, Chris	1.1.1	HHS							
SB 229		Ellis, R.	4.2.3	HHS							
SB 241	HB 311	Shapleigh	1.1.1	HHS	2-May		See HB 1483				
SB 262	HB 493	Carona	5.2.5 5.2.6	Govt Org.			See HB 2292				
SB263	HB 910	Nelson.	1.1.1	Govt Org.	3-Mar	6-Mar	Public Health	15-Apr	24-Apr	29-Apr	9-May
SB 286	HB 2419	Shapleigh		Govt Org.	8-Apr	22-Apr	Higher Ed	21-May	26-May	2-Jun	20-Jun
SB 309	HB 525	Gallegos		Int'l Relations	15-Apr	5-May	Public Health				
SB 327	HB 727	Janek		HHS	6-Mar	13-Mar	State Health Care Exp				
SB 342	HB 1016	Shapleigh		State Affairs	3-Apr		Substituted by HB 727				
SB 343	HB 764	Shapleigh	4.4.1	Education			Portions incorporated into HB 2292				
SB 413		Madla		Education							
SB 418		Nelson.		HHS	17-Mar	25-Mar	Insurance	17-Apr	9-May	2-Jun	17-Jun
SB 426		Lindsay		HHS							
SB 428	HB 3122	Lindsay		HHS			Substituted by HB 3122				

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SB 438	HB 1074	Lindsay	Relating to disease control programs to reduce the risk of certain communicable diseases.		HHS	14-Apr						
SB 446		Madla	Relating to the authority of the Rural Foundation.	3.2.2	Inter Govt. Rela	6-Apr	13-Mar	Land & Resource Mgmt	16-Apr	2-May	7-May	16-May
SB 474	HB 1093	Lucio	Relating to nutrition and health programs for public school children.	4.4.1	Education	9-May	14-May	Public Health	22-May	28-May	2-Jun	20-Jun
SB 558	HB 1130	Madla	Relating to immigration visa waivers for physicians.	3.2.2	Int'l Relations	18-Mar	27-Mar	Border & Int'l	14-Apr	29-Apr	1-May	28-May
SB 610	HB 1094	Nelson	Relating to Grants for Federally Qualified health centers.		HHS	22-Apr	1-May	Public Health	19-May	25-May	2-Jun	20-Jun
SB 612	HB 1095	Nelson	Relating to the authority of advanced practice nurses and physician assistants to administer, provide and carry out or sign a prescription drug order.		HHS							
SB 622	HB 1386	Armbrister	Relating to creating an on-line central customer service center for licensing activities regulated by the state.		State Affairs							
SB 691	HB 3531	Madla	Relating to reimbursement for telemedicine medical services under the Medicaid program and other government-funded programs.	3.1.1	HHS	14-Apr	28-Apr	State Health. Care Exp	6-May	24-May	31-May	20-Jun
SB 718		Madla	Relating to the regulation of nursing. [Increase nurse workplace retention including expanded whistleblower protections among other issues].	1.1.1	HHS	14-Apr	22-Apr	Public Health	29-Apr	30-Apr	2-May	20-Jun
SB 722	HB 2977	Van de Putte	Relating to a program to provide incentives for certain persons earn doctorate degree and enter the faculty and administration of institutions of higher education.	3.2.2	Education	13-May	20-May	Higher Ed				
SB 769	HB 3008	Carona	Relating to the licensing and regulation of surgical assistance.		HHS	8-May	12-May	Public Health	22-May	28-May	31-May	21-Jun
SB 858	HB 1877	Madla	Relating to creating the rural physician relief program.	3.2.2	Inter Govt. Rela							
SB 859	HB 1614	Madla	Relating to the reporting of medical errors by certain hospitals, ambulatory surgical centers, and mental hospitals.		HHS							
SB 1009	HB 85	West, R	Relating to the establishment of an undergraduate medical academy at Prairie View A&M University.	5.2.5 5.2.6	Education							

Substituted by HB 1095

Elements incorporated into HB 1166

Incorporated into SB 286

Substituted by HB 1877

Substituted by HB 1614

Substituted by HB 85

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SB 1028	HB 770	Gallegos	Relating to a community health center revolving loan program.		HHS							
SB 1128		Bivins	Relating to the administration of the Joint Admission Medical Program. [requires the JAMP to establish procedures to select and work with JAMP alternates, establishes that applicants' records as confidential, and provides that meetings dealing with such records are not subject to the Open Meetings Act.]	3.2.2	HHS	24-Apr	1-May	Higher Ed	21-May	28-May	30-May	20-Jun
SB 1167	HB 2986 HB 3126	Janek	Relating to increasing the number of registered nurses and other health care professionals.	3.2.2	Education	2-May	Substituted by HB 3126					
SB 1353	HB 3231	Ellis, R.	Relating to the operation of the Health Professions Council. Sunset bill for the HPC.	1.1.1	Govt.Org.							
SB 1401		Fraser	Relating to the administration of the telecommunications infrastructure fund, including the abolition of the telecommunications infrastructure fund board and the transfer of the board's duties.	3.1.1	Finance		Governor eliminated TIFB by a line item veto of appropriation in HB 1.					
SB 1421	HB 1814	Janek	Relating to the provision of health and human services in this state, including the powers and duties of the Health and Human Services Commission and other state agencies.		HHS		Substituted by HB 2292					
SB 1436	HB 3325	Staples	Relating to the creation and administration of the community telecommunications alliance program.	3.1.1	Business		Substituted by HB 3325					
SB 1549		Nelson	Relating to requiring that certain individuals who provide nursing services in a nursing institution receive annual training in caring for people with dementia.	5.2.5 5.2.6 6.1.2	HHS	14-Apr	25-Apr	Public Health	2-May	16-May	22-May	20-Jun
SB 1586		Lucio	Relating to establishing a health science center and medical school in the Rio Grande Valley.	6.1.2	Education							
SB 1642		Staples	Relating to the establishment of a geriatric education and care research center at The University of Texas Health Science Center at Tyler.	5.2.5 5.2.6 6.1.2	Education	28-Apr	1-May	Higher Ed	21-May	28-May	31-May	20-Jun

Appendix E

AD HOC COMMITTEE ON HEALTH PERSONNEL DATA



Appendix E

Ad Hoc Committee on Health Personnel Data

A report given in response to the *1999–2004 Texas State Health Plan* goal:

Goal 1: Ensure that the needed number of health care professionals are educated and trained.

Objective 1.1: Improve coordination of data collection and statewide planning efforts.

Report to the Statewide Health Coordinating Council

February 10, 2000

Statewide Health Coordinating Council

TEXAS STATEWIDE HEALTH COORDINATING COUNCIL
Ad Hoc Committee on Health Personnel Data
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HMO Representative
SHCC Member

PJ (Schneider) Wright, Co-Chair
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Ad Hoc Committee on Health Personnel Data

INTRODUCTION



Over half a million workers comprise the health care workforce in Texas. They provide health care in various settings and services that cover the full spectrum of the health care delivery system. The Statewide Health Coordinating Council's workforce arm, the Health Professions Resource Center (HPRC), currently tracks the supply trends for state licensed health professionals.

Given the diversity, rapid growth and constant evolution of the health personnel workforce, there is an increasing need to maintain a comprehensive database that includes demographic information as well as basic licensure information. For example:

- Who are they (e.g., physician assistants)?
- Where do they work (e.g., hospitals)?
- What are their characteristics (e.g., gender)?
- What type of training do they have (e.g., associate degree)?
- How many are there (e.g., number per 100,000 population)?
- How many should there be now and in the future (e.g., 20 percent increase in the number of graduates)?

To assess the status of the current workforce and to forecast the requirements for health professionals in the future, reliable, accurate, complete and timely health professions data must exist and be readily accessible to workforce planners. A common set of data elements collected on all of the licensed health professions would ensure the establishment of a comprehensive database. Timely, complete and accurate data allow for the following types of analyses:

- Evaluating the effects of various forces on the requirements for health care personnel.
- Tracking trends in the supply and requirements for personnel.

- Monitoring the annual changes in health professions education pipelines.
- Reporting the annual distribution and composition of the health care workforce.
- Evaluating the effects of public policies on health care professional education, recruitment and retention.
- Planning new educational programs and funding streams.
- Determining performance measures at state educational institutions.

Legislative Charge to the Statewide Health Coordinating Council

The Texas Health and Safety Code, §104.0421, directs the Statewide Health Coordinating Council to work with “professional licensing agencies to develop uniform standards for health professional data collected by those agencies, to enable the Council to maintain a comprehensive health professional database.” It specifies that, “the Council shall retrieve data on health professionals from the appropriate licensing agencies...and enter (into) agreements...concerning the identification, acquisition, transfer and confidentiality of data.”

High priority is to be placed on collecting and disseminating data on health professions in acute shortage areas, on nursing personnel and on health professions needs in rural areas. The legislation states that, at a minimum, the data must include the number and distribution of health professionals; their licensure or certification status; information on their specialty areas, if applicable; and trends or changes in license holders according to number or geographic distribution.

In implementing the requirements of the Health and Safety Code, §104.0421, the Council sought to bring about the coordination of health professions training and workforce development activities in Texas identified in the *1999-2004 Texas State Health Plan*. This plan addressed seven goals for ensuring that Texas residents are served by a high quality health care workforce, both now, and in the future. The Council appointed the Ad Hoc Health Personnel Data Advisory Committee to accomplish the first of these seven goals - *to ensure that the needed number of health care professionals are educated and trained*. The Ad Hoc Committee was to accomplish this through implementing strategy 1.1.1 of the Texas State Health Plan:

Appoint a Health Personnel Data Advisory Committee to provide guidance and improve the coordination and integration of data collection, analysis and statewide health care workforce planning efforts.

According to the statute, the Council is directed to use the health workforce data to monitor and evaluate long-term regional, statewide, and local health needs. The Council shall use this information for developing workforce goals and recommendations relating to health education, training and regulation. The Health Professions Resource Center is to use the data to publish reports concerning the educational and employment trends for health professions, the supply of and demand for health professionals, and other issues, as necessary, concerning health professions in this state. It is generally accepted that, based on this legislation, state legislators felt that quality health personnel data and workforce analyses are important for determining sound policy and fiscal management of state dollars for the education and training of health professionals in Texas.

BACKGROUND

The Status of Health Professions Data in Texas

State licensing boards focus on the collection of data required to implement their licensure responsibilities. Few of the boards collect adequate information for conducting basic workforce supply studies, planning, or policy-making. Table A-1 contains a list of the types of data elements necessary to perform different levels of workforce analysis. Many boards regard the collection of data beyond the minimum required in their regulatory function to be outside of their statutory requirement. Not all boards, however, follow such a strict interpretation of their enabling acts. For example, the Texas State Board of Medical Examiners (TSBME) and the Texas Board of Nurse Examiners (TBNE) have considered it in their best interest to collect more comprehensive data on their licensees.

Minimum Data Set

To meet the legislative charge of §104.0421, the Ad Hoc Committee convened a data subcommittee to review the data elements currently collected by the boards and to develop a proposed Minimum Data Set (MDS) that could be used as a common framework by all licensing boards for the collection of licensee data. Many of these

data elements were selected directly from the TSBME and the TBNE data elements collected on their licensees. The proposed minimum data set was presented to the Ad Hoc Committee and revisions were made based on input from the committee and the boards. Table A-2 includes the final version of the list of data elements proposed in the MDS.

The MDS elements were selected to answer the most basic and salient questions customers have about health workforce. These basic data elements allow for the analytical compatibility and comparability of data over time and across professions. Although no one workforce method can reliably forecast the supply and requirements for health personnel in the future, the MDS is essential for conducting even the simplest of workforce supply studies and for measuring the state's progress in the recruitment and retention of health personnel.

The MDS should be integrated into the existing data sets already being collected on state licensees. The assumption is that basic workforce information is needed by all boards in order to answer the many questions they receive from their licensees, state legislators, and other customers. Many of these customers need health professions data to satisfy state and federal mandates, and, in many cases, the licensing boards are the only sources of such data. The principal types of customers the Ad Hoc Committee determined to be most in need of the data elements in the MDS are as follows:

- State legislators and state agencies
- Professional associations
- Educational institutions
- Agencies concerned with issues of primary care and medical under-service
- Managed care organizations, hospitals and other health care employers
- Consumer and citizen advocacy groups
- Health workforce policy researchers

Upon the advice of licensing board staff and attorneys, ad hoc committee members, and other state and federal workforce planners, the proposed data set was kept to a minimum to ensure better compliance by health professionals who must complete this information on their license application or renewal form. Limiting the MDS to “need to know” rather than “nice to know” data about health professionals limits

the number of questions the applicant or licensee must answer and the amount of data processing needed to be done by the boards.

The ad hoc committee discussed whether the data fields on the application or renewal forms should be mandatory for licensure or renewal. Some Texas boards and boards in other states have found that most health professionals respond to the questions on their application or renewal forms regardless of whether the fields are mandatory or voluntary. Given the increase in personnel costs required to monitor the completion of all data elements if they are mandatory for licensure, the committee does NOT recommend that the licensing or renewal of a professional's license be dependent upon the completion of all data elements. There are also legal considerations that prohibit making the collection of age, gender, race/ethnicity data elements mandatory.

The MDS represents basic or core descriptors common to all professions and is not entirely sufficient for conducting more sophisticated workforce analyses. More specialized data elements such as compensation, retirement planning, employment benefits, and practice patterns are proposed to be collected through the use of survey tools. Most of the boards indicated they were willing to assist the Council by enclosing surveys in their license renewal applications.

Barriers to Implementing the Proposed Minimum Data Set

To determine the feasibility of implementing the MDS, the Ad Hoc Committee mailed a survey to licensing board staff and attorneys and asked them to reply to questions concerning the implementation of the MDS by their boards. Licensing board staff answered questions about the applicability of the MDS data fields to their professions; the fiscal and workload impact to their boards if the MDS were implemented; the possible use of optically scanned license application and renewal forms; their willingness to include a one to two page workforce survey tool with their renewal forms; and the ramifications (cost, personnel, etc.) of collecting MDS information as mandatory versus voluntary information. Licensing Board attorneys replied to legal questions about implementing the MDS. These questions concerned the possible violation of laws governing the boards pursuant to the collection of the MDS; the possible violation of any confidentiality laws if the MDS were implemented; whether the collection of the MDS data elements could be mandated

by law as a condition for licensure or renewal; and, whether implementing the MDS would violate their boards' current rules.

The following barriers to implementing the MDS were identified:

- The cost for staff, printing, additional programming, and equipment upgrades were considered barriers to implementation. State Appropriations Act, Article VIII, would require many of the boards to significantly raise their licensing fees to cover costs incurred in implementing the MDS.
- State employment (FTE) caps prohibit the hiring of new staff to implement the MDS
- Concern that the collection and release of privacy data (social security number, race/ethnicity, etc.) by the boards to other state agencies would violate state Open Record Acts and Privacy Acts

Although many board staff indicated that it would be simpler if the Council were to collect MDS data by survey, research by the Ad Hoc Committee indicated that the development and collection of multiple surveys of health professionals would be cost prohibitive (see Table A-3).

Other states have found that costs related to the development and routine administration of the surveys required for effective planning have been determined to be prohibitive. In addition, the effectiveness of that collection methodology is questionable given the historically poor survey return rates. Thus, the use of survey tools to collect basic health personnel data would be cost prohibitive and less reliable when compared with collection of the MDS through license application or renewal forms. However, as mentioned earlier, surveys would be useful for the collection of data for special projects or studies such as the salaries and benefits of health professionals, multiple practice address issues, and practice patterns.

Proposed Implementation of MDS

The Ad Hoc Committee used information provided by the licensing boards staff to determine which data elements were missing from their licensee databases. A list of these data elements is presented in Table A-4. It was suggested in the Ad Hoc Committee that if the HPRC were to contract with the licensing boards to collect the data, barriers such as the FTE cap, the structure of the boards' appropriations, and the current fee collection system could be surmounted. The Ad Hoc Committee

proposes that the Texas Legislature appropriate funds to the HPRC to contract with the licensing boards to collect the existing and missing data elements.

The HPRC would implement the MDS in a priority order. Priority order for implementation was determined by consulting with the Higher Education Coordinating Board, the Center for Rural Health Initiatives, an academic representative of allied health programs and a representative of an academic health center. Collection of survey data high priority professions would be funded for implementation as soon as funding was appropriated, low priority professions would be funded at a later date. The intent would be that all of the licensed health professions in Texas would be collecting the MDS by 2006. Table A-5 includes a list of these professions in order of priority.

Licensing board staff also expressed concern about the privacy of the data collected in the MDS, especially the social security number. Licensing boards have been unwilling to provide this critical data element to the HPRC and other state agencies because of HB 692 passed by the 76th Texas Legislature that prevents the release of the social security number under the open records act. Board attorneys indicated that the social security number and other privacy data may be available to other state agencies since a transfer of information from one governmental body to another is considered an intra-governmental transfer. The receiving agency is required to maintain the same confidentiality statutes as the original holder of the information.

The social security number is important to the Council and other state agencies because it allows the accurate identification of health professional licensees within the state. Since a licensee's name and address may change over time, and nicknames and variants for given names may be used by licensees, the social security number is the only reliable data element that allows state agencies to follow the location and distribution of health care personnel across the state. State health professions schools have an interest in these data, and in some instances, a state requirement, to determine where their graduates locate upon graduation, how many remain in the health professions field, and how likely are health personnel of various racial/ethnic backgrounds to serve populations with similar racial/ethnic backgrounds. Other state agencies need the social security number to determine an important workforce supply variable – the number of Texas trained graduates employed in Texas versus the number of health professionals practicing in Texas who were trained at out-of-

state institutions. Given the importance of the social security number as the personal identification data element, the Ad Hoc Committee recommends an amendment to HB 692 that would clarify the transfer of this data element.

Finally, to meet the requirements of state statute, the Ad Hoc Committee recommends that a memorandum of agreement between the Health Professions Resource Center and each licensing board be developed. These agreements should focus on the identification, collection, acquisition, transfer and confidentiality of data.

The Ad Hoc Committee acknowledges that revising existing data collection systems is difficult and costly. The Ad Hoc Committee has had excellent cooperation and input from the licensing boards and the Health Professions Council. The recommendations proposed are the result of a collaborative effort to meet the Council's legislative mandates and the boards' resource needs to implement the MDS.

AD HOC COMMITTEE RECOMMENDATIONS

Based on the meetings and surveys with licensing board staff, the Ad Hoc Committee developed four recommendations to ensure that the state has the ability to maintain a comprehensive database of health professionals in Texas.

Recommendation One: Amend the Health and Safety Code, §105.003, to include the data elements listed in Attachment A as minimum data to be requested from each health professional licensed in Texas.

Recommendation Two: Appropriate funds to the Statewide Health Coordinating Council to be used to contract with the state health professions licensing boards for them to collect the minimum data set.

Implementation of the minimum data set would be on a priority basis as determined by the Statewide Health Coordinating Council. Any licensing board entering into an interagency contract to collect the minimum data set may exceed their FTE cap for the purpose of providing data collection and processing support to the Council.

The contract will specify services to be provided and include sufficient funds to fully support the FTE's hired or contracted by the agency

Recommendation Three: Implement the MDS in any new licensing system for a healthcare professional licensing board that results from the licensing system analysis study by the Department of Information Resources (House Bill 1, 76th Legislative Session, Section 1-67, Department of Information Resources, Rider #6) should be able to accommodate the recommended MDS.

Recommendation Four: Amend H.B. 692, 76th Texas Legislative Session, to allow for the disclosure of the social security number and other licensing board data including, but not limited to, gender, date of birth, and race/ethnicity to the Health Professions Resource Center, other state agencies and state universities.

Release of such licensing data should be subject to any confidentiality requirements and guidelines outlined by the open records laws and privacy laws of Texas.

Recommendation Five: Develop a Memorandum of Understanding between the Health Professions Resource Center and each of the health professions licensing boards:

- 1) Annual acquisition of data
- 2) Disposition and ownership of board licensee data
- 3) Collection of fees for databases
- 4) Disclosure of data that are subject to the open records law
- 5) Collaborative efforts for collection of additional needed workforce data.

Table A-1. Levels of Health Personnel Workforce Studies

Type of Workforce Analysis	Hierarchy - Level of Data and Analysis		
	Basic Data & Analyses	Intermediate Data & Analyses	Advanced Data & Analyses
Supply of Personnel	<u>License Counts</u> <u>Employment Counts</u> <u>National Trends:</u> Practitioners Employment <u>State Trends:</u> Practitioners Employment <u>Association Data:</u> Members General Data	<u>New professionals</u> <u>Education Pipeline:</u> Enrollments Degrees Trends <u>Adjustments:</u> Age Gender Practice FTE Specialty <u>Sub-state Regions</u> <u>Migration Patterns</u> <u>Projections</u>	<u>Special Surveys:</u> Providers Educators Practitioners <u>Special Problems:</u> Rural Areas Inner Cities <u>Small Area Studies:</u> Zip codes Cities & towns Special Districts Travel Time <u>Integrated Models</u> <u>Credential Changes</u> <u>Practice Patterns</u>
Requirements for Personnel	<u>Ratios of Personnel:</u> To population To patients To beds, etc. <u>Historical Trends:</u> Hospitalizations Office Visits <u>Employment Stats:</u> Providers Government <u>Standards & Norms:</u> Baselines Targets	<u>Demand Factors:</u> Age Income <u>Facility Changes:</u> New Facilities Closed Facilities New Services <u>Needs vs. Demand:</u> Underserved Special <u>Populations</u> <u>Substate Regions</u> <u>Indirect measures:</u> Salary Trends Recruiting Vacancies	<u>Special Problems:</u> Inner city Rural AIDS STDs Preventive Care Illness patterns <u>Special Surveys:</u> Practitioners Employers Patients Public <u>Integrated Models</u> <u>Utilization Studies:</u> 3 rd Party Payers Productivity <u>Regulations</u>

Slight Modification of a Table from: Wing, Paul and Edward S. Salsberg. Data Systems to Support Health Personnel Planning and Policymaking: A Resource Guide for State Agencies. The New York State Department of Health and the U.S. Department of Health and Human Services, pg. 72 (Figure 2. Health Personnel Analysis Hierarchy), October 1992.

Table A-2. List of 37 Workforce Data Elements in the Minimum Data Set

- 1) Last Name
- 2) First
- 3) Middle Name
- 4) Social Security Number
- 5) License (Certification, Registration) Number
- 6) License Issuance Date
- 7) Method of Licensure
- 8) Registration Status
- 9) Gender
- 10) Race /Ethnicity (single field; or, Hispanic origin/Race/Ethnicity in two different fields)
- 11) Date of Birth (single field; or, separate fields for year, month & day of birth)
- 12) Place of Birth (state/foreign country)
- 13) Mailing Address
- 14) Mailing City
- 15) Mailing State
- 16) Mailing Zip Code
- 17) Basic Health Professions Degree - Professional degree required for entering profession
- 18) Basic Health Professions Degree - School Location
- 19) Basic Health Professions Degree - School name
- 20) Basic Health Professions Degree - Graduation Year
- 21) Highest Health Professions Degree - Highest professional degree
- 22) Highest Health Professions Degree - School Location
- 23) Highest Health Professions Degree - School Name
- 24) Highest Health Professions Degree - Graduation Year
- 25) High School Location - Tex County, other State or other Country
- 26) Primary Specialty or Work Area
- 27) Secondary Specialty or Work Area
- 28) Primary Practice Site - Specialty (e.g., family practice, etc.)
- 29) Primary Practice Site - Address
- 30) Primary Practice Site - City
- 31) Primary Practice Site - State
- 32) Primary Practice Site - Zip Code
- 33) Primary Practice Site - County FIPS Code
- 34) Primary Practice Site - Hrs/week at location
- 35) Primary Practice Site - Employment setting type (Rural Health Clinic, hospital, etc.)
- 36) Second Practice Site (SPL) - Zip Code
- 37) Second Practice Site - County FIPS code

Table A-3. Comparison of Three Scenarios for Collecting Health Care Professions Data in Texas

SCENARIO 1	COST	PROS	CONS
<p>BOARD SCENARIO</p> <p>Boards add missing MDS data elements into current databases and collect all MDS data on licensing and/or renewal forms.</p>	<p><u>Implementation - Yr 1</u> \$1,793,000</p> <p><u>Maintenance - Yr 2-5</u> \$3,938,000</p> <p><u>Total</u> - \$5,731,000</p>	<p>Return rates for data collection forms (licensing/renewal) approach 100%.</p> <p>Builds on existing systems.</p> <p>Data needs of the U.S. DHHS's HPSA program (for complete licensee data) are satisfied.</p> <p>Boards keep current with profession specific database variables (e.g., specialties, settings, degrees, etc.)</p> <p>MDS data elements are not mandatory for licensure.</p>	<p>Must modify existing databases/forms.</p> <p>Must overcome implementation barriers:</p> <ol style="list-style-type: none"> 1) State Comptroller's lock box system for collecting licensing fees and data has licensing form size limitations that could be exceeded. 2) State FTE cap for hiring staff. 3) Inadequate computer systems, office space and staffing.
SCENARIO 2	COST	PROS	CONS
<p>BOARD-HPRC SURVEY SCENARIO</p> <p>Health Professions Resource Center collects missing MDS data with a survey attached to renewal forms.</p>	<p><u>Implementation - Yr 1</u> \$2,024,000</p> <p><u>Maintenance - Yr 2-5</u> \$8,096,000</p> <p><u>Total</u> = \$10,120,000</p> <p>According to Texas SOICC, the costs for conducting a survey under Scenarios 2 would approximate the cost for Scenario 3.</p>	<p>Boards do not change their existing system.</p> <p>Since surveys are attached to licensing or renewal forms, return rates could meet U.S. OMB standard rate of 75% for reporting labor statistics if extensive follow-up work with non-responders is done.</p>	<p>Data needs for U.S. DHHS HPSA program and the Texas Legislature will not be met with a 75% return rate.</p> <p>Survey costs are high and remain constant for initial and subsequent years.</p> <p>HPRC is not staffed or funded for developing and conducting surveys.</p> <p>HPRC must be able to collect the SSN number in order to link survey data to board licensee data for analysis.</p>
SCENARIO 3	COST	PROS	CONS
<p>HPRC SURVEY SCENARIO</p> <p>Health Professions Resource Center collects ALL MDS data with a survey tool, independent of the boards.</p>	<p><u>Implementation - Yr 1</u> \$2,024,000</p> <p><u>Maintenance - Yr 2-5</u> \$8,096,000</p> <p><u>Total</u> = \$10,120,000</p>	<p>Boards would not have to change their existing systems.</p>	<p>Survey reports indicate that return rates of 10-40% are typical unless extensive follow-up work with non-responders is done.</p> <p>HPRC resource needs for data entry are increased.</p> <p>Without increased resources, HPRC would not be able to conduct specialized workforce studies such as addressing compensation and practice pattern issues.</p> <p>It would be difficult for HPRC to keep current with Board changes in data variables such as specialties, practice settings and degrees for 32 licensing boards.</p>

NOTES:

Board staff for nine professions (Chiropractor, Physical Therapist, Occupational Therapist, Optometrist, Physician, Physician Assistant, Acupuncturist, Pharmacist, Psychologist) submitted costs for implementing the MDS. The costs were determined based on computer costs (new equipment and programming), office supply costs (printing, postage, etc.) and data entry or administrative staff costs (new FTEs for implementing and maintaining the MDS data elements).

Cost estimates were computed on a cost per licensee figure for each board. Costs will vary by board because the number of missing data elements and the number of professionals licensed varies with each board. The number of missing data elements by board ranges from 2 to 12 data elements, the average being 8. However, since each survey must include 10 identifier fields such as name, license number, social security number and address, the smallest survey form needed to collect missing fields would be comprised of at least 12 of the 37 data elements.

Costs for First Year of Implementation. The cost range for implementing the MDS for those boards responding was \$2.17 (Board of Physical/Occupational Therapists) to \$ 51.06 (Texas State Board of Examiners of Psychologists) per licensee. The average of these nine professions was \$3.26. Thus, the first year costs for implementing the MDS by all Boards (Scenario 1) is \$1,793,000 using a cost estimate of \$3.26 per licensee and 550,000 licensees.

Costs for Second – Fifth Year. The first implementation year was more costly than the subsequent or “out-years” because many items such as programming, revision of licensing forms and initial personnel costs were applicable only to the first year. The principal costs in the “out-years” were for data or administrative personnel salaries and was calculated to be 55% of the first year costs based on data from the Boards of Optometry, Pharmacy, Psychology and Physical/Occupational Therapy. The range for the “out-year” costs compared to the initial year costs was 40% to 63%. Thus, the “out-years” average cost was calculated to be \$1.79 ($\$3.26 \times 0.55 = \1.79).

Survey Data.

The cost for implementing the Scenarios 2 and 3 were based on the cost for conducting surveys reported to the committee from other state agencies.

Out-of-state Cost Estimates. Workforce centers in Wisconsin (Bureau of Health Information) and New York (Center for Health Workforce Studies) were questioned as to the cost for collecting workforce data on health care licensees. Wisconsin collects data on 18,000 physicians and charges each a fee of \$5.00, the amount that they have determined to minimally cover the cost of the surveys. New York survey costs average about \$2 per person. The average cost for these two workforce centers to collect workforce data is \$3.50.

In-state Cost Estimates. The Texas Medical Association (TMA) conducts several types of surveys. Postage rates, data entry and analysis of a 4-page survey cost \$2.14 per person. Thus, the total cost is \$2.37 per person.

The University of Texas at Houston conducts surveys on health professionals and has determined the cost for conducting a survey is \$5 per person.

Texas State Occupational Information Coordinating Committee (SOICC) of Texas Workforce Commission was consulted and advised that Scenarios 2 and 3 would not be significantly different in costs. Texas SOICC has extensive experience managing workforce survey data.

Table A-4. MDS fields missing from current state licensing board databases.

State Licensing Board	Missing MDS Fields		
Acupuncturists	High School Location Primary Practice Site- Activity	Primary Practice Site- County Primary Practice Site- Hours Primary Practice Site- Setting	Second Practice Site- Zip Code Second Practice Site- County
Athletic Trainers	Gender Race-Ethnicity Place of Birth Basic Professional Degree (all)	High School Location Primary Practice Site- Activity Primary Practice Site- County Primary Practice Site- Setting	Primary Practice Site- Hours Second Practice Site- Zip Code Second Practice Site- County
Audiologists	Gender Race-Ethnicity Place of Birth	Primary Specialty Secondary Specialty Primary Practice Site- Specialty Primary Practice Site- county	Primary Practice Site- hours Second Practice Site- Zip Code Second Practice Site- County
Chiropractors	Race-Ethnicity Place of Birth	High School Location Primary Practice Site- Activity Primary Practice Site- Hours	Primary Practice Site- Setting Second Practice Site- Zip Code Second Practice Site- County
Contact Lens Dispensers (Permit Program)	Method of Licensure Gender Race-Ethnicity Place of Birth	High School Location Primary Practice Site- County Primary Practice Site- Hours	Primary Practice Site- Setting Second Practice Site- Zip Code Second Practice Site- County
Counselors, Professional	Gender	Race-Ethnicity	
Dentists	Race-Ethnicity Basic Professional Degree- Location	High School Location Primary Practice Site- setting	
Dental Hygienists	Method Licensure Race-Ethnicity High School Location	Place of Birth Basic Professional Degree - Site Primary Practice Site- Hours	Primary Practice Site- Activity Second Practice Site- Zip Code Second Practice Site- County
Dietitians	Gender Basic Professional Degree (all) Race-Ethnicity	Place of Birth High School Location Primary Practice Site (all)	Second Practice Site- Zip Code Second Practice Site- County
Fitters and Dispensers of Hearing Instruments	Gender Race-Ethnicity	Place of Birth High School Location	Primary Practice Site- hours Second Practice Site- County
Marriage and Family Therapists	Place of Birth Gender	Race-Ethnicity High School Location	Primary Practice Site- hours Second Practice Site- County
Massage Therapists	License Issue Date Method of Licensure Race-Ethnicity Place of Birth	High School Location Primary Practice Site- county Primary Practice Site- hrs	Primary Practice Site- Setting Second Practice Site- Zip Code Second Practice Site- County

AD HOC COMMITTEE ON HEALTH PERSONNEL DATA

Statewide Health Coordinating Council

State Licensing Board	Missing MDS Fields		
Medical Laboratory Practitioners (Voluntary Registry)	Method of Licensure Gender Race-Ethnicity	Place of Birth High School Location Primary Practice Site (all)	Second Practice Site- Zip Code Second Practice Site- County
Medical Physicists	Gender Race-Ethnicity	High School Location Primary Practice Site- Hours	Primary Practice- Setting Second Practice Site- Zip Second Practice Site- County
Medical Radiologic Technologists	Gender Race-Ethnicity	Highest Professional Degree Primary Practice Site- Hours	Primary Practice Site-Setting Second Practice Site-Zip Code Second Practice Site-County
Midwives, Direct Entry	Race-Ethnicity Basic Professional Degree- School Basic Professional Degree- Year Basic Professional Degree- Location	High School Location Primary Practice Site- Address Primary Practice Site- City Primary Practice Site- State	Primary Practice Site- Zip Code Primary Practice Site- Hours Second Practice Site- Zip Second Practice Site- County
Nurses, Licensed Vocational	Place of Birth Basic Professional Degree- School Highest Professional Degree (all)	High School Location Primary Practice Site (all)	Second Practice Site- Zip Code Second Practice Site- County
Nurses, Registered	Place of Birth High School Location Primary Pract. Site- Specialty	Primary Pract. Site- Address Primary Pract. Site- City Primary Pract. Site- State	Primary Pract. Site-Hours Second Practice Site- Zip Code Second Practice Site- County
Occupational Therapists	High School Location Highest Professional Degree-School Highest Professional Degree-year	Primary Practice Site- Hours Primary Practice Site- Setting	Second Practice Site- Zip Code Second Practice Site- County
Opticians (Voluntary Registry)	Method of Licensure Gender Race-Ethnicity Place of Birth	High School Location Primary Practice Site- county Primary Practice Site- Hours	Primary Practice Site- Setting Second Practice Site- Zip Code Second Practice Site- County
Orthotists and Prosthetists	Gender Race-Ethnicity Basic Professional Degree (all)	Highest Professional Degree (all) High School Location Primary Practice Site- Hours	Primary Practice Site- Setting Second Practice Site- Zip Code Second Practice Site- County
Optometrists	Place of Birth Basic Professional Degree- School	High School Location Primary Practice Site- Hours	Second Practice Site- Zip Code Second Practice Site- County
Perfusionists	Gender Race-Ethnicity	Place of Birth High School Location	Primary Practice Site-Hours

AD HOC COMMITTEE ON HEALTH PERSONNEL DATA

Statewide Health Coordinating Council

State Licensing Board	Missing MDS Fields		
Physicians	Highest Profess. Degree- School Highest Profess. Degree- Location	Highest Profess. Degree- School Name Highest Profess. Degree- Graduation Year	Second Practice Site- County Primary Practice Site- Setting
Physician Assistants	Method of Licensure Basic Professional Degree High School Location	Primary Practice Site- county Primary Practice Site- Hours Primary Practice Site- Setting	Primary Specialty Second Practice Site- Zip Code Second Practice Site- County
Physical Therapists	Gender High School Location	Primary Practice Site (all fields) Second Practice Site- Zip Code	Second Practice Site- County
Podiatrists	Method of Licensure Place of Birth High School Location	Basic Profess. Degree- Location Primary Practice Site- county Primary Practice Site- Hours	Second Practice Site- Zip Code Second Practice Site- County Primary Practice Site- Setting
Psychologists	Gender Race-Ethnicity Place of Birth Basic Professional Degree – Site	Highest Profess. Degree- School Basic Professional Degree- year Highest Professional Degree (all) High School Location	Registration Status Primary Practice Site (all) Second Practice Site- Zip Code Second Practice Site- County
Social Workers	Gender Race-Ethnicity Place of Birth	Basic Professional Degree (all) Highest Profess. Degree- School High School Location	Secondary Specialty Primary Practice Site- Hours Second Practice Site- Zip Code Second Practice Site- County
Respiratory Care Technicians	Gender Race-Ethnicity	Place of Birth High School Location	Primary Practice Site- Hours Second Practice Site- Zip Code Second Practice Site- County
Speech-Language Pathologists	Gender Race-Ethnicity Place of Birth	High School Location Primary Practice Site- county	Primary Practice Site- Hours Second Practice Site- Zip Code Second Practice Site- County

Table A-5. Health Professions by Priority Group for Implementing the MDS

Level 1 Priority Group

- Audiologists
- Chiropractors
- Dentists
- Dental Hygienists
- Dietitians
- Licensed Vocational Nurses
- Medical Radiologic Technicians
- Occupational Therapists
- Optometrists
- Pharmacists
- Physicians
- Physician Assistants
- Physical Therapists
- Psychologists
- Registered Nurses (including advanced practice nurses)
- Respiratory Care Practitioners
- Speech Language Pathologists
- Social Workers

Level 2 Priority Group

- Acupuncturists
- Athletic Trainers
- Direct Entry (Documented) Midwives
- Fitters and Dispensers of Hearing Instruments
- Licensed Professional Counselors
- Marriage & Family Therapists
- Massage Therapists
- Medical Physicists
- Orthotists / Prosthetists
- Perfusionists

Appendix F

2002-2010

Texas State Health Plan

STATEWIDE HEALTH
COORDINATING COUNCIL
RESPONSE TO
PUBLIC COMMENT



2005-2010

TEXAS STATE HEALTH PLAN

I. Texas Higher Education Coordinating Board

Comments:

Recommends the following revisions to the Nursing Workforce Recommendations:

2. The Legislature should continue to support the Nursing Innovation Grant Program funded by tobacco earnings from the Permanent Fund for Higher Education Nursing, Allied Health, and Other Health-Related Programs and administered by the Texas Higher Education Coordinating Board.

SHCC Response: Changed as recommended.

4. The Legislature should provide institutions with Special Item funding to support enrollment increases in nursing programs and stimulate graduate programs that prepare nursing faculty, and establish procedures that would confirm that these special allocations for nursing programs are spent for these purposes.

SHCC Response: Changed as recommended.

8. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage institutions to use technology, preceptors, simulation, etc., to maximize the use of existing and new faculty, while ensuring quality outcomes and increasing student enrollments.

SHCC Response: Changed as recommended.

Recommends the following revisions to the Primary Care Recommendations:

Add a new recommendation regarding pharmacy education; it could be placed between current recommendations 6 and 7.

The Legislature should provide Special Item funding to support enrollment increases at the state's pharmacy schools to help relieve the current shortage of pharmacists in the state.

SHCC Response: Recommendation added.

6. The Legislature should increase funding levels for the Physician Education Loan Repayment Program by mandating that all Texas medical schools that receive state funds participate in the “two percent set aside.”

SHCC Response: Changed as recommended.

II. Texas Hospital Association-Rural Hospital Division

Comments:

1. Primary care physicians...They can't find enough of them to meet the needs. Internal medicine is becoming scarcer, and OB/GYNs scarcer still, unless one already is in practice in the rural community seeking to recruit another. This makes sense, when you consider the scope and 24 hour responsibility of an OB physician's practice.

SHCC Response: No action required. Current document supports comment. Texas followed the lead of other states and passed tort reform in the 78th Regular Legislative Session.

2. Nursing is still an issue, although for now most rural hospitals have increased salaries, benefits, and improved working conditions to be competitive with urban areas. Urban areas keep upping the ante. The problem will become exacerbated as more nurses retire in years to come, and as the nursing instructors continue to age and retire. Then, we will have the issue flare up badly again.

SHCC Response: No action required. Current document supports comment.

3. Next hot area: CRNA's....very hard to find in rural areas, and if they can be found, they are becoming increasingly unaffordable.

SHCC Response: No action required. Current document supports comment.

4. Radiology techs, and especially ultrasonographers, very hard to find in some rural areas.

SHCC Response: No action required. Current document supports comment.

5. Pharmacists are also becoming harder to find, and as rural pharmacists retire, the “sticker-shock” of replacing them with staff requiring retail pharmacist’s salaries (now in the triple digits) is tough on rural hospitals. (Some rural CEOs still do not make triple digit salaries!)

SHCC Response: No action required. Current document supports comment.

6. Mental health workers....any category, are hard to recruit/retain in rural areas.

SHCC Response: No action required. Current document supports comment.

7. Dentist and dental technicians are in short supply in rural areas, which in many parts of the state, lack dental staff to maintain oral health.

SHCC Response: No action required. Current document supports comment.

III. Consortium of Texas Certified Nurse Midwives

Comments:

The Consortium of Texas Certified Nurse Midwives (CTCNM) fully supports the focus of the 2005-2010 Texas State Health Plan on having competent health professionals strategically placed in the health care delivery system. We are pleased that under the Nursing Workforce Recommendations, an increase in funding levels to nursing programs is included. Under the Primary Care Recommendations, you have 5 recommendations, which address financial support for medical education programs and their students. The importance of physician providers to a health care delivery system is universally understood.

CTCNM urges your consideration of the contribution of certified nurse midwives to our health care system. Nurse midwives have demonstrated that they are competent health professionals who can safely provide many of the same services as OB/GYN physicians. In health settings, they have improved access to care by increasing the provider pool and by freeing physicians to focus on high-risk patients. As the enclosure demonstrates, numerous studies on nurse-midwifery care consistently report good outcomes with associated cost savings. In addition, nurse-midwifery educational programs are shorter and less expensive than medical educational programs.

Unfortunately, within the last year, two nurse-midwifery educational programs have stopped admitting new students. Currently there is only one educational program remaining within the state. Given the proven value of this group of professionals, we urge you to expand your recommendations to include increasing funding specifically for educational settings that provide nurse midwifery educational programs.

SHCC Response: The SHCC recognizes the challenges that the projected increase in birth rates will present for the Texas population. Staff suggests adding an additional recommendation under “Nursing Recommendations” as follows: *The Legislature and the Texas Higher Education Coordinating Board should study avenues to expand nurse-midwifery educational programs.*

IV. Parkland Health Care System

Comments:

Thanks so much for allowing a comment period on the 2005-2010 State Health Plan. Parkland would like to make the following comments:

The Higher Education Coordinating Board is currently conducting a study of the state’s support of Graduate Medical Education. There are two interim committees, one in each chamber, that is reviewing the consequences of the Legislature’s elimination of GME funding in the 78th Session. Preliminary reports indicate that there is a \$380 million shortfall for 67% of the residents in teaching hospitals. It is strongly recommended that the work of the HECB and the findings of the two legislative committees be given high priority by the 79th Legislature. The retention of residency slots assure that doctors have a tendency to stay in the state that helps fund residencies. Current shortages of doctors in underserved areas and the looming shortfall of doctors in urban and rural areas must be addressed in the immediate future.

SHCC Response: Recommendations included within *the 2005-2010 Texas State Health Plan* have been coordinated with the Texas Higher Education Coordinating Board’s study and their subsequent recommendations. No additional action required.

V. Texas Society for Respiratory Care

Comments:

The TSRC is concerned that the Draft document does not recognize, nor include data and information, on the profession of respiratory care even though our profession has an integral and growing role in providing non acute care services to the people of Texas, such as asthma disease management and smoking cessation counselors, two important public health issues facing all states.

The Texas Society for Respiratory Care respectfully requests the final version of the 2005-2010 Texas State Health Plan include information and data for the respiratory care practitioner in sections:

Chapter 2, “Status of the Health Workforce in TX under the Allied Health Profession”.

Appendix B: Primary Care White Papers

Appendix C: Health Workforce Data.

SHCC Response: The SHCC recognizes the important role that Respiratory Therapists serve in the delivery of health care within our state and the potential for being part of the health care team providing chronic disease management programs. Unfortunately, the Health Professions Resource Center (HPRC) was only able to compile data on a limited group of health professionals due to the lack of available resources. Therefore for the current document, the HPRC will be unable to add comparable data for inclusion in Chapter 2 and Appendix C. The SHCC recommends that the HPRC consider adding respiratory therapists to the list for future reports.

Finally, we have included a concept paper for Chronic Obstructive Pulmonary Disease (COPD) including public education in pulmonary health, chronic obstructive pulmonary disease, and smoking cessation, which the Council might wish to include in **Appendix B, Primary Care White Papers**.

SHCC Response: COPD White Paper added to Primary Care White Papers in **Appendix**.

VI. Texas Silver Hair Legislator

Comments:

1. Overview: Needs to include every six year in-service for Commission/Council Members.
2. Page 2. subchapter A 104.001, b, 1...appropriate health planning activities must include ethnicity and cultural considerations.
3. Page 5. Training 104.0113, a, 1...Program for training of council shall be written, developed and managed by a group of Health Care Providers as those described in item 104.011..composition of council.
4. Page 7. Subchapter C. 104.022, f, 1...strategies for correction of major deficiencies in service deliveries must include two (2) subset definitions:
 - a. Major
 - b. Minor

Each subset must have weighted penalties, time period for correction, repeat offenders, publication of offenses

associated with type of event.
5. Page 9. 104.0421 Data Collection C. Agencies/facilities, in order to participate shall have a plan for staff credentialing, development, incentivizing, counseling and appreciation.
6. Page 10. 104.043 Civil Penalty b, Shall be severe and range from fine of not more than \$500 per day but can lead to loss of Medicare/Medicaid funds for the time period required for corrections.
7. Page 11. 105.004 Health Professional Resource Center. Reports, 4, Credentialing Program to be in place for checking authenticity, experience and reliability in Health Professionals across all disciplines and those with whom contracting.

8. If not somewhere else included: As a requirement for certification and/or re-certification of health care professional, training in issues related to aging.

SHCC Response: The comments submitted above relate to the statutory authority of the SHCC and not to the *2005-2010 Texas State Health Plan*. However, the SHCC has addressed many of the sections referenced in the comments within the document.

VII. Board of Nurse Examiners

Comments:

General Workforce Recommendations

Recommendation 1:

The BNE supports the concept of the minimum data set developed by the SHCC; however, the BNE requests that agencies be adequately funded to expand or update existing data bases and amend applications, both paper and online, to support collection of this data.

SHCC Response: No change recommended.

Recommendation 3

The BNE does not agree with the recommendation that “the Legislature realign health workforce licensure and regulatory agencies in a structure that is better able to coordinate health workforce planning and data collection.” The BNE does not disagree with the concept that agencies collaborate with other stakeholders on workforce planning; and, most agencies are putting forth resources to work with planning groups. The structure of health professions regulatory agencies with the use of the Health Professions Council as an administrative mechanism to coordinate cooperation among the boards is currently designed to balance a number of regulatory service delivery needs that is of a great benefit to Texans.

The structure/alignment of the licensing boards does not pose a barrier to the ongoing work of health workforce planning and data collection. The Council has maintained for years that its member agencies support the concept of the minimum data set. The member agencies simply do not have the funding to develop and maintain the minimum data set.

Changing the alignment/structure of the agencies would not create new funding. In fact, it could cause disruption to a system, which has suffered from budget cuts and possibly further cripple the effort to create the minimum data set.

SHCC Response: No change recommended.

Recommendation 4:

The BNE supports the concept of identifying barriers/implementing solutions to the collection of ethnicity data for health professionals and applicants to health education programs. The BNE points out that the implementation of collection of ethnicity data may likely require legislation to require licensees and applicants to disclose ethnicity information and allow agencies to collect, compile and report it.

SHCC Response: Revise recommendation to include this reference/requirement.

Recommendation 9:

The BNE supports legislation that would allow boards to permit exceptions to their regulations for demonstration projects if, in the judgement of each independent board, the public safety is not jeopardized.

SHCC Response: No action is required. Patient safety is clearly a priority of the SHCC's concerning the intent of this recommendation.

Nursing Workforce Recommendations

Recommendation 3:

The BNE supports the concept of legislation that would enable the member agencies to incorporate the use of technology to reduce paperwork and streamline the process required by regulatory agencies to that which is truly necessary for quality patient care. The BNE agrees with the concept of using technology to streamline the licensure process.

The BNE and Health Professions Council is concerned that the undertone of this recommendation is that agencies and boards currently impose unnecessary requirements on applicants for licensure. Regulatory boards have the responsibility of ensuring that the

standards for licensure are set at a minimum so that persons licensed to deliver health care services in the state of Texas are qualified to do so.

SHCC Response: No change recommended.

5. The BNE supports the concept of interdisciplinary education. The THEBC is offering innovation grants for nursing programs which may require exemptions from our rules for “pilot programs” under the authority of the NPA. It may be helpful to APN programs to share faculty. It would be consistent with the Board’s policy position and proposed rule that APNs be prepared more broadly for entry into practice.

SHCC Response: No action required.

6. The Board of Nurse Examiners already permits educational institutions to add appropriate accelerated degree programs at all levels of nursing. We believe that implementation of these programs needs to be studied to assure that educational preparation is not compromised. This is particularly a concern with regard to programs which prepare Advanced Practice Nurses. The independent nature and risk to patient safety of these practitioners requires the depth of didactic and clinical preparation to be sufficient.

SHCC Response: No action required.

7. The Texas Board of Nurse Examiners permits educational institutions to use alternative methods such as the use of technology, preceptors, simulation, etc. to increase the clinical faculty to student ratio while still ensuring quality outcomes. BNE rules permit preceptors and teaching assistants for these purposes.

SHCC Response: No action required.

VIII. Coalition for Nurses in Advanced Practice

Comments:

The Coalition for Nurses in Advanced Practice (CNAP) appreciates the opportunity to comment on the draft of the State Health Plan. We think the text and recommendations in the plan are excellent. We only have a few comments on Chapter 1.

On page 13, in the first paragraph, seventh line, “nursing midwifery” should be changed to “nurse midwifery”.

SHCC Response: Changed as recommended.

On page 22, at the end of the first sentence of the third paragraph, CNAP suggests reinforcing the increasing importance of telehealth, by adding an additional phrase at the end of that sentence. We also suggest a few editorial changes. We suggest that sentence read, “In future models, establishing the initial diagnosis, developing the treatment plan, and prescribing medications would probably occur similarly to current models, except these activities will occur much more frequently using technologies such as telehealth.”

SHCC Response: Changed as recommended.

On page 24, the number of nurse practitioners is cited for the year 2002, while numbers for PAs and family physicians use 2003 data. If you wish to make the years consistent, the BNE has the number of NPs, as of 9/1/03, posted on its website as 5160. Also, at the end of that paragraph, SHCC recommends that the professions work toward a coordinated workforce. We think it would be more effective to suggest that the state of Texas work for a coordinated plan for the primary care workforce. If left only to the professions, with no pressure from the state, a coordinated plan is unlikely to ever be developed.

SHCC Response: The HPRC utilized 2003 state-level data for this report. The numbers differ from those on the BNE website due to adjustments made by HPRC staff to make the numbers more accurately reflect the number of professionals actually working as nurse practitioners. Deductions are made for those indicating that they are not working in nursing and for those recognized nurses who have indicated they work in other areas such as administration, etc. Staff believes that the adjusted numbers are more accurate as a basis for workforce planning.

Staff was unable to locate the text on page 24 that referenced the coordinated plan for the primary care workforce.

On page 32, the third dot point in recommendation #10 does not indicate what providers should be reimbursed at 92% of the physician’s rate. We suggest the following language, “increasing Medicaid and Children’s Health Insurance Program reimbursement for advanced practice nurses to 92 percent of the physician’s rate.”

SHCC Response: Changed as recommended.

On page 32, recommendation #12 is an excellent recommendation, but before state agencies can take action to change regulations to allow NPs, CNSs, and PAs to order home health, federal law must be changed. We suggest rewording recommendation #12 to read, “Texas should direct its Office of State and Federal Relations to encourage federal legislation that allows Nurse Practitioners, Clinical Nurse Specialists, and Physician Assistants to order home health care services, and then change state regulations accordingly.”

SHCC Response: Changed as recommended.

IX. East Texas Area Health Education Center

Comments:

Thanks for the opportunity to respond to the draft SHCC 2005-2010 State Health Plan. Please note my comments as follows: I am disappointed that Area Health Education Centers (AHECs) are not mentioned in the workforce development and planning discussions, particularly in the dialog on recruitment and retention. The work of the three AHECs covering the state is most commonly defined by their efforts at recruitment and retention, both at the student/candidate level, and at the entering/retained active health professional level.

SHCC Response: Section added on role of the AHECs.

General Workforce Recommendation 8 could easily include identification of continued state support of its three AHECs as an important means for the state to continue to provide vital health careers pipeline development efforts among other recruitment and retention strategies that are not provided through any other means or agency effort.

SHCC Response: Specific recommendation was included in the 2003-2004 Texas State Health Plan Update, which is the current workforce planning document. Due to the important role that the AHECs play in recruitment and retention of health professionals, the following will be added to General Workforce Recommendation: *The Legislature should support funding of the Area Health Education Centers to guarantee that vital health career development efforts and recruitment and retention strategies are available in areas not provided through other means or agency efforts.*

While there are other areas that could incorporate AHEC recognition, these two are the most important. Thanks for your consideration.

SHCC Response: No additional action recommended.

X. Texas Hospital Association

Comments:

On behalf of the 420 institutional members of the Texas Hospital Association, we are pleased to provide the following comments regarding the draft of the 2005-2010 State Health Plan developed by the Texas Statewide Health Coordinating Council. THA appreciates the opportunities over the past year to provide input during the development of the draft plan at numerous stakeholder meetings, as well as SHCC subcommittee and council meetings.

THA is pleased that the draft State Health Plan identifies the nursing shortage as one of the most critical health workforce issues. Addressing the nursing shortage is one of THA's top five priorities. The recommendations cited in the draft plan addressing nursing recruitment, retention and education mirror recommendations in THA's Health Care Workforce Strategic Plan. THA supports the plan of action and recommendations presented by the SHCC to alleviate not only the current, but also the anticipated future nursing shortage.

SHCC Response: No action required.

THA also appreciates the draft State Health Plan's consideration of a redesigned health care delivery system for the future. The Association is committed to improving the overall health status of Texans and identifying strategies to enhance chronic disease management. THA supports the primary care recommendations as proposed, but asks the SHCC to provide additional clarification regarding the Federally Qualified Health Centers and the reimbursement for care provided under Medicaid and the Children's Health Insurance Program.

SHCC Response: Clarification added on the 92% reimbursement section to "add advanced practice nurse" as the referenced provider.

THA requests that Primary Care Recommendation #7 emphasize the need for FQHCs to increase their hours of service by offering evening hours on week days and providing services on the weekends. Extending hours will ensure increased access to health care and

help offset the inappropriate use of hospital emergency departments. Also, THA requests clarification of Primary Care Recommendation #10 regarding increasing the Medicaid/CHIP reimbursement to 92 percent of the physician's rate. Please insert the name of providers to whom this recommendation applies.

SHCC Response: The recommendation to expand the FQHC hours of operations goes beyond the level of “broad policy recommendations”.

Primary Care Recommendation #10 changed to include the name of the referenced provider, advanced practice nurse.

Again, THA supports, with the minor clarifications noted above, the recommendations listed in the draft State Health Plan and thanks the SHCC for including THA in this important state health care process.

XI. Center for South Texas Programs

Comments:

I appreciate the opportunity to review the draft of the 2005-2010 Texas State Health Plan that will serve as a guide to help Texas leaders formulate appropriate health workforce policy.

After reviewing the plan, I felt disappointed that after over a decade of operating the Area Health Education Center (AHEC) of South Texas, no mention of Area Health Education Centers were mentioned in the draft report. AHECs are charged with the mission of improving the number, distribution, and quality of health professional manpower, especially in MUAs and HPSAs. While operating under federal funds through Title VII of the Public Health Service Act, AHECs also receive state, foundation, and private funding to maintain and expand their services.

Texas has three operating AHECs – East Texas based at the University of Texas Medical Branch; South Texas based at the University of Texas Health Science Center at San Antonio; and West Texas based at Texas Tech Health Science Center in Lubbock. The exclusion of these important programs from the Texas State Health Plan is not understandable to me, especially given the length of time AHECs have operated in Texas and the many contributions they have made to many TDH activities, conferences, and meetings.

It seems it would be advantageous for the citizens of this state if the Texas State Health Plan identifies the need for continuing state support for the AHECs as one of the means of addressing the maldistribution, recruitment, and retention of health professionals in underserved areas and to support student pipeline program activities such as our HCOP and MED-ED programs in South Texas which are duplicated by our sister AHECs in other regions of the state.

I would appreciate your consideration to include the federal/state AHEC programs as a component of this report.

SHCC Response: Section added on role of the AHECs.

XII. Texas Dental Association

Comments:

On behalf of the Texas Dental Association (TDA), we would like to offer our comments on the draft 2005–2010 Texas State Health Plan. First, we would like to express TDA’s general support for the Plan, as well as our appreciation for the time and effort that members and staff of the Statewide Health Coordinating Council devoted to developing it. We are also pleased that Dr. Richard M. Smith of Amarillo, a TDA member, recently joined the Council and was able to contribute to the plan.

Our comments about specific aspects of the plan follow.

General Workforce Recommendations

Recommendation 5. The Legislature and the Texas Higher Education Coordinating Board should develop and implement positive financial incentives for schools that create innovative models in education for the health professions that will move toward shared or combined curricula, interdisciplinary classes across health programs, and the use of multi-disciplinary faculty or interdisciplinary teams among the health programs. (p. 28)

TDA Comment: The “innovative models in education for the health professions” addressed in this recommendation should conform to state law and professional regulatory board rules regarding scope of practice. Efforts in this area should consider workforce projections for the dental profession and base curriculum recommendations on both short- and long-term implications for patient access.

SHCC Response: No action required.

Recommendation 9. The Legislature should direct the regulatory boards for the health professions to permit exceptions to their regulations to facilitate the increase in innovative, outcome-oriented demonstration projects. (p. 29)

TDA Comment: This recommendation should not be construed to authorize or encourage regulatory boards for the health professions to circumvent state law governing scope of practice.

SHCC Response: The SHCC encourages regulatory boards to support collaboration to foster evidence-based outcomes and research.

Primary Care Recommendations

Recommendation 7. The Legislature should continue to support the increase in the numbers of Federally Qualified Health Centers in Texas. (p. 31)

TDA Comment: Efforts to expand the number of Federally Qualified Health Centers should be directed by current data regarding Health Professional Shortage Areas and coordinated with local dentists to preserve and protect existing dental care systems and dentist-patient relationships.

SHCC Response: No action required.

Recommendation 8. The Legislature should support methodologies for the development of innovative models for the delivery of primary care that would include physical, mental, and oral health. (p. 31)

TDA Comment: TDA is pleased that this recommendation specifically includes “oral health,” recognizing the importance of prevention and early treatment of oral disease as part of overall health maintenance and promotion.

SHCC Response: No action required.

Recommendation 10. The Legislature should support changes in Medicaid, Children’s Health Insurance Program, and Texas Vendor Drug Program rules and policies to trace outcomes and increase accountability by

- identifying the practitioner that prescribed the drug instead of the delegating physician,
- requiring all providers to bill services under their own names, and
- increasing Medicaid and Children’s Health Insurance Program reimbursement to 92 percent of the physician’s rate. (p. 32)

TDA Comment: This recommendation apparently refers to policy positions developed through a collaborative effort by the medical, nursing, and physician assistant professions. We believe that it warrants further clarification.

SHCC Response: Clarification added relating to the 92% reimbursement to reference “advanced nurse practitioner”.

Recommendation 14. The Legislature will provide positive financial incentives for providers who implement the use of evidence-based health care and the use of outcome-based practice guidelines that have been approved by an agreed upon nationally recognized health association. (p. 32)

TDA Comment: TDA supports the use of evidence-based oral health care and would add that outcome-based practice guidelines should reflect the standard of care upheld by each profession.

SHCC Response: No action required.

Appendix B, Primary Care Models

Finally, TDA would like to briefly comment on two white papers included in Appendix B of the draft Plan:

- **“The School Dental Hygienist,”** proposed by Dr. Chris French Beatty of the Texas Dental Hygiene Educators’ Association (pp. 16-17), and
- **“Health Promotion Specialists: School Based Oral Health Program,”** proposed by Ms. Andrea Scott of the Texas Dental Hygienists’ Association (pp. 18-20).

TDA Comment: Under both proposals, dental hygienists would provide educational services, preventive treatment, and dental referrals in the public schools. Current state law already allows dental hygienists to provide all of those services in public schools under the general supervision of a dentist. The two proposals go farther, however, by advocating the amendment of state law and agency rules to permit dental hygienists to practice unsupervised and to bill Medicaid and private insurers for their services. TDA believes that eliminating the dentist’s responsibility for authorizing and supervising care provided by dental hygienists is unwarranted and ill-advised.

Current state law properly recognizes that dental hygienists do not have the education and training required to properly diagnose dental diseases, disorders, or physical conditions. Moreover, in our professional experience, individuals who do not receive regular oral health care usually require extensive restorative treatment that only a dentist can provide.

Given the likely absence of state funding and the ongoing budget pressures faced by local school districts, neither of the proposals would be cost-effective. Existing teachers and school nurses can (and likely already do) provide oral health education as part of their schools’ health curriculum. In addition, both proposals would require public schools to hire staff and acquire costly equipment that would duplicate resources already available in local dental offices, clinics, or community health centers.

SHCC Response: The White Papers included in Appendix B are not subject to change by the SHCC.

XIII. Texas Workforce Commission

Comments:

We submit the following comments for consideration in the *State Health Plan*:

1. Address the potential resources available from the public workforce system, specifically the Local Workforce Development Boards (Boards). In 2000, Governor Perry made nursing one of three state’s targeted occupations. The Commission and the Boards launched several initiatives across the state that focused on the nursing shortage. These initiatives included recruiting and training efforts using the Boards’ formula funds, state discretionary funds, and federal funds (notably

federal H-1B grants). Unfortunately, the SHCC *State Health Plan* has no reference to the Boards' role in developing the health care workforce.

SHCC Response: Reference added per above recommendation.

2. Make recommendations that include public-private cooperation to address healthcare workforce shortages. Public incentives can be available not only to state agencies and colleges, but also to hospitals and to other healthcare organizations. The *State Health Plan* does briefly describe initiatives by other groups that appear to be addressing the public-private arena, but it does not appear to be a focus of the *Health Plan*.

SHCC Response: See final paragraph of TWC comments below. No additional action required.

3. Provide greater emphasis on the “retention” or “attrition” problem among the nursing workforce. The growing inability to retain nurses contributes as much to the nursing shortage as the inability to retain teachers contributes to the teacher shortage. The “retention” problem is almost wholly a function of inadequate salaries and an inhospitable workplace. During the past three years recognition of these conditions has brought attention and some improvement, but there is yet a long way to go.

SHCC Response: No action recommended. However, the Texas Workforce Commission could develop a partnership with the Area Health Education Centers for health care recruitment and retention and for development of a program for recruitment and retention of entry-level positions into the health profession's pipeline.

The *State Health Plan* provides a very good, fact-based, foundation for describing the problems of the healthcare workforce and forecasts of the likely decreasing quality of healthcare unless that workforce increases in number and quality. It appears that the research and collaboration concerning these issues was extensive.

SHCC Response: No response necessary.

The Texas Institute for Health Policy Research (TIHPR) is undertaking the “Shared Vision for Health Care in Texas” project. This effort may obviate one of the shortcomings noted

above-the failure to address opportunities for public-private cooperation because the Institute will involve “ a forum for dialogue among leaders of Texas’ health care providers, payers, and consumers for informed decision making.” On August 17, 2004, the SHCC and the Institute will co-host the first Shared Vision Policy Forum in Austin. The Commission would like to commend SHCC on your cooperation with TIHPR.

SHCC Response: No response necessary.

XIV. Texas Department of State Health Services-Community Preparedness Section

Comments:

Workforce issues are a concern throughout health care. The plan addresses the issues thoroughly from a global perspective. In today’s environment, workforce issues are a significant concern in identifying personnel that are capable, and willing, to respond to disasters that result from the effects of weapons of mass destruction.

There should be some consideration of the impact terrorism will have on the workforce of health professionals. When fundamental change in the system is discussed, one cannot ignore the impact an act of terrorism. First is the impact on the response. A certain number of health professionals will be victims of the attack or limited in their mobility as a result of an attack. Second is the impact of the disaster on the responder. A certain percentage of the health care workforce are not going to be willing to place themselves in immediate danger with the possibility of exposing their families to the danger.

There were two studies looking at the response by health professionals to acts involving weapons of mass destruction and large-scale biological events. The Hawaii Medical Personnel Assessment: A Longitudinal Study conducted by S. Lanzilotti, EdD, that addressed availability of nurses and physicians to staff non-hospital, field medical facilities for mass casualty incidents resulting from the use of weapons of mass destruction and the level of knowledge and skills these personnel possessed related to the treatment of victims. The emphasis was no one ever asked will the health care professionals come and, if they do, will they know what to do. The findings showing response to natural disasters, explosions, chemical attacks, biological attacks, nuclear/radiological attacks and large-

scale contagious epidemics was dramatic. There were 84% of the nurses said they would respond to a natural disaster. The numbers dropped with each type of event until only 49% would respond to a large-scale contagious disease outbreak. This has definite workforce implications when a response to a disaster is needed.

I think we were remiss in identifying priority issues for the *2003-2004 Update* by not including the impact of the terrorist events of 2001 and the efforts in planning and preparedness from a health care workforce perspective. Terrorism and the Health Care Workforce should be included as a priority area. The increased demand for registered nurses in the acute care setting will only be complicated by the exponential increase in the face of a large-scale disaster that results from and act of terrorism.

The role of primary care is another area that needs to be addressed from a response perspective. The role needs to be defined in relation to a response to an act of terrorism. Primary care is a resource and will be involved in an event. The profession needs to be involved in the regional planning efforts and preparing themselves to fulfill their identified role.

The anticipation of another attack on the US has never been higher. The demands placed on health care to provide the necessary emergency care will be unlike anything the US has ever experienced. The preparedness efforts have brought health care and public health a long way toward an appropriate response. One area that has been in the forefront and a concern at all levels is the capacity and capability of the health care workforce. This issue should be a concern in the health plan and be an area that has continued emphasis and direction from the Department of State Health Services as a voice of health care in the state.

SHCC Response: Additional references added as requested.



TEXAS HEALTH AND HUMAN SERVICES COMMISSION

ALBERT HAWKINS
EXECUTIVE COMMISSIONER

September 16, 2004

Ben G. Raimer, M.D., Chair
Statewide Health Coordinating Council
110 West 49th Street
Austin, TX 78758-3199

Dear Dr. Raimer:

The Health and Human Services Commission is pleased to submit this letter of support for the Statewide Health Coordinating Council's 2005-2010 Texas State Health Plan.

The SHCC is to be commended for its continued focus in the areas education and training in the health professions that will ensure that an appropriately skilled, sufficient, and experienced workforce becomes a reality for the state. The SHCC is to be particularly congratulated for its emphasis on the examination of innovative models of education and practice. Successful implementation of the recommendations in the plan will be a significant step towards improving access to quality health care.

HHSC looks forward to continuing to work in partnership with the SHCC especially on potential policy and rule changes in Medicaid, Children's Health Insurance Program, and Texas Vendor Drug Programs that support the goals of the 2005-2010 Texas State Health Plan. We look forward to working with the SHCC towards the vision of a healthier Texas.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick Allgeyer".

Rick Allgeyer, Ph.D., Director
Center for Strategic Decision Support
Texas Health and Human Services Commission

Connie Turney

From: Silverman, Stacey [Stacey.Silverman@THECB.state.tx.us]
Sent: Thursday, July 29, 2004 11:53 AM
To: Connie Turney
Subject: Proposed changes to TSHP recommendations



State Health Plan --
proposed ...

Hi Connie,

After reviewing the revised recommendations for the State Health Plan, I have consulted with my colleagues and drafted some additional changes. These changes are primarily for clarification purposes.

Please let me know if you have any questions.

Best regards,
Stacey

Stacey Silverman, MA
Program Director
Texas Higher Education Coordinating Board
1200 East Anderson Lane
Austin, Texas 78752
Phone 512.427.6206
Fax 512.427.6168
Email stacey.silverman@thecb.state.tx.us

State Health Plan

Proposed revisions to current recommendations:

Nursing Workforce Recommendations:

2. The Legislature should continue to support the Nursing Innovation Grant Program funded by tobacco earnings from the Permanent Fund for Higher Education Nursing, Allied Health, and Other Health-Related Programs and administered by the Texas Higher Education Coordinating Board.

4. The Legislature should provide institutions with Special Item funding to support enrollment increases in nursing programs and stimulate graduate programs that prepare nursing faculty, and establish procedures that would confirm that these special allocations for nursing programs are spent for these purposes.

8. The Texas Higher Education Coordinating Board and the Texas Board of Nurse Examiners should encourage institutions to use technology, preceptors, simulation, etc., to maximize the use of existing and new faculty, while ensuring quality outcomes and increasing student enrollments.

Primary Care:

Add a new recommendation regarding pharmacy education; it could be placed between current recommendations 6 and 7.

The Legislature should provide Special Item funding to support enrollment increases at the state's pharmacy schools to help relieve the current shortage of pharmacists in the state.

6. The Legislature should increase funding levels for the Physician Education Loan Repayment Program by mandating that all Texas medical schools that receive state funds participate in the "two percent set aside."

Connie Turney

From: Richard Hoeth [rhoeth@lha.org]
Sent: Tuesday, August 03, 2004 11:38 AM
To: Elizabeth Sjoberg
Cc: Connie Turney
Subject: FW: IMPORTANT Health Data Website

Follow Up Flag: Follow up
Flag Status: Flagged

Elizabeth and Connie, I finally had a chance to review this, and also plan on attending the meeting on August 17th. However, here are the manpower shortages I am still hearing about in the rural areas:

1. Primary care physicians...They can't find enough of them to meet the needs. Internal medicine is becoming more scarce, and OB/GYNs scarcer still, unless one already is in practice in the rural community seeking to recruit another. This makes sense, when you consider the scope and 24 hour responsibility of an OB physician's practice.
2. Nursing is still an issue, although for now most rural hospitals have increased salaries, benefits, and improved working conditions to be competitive with urban areas. Urban areas keep upping the ante. The problem will become exacerbated as more nurses retire in years to come, and as the nursing instructors continue to age and retire. Then, we will have the issue flare up badly again.
3. Next hot area: CRNA's....very hard to find in rural areas, and if they can be found, they are becoming increasingly unaffordable.
4. Radiology techs, and especially ultrasonographers, very hard to find in some rural areas.
5. Pharmacists are also becoming harder to find, and as rural pharmacists retire, the "sticker-shock" of replacing them with staff requiring retail pharmacist's salaries (now in the triple digits) is tough on rural hospitals. (Some rural CEOs still do not make triple digit salaries!)
6. Mental health workers....any category, are hard to recruit/retain in rural areas.
7. Dentist and dental technicians are in short supply in rural areas, which in many parts of the state, lack dental staff to maintain oral health.

To the extent the SHCC can address those staffing areas in rural areas, it will be very beneficial to our rural members and the rural citizens they serve.

Richard

-----Original Message-----

From: Connie Turney [mailto:Connie.Turney@tdh.state.tx.us]
Sent: Thursday, July 29, 2004 9:18 AM
To: Allison, Jane S.; Anderberg, Marc; Andrews, Claude L.; Bartos, Justin; Berry, Connie; Berryhill, Becky; Camarillo, Barry; Rosa Campos; Coleridge, Timothy D.O.S.; Cooper, Curtis; Cornish, Cindy; Cortez, Leslie; Edwards, Debra; Fair, Christy; Fitzsimmons, Dana S.; Ford, Betty; Foxhall, Lewis E.; Furino, Antonio; Gipson, Ronnie; Gleasman,



August 6, 2004

Connie Turney,
Texas Statewide Health Coordinating Council
1100 West 49th Street
Austin, Texas 78756

Dear Ms Turney,

The Consortium of Texas Certified Nurse Midwives (CTCNM) fully supports the focus of the 2005-2010 Texas State Health Plan on having competent health professionals strategically placed in the health care delivery system. We are pleased that under the Nursing Workforce Recommendations, an increase in funding levels to nursing programs is included. Under the Primary Care Recommendations, you have 5 recommendations, which address financial support for medical education programs and their students. The importance of physician providers to a health care delivery system is universally understood.

CTCNM urges your consideration of the contribution of certified nurse midwives to our health care system. Nurse midwives have demonstrated that they are competent health professionals who can safely provide many of the same services as OB/GYN physicians. In health settings, they have improved access to care by increasing the provider pool and by freeing physicians to focus on high-risk patients. As the enclosure demonstrates, numerous studies on nurse-midwifery care consistently report good outcomes with associated cost savings. In addition, nurse-midwifery educational programs are shorter and less expensive than medical educational programs.

Unfortunately, within the last year, two nurse-midwifery educational programs have stopped admitting new students. Currently there is only one educational program remaining within the state. Given the proven value of this group of professionals, we urge you to expand your recommendations to include increasing funding specifically for educational settings that provide nurse midwifery educational programs.

Please contact me if I can provide additional information about nurse-midwifery in Texas

Sandra Gale, CNM
Legislative Liaison
Consortium of Texas Certified Nurse Midwives

Attachments: CNM's Contribution to Health Care

Sandra Gale CNM, FNP, MPH, MSN
6806 Terra Oak Circle E Austin E Texas E 78749
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Email: gale@ijnfohwy.com

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In the case of **ADVANCED PRACTICE NURSES**, less is more.
A focused, less expensive educational process results in
HIGH VALUE PROVIDERS.

CERTIFIED NURSE MIDWIVES (CNMs) CONTRIBUTIONS TO HEALTH CARE

Where midwifery care is offered, CNMs reduce costs by:

- lowering the c-section rate, therefore reducing patient complications and prolonged hospital stays;
- reducing premature births, therefore reducing neonatal ICU admissions and neonatal mortality rates; and
- avoiding excessive testing and unnecessary technological interventions.

CNMs increase access to maternal health care by:

- providing care to medically underserved populations;
- freeing physicians to focus on problem pregnancies and deliveries; and
- offering care in a variety of settings that reduce costs and shorten stays.

References

CNMs lower cesarean section rate

The obstetric outcomes of a primary-care clinic for low-income women staffed by certified nurse-midwives supervised by a private practice group of four obstetricians, compared with the obstetric outcomes of that physician group's private practice patients, showed comparable birth outcomes with a significant reduction in cesarean sections (13.1% to 26.4%) for CNMs' patients. [Source: Blanchette H. (1995). Comparison of obstetric outcome of a primary-care access clinic staffed by certified nurse-midwives and a private practice group of obstetricians in the same community. American Journal of Obstetrics & Gynecology, 172, 1864-1868.]

Obstetricians, family physicians, and certified nurse-midwives differed in patterns of obstetric care provided to low-risk patients in Washington State. Certified nurse-midwives were less likely to induce or augment labor and use continuous electronic fetal monitoring or epidural anesthesia. The cesarean section rate for patients of certified nurse-midwives was 8.8% vs. 13.6% for obstetricians and 15.1% for family physicians. CNMs used 12.2% fewer resources. [Source: Rosenblatt RA, Dobie SA, Hart LG, Schneeweiss R, Gould D, & Raine TR (1997). Interspecialty differences in the obstetric care of low-risk women. American Journal of Public Health, 87, 344-351.]

Women cared for by nurse-midwives in a Chicago Hospital had a lower cesarean section rate (8.5% vs. 12.9%), fewer interventions, and equally good maternal and infant outcomes when compared with those cared for by physicians. [Source: Davis LG; Riedmann GL; Sapiro M; Minogue JP; Kazer RR (1994). Cesarean section rates in low-risk private patients managed by certified nurse-midwives and obstetricians. J Nurse Midwifery, 39, 91-97.]

CNMs provide quality care at a lower cost

Low-risk patients receiving collaborative midwifery care had birth success rates comparable to those who saw physicians, with fewer interventions, more options, and lower cost to the health care system. [Source: Jackson, J.L., Lang, J.M., Swartz, W.H., Ganiats, T.G., Fullerton, J., & Ecker, J. (2003). Outcomes, safety, and resource utilization in a collaborative care birth center program compared with traditional physician-based perinatal care. American Journal of Public Health, 93, 999-1006.]

After controlling for social and medical risk factors, the risk of experiencing an infant death was 19% lower for certified nurse midwife attended births than physician attended births. The risk of delivering a low birthweight infant was 31% lower. Mean birthweight was 37 grams heavier for CNM attended than for physician attended births. The authors, from the Centers for Disease Control and Prevention, National Center for Health Statistics, conclude that national data support findings of previous local studies that certified nurse midwives have excellent birth outcomes, and CNMs provide a safe and viable alternative to maternity care in the United States, particularly for low to moderate risk women. [Source: MacDorman, M.F., Singh, G.K. (1998). Midwifery care, social and medical risk factors, and birth outcomes in the USA. J Epidemiology & Community Health, 52, 310-317.]

Pregnancy outcomes were compared for 710 women cared for by private obstetricians and 471 cared for by certified nurse-midwives to determine whether pregnancy outcomes differ by provider group when alternative explanations are taken into account. CNM care resulted in fewer third or fourth degree lacerations (23% vs 7%), fewer complications (0.7 vs. 0.4%), more infants remaining with mother for the entire hospital stay (15% versus 27%), and greater satisfaction with care. [Source: Oakley D; Murray ME; Murland T; Hayashi R; Andersen HF; Mayes F; Rooks J. (1996). Comparisons of outcomes of maternity care by obstetricians and certified nurse-midwives. Obstetrics & Gynecology, 88, 823-829.]

The Department of Defense utilizes certified nurse midwives (CNMs) for the delivery of primary women's health care. Although the numbers of CNMs remain relatively small, their impact on quality, cost, choice, and access to care is substantial. CNMs are not merely physician extenders, but primary health providers who emphasize holistic and wellness-oriented care. [Source: Davis, L.J. (1995). Certified nurse midwives: over twenty years of military service. Military Medicine, 160, 401-404.]

The Medical University of South California Twin Clinic study demonstrated a lower rate of very early pre-term births, very low birthweight infants, Neonatal intensive care admissions, and perinatal mortality in a CNM directed Clinic where CNM care is given when compared to a MD directed team where MD care is given. This demonstrated that the contributions of CNMs to high-risk prenatal care can be considerable. [Source: Ellings & Janna, et al. (1993). Certified-nurse midwife directed twin clinic reduces very low birthweight delivery & perinatal mortality. Journal of Obstetrics and Gynecology]

The quality of CNM care is equivalent to physicians' care within their area of competence, according to a 1986 study by the Office of Technology Assessment. Further, they are better than physicians at providing services which depend on communication with patients and preventive action. [Source: Department of Health & Human Services, Office of Inspector General "A Survey of Certified Nurse-Midwives," March 1992, p. F-2.]

At two HMO centers when CNMs were added to the obstetrical teams, there was a 13% or \$292,000 reduction in payroll costs at one center and a 7% or \$2 million reduction at another center. [Source: Bell, K., & Mills, J. I. (1989). Certified nurse-midwife effectiveness in health maintenance organization team. Obstetrics and Gynecology, 74, 112-116.]

If only 50% of 4,060,000 births were attended in free-standing birth centers (run by midwives), not only would access to care be greatly improved but savings would be almost \$4 billion annually. (Source: National Association of Childbearing Centers Survey Report Experience 1987-1989.)

CNMs care for underserved populations

CNMs care for medically underserved women and those at higher risk for poor outcomes, including women who are uninsured (16%), immigrant (27%), adolescent (29%), and women of color (50%). [Source: Declercq ER, Williams DR, Koontz AM, Paine LL, Streit EL, & McCloskey L (2001). Serving women in need: nurse-midwifery practice in the United States. Journal of Midwifery & Women's Health 46, 11-6.]

Connie Turney

From: SUE PICKENS [SPICKE@parknet.pmh.org]
Sent: Friday, August 06, 2004 2:56 PM
To: connie.turney@tdh.state.tx.us
Cc: JENNIFER CUTRER; RON ANDERSON
Subject: comments on the 2005-2010 State Health Plan

Thanks so much for allowing a comment period on the the 2005-2010 State Health Plan. Parkland would like to make the following comments:

The Higher Education Coordinating Board is currently conducting a study of the state's support of Graduate Medical Education. There are two interim committies, one in each chamber, that is reviewing the consequences of the Legislature's elimination of GME funding in the 78th Session. Preliminary reports indicate that there is a \$380 million shortfall for 67% of the residents in teaching hospitals. It is strongly recommended that the work of the HECB and the findings of the two legislative committees be given high priority by the 79th Legislature. The retention of residency slots assure that doctors have a tendency to stay in the state that helps fund residencies. Current shortages of doctors in underserved areas and the looming shortfall of doctors in urban and rural areas must be addressed in the immediate future.

If you have any questions regarding this comment, please do not hesitate to contact me.

Sue Pickens

Sue Pickens
Director Strategic Planning and Population Medicine
S201 Harry Hines Blvd
Dallas, Texas 75235
Phone 214-590-8067
Fax 214-590-5958
Pager 214-786- 8348

Connie Turney

From: Wagner, Roy [ROY.WAGNER@tenethealth.com]
Sent: Monday, August 09, 2004 9:37 AM
To: connie.turney@ldh.state.tx.us
Subject: Comments on "2005-2010 Texas State Health Plan Draft"

August 9, 2004

Texas Department of Health
Center for Health Statistics
ATTN: Connie Turney, SHCC Project Director
1100 West 49th Street
Austin, Texas 78756

Ms. Turney:

On behalf of the Texas Society for Respiratory Care (TSRC), a statewide professional association representing several thousand respiratory therapists, I appreciate the opportunity to comment on the proposed 2005-2010 Texas State Health Plan developed by the Statewide Health Coordinating Council.

The Texas Society for Respiratory Care advocates for respiratory patients and strives to assure that our patients receive appropriate respiratory care services delivered by competent practitioners. We recognize and promote the value of respiratory therapy and Respiratory Care Practitioners in all areas of pulmonary health and public policy.

Respiratory care practitioners care for patients of all ages who suffer from respiratory illness such as asthma, emphysema, chronic obstructive pulmonary disease (COPD- the 4th leading cause of death in the United States). Respiratory therapists are on the front lines caring for patients suffering from tuberculosis, and most recently treating patients who were afflicted with Severe Acute Respiratory Syndrome (SARS). Respiratory therapists care for patients across all care sites, from the hospital to the home to the nursing home and to the physician office.

The TSRC is concerned that the Draft document does not recognize, nor include data and information, on the profession of respiratory care even though our profession has an integral and growing role in providing non acute care services to the people of Texas, such as asthma disease management and smoking cessation counselors, two important public health issues facing all states.

The Texas Society for Respiratory Care respectfully requests the final version of the 2005-2010 Texas State Health Plan include information and data for the respiratory care practitioner in sections:

Chapter 2, "Status of the Health Workforce in TX under the Allied Health Profession".
Appendix B: Primary Care White Papers
Appendix C: Health Workforce Data.

As an attachment we have included more detailed information on the respiratory care practitioner in Texas obtained from the United States Health Resources and Services Administration (HRSA) database.

Finally, we have included a concept paper for Chronic Obstructive Pulmonary Disease (COPD) including public education in pulmonary health, chronic obstructive pulmonary disease, and smoking

cessation, which the Council might wish to include in **Appendix B, Primary Care White Papers**.

The TSRC will be happy to assist the Council to obtain further information as needed to fit into the format of the Draft plan.

The TSRC appreciates your time and consideration. Please see attachments and to assure that you received all data, please e-mail me a response of reception.

Roy E. Wagner, RCP, RRT
Delegate
Texas Society for Respiratory Care
EMail: roy.wagner@tenethealth.com
Phone (469)893-2859
Fax (469)893-3859

RESPIRATORY THERAPY

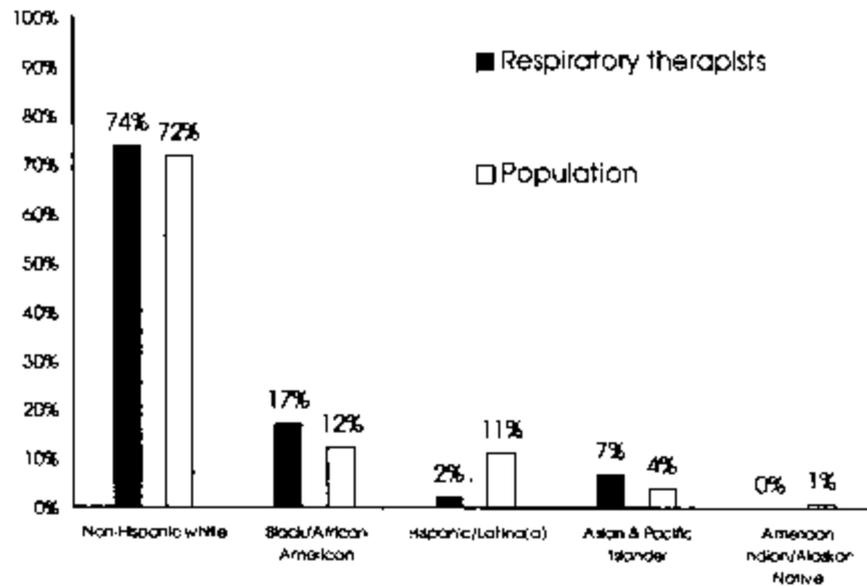
- √ There were 6,120 respiratory therapists in practice in Texas in 1998.
- √ There were 31 respiratory therapists per 100,000 population, close to the national average of 31.4. Texas ranked 25th in the nation in respiratory therapists per capita.
- √ The majority of respiratory therapists in the United States were non-Hispanic white and female.
- √ The number of respiratory therapy technician graduates in the United States declined 19% between 1991-92 and 1996-97 while the total population grew 5%. The result was a 23% decline in respiratory therapy graduates per capita nationwide.
- √ In 1996-97, 65.7% of respiratory therapy technician degree recipients in Texas were non-Hispanic white, compared to 56.7% in the general population. Twenty-one percent were Hispanic/Latino, compared to 28.5% in the general population.

Respiratory therapists, 1998

	Texas	Region VI	US	Rank
Respiratory therapists	6,120	10,140	84,730	2/50
Per 100,000 population	31.0	32.0	31.4	25/50
Percent female	-	-	61%	-

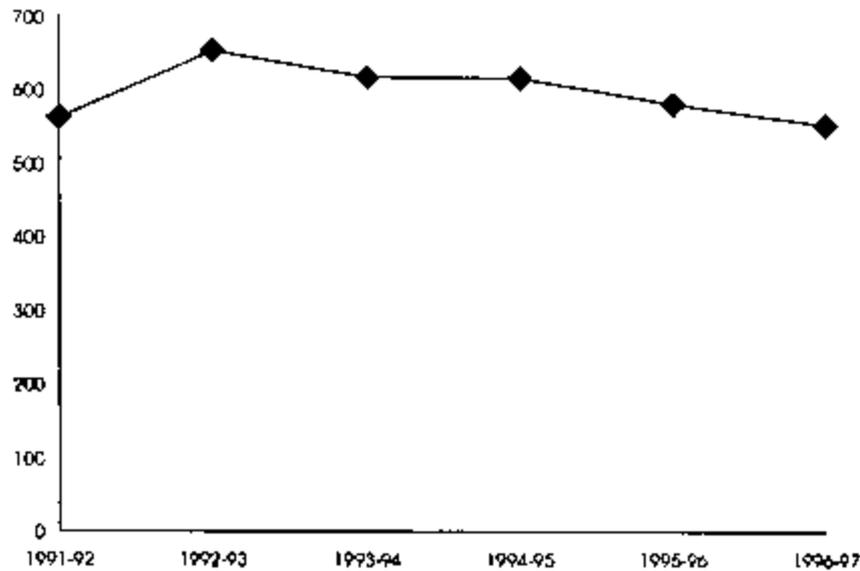
Source: Bureau of Labor Statistics; Bureau of the Census.

Race/ethnicity of respiratory therapists & the population, U.S., 1999



Source: Bureau of Labor Statistics; Bureau of the Census.

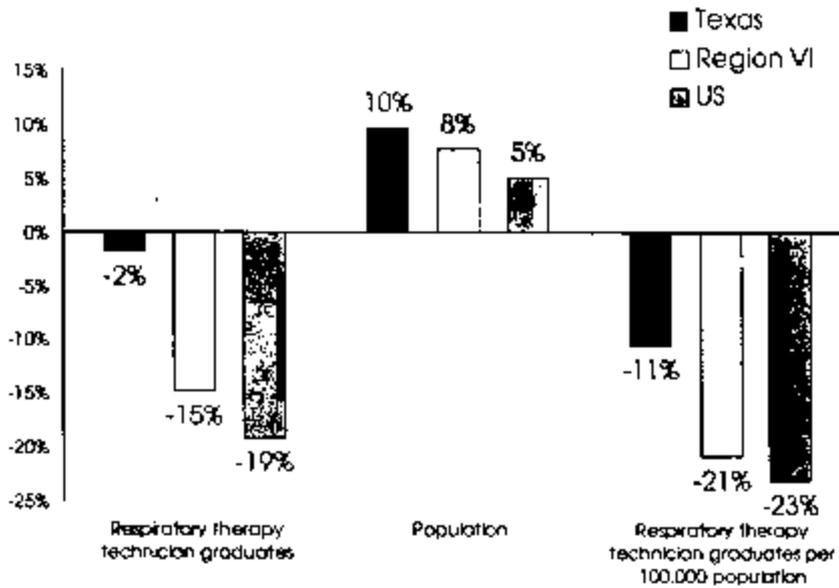
Respiratory therapy technician degrees awarded, 1992-3 to 1996-7



Source: National Center for Education Statistics.

Note: Includes the 'respiratory therapy technician' major field of study extant in the data.

Percentage change in respiratory therapy technician graduates, population & respiratory therapy technician graduates per 100,000 population, 1991-92 to 1996-97



Source: National Center for Education Statistics; Bureau of the Census.
 Note: Includes the 'respiratory therapy technician' major field of study extant in the data.

Race/ethnicity & gender of respiratory therapy technician degree recipients & the population, 1996-97

	Respiratory therapy technician education program degree recipients	Population
Race/ethnicity		
Non-Hispanic white	65.7%	56.7%
Black/African American	8.5%	11.7%
Hispanic/Latino(a)	20.7%	28.5%
Asian & Pacific Islander	4.9%	2.7%
American Indian/Alaskan Native	0.2%	0.5%
Total	100.0%	100.0%
Gender		
Female	67.6%	50.8%
Male	32.4%	49.2%
Total	100.0%	100.0%

Source: National Center for Education Statistics; Bureau of the Census.
 Note: Includes the 'respiratory therapy technician' major field of study extant in the data.

Innovative Primary Care Models to Improve Access and Outcomes

Caryn Pope, RRT, RCP
Roy Wagner, RRT, RCP
Texas Society for Respiratory Care
Dallas TX972- 495-9200

Title: The Respiratory Care Practitioner and the COPD Patient

Respiratory Care Practitioners (RCP) are a distinct profession dating back to the 1930's. During each of the seventy-plus years of working with patients with lung disease, no group has potentially benefited more than those with Chronic Obstructive Lung Disease (COPD). Initially, RCPs simply provided oxygen to this patient while hospitalized, usually via an oxygen tent or face mask. But during these seven decades of improved equipment, medication and monitoring the RCP has become not only the provider of respiratory therapy but the most qualified educator for this chronically ill population.

COPD is a major cause of chronic morbidity and mortality throughout the state of Texas. It ranks as the fourth leading cause of death in the United States. Further, due to the aging population increases in the prevalence and mortality of the disease can be predicted in the coming decades. A unified effort of education, research and treatment is required to reverse this trend.

Recently the World Health Organization issued the following statement regarding tobacco use: "Current projections show a rise of 31 % in tobacco-related deaths during the next twenty years, which will double the current death toll, bringing it to almost ten million a year," said WHO Director-General Dr LEE Jong-wook to countries attending the Intergovernmental Working Group.

It is the belief of this group that the state of Texas could be the leader in the United States to form throughout the state COPD education groups with its essential tobacco cessation program. This could save the state of Texas millions of dollars in Medicaid expenditures over the next few years.

COPD is a disease state where airflow is limited and no medication will fully reverse that condition. The airflow limitation is usually both progressive and associated with an abnormal response to noxious particles or gases. The diagnosis of COPD should be considered in any patient who has symptoms of cough, sputum production, or shortness of breath and/or a history of exposure to risk factors for the disease. The diagnosis can be confirmed by pulmonary function testing. All physicians are being encouraged to perform simple spirometry on their patients who exhibit the above symptoms. Once even a

diagnosis of even mild COPD is made the patient would be referred to the RCP for education and monitoring.

The purpose of ongoing patient education groups is to allow the COPD patient to learn more about the disease. It has been well documented in peer-reviewed literature that ongoing education of the patient about the disease process improves outcomes. The program would consist not only of education regarding disease management and expectations but also a very important component of smoking cessation. It is estimated that over 50% of patients diagnosed with COPD continue to use tobacco.

COPD patient education groups are scattered, at best, throughout the state. Although there are several very successful groups, these tend to be located in the larger metropolitan areas, sponsored by hospital-based respiratory care departments. The goal of this COPD program would be to provide both group education as well as ongoing support education via DVD and/or the internet.

In 1981, the American Thoracic Society gave its first Statement on the efficacy and scientific foundation of pulmonary rehabilitation programs. Since then it has become firmly established that strategies employed by pulmonary rehabilitation programs are now an integral part of the clinical management and health maintenance of patients with COPD who remain symptomatic or continue to have decreased function despite standard medical management. Since pulmonary rehabilitation programs are not available in all areas of the state, we propose that respiratory care practitioners provide a COPD education program including a tobacco education segment.

How will your model improve outcomes without increasing health care cost?

The patients enrolled in these programs are those who would most benefit from it. Prevalence and morbidity data greatly underestimate the total burden of COPD because the disease is usually not diagnosed until it is clinically apparent and moderately advanced.

What process is in place to collect and analyze process and outcome measures?

The program is developed to collect outcome measures. Patients not actively attending group education classes will be contacted via telephone or internet as to well-being and other outcome measures (e.g., ER visits, hospitalizations, unscheduled physician visits, non-routine prescriptions).

Does your model emphasize standard treatment protocols (evidence-based practice guidelines and patient instruction and reinforcement concerning self care?)

It is noted throughout the literature that those patients who have improved knowledge of their disease, exposures that trigger exacerbation utilize fewer healthcare services. An effective COPD management plan includes four components:

1. Assessment and monitoring;
2. Reduction of Risk Factors;
3. Management of Stable COPD and;
4. Management of Exacerbations.

The goals of effective COPD management include: prevention of disease progression, relief of symptoms, improvement in exercise tolerance, improve health status, prevent and treat complications, prevent and treat exacerbations and reduce mortality. The Global Initiative for Chronic Obstructive Lung Disease or GOLD Book defines the global strategy for the diagnosis, management and prevention of COPD. This book is the executive summary of the NHLBI/WHO workshop.

How will this model be used to create a "wellness" model rather than an "illness" model?

This program would emphasize the prevention of COPD through the tobacco cessation segment. Since it is known that passive exposure to cigarette smoke may also contribute to respiratory symptoms and COPD by increasing the lung's total burden of inhaled particulates and gases, tobacco cessation classes should be able to reduce this exposure.

Smoking during pregnancy may also pose a risk for the fetus, by affecting lung growth and development of the fetus. It would be suggested that upon determination of pregnancy, a tobacco-using female should be referred to a smoking cessation program.

What effect will your model have on the demand for health workforce in the future?

The model would utilize respiratory care practitioners acting on the referral of a physician, physician's assistant or nurse practitioner. The state currently has an adequate number of RCPs to provide the work force.

How will the community be utilized to improve the health of the community?

Communities will be involved through use of community social programs promoting and setting up smoking cessation classes and offer continuing support for their citizens through open communication, public service announcements and publication of success stories. Additionally, we could train and develop laypeople for this through a training program. The community is involved by placing the program within the hospitals and/or medical centers. Other healthcare providers would become more aware of the program, encouraging and reinforcing participation. Involvement of community leaders by disallowing smoking in public buildings would help to empower the community and the participants in tobacco cessation.

How will your model improve the culturally sensitive delivery of healthcare?

All cultures develop COPD, all cultures use tobacco. Many materials are now available in English, Spanish and Vietnamese.

How will your model improve health disparities and access to care?

With successful education in the four components of education the COPD patient will need less emergent care, less hospitalization and decreased physician office visits.

How does or how could technology be utilized to improve the effectiveness of your primary care delivery model in terms of outcomes or cost?

Once patients are evaluated by the RCP for understanding of the program and the program is implemented, much of the outcomes monitoring and ongoing education and information could be done via mail or internet.

What are the barriers to implementing your model?

Currently, the numbers of programs are very limited and physicians do not readily refer patients to COPD education programs and smoking cessation programs. If programs were available at the majority of community hospitals and/or medical centers in an ongoing or rotating basis, patients would have much improved access.

What regulatory/legislative/reimbursement issues will be required to implement or expand your model?

Reimbursement for patient education would be necessary for this population as it is for the patient with diabetes. Thus changes in reimbursement regulations would be required.

Connie Turney

From: Ann Pennington [apennington2@austin.rr.com]
Sent: Monday, August 09, 2004 3:01 PM
To: connie.turney@tdh.state.tx.us
Cc: 'Maryalice Craig'; 'Barbara Effenberger'; 'Betty Streckfuss'; 'Carlos Higgins'; 'Charlotte Parks'; 'Chris Kyker'; 'Fannie Lovelady Spain'; 'Glen Peterson'
Subject: Comments on 2005-2010 Texas State Health Plan

Dear Ms. Turney:

The following are comments prepared by Texas Silver Hair Legislators, Ann Pennington and Betty Streckfuss. Thank you for your consideration.

1. Overview: Needs to include every six year in-service for Commission/Council Members.
2. Page 2. subchapter A 104.001, b, 1...appropriate health planning activities must include ethnicity and cultural considerations.
3. Page 5. Training 104.0113, a, 1...Program for training of council shall be written, developed and managed by a group of Health Care Providers as those described in item 104.011..composition of council.
4. Page 7. Subchapter C. 104.022, f, 1...strategies for correction of major deficiencies in service deliveries must include two (2) subset definitions:
 - a. Major
 - b. Minor

Each subset must have weighted penalties, time period for correction, repeat offenders, publication of offenses associated with type of event.
5. Page 9. 104.0421 Data Collection C: Agencies/facilities, in order to participate shall have a plan for staff credentialing, development, incentivizing, counseling and appreciation.
6. Page 10. 104.043 Civil Penalty b, Shall be severe and range from fine of not more than \$500 per day but can lead to loss of Medicare/Medicaid funds for the time period required for corrections.
7. Page 11. 105.004 Health Professional Resource Center. Reports, 4, Credentialing Program to be in place for checking authenticity, experience and reliability in Health Professionals across all disciplines and those with whom contracting.
8. If not somewhere else included: As a requirement for certification and/or re-certification of health care professional, training in issues related to aging.

Thank you for your consideration. Please feel free to call either of us if you have questions.

Ann Pennington
 Texas Silver Hair Legislator
 3600 Indian Point Drive
 Austin, TX 78739
 512/282-7708
 apennington2@austin.rr.com

Betty Streckfuss
Texas Silver Hair Legislator
3704 Blue Candle
Spring, TX 77388
281/350-9136
streckfuss2@msn.com

Connie Turney

From: KATHY THOMAS [KATHY.THOMAS@BNE.STATE.TX.US]
Sent: Monday, August 09, 2004 5:08 PM
To: 'connie.turney@tdh.state.tx.us'
Subject: SHCC Health Plan

Connie, Attached are comments on the Health Plan. We have not really had sufficient time to flesh out the fiscal impact but would appreciate opportunity to do that after the close of comments today. Let me know if that is possible.

Kathy

Katherine A. Thomas, MN, RN
Executive Director Board of Nurse Examiners for the State of Texas, and
Chair of the Health Professions Council

Board of Nurse Examiners' response to the draft 2005-2010 State Health Plan

General Workforce Recommendations

Recommendation 1:

The BNE supports the concept of the minimum data set developed by the SHCC; however, the BNE requests that agencies be adequately funded to expand or update existing data bases and amend applications, both paper and online, to support collection of this data.

Recommendation 3

The BNE does not agree with the recommendation that "the Legislature realign health workforce licensure and regulatory agencies in a structure that is better able to coordinate health workforce planning and data collection." The BNE does not disagree with the concept that agencies collaborate with other stakeholders on workforce planning; and, most agencies are putting forth resources to work with planning groups. The structure of health professions regulatory agencies with the use of the Health Professions Council as an administrative mechanism to coordinate cooperation among the boards is currently designed to balance a number of regulatory service delivery needs that is of a great benefit to Texans.

The structure/alignment of the licensing boards does not pose a barrier to the ongoing work of health workforce planning and data collection. The Council has maintained for years that its member agencies support the concept of the minimum data set. The member agencies simply do not have the funding to develop and maintain the minimum data set. Changing the alignment/structure of the agencies would not create new funding. In fact, it could cause disruption to a system, which has suffered from budget cuts and possibly further cripple the effort to create the minimum data set.

Recommendation 4:

The BNE supports the concept of identifying barriers/implementing solutions to the collection of ethnicity data for health professionals and applicants to health education programs. The BNE points out that the implementation of collection of ethnicity data may likely require legislation to require licensees and applicants to disclose ethnicity information and allow agencies to collect, compile and report it.

Recommendation 9:

The BNE supports legislation that would allow boards to permit exceptions to their regulations for demonstration projects if, in the judgement of each independent board, the public safety is not jeopardized.

Nursing Workforce Recommendations

Recommendation 3:

The BNE supports the concept of legislation that would enable the member agencies to incorporate the use of technology to reduce paperwork and streamline the process required by regulatory agencies to that which is truly necessary for quality patient care. The BNE agrees with the concept of using technology to streamline the licensure process.

The BNE and Health Professions Council is concerned that the undertone of this recommendation is that agencies and boards currently impose unnecessary requirements on applicants for licensure. Regulatory boards have the responsibility of ensuring that the standards for licensure are set at a minimum so that persons licensed to deliver health care services in the state of Texas are qualified to do so.

5. The BNE supports the concept of interdisciplinary education. The THEBC is offering innovation grants for nursing programs which may require exemptions from our rules for "pilot programs" under the authority of the NPA. It may be helpful to APN programs to share faculty. It would be consistent with the Board's policy position and proposed rule that APNs be prepared more broadly for entry into practice.

7. The Board of Nurse Examiners already permits educational institutions to add appropriate accelerated degree programs at all levels of nursing. We believe that implementation of these programs needs to be studied to assure that educational preparation is not compromised. This is particularly a concern with regard to programs which prepare Advanced Practice Nurses. The independent nature and risk to patient safety of these practitioners requires the depth of didactic and clinical preparation to be sufficient.

8. The Texas Board of Nurse Examiners permits educational institutions to use alternative methods such as the use of technology, preceptors, simulation, etc. to increase the clinical faculty to student ratio while still ensuring quality outcomes. BNE rules permit preceptors and teaching assistants for these purposes.

Connie Turney

From: Lynda Freed Woolbert [mwoolb@charter.net]
Sent: Tuesday, August 10, 2004 8:21 AM
To: 'Connie Turney'
Subject: CNAP Comments on State Health Plan

Texas Department of Health
Center for Health Statistics
ATTN: Connie Turney, SHCC Project Director
1100 West 49th Street
Austin, Texas 78756

The Coalition for Nurses in Advanced Practice (CNAP) appreciates the opportunity to comment on the draft of the State Health Plan. We think the text and recommendations in the plan are excellent. We only have a few comments on Chapter 1.

On page 13, in the first paragraph, seventh line, "nursing midwifery" should be changed to "nurse midwifery".

On page 22, at the end of the first sentence of the third paragraph, CNAP suggests reinforcing the increasing importance of telehealth, by adding an additional phrase at the end of that sentence. We also suggest a few editorial changes. We suggest that sentence read, "In future models, establishing the initial diagnosis, developing the treatment plan, and prescribing medications would probably occur similarly to current models, except these activities will occur much more frequently using technologies such as telehealth."

On page 24, the number of nurse practitioners is cited for the year 2002, while numbers for PAs and family physicians use 2003 data. If you wish to make the years consistent, the BNE has the number of NPs, as of 9/1/03, posted on its website as 5160. Also, at the end of that paragraph, SHCC recommends that the professions work toward a coordinated workforce. We think it would be more effective to suggest that the state of Texas work for a coordinated plan for the primary care workforce. If left only to the professions, with no pressure from the state, a coordinated plan is unlikely to ever be developed.

On page 32, the third dot point in recommendation #10 does not indicate what providers should be reimbursed at 92% of the physician's rate. We suggest the following language, "increasing Medicaid and Children's Health Insurance Program reimbursement for advanced practice nurses to 92 percent of the physician's rate."

On page 32, recommendation #12 is an excellent recommendation, but before state agencies can take action to change regulations to allow NPs, CNSs, and PAs to order home health, federal law must be changed. We suggest rewording recommendation #12 to read, "Texas should direct its Office of State and Federal Relations to encourage federal legislation that allows Nurse Practitioners, Clinical Nurse Specialists, and Physician Assistants to order home health care services, and then change state regulations accordingly."

Thank you for considering these comments. If you have any questions, please contact me by any of the methods below.

Lynda Woolbert, MSN, RN, CPNP
CNAP Director of Public Policy
(979) 345-5974

8/10/2004

Connie Turney

From: Shelton, Steve R. [srshelto@utmb.edu]
Sent: Monday, August 09, 2004 6:25 PM
To: Connie Turney
Cc: Raimer, Ben G.; Wainwright, Mary E.; pam.danner@ttuhsc.edu; Richard Garcia (Garcia, Richard)
Subject: RE: Public Comment Period Announcement

Thanks for the opportunity to respond to the draft SHCC 2005-2010 State Health Plan. Please note my comments as follows:

I am disappointed that Area Health Education Centers (AHECs) are not mentioned in the workforce development and planning discussions, particularly in the dialog on recruitment and retention. The work of the three AHECs covering the state is most commonly defined by their efforts at recruitment and retention, both at the student/candidate level, and at the entering/retained active health professional level.

General Workforce Recommendation 8 could easily include identification of continued state support of its three AHECs as an important means for the state to continue to provide vital health careers pipeline development efforts among other recruitment and retention strategies that are not provided through any other means or agency effort.

While there are other areas that could incorporate AHEC recognition, these two are the most important. Thanks for your consideration.

Steve Shelton
409.772.7884

-----Original Message-----

From: Connie Turney [mailto:Connie.Turney@tdh.state.tx.us]
Sent: Tuesday, July 20, 2004 5:08 PM
To: Al Holguin (E-mail); Alice K. Marcee (E-mail); Amy Lindley (E-mail);
Subject: Public Comment Period Announcement
Importance: High

Texas Health Workforce Stakeholders-

The Texas Statewide Health Coordinating Council (SHCC) announces the public comment period for the 2005-2010 Texas State Health Plan Draft. Under Chapter 104 of the Health and Safety Code, the SHCC is mandated to develop a six-year State Health Plan with biennial updates. The plan serves as a guide to help Texas leaders formulate appropriate health workforce policy. The 2005-2010 Texas State Health Plan is the initial document in a new six-year planning cycle. The draft document will be posted for the period from July 21, 2004 through August 9, 2004. It will be available for viewing and downloading on the SHCC website at <http://www.TexasSHCC.org> for review by the public. We ask that requests for copies be made only by those individuals who do not have access to the Internet. Those requests should be addressed to the following:

Texas Department of Health
Center for Health Statistics
ATTN: Connie Turney, SHCC Project Director
1100 West 49th Street
Austin, Texas 78756
(512) 458-7111, Ext. 3548 - Telephone request
(512) 458-7344 - Fax request
connie.turney@tdh.state.tx.us

<mailto:connie.turney@tdh.state.tx.us>
- Email request

The SHCC will consider written comments on the document that are postmarked, faxed, or emailed no later than August 10, 2004. These comments should be sent to the attention of Connie Turney, SHCC Project Director at the address noted above or by email at connie.turney@tdh.state.tx.us <mailto:connie.turney@tdh.state.tx.us>.

Please do not hesitate to contact me should you require additional information or clarification.

Connie Turney
Project Director
Texas Statewide Health Coordinating Council
connie.turney@tdh.state.tx.us
(512) 458-7111, Ext. 3548 (Voice)
(512) 458-7344 (Fax)

Center for Health Statistics, Texas Department of Health
...The Portal for Comprehensive Health Data in Texas
www.tdh.state.tx.us/chs



East Texas Area Health Education Center (AHEC) 2002-2003 Accomplishments

Health Workforce Development - Health Careers Promotion

- Provided careers information to 35,237 career-decision makers, 93% from under-represented minorities and disadvantaged populations.
- Provided 103 enrichment projects with 29,036 hours of programming to better prepare 2,244 students, 94% from under-represented minorities and disadvantaged populations, for health professions education programs.
- Worked with 528 primary and secondary schools to facilitate health career awareness through classroom, peer, teacher, and counselor support activities and informational materials.

Health Workforce Development - Community-Based Education

- Recruited and/or maintained 468 community-based training sites and 749 community faculty, primarily physicians, for student clinical training.
- Placed 1,296 health professions students for 110,991 training hours for 18 disciplines from 40 campus partners.
- Supported the utilization of 50 laptop and 30 desktop computers for training in community settings to enhance information resources.

Health Workforce Development - Practice Entry and Support

- Offered 157 continuing education programs totaling 630 course hours to 7,505 participants.
- Increased partnership activity in retention of health professionals, including 10 new projects.
- Co-sponsored satellite programming throughout the region.
- Expanded and maintained learning resource materials and dissemination of information for community health professionals.
- Identified 255 (cumulative) health professionals added to our region after an "AHEC Touch."

Community Health Support – Health Literacy

- Increased health education programming through 535 projects/programs to 28,171 participants.
- Maintained programs addressing community health issues such as geriatric sensitivity, tobacco cessation, domestic violence, and cancer awareness.

Community Health Support – Community Health Systems

- Expanded capacity for conducting community assessment and community development activities.
- Initiated 55 community health system support projects, such as, a structured process designed to involve community members in developing ways to improve local health care delivery systems and community health status.

Developing Organization Infrastructure

- Maintained 9 operational centers to service an area of 111 counties with an estimated population of 17 million.
- Partnered with communities and academic collaborators, including all 8 of the state's health science centers/schools of medicine and over 1,100 organizations and institutions.
- Leveraged \$2,126,769 in state funds for \$1,490,441 in Federal funds and \$580,500 in other grant and contracts funds with over \$3,500,000 in value of in-kind services provided.



TEXAS HOSPITAL ASSOCIATION

August 9, 2004

Connie Turney, Project Director
Texas Statewide Health Coordinating Council
1100 West 49th Street
Austin, Texas 78756

e-mailed to: connie.turney@tdh.state.tx.us

RE: 2005-2010 Texas State Health Plan Draft, Texas Statewide Health Coordinating Council

Dear Ms. Turney:

On behalf of the 420 institutional members of the Texas Hospital Association, we are pleased to provide the following comments regarding the draft of the 2005-2010 State Health Plan developed by the Texas Statewide Health Coordinating Council. THA appreciates the opportunities over the past year to provide input during the development of the draft plan at numerous stakeholder meetings, as well as SHCC subcommittee and council meetings.

THA is pleased that the draft State Health Plan identifies the nursing shortage as one of the most critical health workforce issues. Addressing the nursing shortage is one of THA's top five priorities. The recommendations cited in the draft plan addressing nursing recruitment, retention and education mirror recommendations in THA's Health Care Workforce Strategic Plan. THA supports the plan of action and recommendations presented by the SHCC to alleviate not only the current, but also the anticipated future nursing shortage.

THA also appreciates the draft State Health Plan's consideration of a redesigned health care delivery system for the future. The Association is committed to improving the overall health status of Texans and identifying strategies to enhance chronic disease management. THA supports the primary care recommendations as proposed, but asks the SHCC to provide additional clarification regarding the Federally Qualified Health Centers and the reimbursement for care provided under Medicaid and the Children's Health Insurance Program.

THA requests that Primary Care Recommendation #7 emphasize the need for FQHCs to increase their hours of service by offering evening hours on week days and providing services on the weekends. Extending hours will ensure increased access to health care and help offset the inappropriate use of hospital emergency departments. Also, THA requests clarification of Primary Care Recommendation #10 regarding increasing the Medicaid/CHIP reimbursement to 92 percent of the physician's rate. Please insert the name of providers to whom this recommendation applies.

Again, THA supports, with the minor clarifications noted above, the recommendations listed in the draft State Health Plan and thanks the SHCC for including THA in this important state health care process.

Sincerely,

Elizabeth N. Sjoberg, RN, J.D.
Associate General Counsel

Jennifer C. Banda, J.D.
Director, Government Affairs



The University of Texas Health Science Center at San Antonio

Mail Code 7839 • 7703 Floyd Curl Drive • San Antonio, Texas 78229-3900 • (210) 567-7813 • FAX: (210) 567-7820

August 9, 2004

Transmitted via E-Mail

Connie Turney
Project Director
Texas Statewide Health Coordinating Council
1100 West 49th Street
Austin, Texas 78756

Dear Ms. Turney,

I appreciate the opportunity to review the draft of the 2005-2010 Texas State Health Plan that will serve as a guide to help Texas leaders formulate appropriate health workforce policy.

After reviewing the plan, I felt disappointed that after over a decade of operating the Area Health Education Center (AHEC) of South Texas, no mention of Area Health Education Centers were mentioned in the draft report. AHECs are charged with the mission of improving the number, distribution, and quality of health professional manpower, especially in MUAs and HPSAs. While operating under federal funds through Title VII of the Public Health Service Act, AHECs also receive state, foundation, and private funding to maintain and expand their services.

Texas has three operating AHECs – East Texas based at the University of Texas Medical Branch; South Texas based at the University of Texas Health Science Center at San Antonio; and West Texas based at Texas Tech Health Science Center in Lubbock. The exclusion of these important programs from the Texas State Health Plan is not understandable to me, especially given the length of time AHECs have operated in Texas and the many contributions they have made to many TDH activities, conferences, and meetings.

It seems it would be advantageous for the citizens of this state if the Texas State Health Plan identifies the need for continuing state support for the AHECs as one of the means of addressing the maldistribution, recruitment, and retention of health professionals in underserved areas and to support student pipeline program activities such as our HCOP and MED-ED programs in South Texas which are duplicated by our sister AHECs in other regions of the state.

I would appreciate your consideration to include the federal/state AHEC programs as a component of this report.

Sincerely,

Richard A. Garcia, MHA
Assistant Vice President for South Texas Programs

Connie Turney

From: Jay [jbond@tda.org]
Sent: Tuesday, August 10, 2004 4:50 PM
To: connie.turney@tdh.state.tx.us
Subject: Comments on Draft 2005-2010 State Health Plan



Comments on
005-2010 State He.

Dear Ms. Turney,

Please see the attached letter RE: TDA Comments on Draft State Health Plan.

Jay Bond
Director of Policy
Texas Dental Association
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Austin, Texas 78704
(512) 443-3675 Ext. 133 Fax: (512) 443-3031
jbond@tda.org
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August 6, 2004

Ms. Connie Turney, SHCC Project Director
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

Dear Ms. Turney:

On behalf of the Texas Dental Association (TDA), we would like to offer our comments on the draft 2005–2010 Texas State Health Plan. First, we would like to express TDA's general support for the Plan, as well as our appreciation for the time and effort that members and staff of the Statewide Health Coordinating Council devoted to developing it. We are also pleased that Dr. Richard M. Smith of Amarillo, a TDA member, recently joined the Council and was able to contribute to the plan.

Our comments about specific aspects of the plan follow.

General Workforce Recommendations

Recommendation 5. The Legislature and the Texas Higher Education Coordinating Board should develop and implement positive financial incentives for schools that create innovative models in education for the health professions that will move toward shared or combined curricula, interdisciplinary classes across health programs, and the use of multi-disciplinary faculty or interdisciplinary teams among the health programs. (p. 28)

TDA Comment: The "innovative models in education for the health professions" addressed in this recommendation should conform to state law and professional regulatory board rules regarding scope of practice. Efforts in this area should consider workforce projections for the dental profession and base curriculum recommendations on both short- and long-term implications for patient access.

Recommendation 9. The Legislature should direct the regulatory boards for the health professions to permit exceptions to their regulations to facilitate the increase in innovative, outcome-oriented demonstration projects. (p. 29)

TDA Comment: This recommendation should not be construed to authorize or encourage regulatory boards for the health professions to circumvent state law governing scope of practice.

Primary Care Recommendations

Recommendation 7. The Legislature should continue to support the increase in the numbers of Federally Qualified Health Centers in Texas. (p. 31)

TDA Comment: Efforts to expand the number of Federally Qualified Health Centers should be directed by current data regarding Health Professional Shortage Areas and coordinated with local dentists to preserve and protect existing dental care systems and dentist-patient relationships.

Recommendation 8. The Legislature should support methodologies for the development of innovative models for the delivery of primary care that would include physical, mental, and oral health. (p. 31)

TDA Comment: TDA is pleased that this recommendation specifically includes "oral health," recognizing the importance of prevention and early treatment of oral disease as part of overall health maintenance and promotion.

Recommendation 10. The Legislature should support changes in Medicaid, Children's Health Insurance Program, and Texas Vendor Drug Program rules and policies to trace outcomes and increase accountability by

- identifying the practitioner that prescribed the drug instead of the delegating physician,
- requiring all providers to bill services under their own names, and
- increasing Medicaid and Children's Health Insurance Program reimbursement to 92 percent of the physician's rate. (p. 32)

TDA Comment: This recommendation apparently refers to policy positions developed through a collaborative effort by the medical, nursing, and physician assistant professions. We believe that it warrants further clarification.

Recommendation 14. The Legislature will provide positive financial incentives for providers who implement the use of evidence-based health care and the use of outcome-based practice guidelines that have been approved by an agreed upon nationally recognized health association. (p. 32)

TDA Comment: TDA supports the use of evidence-based oral health care and would add that outcome-based practice guidelines should reflect the standard of care upheld by each profession.

Appendix B, Primary Care Models

Finally, TDA would like to briefly comment on two white papers included in Appendix B of the draft Plan:

- **“The School Dental Hygienist,”** proposed by Dr. Chris French Beatty of the Texas Dental Hygiene Educators' Association (pp. 16-17), and
- **“Health Promotion Specialists: School Based Oral Health Program,”** proposed by Ms. Andrea Scott of the Texas Dental Hygienists' Association (pp. 18-20).

TDA Comment: Under both proposals, dental hygienists would provide educational services, preventive treatment, and dental referrals in the public schools. Current state law already allows dental hygienists to provide all of those services in public schools under the general supervision of a dentist. The two proposals go farther, however, by advocating the amendment of state law and agency rules to permit dental hygienists to practice unsupervised and to bill Medicaid and private insurers for their services. TDA believes that eliminating the dentist's responsibility for authorizing and supervising care provided by dental hygienists is unwarranted and ill-advised.

Current state law properly recognizes that dental hygienists do not have the education and training required to properly diagnose dental diseases, disorders, or physical conditions. Moreover, in our professional experience, individuals who do not receive regular oral health care usually require extensive restorative treatment that only a dentist can provide.

Given the likely absence of state funding and the ongoing budget pressures faced by local school districts, neither of the proposals would be cost-effective. Existing teachers and school nurses can (and likely already do) provide oral health education as part of their schools' health curriculum. In addition, both proposals would require public schools to hire staff and acquire costly equipment that would duplicate resources already available in local dental offices, clinics, or community health centers.

Ms. Connie Turney
August 6, 2004
Page 4

Thank you for considering the Texas Dental Association's comments on these important issues.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Jerry Long, D.D.S.", written in a cursive style.

S. Jerry Long, D.D.S.
Chair, TDA Council on Legislative and Regulatory Affairs

Texas Workforce Commission

Member of the Texas Workforce Network

Alfred Neumann
Diane D. Rath, Chair
Commissioner Representing
the Public

Ron Lehman
Commissioner Representing
Employers

Ronald G. Congleton
Commissioner Representing
Labor

Larry E. Temple
Executive Director

August 9, 2004

Ms. Connie Turney, SHCC Project Director
Texas Department of Health
Center for Health Statistics
1100 West 49th Street
Austin, Texas 78756

Dear Ms. Turney:

Thank you for providing the Texas Workforce Commission (Commission) with the opportunity to comment on the Texas Statewide Health Coordinating Council's (SHCC) draft of the *2005-2010 Texas State Health Plan (State Health Plan)*. The Commission is especially pleased that the SHCC continues to focus on the needs of the Texas healthcare workforce.

The Commission supports many of the recommendations outlined in the *State Health Plan*, specifically:

- Improving coordination among colleges that train the healthcare workforce;
- Improving coordination among licensing authorities;
- Increased salaries for faculties, especially nursing faculties;
- Enabling the increased use of technology to train the healthcare workforce; and
- Pursuing opportunities to obtain federal funding for healthcare workforce training and education.

We submit the following comments for consideration in the *State Health Plan*:

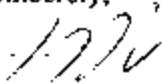
1. Address the potential resources available from the public workforce system, specifically the Local Workforce Development Boards (Boards). In 2000, Governor Perry made nursing one of three state's targeted occupations. The Commission and the Boards launched several initiatives across the state that focused on the nursing shortage. These initiatives included recruiting and training efforts using the Boards' formula funds, state discretionary funds, and federal funds (notably federal H-1B grants). Unfortunately, the SHCC *State Health Plan* has no reference to the Boards' role in developing the health care workforce.
2. Make recommendations that include public-private cooperation to address healthcare workforce shortages. Public incentives can be available not only to state agencies and colleges, but also to hospitals and to other healthcare organizations. The *State Health Plan* does briefly describe initiatives by other groups that appear to be addressing the public-private arena, but it does not appear to be a focus of the *Health Plan*.
3. Provide greater emphasis on the "retention" or "attrition" problem among the nursing workforce. The growing inability to retain nurses contributes as much to the nursing shortage as the inability to retain teachers contributes to the teacher shortage. The "retention" problem is almost wholly a function of inadequate salaries and an inhospitable workplace. During the past three years recognition of these conditions has brought attention and some improvement, but there is yet a long way to go.

The *State Health Plan* provides a very good, fact-based, foundation for describing the problems of the healthcare workforce and forecasts of the likely decreasing quality of healthcare unless that workforce increases in number and quality. It appears that the research and collaboration concerning these issues was extensive.

The Texas Institute for Health Policy Research (TIHPR) is undertaking the "Shared Vision for Health Care in Texas" project. This effort may obviate one of the shortcomings noted above—the failure to address opportunities for public-private cooperation because the Institute will involve "a forum for dialogue among leaders of Texas' health care providers, payers, and consumers for informed decision making." On August 17, 2004, the SHCC and the Institute will co-host the first Shared Vision Policy Forum in Austin. The Commission would like to commend SHCC on your cooperation with TIHPR.

Again, thank you for the opportunity to comment on the *2005-2010 Texas State Health Plan*. If you have any questions, please contact me at (512) 936-0697.

Sincerely,



Luis M. Macias, Director
Workforce Development Division

mc: Larry E. Temple, Executive Director
H. E. (Gene) Crump, Jr., Deputy Executive Director

2005-2010 Texas State Health Plan

Texas Department of State Health Services - Community Preparedness Section

Review comments:

Workforce issues are a concern throughout health care. The plan addresses the issues thoroughly from a global perspective. In today's environment, workforce issues are a significant concern in identifying personnel that are capable, and willing, to respond to disasters that result from the effects of weapons of mass destruction.

There should be some consideration of the impact terrorism will have on the workforce of health professionals. When fundamental change in the system is discussed, one cannot ignore the impact an act of terrorism. First is the impact on the response. A certain number of health professionals will be victims of the attack or limited in their mobility as a result of an attack. Second is the impact of the disaster on the responder. A certain percentage of the health care workforce are not going to be willing to place themselves in immediate danger with the possibility of exposing their families to the danger.

There were two studies looking at the response by health professionals to acts involving weapons of mass destruction and large-scale biological events. The Hawaii Medical Personnel Assessment: A Longitudinal Study conducted by S. Lanzilotti, EdD, that addressed availability of nurses and physicians to staff non-hospital, field medical facilities for mass casualty incidents resulting from the use of weapons of mass destruction and the level of knowledge and skills these personnel possessed related to the treatment of victims. The emphasis was no one ever asked will the health care professionals come and, if they do, will they know what to do. The findings showing response to natural disasters, explosions, chemical attacks, biological attacks, nuclear/radiological attacks and large-scale contagious epidemics was dramatic. There were 84% of the nurses said they would respond to a natural disaster. The numbers dropped with each type of event until only 49% would respond to a large-scale contagious disease outbreak. This has definite workforce implications when a response to a disaster is needed.

I think we were remiss in identifying priority issues for the 2003-2004 Update by not including the impact of the terrorist events of 2001 and the efforts in planning and preparedness from a health care workforce perspective.

Terrorism and the Health Care Workforce should be included as a priority area. The increased demand for registered nurses in the acute care setting will only be complicated by the exponential increase in the face of a large-scale disaster that results from an act of terrorism.

The role of primary care is another area that needs to be addressed from a response perspective. The role needs to be defined in relation to a response to an act of terrorism. Primary care is a resource and will be involved in an event. The profession needs to be involved in the regional planning efforts and preparing themselves to fulfill their identified role.

The anticipation of another attack on the US has never been higher. The demands placed on health care to provide the necessary emergency care will be unlike anything the US has ever experienced. The preparedness efforts have brought health care and public health a long way toward an appropriate response. One area that has been in the forefront and a concern at all levels is the capacity and capability of the health care workforce. This issue should be a concern in the health plan and be an area that has continued emphasis and direction from the Department of State Health Services as a voice of health care in the state.



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WORKING BIBLIOGRAPHY



2005-2010
TEXAS STATE HEALTH PLAN

WORKING BIBLIOGRAPHY
Statewide Health Coordinating Council

- Advancing Health in America. 2002. In our hands: How hospital leaders can build a thriving workforce. Commission on Workforce for Hospitals and Health Systems. Available online at: <http://www.hospitalconnect.com/jsp/article.jsp?dcrpath=AHA/NewsStory_Article/data/HEALTHFORUMJOURNAL-0708x11&domain=HEALTHFORUMJOURNAL>. Accessed February 12, 2004.
- Aiken, Linda H., Sean P. Clarke, Robyn B. Cheung, Douglas M. Sloane, and Jeffrey H. Sibley. 2003. Educational levels of hospital nurses and surgical patient mortality. *Journal of the American Medical Association* 290(12): 1617–23.
- American Nurses Association. 2002. Nursing’s agenda for the future: A call to the nation. The Nursing Profession and Nursing’s Agenda for the Future Steering Committee. April 2002. Available online at: <<http://www.nursingworld.org/naf>>. Accessed February 12, 2004.
- Bodenheimer, Thomas, and Kevin Grumbach. 2003. A spark to revitalize primary care. *Journal of the American Medical Association* 290(2): 259–64.
- Braden, Barbara A. The Bureau of Primary Health Care: The Quality Center. Power Point Presentation. Available online at: U.S. Department of Health and Human Services Health Resources and Services Administration, <<http://bphc.hrsa.gov/quality/QCPRESENTATION.ppt>>. Accessed February 11, 2004.
- Buerhaus, Peter I., Douglas O. Staiger, and David L. Auerbach. 2003. Trends: Is the current shortage of hospital nurses ending? *Health Affairs* 22(6): 191–98.
- Center on an Aging Society. 2004. Disease management programs: Improving health while reducing costs? Issue Brief 4. Available online at: Georgetown University, <<http://ihcrp.georgetown.edu/agingociety/pdfs/management.pdf>>. Accessed February 11, 2004.
- Cohen, Jordan J. 2003. Our quest for meaning. Association of American Medical Colleges President’s Address. Press Release, November 9. Available online at: <<http://www.aamc.org/newsroom/pressrel/2003/031109.htm>>. Accessed February 10, 2004.
- Committee for the Study of the Future of Public Health, Division of Health Care Services, Institute of Medicine. 1988. *The Future of Public Health*. Washington: National Academy Press.
- Commonwealth Fund Task Force on Academic Health Centers. 2003. *Envisioning the future of academic health centers: Final report*. Available online at: <http://www.cmwf.org/programs/taskforce/ahe_envisioningfuture_600.pdf>. Accessed February 11, 2004.
- Cunningham, Joyce. 2003. Focus on nursing data create change for health care. *Texas Nursing* 77(7): 8–11.
- Farrington, Chad H., Frederic J. Martucci, Adam L. Kaplan, Joseph S. Korleski, M. Craig Kornett, John E. Wells, Robert C. Wetzler, and Emily Wong. 2003. *Health care special report: Nursing shortage update*. Available online at Fitch Ratings, <<http://www.fitchratings.com>>. Accessed February 12, 2004.

WORKING BIBLIOGRAPHY
Statewide Health Coordinating Council

- Ferrante, J. M., E. C. Gonzalez, N. Pal, and R. G. Roetzheim. 2000. Effects of physician supply on early detection of breast cancer. *Journal of the American Board of Family Practice* 13(6): 408–14.
- Fink, Kenneth, Robert L. Phillips Jr., George E. Fryer, and Nerissa Koehn. 2003. International medical graduates and the primary care workforce for rural underserved areas. *Health Affairs* 22(2): 255–62.
- Hospital nurse vacancy rates on the decline: Challenges remain: A survey of Florida hospitals.* 2003. Orlando: Florida Hospital Association.
- Fryer, G. E., Jr., J. Drisko, R. D. Krugman, C. P. Vojir, A. Prochazka, T. J. Miyoshi, and M. E. Miller. 1999. Multi-method assessment of access to primary medical care in rural Colorado. *Journal of Rural Health* 15(1): 113–21.
- Geyman, John P. 2002. Family practice in a failing health care system: New opportunities to advocate for system reform. *Journal of the American Board of Family Practice* 15(5): 407–10.
- Greiner, Ann C., and Elisa Knebel, eds. 2003. *Health professions education: A bridge to quality.* Committee on the Health Professions Education Summit, Board on Health Care Services, Institute of Medicine. Available online at: National Academies Press, <<http://www.nap.edu/books/0309087236/html/>>. Accessed February 11, 2004.
- Gullett, Brenda, and Barbara G. Williams. 2002. Your health care crisis: The Arkansas nursing shortage. Presentations from the Council on Collegiate Education for Nursing. Available online at: Southern Regional Education Board, <<http://www.sreb.org/programs/nursing/presentations/presentationsindex.asp>>. Accessed February 12, 2004.
- Health Professions Resource Center. 2003. *Supply trends among licensed health professions: Texas, 1980–2002.* Austin: Center for Health Statistics, Texas Department of Health.
- Hecker, Daniel E. 2001. Employment outlook 2000–10: Occupational employment projections to 2010. *Monthly Labor Review Online* 124(1). Available online at: U.S. Department of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/opub/mlr/2001/11/art4full.pdf>>. Accessed February 12, 2004.
- Hospital workforce study.* 2004. Austin: Texas Hospital Association.
- Johnson, G. P. 2002. Primary care enrollment levels in staff- and group-model health maintenance organizations: A standard to compare military enrollment with civilian organizations. *Military Medicine* 167(5): 370–73.
- Joint Commission on Accreditation of Healthcare Organizations. *Health care at the crossroads: Strategies for addressing the evolving nursing crisis.* Available online at: <<http://www.jcaho.org/about+us/public+policy+initiatives/health+care+at+the+crossroads.pdf>>. Accessed February 12, 2004.
- Kimball, B., and E. O’Neil. 2002. *Health care’s human crisis: The American nursing shortage.* Available online at: Robert Wood Johnson Foundation, <http://www.rwjf.org/publications/publicationsPdfs/nursing_report.pdf>. Accessed February 12, 2004.

WORKING BIBLIOGRAPHY
Statewide Health Coordinating Council

- Levit, Katharine, Cynthia Smith, Cathy Cowan, Art Sensenig, Aaron Catlin, and Health Accounts Team. 2004. Trends: Health spending rebound continues in 2002. *Health Affairs* 23(1): 147–59.
- Lurie, J. D., D. C. Goodman, and J. E. Wennberg. 2002. Benchmarking the future generalist workforce. *Effective Clinical Practice* 5(2): 58–66.
- Lurie, N. 2000. Strengthening the U.S. health care safety net. *Journal of the American Medical Association* 287(16): 2112–14.
- McInaney, Maureen. 2003. *Report: Primary care in U.S. in crisis, must be reconstructed*. Available online at: Center for Health and Community, University of California–San Francisco, <<http://chc.ucsf.edu/news/primaryreport.htm>>. Accessed February 11, 2004.
- Mick, S. S., and S. Y. Lee. 1999. Are there need-based geographical differences between international medical graduates and U.S. medical graduates in rural U.S. counties? *Journal of Rural Health* 15(1): 26–43.
- Moore, G., and Jonathan Showstack. 2003. Primary care medicine in crisis: Toward reconstruction and renewal. *Annals of Internal Medicine* 138(3): 245–47.
- National Center For Health Workforce Analysis. 2002. *Projected supply, demand, and shortages of registered nurses: 2000–2020*. Available online at: <<ftp://ftp.hrsa.gov/bhpr/nationalcenter/mproject.pdf>>. Accessed February 12, 2004.
- National Quality Forum. 2004. National Quality Forum endorses national voluntary consensus standards for nursing-sensitive performance measures and endorses two additional nursing home performance measures. Press release, January 30.
- Needleman, Jack, Peter Buerhaus, Soeren Mattke, Maureen Stewart, and Katya Zelevinsky. 2002. Nurse-staffing levels and the quality of care in hospitals. *New England Journal of Medicine* 346(22): 1715–22.
- Oklahoma Community Partners in Public Health Innovation. *Turning point: Building healthy communities in Oklahoma through partnerships*. Oklahoma Health Innovation Plan. Available online at: Oklahoma State Department of Health, <<http://www.health.state.ok.us/partners/>>. Accessed February 11, 2004.
- Page, Ann, ed. *Keeping patients safe: Transforming the work environment of nurses*. Committee on the Work Environment for Nurses and Patient Safety, Board on Health Care Services, Institute of Medicine. Available online at: National Academies Press, <<http://www.nap.edu/books/0309090679/html/>>. Accessed February 12, 2004.
- Pathman, D. E., D. H. Taylor, Jr., T. R. Konrad, T. S. King, T. Harris, T.M. Henderson, J. D. Bernstein, T. Tucker, K. D. Crook, C. Spaulding, G. G. Koch, and Cecil G. Sheps. 2000. State scholarship, loan forgiveness, and related programs: the unheralded safety net. *Journal of the American Medical Association* 287(16): 2084–92.

WORKING BIBLIOGRAPHY
Statewide Health Coordinating Council

- Politzer, R.M., K. S. Hardwick, J. M. Cultice, and C. Bazell. 1999. Eliminating primary care health professional shortage areas: The impact of Title VII generalist physician education. *Journal of Rural Health* 15(1): 11–20.
- Reineck, Carol, Antonio Furino, Joseph Lucke, and Robert Wood. 2002. In their own words: 2002 survey of Texas registered nurses. *Health and Nurses in Texas* 2(2).
- Retchin, S. M., P. A. Boling, M. D. Nettleman, and S. S. Mick. Marketplace reforms and primary care career decisions. *Academic Medicine* 76(4): 316–23.
- Robert Graham Center for Policy Studies in Family Practice and Primary Care. 2001. Uncoordinated growth of the primary care workforce. Available online at: *One Pager*, <<http://www.aafppolicy.org/x163.xml>>. Accessed February 10, 2004.
- Robeznieks, Andis. 2004. Disparities in care still undercut quality progress: Increasing trust and building a “medical home” are proposed fixes to quality and disparity problems. Available online at: <<http://www.ama-assn.org/amednews/2004/01/19/prl20119.htm>>. Accessed February 11, 2004.
- Salsberg, Edward. Making sense of the system: How states can use health workforce policies to increase access and improve quality of care. Milbank Memorial Fund and Reforming States Group. Available online at: <<http://www.milbank.org/reports/2003salsberg/2003salsberg.html>>. Accessed February 11, 2004.
- Sheldon, G. F. 2003. Great expectations: The 21st century health workforce. *American Journal of Surgery* 185(2): 35–41.
- Smedley, Brian D., Adrienne Y. Stith, Lois Colburn, and Clyde H. Evans, eds. 2001. *The right thing to do, the smart thing to do: Enhancing diversity in the health professions*. Summary of the Symposium on Diversity in Health Professions. Washington: Institute of Medicine, National Academy Press.
- , Adrienne Stith Butler, and Lonnie R. Bristow, eds. *In the nation’s compelling interest: Ensuring diversity in the health care workforce*. 2004. Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Health Care Workforce. Available online at: National Academies Press, <<http://books.nap.edu/books/030909125X/html/1.html#pagetop>>. Accessed February 10, 2004.
- Spetz, Joanne, and Ruth Given. 2003. Trends: The future of the nurse shortage: Will wage increases close the gap? *Health Affairs* 22(6): 199–206.
- Stoneham, L. 2001. When is enough enough? *Texas Medicine* 97(5): 50–54.
- Tennessee Primary Care Association. Community development: Website resources. Available online at: <http://www.tnpca.org/tpca_communitydev.htm>. Accessed February 11, 2004.
- Terry, Ken. 1999. Primary care feels the job squeeze. *Medical Economics* 76(13): 194–98, 203–05.
- . 2002. What’s on the horizon for primary care? *Medical Economics* 79(3): 26–31.

WORKING BIBLIOGRAPHY
Statewide Health Coordinating Council

- United States General Accounting Office. 2001. Health workforce: Ensuring adequate supply and distribution remains challenging. Report GAO-01-1042T. Available online at: <<http://www.gao.gov>>. Accessed February 12, 2004.
- Vanselow, N. A. 1999. Are we headed for a surplus of “generalist” healthcare providers? It might be time to pull the plug on incentives. *Postgraduate Medicine* 105(7): 15–17.
- Virginia Primary Care Association. Models of community health care delivery systems. *Community Health Care Development Resources Guide*. Available online at: <http://www.vpca.com/resources/pdf_files/Models%20of%20Primary%20Care%20Delivery.pdf>. Accessed February 11, 2004.
- Whynes, D. K., and P. Thornton. 2000. Measuring concentration in primary care. *Health Care Management Science* 3(1): 43–49.
- Wieck, K. Lynn. Aim high — think big. 2003. *Texas Nursing* 77(8): 8–14.



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