



Building Texas' Future Healthcare Workforce

Texas Healthcare Workforce Task Force
Final Report | October 2024

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Executive Summary

Everyday millions of Texans rely on highly skilled and effectively trained healthcare professionals to provide essential medical care. As the state's largest employment sector, healthcare plays a crucial role not only in supporting public health efforts, but also in driving the Texas economy. Persistent shortages in the healthcare workforce have emerged as a growing concern in the healthcare sector.

In response to the healthcare workforce shortage, Governor Abbott charged the Texas Higher Education Coordinating Board with creating the Healthcare Workforce Task Force to examine this issue, as well as to identify ways to remove barriers to expand healthcare programs at institutions and provide students with the tools necessary to succeed in this field in Texas.

To address these charges, the Task Force has developed specific recommendations which when taken together present a systematic approach to ensure accurate and comprehensive data collection; expand opportunities for and improve the quality of educational pathways; and open the door for further innovation that will allow the system to adapt and evolve well into the future.

Collaborating Across Agencies to Build a Healthcare Workforce Pipeline

- 1 Coordinate state healthcare workforce planning more effectively by creating the Statewide Health Professions Workforce Coordinating Council (HPWCC).

Expanding the Pipeline

- 2 Expand the number of pharmacy technicians in Texas.
- 3 Create a start-up fund for sponsors of apprenticeship programs.
- 4 Improve the alignment of curriculum for credentials between high school and post-secondary programs.
- 5 Study the feasibility of creating partnerships for sharing practice lab resources across educational institutions.
- 6 Expand the availability of uniform, high quality instructional materials for health professions related courses and CTE programs.
- 7 Study the feasibility of community colleges to expand four-year degree programs for health professionals in specific circumstances.

Modernizing the Production Pipeline

- 8 Streamline the nursing school application process by including nursing school programs in the Texas Medical & Dental Schools Application Services.

- 9 Create a Gold Ribbon Panel on the Future of Nursing.

- 10 Revisit Health and Safety Code Chapter 257 to ensure effective compliance and enforcement of the nursing staffing statute.

- 11 Improve the alignment of the nursing profession career pathway.

- 12 Create a clear career pathway that facilitates the transition of certain allied health professionals into the nursing profession.

Exploring Options in Medicaid

- 13 Investigate the feasibility of establishing a workforce development initiative in Texas Medicaid.

Bolstering the Faculty and Preceptors

- 14 Enhance state support for creating local and regional collaborations.

- 15 Study the feasibility of implementing a statewide system for coordinating clinical training placements.

- 16 Create a program evaluation unit to research and identify effective innovations in education and training of healthcare professionals.

- 17 Consider making investments in the unfunded Senate Bill 25 (88R) programs.

- 18 Continue investment in scholarship and loan repayment programs.

A Note from the Task Force Chair



Healthcare workforce shortages are not new and/or limited to one particular type of healthcare provider. Over many decades, tremendous effort has been made to invest in Texas students who have chosen to go into health professions through scholarship and loan repayment programs. While these programs have proven effective at increasing the supply of trained workers, shortages in the state persist.

The challenge for this task force was to examine this long-standing issue differently, from a broader perspective, and to work to identify more comprehensive solutions. Over the last five months, over 70 subject matter experts, 50 stakeholders, and 7 state agencies came together to break this issue down into its many component parts. This was done by considering issues with supply, demand, local planning, and collaboration, and identifying opportunities and removing barriers that contribute to this challenge.

As we all know, Texans do not wait for the government to solve their problems. Many of these subject matter experts have been working in their local communities and finding success in building effective partnerships and approaches to training healthcare professionals. This report and the recommendations herein build on this work and seek to lay the groundwork for a systemic long-term process to monitor and address these shortages over time.

I thank Governor Abbott for his foresight and leadership to create this task force. I thank each task force member and participant in this process. These individuals are passionately working in the trenches to solve a very local and very personal issue in their communities. I am grateful they lent their experience and expertise to this project.

Victoria Ford, MPA

Chair

Task Force Members

- **Victoria Ford** of Austin is President and CEO of Texas Healthcare and Bioscience Institute and has over 29 years of Texas public policy and administration experience. In her most recent role as Chief Policy and Regulatory Officer at the Texas Health and Human Services Commission.
- **Avik Roy** is President of the Foundation for Research on Equal Opportunity. Among other roles, he leads the National Institute for Health Care Management, and serves as an Advisor to the National Academy of Medicine's Robert Wood Johnson Foundation Health Policy Fellowship.
- **Cheryl Petersen** is the Chief Nursing Officer and Vice President for Patient Services at Cook Children's Medical Center in Fort Worth. Prior to this role, she was Assistant Vice President of Nursing and Nursing Director with Cook Children's for more than 20 years.
- **Dr. Fred Cerise**, Ph.D. is President and Chief Executive Officer (CEO) of Parkland Health. Prior to joining Parkland Health, Dr. Cerise served as Associate Dean for Clinical Affairs at the Louisiana State University Health Science Center and New Orleans School of Medicine.
- **Jack Dwyer** is Founder of Dwyer Workforce Development. He previously founded Capital Funding Group and created a family of 11 companies that provide full-service, comprehensive financing and banking solutions.
- **Dr. Jackie Ward**, DNP is the System Chief Nurse Executive and Senior Vice President for Texas Children's Hospital. As Chief Nursing Executive, Dr. Ward has oversight of and responsibility for clinical workforce. Dr. Ward has been recognized as a leader on workforce issues.
- **Jamie Dudensing** is the Chief Executive Officer of the Texas Association of Health Plans. She has held multiple roles in the Texas Legislature including previously serving as Health and Human Services Budget Analyst on the House Appropriations Committee and was the Senior Advisor for Budget and Policy, and then Deputy Chief of staff for former Lieutenant Governor David Dewhurst.
- **Dr. Jayson Valerio**, DNP is the Dean for the School of Nursing and Allied Health for South Texas College. He has over 20 years of experience as a registered nurse in the field of medical-surgical nursing and nursing education. Dr. Valerio oversees 12 different nursing and allied health care programs across three campuses.

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- **Jennifer Deegan** is Vice President of Health Policy and Systems Strategy at UTHealth Houston. Deegan has engaged in health policy issues throughout her career, including four sessions in the Speaker's Office as Budget Director and Senior Health and Human Services Advisor.
 - **Dr. John Zerwas** is the Executive Vice Chancellor for Health Affairs at The UT System. In this role, he provides oversight and guidance for the five UT System health institutions and three medical schools at academic institutions.
 - **Kathy Thomas** is the former Executive Director for the Texas Board of Nursing (BON). She previously served BON as Director of Nursing Practice, Nursing Consultant for Advanced Practice, and Education Consultant. Prior to joining BON, Thomas taught nursing as an instructor and assistant professor at UT Health Science Center at San Antonio.
 - **Dr. Lori Rice-Spearman, Ph.D.** is the ninth President of Texas Tech University Health Science Center (TTUHSC) and first female President in the Texas Tech University System. She joined TTUHSC in 1987 and has held multiple leadership positions during her tenure.
 - **Olga Rodriguez** serves as Chief of Staff and Associate Vice President of Texas A&M Health Science Center. In this role, she provides leadership and strategic counsel regarding innovation, development, and oversight of the strategic healthcare finance and healthcare delivery system growth across the Texas A&M Health colleges.

Introduction

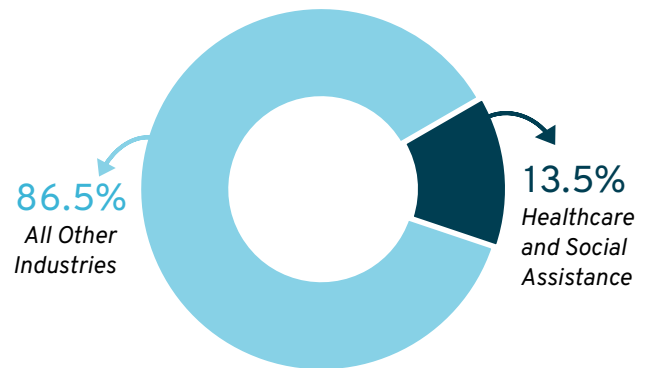
Every single Texan will at some point over the course of a given year rely on the healthcare system. For most, that will be routine care in a doctor’s office, community health center, retail eye glass shop, or a prescription filled at local pharmacies, and for others, it will be the more joyous occasion as approximately 375,000ⁱ new Texans are born each year. Many Texans rely on the healthcare system to help them manage chronic health conditions such as the 2.5 millionⁱⁱ Texans living with diabetes, or the 32%ⁱⁱⁱ of Texans living with high blood pressure, and the 140,000^{iv} Texans who are fighting cancer annually. More fragile Texans rely on the system with over 12,900,000^v emergency department visits each year, 83,000 Texans living in nursing facilities, and 500,000 receiving home care annually.

For these encounters with the healthcare system to be successful, Texans rely on highly skilled and effectively trained healthcare professionals. According to the U.S. Department of Labor data, in 2022, there were an estimated 14,335,116 workers in healthcare professions, in over 80 different occupations, which accounts for 13% of the total workforce in Texas, making it the largest employment sector in the state.

While the state of Texas has allocated funds to help recruit, train and retain nurses and physicians throughout the state, there are geographic areas, special populations, and facilities with shortages of primary care, dental, and mental health providers and services. Currently 224 of Texas’ 254 counties are designated as health professional shortage areas^{vi} (HPSAs), with 6,066,420 Texas residents living in a HPSA. The shortage of health professionals highlights the opportunity for improvement as many Texans seek greater access to the healthcare services they need.

On April 18, 2024, Governor Greg Abbott directed the Texas Higher Education Coordinating Board to create a task force to address healthcare workforce shortages.

Figure 1. Healthcare Industry as a Portion of Total Texas Employment



Source: Texas Workforce Commission, 2023 Q4 Quarterly Census of Employment and Wages

“To help address the healthcare workforce shortage, I am directing the Texas Higher Education Coordinating Board (THECB) to immediately create a task force to provide opportunities and remove barriers that exist to expand healthcare programs at institutions and provide students with the tools necessary to succeed in this field in Texas. Further, the task force should investigate challenges to establishing and maintaining sufficient clinical rotation sites and clinical placements and identify best practices to attract and retain qualified clinical instructors. The task force shall issue a report by October 1, 2024.

Texas is the fastest growing state in the nation, and it is vital that we continue to expand our healthcare workforce to meet the needs of our citizens as we build a bigger, better Texas.

-Governor Greg Abbott

Task force members were appointed, and a call was issued for nominations for subject matter experts to serve in an advisory capacity. From over 120 nominations, 65 individuals were chosen from across the state, representing a broad spectrum of experience and expertise in the education and preparation of healthcare professionals. Members of both the task force and advisory committee actively participated by responding to surveys, submitting suggestions and research sources, participating in workshops, presenting information about their programs, and attending task force meetings.

To effectively analyze and research the healthcare workforce shortages, the task force identified three focus issue objectives.

- 1 Expand the Pipeline:** A significant number of individuals enter the healthcare workforce as aides, assistants, and technicians. These “gateway” roles increasingly play a vital part in delivering a significant amount of direct patient care, diagnostic testing, data entry, and laboratory work in the modern healthcare system. Many of these individuals then acquire higher-level credentials paving the way for long fulfilling careers working in healthcare professions; with many ultimately becoming nurses. Direct-care workers, diagnostic technicians, and other allied health professions are invaluable partners in the system to ensure effective healthcare across all practice sites and in facilities of all types.
- 2 Modernize the Production Model:** In the last decade, significant advancements have been made in modern technology, in the delivery of educational programming, and in the healthcare system related to facility staffing and patient care. The current requirements and standards for licensed vocational nurses (LVN) and registered nurses (RN) need to be adapted to these new factors to prepare Texas nurses for the new and future realities of the healthcare workplace.
- 3 Bolster Faculty and Preceptors:** One of the most significant challenges identified in the production of new nurses and other healthcare professionals is the recruitment of faculty and clinical training preceptors for education programs. Healthcare professionals, particularly nurses, are handling workforce shortages all while educating and training new nurses. By implementing innovative new approaches and best practices for collaboration and partnerships, we will expand the number of faculty and preceptors for nurses and will ensure the healthcare system can effectively serve all patients’ needs.

The task force organized and hosted three separate intensive one-day workshops; each workshop concentrated on one of the three focus issues. During the first half of the day, task force members and advisory subject matter experts listened to presentations from a variety of stakeholders designed to share perspectives on the challenges and best practices in the field related to that focus issue. The second half of the day consisted of intensive roundtable discussions that included the advisory committee members, the presenters, and supportive agency personnel to discuss, analyze, and break down each focus area. Over the three workshops, 35 presentations by stakeholders, experts, and agency staff ensured that a diverse group of perspectives was presented.

Each workshop had two designated co-chairs who summarized the activity of the workshop, the consensus points, and the recommendations discussed during the workshop. The co-chairs then presented to the full task force at the next public meeting. Over the three public meetings, the task force heard from the state agencies involved in the education, preparation, and licensure of the allied health professions and nurses. The task force also received over 38 additional presentations from industry groups, non-profit organizations, and education programs detailing best practices and new innovative approaches to preparation of healthcare professionals. Members were also asked to submit their own suggestions for identifying the challenges and solutions to addressing workforce shortages in Texas.

Figure 2. Advisory Group Co-Chairs

Expanding the Pipeline

- Dr. Christopher Metsgar, *Dean, Academic Success, Health Sciences, St. Phillips College*
- Mikki Hand, *Executive Director, Frontera Healthcare Network*

Modernizing the Production Model

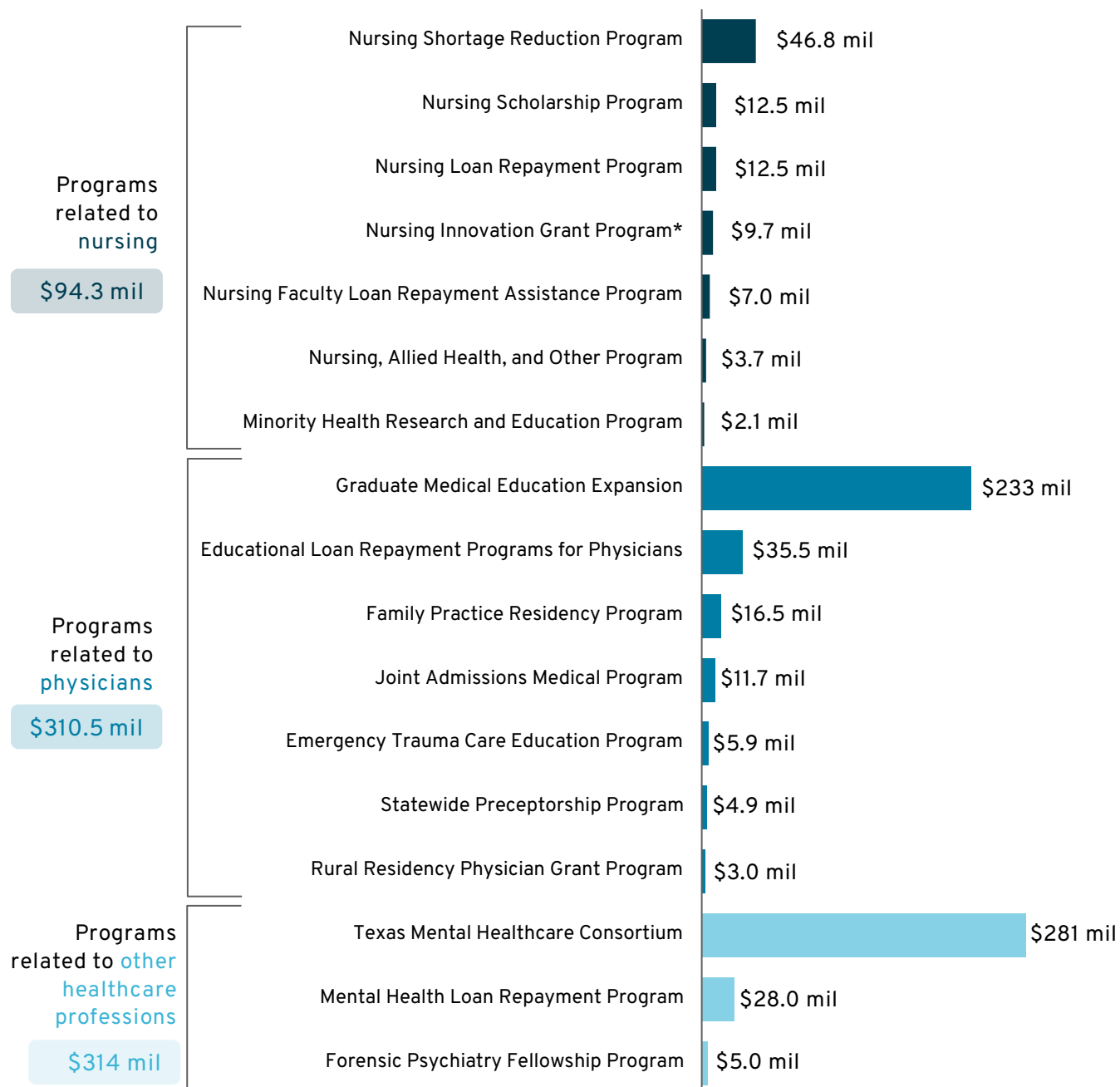
- Dr. Cindy Weston, *Founding Dean and Professor, University of North Texas Health Science Center at Fort Worth, College of Nursing*
- Dr. Deborah Jones, *Senior Vice President and Dean, UTMB, School of Nursing*

Bolstering Faculty & Preceptors

- Dr. Susan Greenwood, *System Vice President & Chief Nursing Officer, Hendrick Health Abilene*
- Dr. Jennifer Chilton, *Associate Dean for Academic Affairs, UT Tyler, School of Nursing*

Summary of Healthcare Funding Programs

Figure 3. State-Funded Programs Related to Nursing, Physicians, and Other Professions



* The Nursing Innovation Grant Program was appropriated \$6 million by rider and \$3.7 million from the Texas Tobacco Lawsuit Settlement Fund. Source: THECB Analysis.

Cross-Government Engagement

The task force prioritized identifying and understanding the roles and responsibilities that each state agency plays in the preparation, education, licensure, and workforce planning processes in Texas. There are over 15 different state agencies and over \$4.2 billion^{vii} in state funds dedicated to providing educational programming, technical support services, scholarships, loan repayment programs, workforce development planning, data collection and analysis, and other important functions supporting the system. Throughout the workshops and public meetings, these agencies provided extensive background information to help inform the process.

Texas Higher Education Coordinating Board

The Texas Higher Education Coordinating Board (THECB) plays a critical role in the preparation and education of healthcare professionals. The agency provides guidance, approval, and support to academic institutions across the state regarding the establishment and operation of courses and degree programs for health professions.

Figure 4. Number of Instructional Programs by Institution Type
Classification of Instructional Programs (CIP) Code 51 - Health Professions and Related Clinical Sciences

CIP Code	Instructional Program Category	Community Colleges	Universities	Health-Related Institutions
5100	Health Services/Allied Health/Health Sciences, General	15	24	1
5102	Communication Disorders Sciences and Services	0	16	1
5106	Dental Support Services and Allied Professions	40	3	3
5107	Health and Medical Administrative Services	140	11	1
5108	Allied Health and Medical Assisting Services	141	0	0
5109	Allied Health Diagnostic, Intervention, and Treatment Professions	326	11	7
5110	Clinical/Medical Laboratory Science and Allied Professions	30	13	8
5115	Mental and Social Health Services and Allied Professions	96	6	1
5118	Ophthalmic and Optometric Support Services and Allied Professions	10	0	0
5122	Public Health	2	25	2
5123	Rehabilitation and Therapeutic Professions	0	6	0
5127	Medical Illustration and Informatics	0	1	0
5131	Dietetics and Clinical Nutrition Services	4	5	0
5132	Bioethics/Medical Ethics	0	4	0
5135	Somatic Bodywork and Related Therapeutic Services	2	0	0
5138	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	107	29	7
5139	Practical Nursing, Vocational Nursing and Nursing Assistants	95	0	0
TOTAL		1027	154	31

Source: THECB Analysis.

THECB is charged with ensuring the rigor and quality of health professions' education programs. These programs are subject to the same approval criteria and process as degree programs in other fields, and many of the programs must also meet specific industry standards. The programs are evaluated to ensure they will produce a credential of value; are not duplicative; have effective financing and cost; have adequate faculty, staff, and other resources; have the institutions' long-term compliance; and align with the state's strategic plan for higher education, *Building a Talent Strong Texas*.^{viii} For many individuals, the journey into a healthcare career begins at the community college level, which offers 1,026 approved programs.

Figure 5. Number of Instructional Programs by Certification Type
Classification of Instructional Programs (CIP) Code 51 - Health Professions and Related Clinical Sciences

<u>CIP Code</u>	<u>Instructional Program Category</u>	<u>CERT 1</u>	<u>CERT 2</u>	<u>Associate</u>	<u>Bachelors</u>
5100	Health Services/Allied Health/Health Sciences, General	8	1	6	25
5102	Communication Disorders Sciences and Services	0	0	0	17
5106	Dental Support Services and Allied Professions	13	2	24	7
5107	Health and Medical Administrative Services	62	27	43	20
5108	Allied Health and Medical Assisting Services	51	20	70	0
5109	Allied Health Diagnostic, Intervention, and Treatment Professions	92	44	190	18
5110	Clinical/Medical Laboratory Science and Allied Professions	9	1	22	20
5115	Mental and Social Health Services and Allied Professions	50	9	37	7
5118	Ophthalmic and Optometric Support Services and Allied Professions	5	1	4	0
5122	Public Health	2	0	0	27
5123	Rehabilitation and Therapeutic Professions	0	0	6	6
5127	Medical Illustration and Informatics	0	0	0	1
5131	Dietetics and Clinical Nutrition Services	2	1	1	5
5132	Bioethics/Medical Ethics	0	0	0	4
5135	Somatic Bodywork and Related Therapeutic Services	20	0	1	0
5138	Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing	4	6	77	56
5139	Practical Nursing, Vocational Nursing and Nursing Assistants	49	46	0	0
TOTAL		367	158	481	213

Source: THECB Analysis.

Texas Education Agency

The Texas Education Agency (TEA) is responsible for overseeing the state’s public education system, and therefore aides in providing education programming for health professionals. The State Board of Education is responsible for identifying the essential knowledge and skills (TEKS) for each subject of the required curriculum, including career and technology education (CTE) courses. Currently, Texas has five approved statewide programs of study and fifty-eight courses in health science. The courses include work-based learning and, hands-on training, and are designed to ensure students are employable with a valued industry credential. During the 2022-2023 school year, 19,768 students earned a nationally recognized certification in a health profession.^{ix}

Texas Workforce Commission

The Texas Workforce Commission (TWC) is the lead state agency for workforce development. TWC plays a key role in addressing the healthcare workforce shortage by supporting the state’s 28 Local Workforce Development Boards (LWDB), state workforce planning, providing technical support and funding to local workforce development efforts, and through data collection and analysis of occupational demand.

TWC is responsible for the administration of both federal and state apprenticeship programs in Texas. Federal apprenticeships are supported by the U.S. Department of Labor and involve multi-year grants and regulatory oversight through the Registered Apprenticeship Partners Information Data System (RAPIDS). Texas hosts 18 such programs with approximately 5,000 active participants. At the state level, initiatives like the Texas Industry Recognized Apprenticeship Program (TIRA) and the Apprenticeship Tax Refund Pilot Program provide financial incentives for businesses. TWC allocates substantial funding to support healthcare apprenticeships, including up to \$6,000 per apprentice and up to \$1 million for healthcare-related TIRA grants.

Figure 6. Governor's Tri-Agency Workforce Initiative

In 2016, Governor Abbott charged the commissioners of TEA, THECB, and TWC to build the state's talent pipeline by increasing the number of Texans with the skills and credentials required for high-demand jobs and industries.



Building a strong Texas workforce is an essential strategy to accelerate economic growth and ensure that Texans are prepared for jobs in the industries that will power the state's economy now and in the future. In 2021, the Legislature built upon the governor's vision and made this process permanent by enacting House Bill 3767^x.

The Tri-Agency Workforce Initiative is established to coordinate and improve information and other resources as necessary to:

- Ensure that the use of state and federal education and workforce funds is efficiently aligned to achieve state workforce development goals,
- Align career education and training programs to workforce demands, and
- Enable local and state policymakers to identify the workforce outcomes of participants in career education and training programs and progress toward the state workforce development goals.

Texas Department of State Health Services

The Texas Department of State Health Services (DSHS) is charged with promoting and protecting the health of people and communities. Specifically, they play a significant role in collecting data regarding the health profession's workforce shortage and helping facilitate the health of all Texans.

DSHS facilitates the Statewide Healthcare Coordination Council (SHCC), a seventeen-member council with thirteen members appointed by the governor and four ex-officio members representing specified state agencies. The broad purpose of the SHCC is to ensure healthcare services and facilities are available to all Texans through health planning activities, resulting in the development of the Texas State Health Plan (TSHP).

Texas Health and Human Services Commission

Among its many roles and responsibilities, the Texas Health and Human Services Commission (HHSC) is responsible for some specific program aspects that directly intersect with the growth and development of the healthcare workforce. More directly, HHSC is responsible for the certified nursing assistants (CNA) Registry. CNAs are an important entry-level role in the healthcare profession. Candidates must be at least 18 years old but there is no minimum education requirement other than completing an accredited CNA class in Texas. HHSC approves Nurse Aide Training and Competency Evaluation Programs (NATCEP) and maintains a list of approved in-service education programs.

Health Professions Licensure Boards

Texas Board of Nursing

The mission of the Texas Board of Nursing (BON) is to “protect and promote the welfare of the people of Texas by ensuring each person holding a license as a nurse in the state of Texas is competent to practice safely.” The BON oversees the education and licensure of nurses. A vital role of the BON is approving nursing education programs by reviewing curricula, faculty, clinical partnerships, and student outcomes to ensure high-quality training. Additionally, the BON enforces licensure standards for nurses by monitoring professional conduct and investigating complaints. Through its regulation of education programs and enforcement of licensure standards, the BON protects both the integrity of the nursing profession and the welfare of the public.

Texas State Board of Pharmacy

The Texas State Board of Pharmacy is responsible for the licensure and registration of Texas pharmacists, pharmacy technicians, and pharmacies; and for establishing regulations for pharmacy practice; and for disciplining licensees and registrants. Pharmacy technicians play a significant role in supporting healthcare delivery and often serve as a gateway into other health professions.

The certification of 1,417 Texas high school graduates as pharmacy technicians during the 2022-2023 school year highlights the growing importance of this profession. Through licensure, establishment of practice regulations, and disciplining those who do not meet standards, the board upholds the integrity of the pharmacy profession and safeguards public health.

Texas Board of Dental Examiners

The Texas Board of Dental Examiners licenses qualified, educated, and trained dentists and dental hygienists and certifies and registers dental assistants in Texas. In 2022, there were an estimated 11,365 dental hygienists in Texas and 32,825 dental assistants. These gateway health professionals provide invaluable direct care to dental patients.

Figure 7. Other Healthcare Licensure Boards

- Texas Medical Board
- Texas Optometry Board
- Board of Chiropractic Examiners
- Behavioral Health Executive Council
- Board of Physical Therapy Examiners
- Board of Veterinary Medical Examiners
- Board of Occupational Therapy Examiners

RECOMMENDATION 1

Coordinate state healthcare workforce planning more effectively by creating the Statewide Health Professions Workforce Coordinating Council (HPWCC).

- This council, which will be anchored at DSHS, reforming the current Statewide Healthcare Coordination Council,^{xi} and modeled after the Statewide Behavioral Health Coordinating Council, will have representation from all 15 state agencies that participate in the planning, education and preparation of the healthcare workforce, including four gubernatorial appointees with related expertise, will be charged to produce a biennial Statewide Health Professions Workforce Blueprint in October before each legislative session.
- The HPWCC will work collaboratively, using all existing sources of data related to the healthcare workforce, including occupations data, licensure data, local workforce plans, graduation data, survey data, and other identified relevant data, to produce a consistent data analysis model for monitoring the short- and long-term growth and predicted workforce needs of the healthcare system for Texas.
- The Statewide Health Professions Workforce Blueprint should include an inventory and fund report of all programs and services the preparation and education of health professionals.
- The HPWCC should establish a workgroup specifically charged to examine the roles of and identify methods to collect data regarding the healthcare professions, that comprise the “gateway” professions and integrate this data into the data analysis model for monitoring the healthcare professions.

Building and maintaining the healthcare workforce is a collective effort that involves 15 state agencies, local workforce boards, chambers of commerce, industry groups, and local government agencies. Together they are engaged and invested in ensuring the success of these efforts to build a workforce that supports the lives of all Texans.

However, there are gaps in the coordination of these efforts, and often, the health profession's shortages are examined in silos that do not provide a comprehensive view of the whole industry. These gaps result in an imbalance in areas around the state where some have robust organization collaborations managing their healthcare preparation and training effectively, while others have training programs that struggle to keep up with current or future demand. The siloed data creates additional challenges in long-term planning.

Many reports examine the "nursing shortage" but do not include the many other direct patient care positions, diagnostic technicians, or aides. Studies of the physician shortage do not include other health providers and professionals also providing care. These silos severely limit the ability of state and local officials to develop a comprehensive healthcare workforce strategy that looks at the full breadth and needs of the healthcare system as a whole.

This first-ever comprehensive examination of the health profession's workforce and the resources dedicated to this effort will provide the most accurate picture of the current system, and projections for future health system workforce needs. Integrating the allied health professionals into this model is important to ensure a more precise understanding of the need for workers that provide direct bedside care but also the diagnostic testing, laboratory analysis, data entry, medication distribution, sample collection, and other important aspects of patient care. No analysis of the healthcare workforce is complete without an accurate accounting of these professionals. This comprehensive analysis model will allow the state to define targeted goals and objectives for healthcare workforce planning at the state, regional and local levels. These goals will provide the foundational basis for the development of strategies by each of the participating HPWCC agencies and local workforce planners to build a strong and thriving healthcare system long into Texas' future.

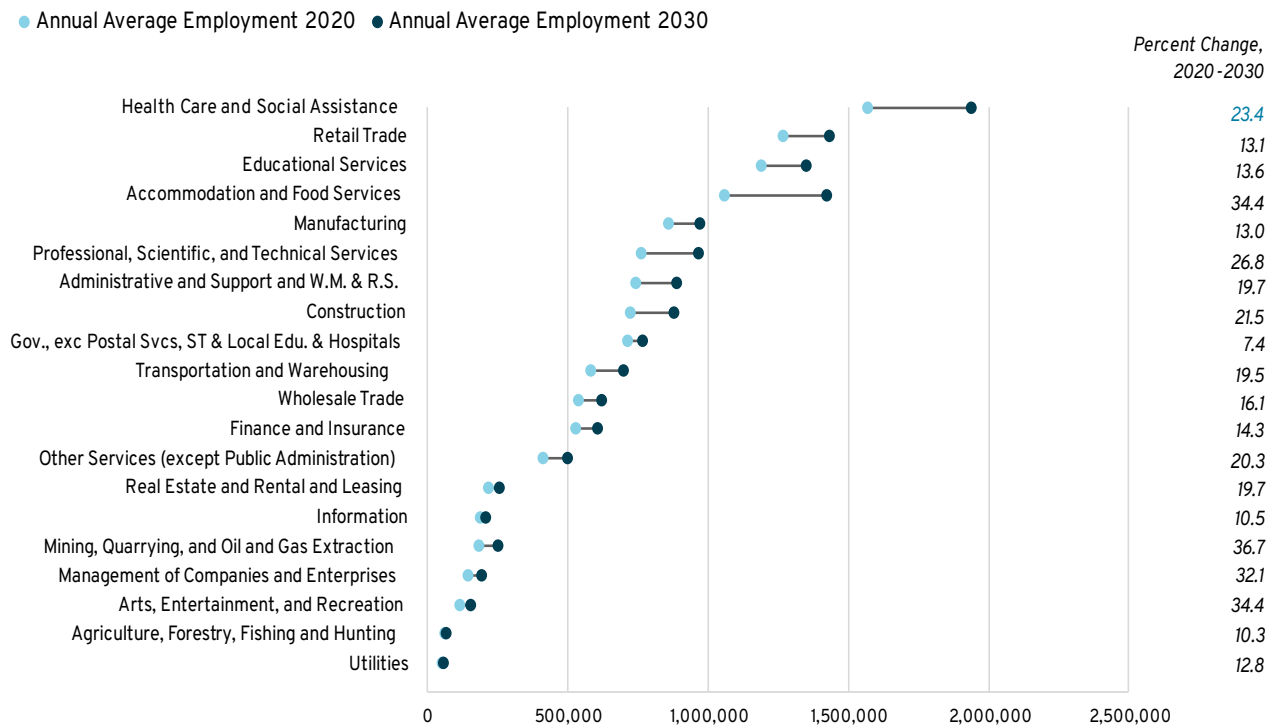


Expanding the Pipeline

Texas is one of the fastest growing states in the nation, with a population exceeding 30 million. Not only does Texas have three of the ten most populous cities in the nation, it contains large regions categorized as not just rural, but also as frontier. Texas is geographically the second largest state, with a land mass larger than Spain or France. These factors continuously challenge those in charge of the delivery of health and medical services to meet the needs of the state’s diverse and rapidly growing population.

Healthcare is the largest industry in Texas, as measured by employees. By 2030, the state’s total workforce is expected to grow by 18.3% to 15,354,361^{xii} (for more detail about growth by industry, see Figure 8), and the healthcare and social assistance sector is expected to continue to be the largest industry by employees in the state, growing by 23.4% to 1,935,146.

Figure 8. Texas Employment by Industry, 2020-2030



Sources: Bureau of Labor Statistics, Occupational Employment and Wage Statistics. May 2023, Long-Term Employment Projections 2020-2030.

Each workshop discussion was anchored in the fundamental importance of this workforce and the need to ensure the highest skilled professionals in this system. With the focus on gateway professionals, LVN, and RNs, the workshops identified challenges and opportunities across the spectrum of the workforce development and education systems for making meaningful changes that will help prepare the healthcare workforce of the future.

Figure 9. Average Annual Employment for Select Nursing and Related Occupations

<u>Occupational Title</u>	<u>Annual Average Employment, 2020</u>	<u>Annual Average Employment, 2030</u>	<u>Percent Change, 2020-2030</u>
Nurse Practitioners	14,815	24,604	66.1%
Home Health and Personal Care Aides	320,777	418,497	30.5%
Registered Nurses	220,984	258,715	17.1%
Licensed Practical and Licensed Vocational Nurses	69,684	81,352	16.7%
Nursing Assistants	75,884	86,994	14.6%

Sources: Bureau of Labor Statistics, Occupational Employment and Wage Statistics. Long-Term Employment Projections, 2020-2030.

"Gateway" and Allied Health Professions

In nearly every healthcare setting, the use of direct care, diagnostic, laboratory, and other technicians is significantly expanding. These professionals are handling a growing amount of responsibility in every hospital, clinical, and medical practice across the healthcare system, as specific functions are identified, and training programs are created to ensure specific expertise is brought to these roles. Of the 48 health occupations tracked by TWC, that are bachelor's degree level, 39 health occupations fall under this category.

Figure 10. Employment and Wages for Associate or Nondegree Award Occupations

<u>Occupational Title</u>	<u>No. of Employed</u>	<u>Mean Wage</u>	<u>Median Wage</u>	<u>No. Change, 2022-2032</u>
Radiologic Technologists and Technicians	19,740	\$72,467	\$74,451	3,607
Respiratory Therapists	11,580	\$78,131	\$76,447	2,758
Physical Therapist Assistants	10,110	\$72,058	\$75,957	2,699
Dental Hygienists	11,510	\$87,272	\$89,155	2,353
Diagnostic Medical Sonographers	7,360	\$81,204	\$81,656	1,886
Occupational Therapy Assistants	6,080	\$73,694	\$75,000	1,342
Health Info Technologists and Medical Registrars	3,200	\$77,270	\$77,612	1,122
Magnetic Resonance Imaging Technologists	2,480	\$84,776	\$85,061	501
Surgical Assistants	2,000	\$71,525	\$66,591	288
Healthcare Practitioners and Technical Workers, All Other	1,040	\$69,772	\$64,725	287
Radiation Therapists	1,790	\$107,463	\$101,999	202
Nuclear Medicine Technologists	1,230	\$88,633	\$87,400	140

Sources: Texas Workforce Commission/Bureau of Labor Statistics, 2023 Occupational Employment and Wage Statistics, and Long-Term Projections.

These professionals include direct patient care workers throughout the healthcare system, individuals who take samples and run diagnostic tests, data entry staff, and other key workers. As the health system has automated over the years, specific tasks have been identified that can be performed by individuals with specific training and skills. Phlebotomy technicians are often the most frequently referenced, but these professionals also run diagnostics for various eye exams or other tests, assist with pharmacy management, and provide direct patient care at the bed side, in the home, or in an emergency care setting. According to TWC, many of these healthcare professionals are considered high-demand occupations by more than half of the local workforce boards.

As noted previously, high school graduates in 2022-2023 acquired over 19,000 industry-based certifications in these fields, as tracked by TEA. However, since most of these individuals do not have a state license, nor do many of them have trade groups or statewide professional organizations, tracking and monitoring this workforce poses challenges. The rapid growth in the use of these professionals means that no analysis of the healthcare workforce can be considered accurate or complete without them.



Figure 11. "Gateway" Health Occupations

- Cardiopulmonary Technology/Technologist
- Certified Electronic Health Records Specialist
- Certified Medical Transcriptionist
- Certified Nurse Aide
- Clinical Laboratory Science Medical Technology Technologist
- Clinical Research Coordinator/Clinical Study Coordinator
- Clinical/Medical Laboratory Assistant
- Certified Nurses Aid
- Community Health Worker
- Dental Administrative Assistant
- Dental Assistant
- Dental Hygienist
- Diagnostic Medical Sonographer
- Dispensing Optician
- Electrocardiogram Technician
- Electronic Health Records Specialist
- Emergency Care Attendant (EMT Ambulance)
- Family Practice Nurse/Nursing
- Health and Wellness General
- Health Information Medical Records Technology Technician
- Histologic Technician
- Home Health Aide
- Hospital and Health Care Facilities Administration & Management
- Licensed Practical Nurse
- Licensed Vocational Nurse
- Massage Therapist
- Medical Administrative Assistant
- Medical and Billing Coder
- Medical Assistant
- Medical Laboratory Assistant
- Medical Office Management Administration
- Medication Aide
- Nursing Administration
- Occupational Therapist Assistant
- Paramedic
- Pharmacy Technician
- Phlebotomy Technician
- Physical Therapy Technician/Assistant
- Psychiatric/Mental Health Services Technician
- Radiologic Technology/Science - Radiographer
- Rehabilitation Aide
- Renal Dialysis Technologist Technician
- Respiratory Care Therapy/Therapist
- Registered Nurse
- Speech Language Pathology
- Sterile Processing Technician
- Substance Abuse Counselor
- Surgical Technologist

RECOMMENDATION 2

Expand the number of pharmacy technicians in Texas.

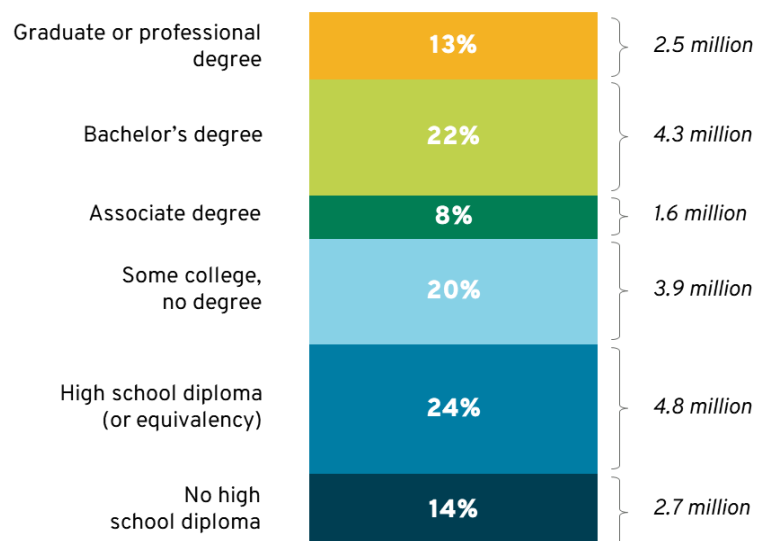
The Texas State Board of Pharmacy should examine the pharmacy technician supervision ratio to ensure it promotes the highest productivity and effectiveness in Texas pharmacies, while still maintaining safe and effective regulation. Additionally, the board should examine restructuring the framework for technician training so as not to limit trainees who may have to step away from training to be able to return to training in the future.

During one of the workshops, the Texas Pharmacy Association highlighted the critical shortages in pharmacy technicians in Texas. Of note, 76% of community pharmacists noted they experienced staff shortages within the last six months, and almost 90% indicated that the most difficult positions to fill were pharmacy technicians. These shortages have led to increased dispensing wait times, reduced pharmacy operating hours, and decreased ability of pharmacies to offer immunizations.

The HPWCC will be charged with examining this issue in greater detail, but there are additional recommendations that could make improvements for this segment of the workforce.

Another key theme for the workgroup focused on allied health professions was the changing nature of the students in the educational system. The College of Health Care Professionals (CHCP), founded over 35 years ago and has over 40,000 alumni health professionals, found that many of today's students are adult learners. Notably, 72% of their students are 22 years of age or older and 42% are parents. According to CHCP, 90% of their students come from the bottom 60% of income, 40% are first-generation college students, and 43% have previously attempted college. These students face unprecedented challenges to completing their education and are juggling work and supporting their families while trying to earn an education and advance their careers. CHCP and many other schools have created intensive case management, mentorships, and other support services programs to help these students succeed. Through these programs, CHCP has earned an 81% campus retention rate and 84% overall job placement rate. In 2024, across 10 campuses, CHCP graduated 6,000 individuals, who were hired by over 2,300 different employers.

Figure 12. Educational Attainment for Texans 25 Years or Older



Source: U.S. Census Bureau, 2023 American Community Survey 1-Year Estimates (ACST1Y2023).

This movement to “earn while you learn” is growing and makes the health professions particularly attractive to many students. The broad spectrum of certifications and occupations means these students can earn a legitimate credential of value in a short period, gain employment, support their family, and over time, efficiently acquire additional education to advance their career and increase their earnings.

These students are such a growing presence in the healthcare professions training programs that the owners of Capital Funding Group, a group that owns and manages healthcare facilities, found it compelling to financially support their student workers. They created an independent nonprofit called Dwyer Workforce Development (DWD) to provide CNA and Geriatric Nursing Assistant (GNA) job training and job placement support to underserved individuals seeking opportunities in the healthcare industry. DWD also supports its Dwyer Scholars with free case management and need-based wraparound services, such as financial support for housing, childcare, transportation, and more. Case managers work closely with Dwyer Scholars to identify their career ladder goals to achieve over several years. After reaching those goals, Dwyer Scholars are awarded scholarships to obtain their nursing certification or pursue training for continued career growth in the senior healthcare industry.

Figure 13. Recommendations for Programs to Support Non-Traditional Students



Continuous Student Support In and Out of the Classroom

- Intensive case management and financial assistance
- Ongoing progress monitoring and accountability
- Providing mentors and counseling services
- Support students in finding support services programs



Flexible but Structured Environment

- Design “stackable” curriculum with short-term goals
- Support various options for earning long-term credentials
- Offer hybrid coursework to balance learning and hands-on training
- Offer courses and training with flexible schedules
- Allow for flexible re-entry points for future credentials



Employment and Employment Services

- Define clear career pathways for students
- Support efforts to “earn while you learn”
- Facilitate connections with local and regional employers
- Provide mentors focused on helping students be “employment ready”
- Provide post-graduation and long-term employment support
- Include employers in curriculum development

Source: Bing, E. (2024, July 28). “The Texas Healthcare Workforce Task Force – Working Group 1.” Working Group Meeting 1, Austin, TX.

RECOMMENDATION 3

Create a start-up fund for sponsors of apprenticeship programs.

This program, located at TWC, would provide one-time start-up funds to support the development of sponsors for apprentice programs. These sponsors will support a network of apprentices for a broad employer base across the industry, or for employers with offices across the state.

One very effective model of training that allows a student to “earn while you learn” is the apprenticeship model. TWC manages the state’s apprenticeship program, which offers two models that are available in Texas (see Figure 14). According to TWC, there are 5,338 healthcare profession-related U.S. Department of Labor apprenticeships registered in Texas, with 3,858 of those for RN or RN residents. Some education programs have successfully integrated the apprenticeship model into their programming. Vernon College, in partnership with the United Regional Health Care System (URHCS), offers associate degree nurses (ADN) and license vocational nurses (LVN) the opportunity to participate in a Department of Labor-approved Registered Apprenticeship. This program enables nursing apprentice students to enhance their hands on experience while being paid for clinical training, combining both clinical experience and on-the-job training. In 2023, Vernon College placed 36 nurses into three-year contracts for employment through the first year of the program.^{xiii}



Workshop participants consistently heard that the administration of an apprenticeship program can be burdensome for employers, due to documentation, training, and other requirements. To address this, the Texas Association of Community Health Centers (TACHC) has developed a “best practice” model of collaboration to support apprenticeships at community health centers across the state. The Medical Assistant Apprenticeship Program is an innovative partnership model where TACHC serves as the administrative support agency, forming partnerships with state and

federal agencies to facilitate the employment of apprentices in community health centers across the state. Through this model, TACHC is the “sponsor” of the program, as recognized by the U.S. Department of Labor, and oversees tracking and reporting of the program. The individual health centers are the employers of the apprentices, responsible for hiring and training. These employers are eligible for TWC funding for apprentices, but as the sponsor, TACHC is not eligible to receive state or federal funds for that activity, therefore the state should explore the idea of utilizing start-up funds to develop apprenticeship programs.

Figure 14. Choosing Between a Federal or State Apprenticeship

Federal Considerations

- Structured, clear pathways and well-defined milestones and support
- Nationally recognized certifications, resources, and support
- Specific compliance and standards for training and safety
- Longer-term (multi-year) programs

State Considerations

- Flexibility in scheduling and curriculum
- More opportunity for innovation
- Less administrative costs, leading to potential cost savings
- Shorter-term programs (26 weeks or less)

HMG Healthcare, a leading long-term care services and healthcare company, also invested significantly in apprenticeships and created a nonprofit 501(c)(3) called HMG-U^{xiv}, which acts as the sponsor for their statewide apprenticeship program. These models can be a significant tool in expanding the use and availability of apprenticeships, and expanding the availability of this education training model would allow students to earn a living while earning a certification, though barriers to implementation are significant.

RECOMMENDATION 4

Improve the alignment of curriculum for credentials between high school and post-secondary programs.

The Tri-Agency Workforce Initiative should review the curriculum of high school and dual credit programs and ensure that those requirements align with college and university requirements to create greater “stacking” and decreased duplication of effort for students. The Initiative should also incorporate input from both academic and practicing healthcare professionals.

Students preparing for their career journeys in high school, school districts, and higher education programs may encounter challenges building and maintaining healthcare-related educational programming. While there have been tremendous advancements in the technology used to simulate training for health professions, the cost and need for lab space and equipment for these programs is a significant barrier. Funding for initial purchases for these programs does not always include funding for ongoing operation and maintenance. Other challenges relate to acquiring the expertise and the cost of developing curriculum. Schools in smaller and rural communities can greatly benefit by “growing their own” health professionals, which encourage students to build their careers locally. However, expertise is often lacking to develop and maintain a strong health-related program.

There are additional opportunities to improve the process for students working to enter and remain in healthcare professions. One of the goals of *Building a Talent Strong Texas* is to encourage the creation of “stacking credentials.” There is a need for the creation of educational and career pathways that allow a student to acquire a professional credential and begin employment. Over time, they can build on those credentials and the experience earned to transition to credit-bearing courses to expand their skills and acquire additional credentials as their career advances.



To address the increasing demand for healthcare professionals and to establish a sustainable pipeline from education to certification, it is imperative to align high school courses or dual credit programs with industry-recognized certifications. For example, according to TEA, in the 2022-2023 school year, 2,783 graduates earned a Patient Care Technician national certification.^{xv} These students should not have to duplicate course work if they choose to earn further credentials, such as advancing from an LVN to ADN. This alignment will ensure that students acquire the requisite clinical and soft skills, thereby facilitating a smoother transition into the healthcare workforce.

RECOMMENDATION 5

Study the feasibility of creating partnerships for sharing practice lab resources across educational institutions.

THECB in coordination with TEA should identify current educational laboratory resources and examine how to create partnerships, incentives or funding mechanisms that facilitate the sharing of lab resources where appropriate and effective, to decrease duplication of effort and expenses.

The tremendous technological advancements of recent years have resulted in incredibly life-like simulation equipment that can dramatically enhance training programs for health professions. However, these labs are very expensive to create, and each individual institution may not have enough students to keep those lab spaces full and continually in use. A community college may create such a lab for their own student class of 30 but the lab lies dormant when those students are not on campus. Since funding streams are siloed and are based on each individual institutions' attendance, there is no incentive to maximize the use of these incredible facilities.

RECOMMENDATION 6

Expand the availability of uniform, high quality instructional materials for health profession-related courses and CTE programs.

TEA should focus on identifying and making available an expanded library of instructional material for high school CTE in health professions.

There are discussions regarding the significant cost that many high school programs face when creating curriculum for their CTE courses for health programs, as well as questions regarding the consistency in the curriculum for those courses. The investment and effort needed to develop the curriculum has resulted in variances in quality for programs across the state. For many courses and subjects, TEA supports districts and educators with access to an optional set of high-quality instructional materials. The materials may include resources for teaching a full subject, designed to provide teachers with everything needed to cover 100% of the TEKS in a grade level/band, or may include only supplemental materials designed to complement, enrich, or extend a particular subject. Workshop participants emphasized the importance of consistent curriculum resources to uniformly produce workplace-ready health professionals.

RECOMMENDATION 7

Study the feasibility of community colleges to expand four-year degree programs for health professionals in specific circumstances.

Study the ability of community colleges to expand additional bachelor's degree programs when necessary. The study should focus on a community colleges ability to aide in reducing the shortages of healthcare, while helping provide a foundation for creating direct care and allied health professionals.

Many of the gateway or allied health professionals are prepared and educated in our community colleges. Currently, there are over 50 community college educational programs for health care professions in Texas. Traditionally, most community college programs lead to certificate or an associate degree, but some colleges are authorized under state law to offer baccalaureate programs. In 2003, Senate Bill 236^{xvi} first authorized these programs as a pilot program with three colleges each able to offer up to five bachelor programs in applied science or applied technology fields. In 2017, the Legislature passed Senate Bill 2118,^{xvii} which expanded this authorization to allow other colleges to each offer up to three baccalaureate programs in applied science, applied technology, or nursing, as long as the college could demonstrate a workforce need, among other provisions. In 2021, House Bill 3348^{xviii} allow these colleges to now offer up to five baccalaureate programs. Over time, as the need for health professionals grows, Texas could benefit from building on this infrastructure and expanding authorization for baccalaureate offerings at community colleges.



As the healthcare system changes and use of certified technicians becomes more widespread, these important entry-level professionals are key to maintaining an effective quality healthcare system and to building a career and education pathway for these individuals into the healthcare professions. The recommendations in Expanding the Pipeline will ensure the state of Texas has an accurate view into the profession and will continue to build out the various career and educational pathways that allow all students regardless of their circumstances to have meaningful and successful careers in the largest employment sector in the state.

Modernizing the Production Model

Students in Texas have multiple pathways to becoming a nurse and can begin in high school, community college, or university. These institutions must all meet the same standards as set by the BON, but they have great flexibility regarding their approach, including using any number of teaching methods, incorporating technology, and setting different requirements for training hours.

RECOMMENDATION 8

Streamline the nursing school application process by including nursing school programs in the Texas Medical and Dental Schools Application Service^{xix} (TMDSAS).

Moving to this standardized application system will immediately improve the quality of data regarding nursing applications and allow for more effective planning for the profession. It will also eliminate the need for students to pay multiple application fees and process multiple applications.

There is a broad array of challenges in the educational production model for both allied professionals and for nurses. Focusing specifically on the nurse production model, there is a preconception that “thousands of qualified applicants for nursing school” are turned away each year. However, the reality is that thousands of applications are not accepted at Texas nursing schools each year because there is no centralized mechanism for submitting applications. Nursing students must submit applications across multiple schools, paying multiple application fees, with no option for the state to filter out duplicate application data. Most applicants apply to and are accepted by multiple RN programs but can only enroll in one program. This creates the impression that the duplicate applications were declined, denied, or failed to enroll even if the applicant met the program’s qualifications. To have an accurate assessment of the state’s capacity to educate and train nurses, this data should be clarified so that an accurate assessment of the applicant pool can be determined.

RECOMMENDATION 9

Create a Gold Ribbon Panel on the future of nursing.

A gubernatorially-appointed panel, supported jointly by the BON and THECB, could comprehensively reexamine the current nursing program standards and educational requirements. These standards and requirements should be sufficiently rigorous to prioritize patient safety standards and ensure they receive the best healthcare outcome possible. It should also take into consideration the changing nature of technology that is impacting both the healthcare workplace and the education system. The standards should be designed to meet the needs of the students and the nursing profession in the future.

The shortage of RN's is seen nationwide, affecting both the cost and quality of healthcare. While the COVID-19 pandemic significantly impacted and changed the way many workplaces operate, it also forced the healthcare system and the nursing profession to change many of their current practices to adapt to new realities. Resolving the RN shortage depends on a complex interplay of many supply and demand drivers. Many of these forces have brought about new and innovative approaches to preparing and educating students for the nursing profession.

In recent years, some nursing programs have transitioned from traditional delivery of nurse education to a competency-based education (CBE) program. CBE programs deliver teaching on essential skills and knowledge, set expectations for the student's achievement, all while adapting to the individual student's learning pace. These programs can allow a student to quickly progress through a program, but the transition to this new approach is often too expensive for many schools to implement. The state should consider new approaches to educating nurses that focus on competencies rather than previously acquired degrees.

Technology advancements have facilitated new clinical training simulation models that recreate life-like experiences. In the case of virtual reality-based simulation in particular, students can enter realistic practice environments where they practice skills, perfect techniques and learn valuable lessons. Standards should be designed to ensure nursing students are prepared in emerging nursing practice topics such as adapting to and optimizing technology tools, artificial intelligence, and working with patients with mental health challenges, substance use, and disabilities.

Suggestions have been made regarding aspects of nursing preparation and education that could be updated to meet evolving student needs, particularly for non-traditional and working students and for the evolving healthcare system. For example, current standards allow programs to set any number of training hours for their students, which creates variations from an average of 500 hours all the way up to 900 hours. Similar questions exist about the BON's current practice of allowing "up to 50%" of student training to be provided through simulation rather than setting a specific range or recommended amount. Ratio requirements for clinical training and supervision were also raised as possible barriers to expanding quality training.

Workshop participants recommended that “Texas should re-envision the curriculum of nursing schools.” Several aspects of the curriculum have not been adapted to current employer and student needs, including how to integrate information from fields like social work, nutrition, and physical therapy to prepare the students to help patients; focusing on geriatric care for nursing students; and integrating technology, social skills, and the use of electronic medical records.

Focusing on the nurse production model, there is consensus that the future of nursing will require new approaches to the teaching and preparation of students, however greater in-depth research and study are needed to identify all the practical and clinical impacts of making adjustments to these policies. The future of nursing and the entire healthcare system is rapidly changing, which requires ongoing thoughtful discussion and innovative proposals to prepare for that future.

RECOMMENDATION 10

Revisit Health and Safety Code Chapter 257 to ensure effective compliance and enforcement of the nursing staffing statute.

Nurse staffing committees are fundamental for ensuring that both the safety and working conditions in the hospital are optimized for patient care. The statute should be revisited to ensure that fair and reasonable enforcement opportunities are in place that include an assessment of current facility practices to identify current levels of compliance, a “right-to-correct” process, and to ensure more effective ongoing compliance.

Current working conditions have had a significant impact on nurses. One significant issue nurses face, particularly since the pandemic, is regarding staffing rules and regulations. According to surveys by the Texas Nurses Association of their membership, staffing is the number one issue nurses identify as contributing to burnout and cause for leaving the profession. Current law requires hospitals to create nurse staffing committees, primarily made up of nurses, who determine staffing policies and plans for the facility. Those policies and plans are provided to the governing body of the organization that then adopts or modifies the policies and plans as needed. Hospitals are required to report compliance with the statute to DSHS. However, since the pandemic, the implementation of the staffing committee process has suffered and is used inconsistently. An additional challenge is that while the compliance reporting is made to DSHS, the actual regulation of hospitals is conducted by HHSC and there is no current mechanism for sharing the data between the two agencies. Therefore, any nurse that has concerns about the operation of the nurse staffing committee is forced to report their employer to the regulatory agency before any review can be conducted.

There is disagreement regarding the severity of this issue, but in general, there is consensus that the nurse staffing committee model is an effective one, and there should be a more effective mechanism for monitoring compliance and correction.

RECOMMENDATION 11

Improve the alignment of the nursing profession career pathway.

The BON and HHSC should collaborate to create an operational plan for the transition of the CNA certification program from HHSC to the BON. The plan should include all financial, operational, and other considerations necessary for such a transition.

In recent years there has been a growing awareness of non-traditional students' journey through not only their education pathways but ultimately their career paths. When these two things align, students have the greatest opportunity to support their families while advancing through a career, attaining educational credentials when they have the time and funds to do so. *Building a Talent Strong Texas* recognizes this and has integrated the attainment of "credentials of value" into higher education to facilitate these journeys.

RECOMMENDATION 12

Create a clear career pathway that facilitates the transition of certain allied health professionals into the nursing profession.

The Texas Center for Nurse Workforce Studies shall create a targeted workgroup that includes individuals from the BON, HHSC, TWC, TEA and THECB, as well as academic and health care professionals. This workgroup will examine how to better align certain allied health careers into the nursing profession. Specifically, examine how to better align certified nurse aides, medication aids, and personal care technicians as entry-level careers into a career building pathway in nursing.

One of the most common examples of this pathway, specific to building a nursing career, involves CNAs, medication aides (MA), and personal care technicians (PCT). These three occupations are entry-level positions for which the required training and credentials can be obtained affordably and quickly. Once these professionals are employed within a healthcare setting, they can then explore other opportunities and determine which roles they prefer, and how they want to further their career. Many then advance to acquire an LVN license or higher.

The role and responsibilities of these nurse assistants continues to grow. The responsibilities of these professionals decrease the workloads for RNs and provide a significant amount of direct patient care in many healthcare facilities. A national study conducted by Mercer that included a comprehensive review projected supply and demand of multiple healthcare occupations, as defined by the Bureau of Labor Statistics, by 2028 found that Texas, California, and New York are the states that are likely to experience the greatest shortages of nurse assistants, which will have a ripple effect on the rest of the nursing industry.^{xx}

In Texas, the CNA role requires a state certification administered by HHSC. The MA and PCT roles are national certifications that do not have a state license or certification requirement. One key consensus is that these professions should have greater alignment between training and nursing educational programs. This would reduce duplication in educational training and streamline the process, allowing individuals to quickly and easily acquire higher-level credentials.

This focus issue concentrates on the changing nature of the students, the practice, and the healthcare system itself, emphasizing the implications for nurse education and preparation for the future. As more students face the prospect of supporting their families while attaining educational training and credentials, the education system should continue to create more flexibility to support those opportunities. As new business practices and advancing technologies reshape the healthcare landscape, it's essential for educational institutions to develop alongside them. Modernizing the nurse education production model involves standardizing the application process to ensure accurate information can be used for future industry planning. It requires taking a close look at the standards, regulations, and laws impacting the profession. Additionally, ensuring the educational pathways for students do not contain duplicative efforts and are designed to facilitate lifelong efforts to earn greater credentials and advance in their careers is vital.



RECOMMENDATION 13

Investigate the feasibility of establishing a workforce development initiative in Texas Medicaid.

HHSC, in partnership with DSHS and TWC, should explore seeking federal approval to use matched state and federal funding to support a Texas Nurse Workforce Initiative to research, analyze, assess, and make recommendations to build a stronger nurse workforce for Medicaid patients and other Texans.

During the workshop process, the Teaching Hospitals of Texas (THOT) presented several opportunities at various stages of development where states are partnering with the Centers for Medicaid and Medicare Services (CMS) to jointly fund initiatives to strengthen the Medicaid healthcare workforce.

For example, in Ohio, the Medicaid Technical Assistance and Policy Program (MedTAPP) is a state university partnership led by the Ohio Department of Medicaid (ODM). MedTAPP leverages academic expertise across Ohio's colleges of medicine and public and private universities to improve health care quality for the nearly 3 million Ohioans insured through Medicaid. This partnership between ODM, the Ohio Department of Higher Education, and other agencies with CMS funds close to \$30 million each year, targets projects aimed at improving the health care of Ohio's Medicaid population.^{xxi} This includes projects designed to enhance the Medicaid healthcare workforce administrative and research functions. Once approved by CMS, projects qualify for administrative matching funds (50%) from CMS.



Other states are also exploring the development of Medicaid-based partnership programs to support the development of a Nursing Transition to Practice Program. These programs mirror the traditional physician residency programs, hiring post-graduate nurses with less than one year of professional nursing experience and offering a comprehensive 12-month curriculum. This training experience includes intensive preceptor supervision and mentorship designed to facilitate nursing students transition into the nursing profession. HHSC has recently initiated a stakeholder project to investigate the development of a similar program for advanced practice nurses in Texas.

Bolstering Faculty and Preceptors

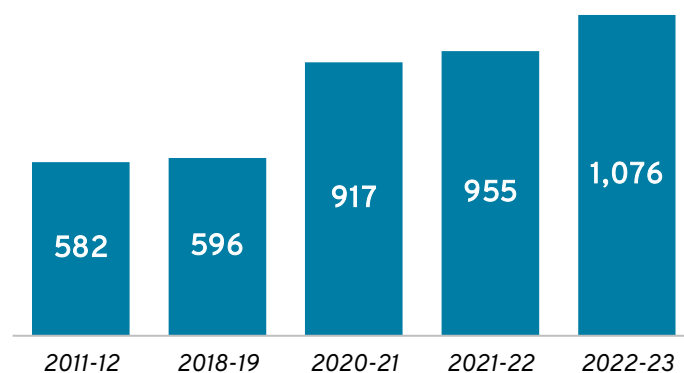
Nearly every discussion and presentation, heard throughout the task force process ultimately centered on providing the hands-on clinical training required to equip students and trainees to provide quality care. Providing clinical training requires collaboration and alignment of all the distinct participants that are involved in the development of a trained and skilled workforce. Each of the education institutions from high schools to universities, employers, to local clinics, physician offices and hospitals, and state and local government agencies should continue working together to effectively cultivate a well-educated and trained healthcare workforce.

This collaboration takes many forms across the state. In the Texas Panhandle, the Rural Nursing Education Consortium is a collaboration between Amarillo College, Frank Phillips College, Dallam Hartley Hospital (Dalhart), Hutchinson County Hospital District (Borger), Deaf Smith Hospital District (Hereford), Moore County Hospital District (Dumas), West Texas A&M University, and Ochiltree County Hospital District (Perryton). These groups came together to resolve the local nursing workforce shortage in these rural communities by aligning the curriculum of the academic partners and the use of healthcare facilities for clinical training rotations. Organized through the Texas Organization of Rural and Community Hospitals (TORCH), this partnership has produced over 100 local “homegrown” nurses for this community since its inception in 2019 and has been recognized by the National Rural Health Association as the 2024 winner of its Outstanding Rural Health Program.^{xxii}

In other regions, local collaboration has been driven by the local workforce development board. Workforce Solutions Capitol Area runs the Central Texas Healthcare Partnership. This collaboration includes three healthcare systems, five different local community partners, including economic development organizations and the regional education service center, and 13 public and private educational programs that train and prepare healthcare professionals. This partnership serves as a platform for local healthcare stakeholders to connect, share knowledge, and identify innovative solutions to address joint workforce challenges, ultimately sustaining and growing the local healthcare workforce while expanding pathways to economic mobility for local residents.

Through this local partnership, over 2,520 LVN, ADN, and BSN students have been trained through 1,588 rotations and 637,444 training hours.^{xxiii} One of the key elements of success for this program was the development of the Centralized Software System for Hospital Partners. By organizing the clinical placements for this region into one software system, they identified several systemic errors that had previously limited the region’s ability to rapidly produce nurses. Once the clinical training opportunities from the various local employers were loaded into one system, it

Figure 15. Annual Nursing Graduates in the Austin Metro



Source: King, A. (2024, September 3). [“Solving Healthcare Shortages Partnership Model.”](#) Task Force Meeting 3, Austin, TX.

was immediately apparent the region had many shifts that were going unused. When a school requested too many shift placements but did not use them all, they were not redistributed to the other schools, and up to 40% of training shifts were immediately made available for new placement. These additional placements made room for more students and four new nursing programs were added to the Central Texas region over four years, which were fully staffed and immediately prepared to offer clinical training hours.

The Central Texas Healthcare Partnership also featured a dynamic recruitment component known as The Rotation to Hire Program. This program identifies students who are within a couple of months of graduation and provides a list of those students to local employer partners through quarterly reports. Students and employers are matched and nearly all students within the program receive job offers before they graduate. These innovations have resulted in extraordinary growth for the Central Texas region, as well as for the individual partners in the program. Texas State University has increased enrollment by 50 students, Austin Community College has increased enrollment by 40 students, St. Edwards University has enrolled their first cohort, and three new nursing programs applied to the BON for approval in July 2024.



Coordination and collaboration are key to success in creating growth and sustainability in these programs. The task force heard from the Gulf Coast Workforce Board where Workforce Solutions facilitates multiple partnerships throughout the 13-county region, focusing on both the nurse and other allied health professional shortages. Their local data shows each of those 13 counties will face a shortage of 9,775 allied healthcare jobs over the next 10 years. The population and size of this region has required multiple collaborations and evolving solutions. Their initiatives are extensive and involve Houston Community College, Dwyer Workforce Development, HCA Healthcare, The University of Texas MD Anderson Cancer Center, and the College of Health Care Professions, as well as many others.

While each of these collaborations are organized and designed to address specific local needs, using local resources and relationships, there are some common elements needed to be successful. Workshop participants heard repeatedly about the amount of time spent in each of these projects developing the affiliation agreements, partnership models, program frameworks for the innovative programs such as designated training unit model, marketing campaigns, legal implications, and administrative and organizational requirements for the partnerships to work. This duplication of effort creates delays and, in some cases, can stall a project completely if the necessary expertise is not available. There is a need for increased awareness regarding available funding, technical support, and expertise from state and federal government resources to support these programs.

RECOMMENDATION 14

Enhance state support for creating local and regional collaborations.

Create an advisory group at the TWC with members from across the spectrum of education institutions, healthcare providers, and local workforce boards to develop a collaboration “toolkit” and resource guide to help facilitate local partnerships designed to more effectively identify and address local healthcare workforce needs.

One of the most innovative projects and partnerships discussed was the Shared Nurse Academic Practice Partnership Initiative (SNAPPI). This collaboration between Houston Healthcare Northwest, Houston Methodist the Woodlands Hospital, Memorial Hermann, Sam Houston State University School of Nursing, and St. Luke’s Health, and the Woodlands Hospital was funded through a Nursing Innovation Grant through THECB. In 2023, the collaboration began to search for solutions to the local nurse shortage. The solution was ultimately to “transition like a physician,” meaning that they would adopt a model for nurse training based on traditional physician education partnerships. The group realized that historically, industry-wide models allow physicians to move seamlessly between their clinical practice and the academic settings. In many cases, joint employment agreements exist to allow a physician to be employed both by the clinical practice, and simultaneously by the academic institution. Under this model, the practitioner does not have to work two separate full-time jobs; they have agreements that outline the shared responsibilities and can balance the needs of both organizations. While this approach has not yet been applied to nurse training, it offers a promising opportunity for collaboration among partners to tackle both the nursing shortage and the challenging workloads many nurses face, which often lead them to decline teaching opportunities.

On a monthly basis throughout 2023-2024, members of the SNAPPI workgroup convened for three-hour meetings, conceptualizing the functional-contractual model, developing a detailed implementation plan, and drafting legal agreements and documents necessary for implementation. The program began operations in the August 2024 semester with 60-80 students and is undergoing a robust evaluation to examine the efficacy of the program. The presenters closed their presentation with this observation: “Big hairy audacious goals are worth aspiring toward. Almost every major healthcare system in North Houston and Montgomery County is an active participant in SNAPPI. We believe Texas academic practice partnerships can lead the way in disruptive innovation for the nursing workforce.”

RECOMMENDATION 15

Study the feasibility of implementing a statewide system for coordinating clinical training placements.

THECB should conduct a feasibility study to evaluate developing regional portals to assist in reserving clinical rotations at healthcare facilities for students. The study should determine the number of regions needed to adequately support public institutions and students that require clinical training. In addition, the study should include the cost of establishing these regional portals and the necessary maintenance support and staff required.

Other models of collaboration and partnership exist that focus more narrowly on the relationship between educational programs and the employers or healthcare facilities in their regions. There are nurse consortia models across the country that work to streamline the movement of associate degree graduates to bachelor's degree RN programs by coordinating curricula, and intensifying advisement and communication between the programs. Dedicated educational units are another model of collaboration between a single nursing program and a single clinical unit in a hospital or a non-hospital setting to coordinate clinical education of nursing students and better support their transition to practice. In both cases, the partnership furthers the goals of enhancing the nursing education experience and encouraging more nurses to become faculty and trainers.

RECOMMENDATION 16

Create a program evaluation unit to research and identify effective innovations in education and training of healthcare professionals.

This unit established at THECB would focus on researching, collecting, and sharing information on best practices in health professions education, as well as evaluating programs funded through THECB grants to determine the effectiveness and scalability.

One area of opportunity that has yet to be fully explored is the use of alternative training settings for training nurses. There is value in expanding these training opportunities to alternative sites such as physician practices, community health centers, long-term care facilities, clinics, and home health sites, but the complications of developing these placements have not yet been overcome. The barriers to using these practice sites are the same as those larger hospitals face; administrative requirements, drafting agreements, and staff availability to conduct the training while they are performing their regular job responsibilities. Since the scale is so much smaller, there are fewer incentives to work through those challenges.

RECOMMENDATION 17

Consider making investments in the unfunded Senate Bill 25 programs.

The Legislature should consider making funding contingent upon participation in collaborative efforts to address the nursing shortage and the development of innovations in the field that can be replicated to support further expansion of the profession.

During the last legislative session, Senate Bill 25 (88th Legislative Session)^{xxiv} reinitiated state efforts to address the nursing shortage. Included in the initiative, but not funded, were four new programs designed to increase the availability of nurse faculty and preceptors:

- **Clinical Site Nurse Preceptor Grant Program** requires THECB, in consultation with the nursing advisory committee, to establish and administer a program to award grants to eligible clinical sites to support the use of nurse preceptors in providing clinical training to nursing students.
- **Clinical Site Innovation And Coordination Program** requires THECB to establish and administer a program to award grants to eligible clinical sites that create and operate innovative pilot programs that will support nursing performed at clinical sites in this state by increasing the number of nurses, improving the working environment for nurses, improving the retention of nurses, addressing workplace safety, and coordinating with other clinical sites any solutions found to address common nursing concerns.
- **Nursing Faculty Grant Program: Part-Time Positions** requires THECB to award grants under a nursing faculty grant program to eligible institutions of higher education to provide funding for qualified nursing staff working at clinical sites who serve as part-time nursing faculty at those institutions.
- **Nursing Faculty Grant Program: Clinical Training** requires THECB to award grants under a nursing faculty grant program to eligible clinical sites to provide funding for qualified nursing faculty of institutions of higher education who seek to obtain additional clinical training by working part-time at a clinical site.

Senate Bill 25 redesigned several existing educational support programs for nurses that were funded by the Legislature. The rules for these programs were finalized and adopted by THECB in summer of 2024 and funds will be distributed in Fiscal Year 24-25. Figure 16 lists each program and associated funding from the General Appropriations Act (GAA).

Figure 16. State FY 2024-2025 General Appropriations Act

<u>Program Title</u>	<u>FY24-25 Funding</u>
Nursing Shortage Reduction Program	\$46,800,000
Nursing Scholarship Program	\$12,500,000
Nursing Loan Repayment Program	\$12,500,000
Nursing Innovation Grant Program*	\$9,700,000
Nursing Faculty Loan Repayment Assistance Program	\$7,000,000

* The Nursing Innovation Grant Program was appropriated \$6,000,000 by rider and \$3,700,000 from the Texas Tobacco Lawsuit Settlement Fund.

Source: Texas Nurses Association. (2024, August 30). [Recommendations to the Healthcare Workforce Task Force](#).

RECOMMENDATION 18

Continue investment in scholarship and loan repayment programs.

Continue supporting students preparing to enter the health professions workforce is an integral part in meeting the demand for healthcare professionals in the future.

Many of these scholarship and loan repayment programs have been in existence for decades. When they have strong funding sources, they have been remarkably successful at addressing the financial barriers many students face.



Conclusion

The members of the task force and each of the subject matter experts who served on the advisory committee are highly committed to addressing the challenges identified throughout this report. These dedicated individuals share a passion for creating meaningful change in the healthcare workforce and play a vital role in supporting students on their path to earning credentials and achieving successful employment.

Individually, these recommendations demonstrate the creativity and drive brought by the participants to this process. When taken together, they provide a bold and comprehensive approach to first, obtaining accurate and comprehensive data; second, expanding the quality and number of educational pathway opportunities; and third, opening the door for continued innovation for a robust healthcare workforce to serve the Texas of tomorrow.

Appendix A: Letter from Governor Abbott



GOVERNOR GREG ABBOTT

April 18, 2024

The Honorable Harrison Keller
Commissioner
Texas Higher Education Coordinating Board
1801 Congress Ave
Austin, Texas 78701

Dear Commissioner Keller:

Health professionals work tirelessly to meet the public health demands of our growing state and care for their fellow Texans. The training and education of health professionals is essential to adequately address healthcare workforce shortages and improve access to healthcare across our great state. Having qualified instructors and sufficient clinical sites play a critical role to prepare future health professionals to care for the patients they will encounter in their careers. The State of Texas has invested millions in job training grants to help prepare students for high-demand careers, such as nursing, to meet the healthcare needs of our state, but we must do more.

To help address the healthcare workforce shortage, I am directing the Texas Higher Education Coordinating Board (THECB) to immediately create a task force to provide opportunities and remove barriers that exist to expand healthcare programs at institutions and provide students with the tools necessary to succeed in this field in Texas. Further, the task force should investigate challenges to establishing and maintaining sufficient clinical rotation sites and clinical placements and identify best practices to attract and retain qualified clinical instructors. The task force shall issue a report by October 1, 2024.

Texas is the fastest growing state in the nation, and it is vital that we continue to expand our healthcare workforce to meet the needs of our citizens as we build a bigger, better Texas.

Sincerely,

Greg Abbott
Governor

GA:eld

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Appendix B: Advisory Committee Members

Workgroup 1: Expanding the Pipeline

- Dr. Bryan Alsip, *University Health*
- Dr. Kala Bailey, *The University of Texas Southwestern Medical Center*
- Eric Bing, *College of Health Care Professions*
- Dr. Jacqueline Brock, *Harris Health System*
- Donovan Dekowski, *Wellsential Health*
- Carol Derkowski, *Wharton County Junior College*
- Pablo Fuentes, *Pima Medical Institute*
- Glynnis Gaines, *McLennan Community College*
- Dr. Christina Hagerty, *Lone Star College System*
- Dr. Souraya Hajjar, *El Paso Community College*
- Mikki Hand, *Frontera Healthcare Network*
- Dr. Brandon Hernandez, *Texas State Technical College*
- Shirley MacNeill, *Lamar State College Port Arthur*
- Elena Marks, *Rice University's Baker Institute for Public Policy*
- Dr. Elizabeth Merwin, *University of Texas at Arlington*
- Christopher Metsgar, *St. Philip's College*
- Dr. Leslie Moore, *Memorial Hermann Health System*
- Dr. Alexander Okwonna, *San Jacinto College*
- Dr. Elizabeth Olivier, *Tyler Junior College*
- Dr. Hani Talebi, *Meadows Mental Health Policy Institute*
- Dr. Tetsuya Umebayashi, *Dallas College*
- Dr. Melinda Villagran, *Texas State University*
- Dr. Danuta Wojnar, *University of the Incarnate Word*

Workgroup 2: Modernizing the Production Model

- Dr. Devon Berry, *Sam Houston State University*
- Jennifer Bray, *Kilgore College*
- Dr. Paula Clutter, *Texas Woman's University*
- Dr. Candi Constantine-Castillo, *Harlingen Medical Center*
- Dr. Lutricia Harrison, *Houston Community College*
- Dr. Patricia Herbias, *Western Technical College*
- Dr. Leann Horsley, *Texas A&M Health*
- Dr. Deborah Jones, *University of Texas Medical Branch*
- Mary Beth Kasprisin, *Texas Southmost College*
- Porter Long, *UMC Health System*
- Dr. Julie Moore, *JPS Health Network*
- Dr. Karen Moriarty, *Midwestern State University*
- Ann Russell, *HCA Houston Healthcare*
- Dr. Diane Santa Maria, *UTHealth Houston*
- Dr. Amber Shammass, *Concordia University Texas*

- Dr. Keith Smith, *Western Governors University*
- Dr. Kathryn Tart, *University of Houston*
- Dr. Cindy Weston, *University of North Texas Health Science Center*
- Dr. Colin Wilborn, *University of Mary Hardin-Baylor*
- Amy Wilson, *Collin College*
- Dr. Karen Wright, *Parkland Health*

Workgroup 3: Bolstering Faculty and Preceptors

- Dr. Nina Almasy, *Austin Community College*
- Dr. Rhonda BeLue, *The University of Texas at San Antonio*
- Dr. Marianne Bogel, *Registered Nurse*
- Dr. Mary Borchardt, *Del Mar College*
- Dr. Serena Bumpus, *Texas Nurses Association*
- Dr. Jenifer Chilton, *The University of Texas at Tyler*
- David Contreras, *Retired Hospital Administrator*
- Sandra DeLeon, *Del Mar College*
- Dr. Ruth Eby, *Texas Lutheran University*
- Dr. Susan Greenwood, *Hendrick Health*
- Dr. Holly Jeffreys, *West Texas A&M University*
- Dr. Jon Law, *University Medical Center of El Paso*
- Yessenia Longoria, *Moore County Hospital District*
- Dr. Jane McCurley, *Methodist Healthcare System*
- Dr. Kia Parsi, *Texas A&M Rural & Community Health Institute (ARCHI)*
- Dr. Linda Plank, *Baylor University*
- Dr. Gurjeet Shokar, *The University of Texas at Austin*
- Darla Strother, *Victoria College*
- Michelle Trubenstein, *Blinn College*
- Roxanne Weisendanger, *El Paso Children's Hospital*

Appendix C: Additional Information on Texas State Agencies

Texas Higher Education Coordinating Board

THECB funds scholarships, loan repayment, and other financial assistance programs for students and also provides specific funding (FY 24-25) and programming to address nursing shortages:

- The [Nursing Shortage Reduction Program](#) (\$46.8 million) was created in 2001 to increase the production of licensed nurses.
- The [Minority Health Research and Education Program](#) (\$2.1 million) provides funding to eligible institutions to conduct research and educational programs related to public health issues affecting one or more minority groups.
- The [Nursing, Allied Health, and Other Program](#) (\$3.7 million) funds are used to support the Nursing Innovation Grant Program.
- The [Nursing Innovation Grant Program Rider](#) recently dedicated \$6 million to fund “the development of innovative nursing education programs, evaluation of these and other innovative nursing programs, and research on methods to increase the state’s nursing workforce pipeline.”

THECB also plays an important role in data collection related to health profession shortages. There are two divisions that maintain data regarding approved degree programs. Academic and Health Affairs maintains the program inventory for all the public institutions in the state, which reflects all the approved programs. Data Management and Research also collects a significant amount of data for all programs at public institutions.

THECB has created the state's strategic plan for higher education in Texas. *Building a Talent Strong Texas* builds on the successes and progress of THECB’s previous plan, 60x30TX, by widening the lens for higher education. By expanding attainment to include all working-age Texans, the state will be able to increase employment opportunities and income for individuals, create a deeper talent pool for employers and align students’ skills with workforce demands. This plan sets goals and objectives for educational attainment for Texas. The plan is innovative in many ways, but one important aspect is its focus on educational attainment to adult learners and its commitment to serving all working-age Texans.

The plan sets the expectation that credentials earned from Texas’ institutions of higher education must propel graduates into lasting, successful careers. These careers must equip them for continued learning and greater earning potential, with low or manageable debt. This requires close partnership among key stakeholders to drive Texas’ economy. Texas will be the first state in the country to tie completion goals directly to the wage premiums associated with postsecondary credentials. This includes a broader range of credentials than traditional degrees and certificates. It also includes short-term credentials and workforce credentials the state hasn’t historically tracked.

My Texas Future ^{xxv} is a groundbreaking website created by THECB for those in middle or high school trying to find the right college and the path and goals they should set to get there. It is also for working-age Texans looking to change or advance their career, return to higher education, or return to the workforce. My Texas Future helps identify a degree or credential that propels

individuals to lasting, successful careers with greater earning potential and low or no debt. Postsecondary and career planning can be confusing, especially for busy Texans juggling families, jobs, and other responsibilities. My Texas Future was built around the needs of potential students, making it easy for them to cut through the noise and identify an in-demand career in their region and an affordable program to help them get there. THECB has partnered with over 80 colleges and universities to help students explore and compare college programs.

Texas Education Agency

TEAs five approved health related programs are health informatics, diagnostic and therapeutic services, biomedical science, nursing science and exercise science, and wellness and restoration. Each program of study has approved TEKS that are developed through an extensive process that involves industry, subject matter experts, and educators. The courses are designed to advance with the student through their school pathway and to prepare them to pass the available national certification or state licensure exams upon completion.

In recent years, Texas has taken steps to align career preparation pathways in K-12 in partnership with higher education and business, including the College, Career, Military Readiness (CCMR) indicators in the public-school evaluation system and CCMR bonuses. Additionally, specific programmatic funding is available to help schools develop CTE courses, such as the Pathways in Technology Early College High Schools (P-TECH) formula funds, P-TECH/Early College High School grant funds, Jobs & Education for Texans (JET) grant funds, and Regional Pathway Planning organizations.

Public schools and TEA also engage with THECB and higher education institutions as partners in offering dual credit courses. Many health professions courses are designed to be dual credit to facilitate students being able to qualify for the highest quality credential upon graduation. Dual credit courses and programs have existed since 2006 and require school districts to provide high school students the opportunity to earn semester credit hours of college credit. These programs expanded dramatically throughout the years, and in 2015, House Bill 1638 (85th Legislative Session)^{xxvi} formally created a partnership between TEA and THECB to establish a comprehensive strategy to administer and evaluate these programs and their outcomes for students.

Texas Workforce Commission

TWC oversees several funding programs that provide workforce and job skills training funding to local communities for workforce development. These programs include the Texas Internship Challenge, the Texas Regional Pathways Network, and the JET program, which provides \$28 million in equipment grants for CTE courses leading to high-demand occupations. Additionally, the Lone Star Workforce of the Future Program offers training funds for individuals in high-demand careers (with an estimated target cost per trainee of \$7,500) while the Skills Development Fund provides \$2 million for public sector healthcare employers to train workers and purchase training equipment.

Texas adheres to the Workforce Innovation and Opportunity Act (WIOA), which requires state and local workforce boards to develop and update four-year plans every two years, incorporating community input. The WIOA Combined State Plan outlines the state's vision, goals, and strategies for workforce development, reviewed by the Office of the Governor before federal submission.

These LWDBs create local plans for using WIOA funds, oversee how workforce services are provided in the local area, collect, and evaluate data on the regional labor markets, develop career pathways relating to local economic needs, and work with local businesses and industry to build local forces. LWDBs are funded by the federal government, state government, and private funding. They also oversee American Job Centers, where job seekers can get employment information, find career development training opportunities, and connect to various programs in their area. LWDBs develop strategic and operational plans detailing policies, procedures, and use of TWC resources.

Texas Department of State Health Services

DSHS also operates the Texas Center for Nursing Workforce Studies (TCNWS), a part of the Center for Health Statistics within DSHS. TCNWS serves as a resource for data and research on the nursing workforce in Texas. This includes collecting and analyzing data on nurse education and employment trends, supply and demand trends, nurse workforce demographics, and the migration of nurses. The repository of data about the healthcare professions and the healthcare system housed at DSHS makes it a leader in the state regarding the development and evolution of healthcare markets and the workforces that serve them.

DSHS operates the Health Professions Resource Center (HPRC) and is the primary source of health workforce information in the state of Texas. HPRC is charged to collect, analyze, and disseminate data concerning the supply of health professionals, trends, geographic distribution, and demographics of licensed healthcare professionals used for studies and reports.

DSHS' Center for Health Statistics' Health Provider Resources Unit collects, analyzes, and disseminates health information regarding health provider resources in Texas. The unit collects hospital-related data through the annual Survey of Hospitals, and a cooperative survey between the DSHS, the American Hospital Association, and the Texas Hospital Association, collecting utilization and financial data for over 560 Texas hospitals. The survey collects data on charity care, government-sponsored indigent healthcare, and other community benefits through the Annual Statement of Community Benefits Standard form. Nonprofit hospitals can qualify for a lower limitation on liability for non-economic damages if they provide 8% of net patient revenue and provide 40% of charity care in their county.

The Texas Health Care Information Collection (THCIC) team collects and releases de-identified hospital inpatient data, emergency department data, and a limited amount of outpatient data from hospitals and ambulatory surgery centers. THCIC oversees the annual collection of the Texas subset of the Healthcare Effectiveness Data and Information Set for commercial health plans in Texas. Additionally, THCIC publishes healthcare-related reports online; provides training for facilities; keeps track of data submissions; and makes available standardized public-use data files and customized research data files as approved by DSHS' Institutional Review Board.

Health and Human Services Commission

HHSC approves Nurse Aide Training and Competency Evaluation Programs (NATCEP) and maintains a list of approved in-service education programs. Each program must include a total of 100 training hours, including 60 classroom hours and 40 hands-on training hours at a nursing facility. Most of these programs can be found at local community colleges, trade schools, the American Red Cross, or even online. The program can be completed in 6 to 15 weeks, although there are some accelerated programs that offer four-week CNA classes as well.

Board of Nursing

The BON fulfills its mission through the regulation of the practice of nursing and the approval of nursing education programs. Texas is one of three states with more than 10,000 first-time candidates for the National Council Licensure Examination-Registered Nurse (NCLEX-RN). The national pass rate for the exam in 2023 was 88.6%, while the pass rate in Texas was 91.2%.

Appendix D: State Appropriations for the Education of Healthcare Professionals

The Texas Legislature appropriates funds to educate healthcare professionals through various channels, primarily by allocating resources to state-funded universities and colleges, particularly those with medical, nursing, dental, and allied health programs. These appropriations typically come through the state’s general budget, which includes funding for higher education institutions, as well as through specific grants and initiatives aimed at supporting the education of healthcare professionals.

The exact amount appropriated specifically for educating healthcare professionals can vary each biennium depending on the state budget and legislative priorities. It includes funding for medical schools, nursing programs, dental schools, allied health professions, residency programs, and GME.

Detailed below is the estimated total from House Bill 1 (88th Legislative Session) that the State of Texas appropriated for the education of healthcare professionals, totaling \$4.2 billion.

<u>GAA Article</u>	<u>Source</u>	<u>FY 24</u>	<u>FY 25</u>	<u>FY 24-25</u>
II	HHSC GME Funding via State Medicaid			\$109,000,000
III	HRI I&O Formula Funding (includes Baylor COM)			\$3,041,600,000
III	*HRI Non-Formula Support (in total, more than instruction)			\$340,400,000
III	GAI I&O Formula Funding for Nursing			\$116,000,000
III	GAI I&O Formula Funding for Pharmacy			\$51,000,000
III	GAI I&O Formula Funding for Optometry			\$9,259,716
III	GAI I&O Formula Funding for Other Health Programs			\$133,000,000
III	THECB GME Funding			\$233,100,000
III	THECB Physician Education Loan Repayment Program (LRP)	\$17,767,492	\$17,767,492	\$35,534,984
III	THECB Mental Health LRP	\$14,000,000	\$14,000,000	\$28,000,000
III	THECB Nursing Faculty LRP	\$3,500,000	\$3,500,000	\$7,000,000
III	THECB Physician and Nursing Trauma Fellowships	\$2,957,203	\$2,957,203	\$5,914,406
III	THECB Family Practice Rural and Public Health Rotations	\$113,957	\$113,957	\$227,914
III	THECB Professional Nursing Shortage Reduction Program	\$23,400,000	\$23,400,000	\$46,800,000
III	THECB Forensic Psychiatry Fellowship Program	\$2,500,000	\$2,500,000	\$5,000,000
III	THECB SB 25 Nursing Scholarships	\$12,500,000	\$12,500,000	\$25,000,000
III	THECB Rural Residency Physician Grant Program	\$1,500,000	\$1,500,000	\$3,000,000

III	THECB Nursing Innovation Grant Program	\$6,000,000	\$0	\$6,000,000
III	U of Houston Pharmacy School Non-Formula Support (GAI)	\$4,500,000	\$4,500,000	\$9,000,000
III	TAMU Rangel Pharmacy School Non-Formula Support (GAI)	\$198,759	\$198,759	\$397,518
III	UTEP Pharmacy School Non-Formula Support (GAI)	\$3,084,512	\$3,084,512	\$6,169,024
III	UT Arlington Nursing Non-Formula Support (GAI)	\$2,021,113	\$2,021,113	\$4,042,226
III	UT Permian Basin Nursing Non-Formula Support (GAI)	\$683,842	\$683,842	\$1,367,684
III	UT Permian Basin HC Workforce Non-Formula Support (GAI)	\$3,000,000	\$3,000,000	\$6,000,000
III	UT Tyler Critical Care Nursing Non-Formula Support (GAI)	\$5,000,000	\$2,500,000	\$7,500,000
III	Stephen F. Austin Nursing Non-Formula Support (GAI)	\$270,370	\$270,370	\$540,740
III	TAMU Corpus Cristi Nursing Non-Formula Support (GAI)	\$130,917	\$130,917	\$261,834
III	TAMU Texarkana	\$955,305	\$955,305	\$1,910,610
III	Angelo State Nursing & Allied Health Non-Formula Support (GAI)	\$569,869	\$569,869	\$1,139,738
III	Texas Women's Online Nursing Non-Formula Support (GAI)	\$85,904	\$85,904	\$171,808
VII	Texas Workforce Commission - Skills Development (Avail. Grants)	\$30,948,161	\$31,028,664	\$61,976,825
VII	Texas Workforce Commission - Apprenticeship (Avail. Grants)	\$18,419,307	\$20,300,004	\$38,719,311
VIII	Texas Board of Nursing - Accreditation Review	\$699,231	\$699,231	\$1,398,462
TOTAL				\$4,336,432,800

Source: THECB Analysis.

Appendix E: Texas Employment, Demand, and Wages by Detailed Occupation

SOC Code	Occupational Title	Projection 2022-2032				HWOL	Location Quotient	2023 Wages (\$)			Education Level
		Estimated 2022	Projected 2023	Percent Change	Annual Openings	Demand 2023		Hourly Entry	Hourly Mean	Wage Diff.	
00-0000	Total, All Occupations	14,335,116	16,444,414	14.7	1,891,373	2,750,672	1.00	\$13.37	\$29.44	--	--
11-9111	Medical and Health Services Managers	49,425	69,184	40.0	6,080	26,415	1.11	\$34.47	\$57.79	1.96	BD+
11-9179	Personal Service Managers, All Other	--	--	--	--	2,901	--	--	--	--	HS+
21-1018	Substance Abuse, Behavioral Disorder, and Mental Health Counselors	18,459	23,482	27.2	2,224	4,334	0.53	\$17.75	\$26.82	0.91	MD+
21-1094	Community Health Workers	5,097	6,147	20.6	658	652	0.91	\$16.97	\$21.63	0.73	HS ST-OJT
29-1011	Chiropractors	3,414	4,037	18.2	199	574	0.92	\$21.26	\$45.21	1.54	DOCT
29-1021	Dentists, General	10,386	12,174	17.2	492	3,261	1.00	\$49.64	\$105.77	3.59	DOCT
29-1031	Dietitians and Nutritionists	4,465	5,227	17.1	381	7,117	0.75	\$23.16	\$31.94	1.08	BD+
29-1041	Optometrists	2,905	3,431	18.1	147	1,343	0.78	\$36.77	\$73.10	2.48	DOCT
29-1051	Pharmacists	23,059	26,948	16.9	1,312	6,277	0.84	\$46.85	\$64.23	2.18	DOCT
29-1071	Physician Assistants	9,220	12,704	37.8	887	4,393	0.66	\$49.65	\$64.80	2.20	MD
29-1081	Podiatrists	433	471	8.8	17	89	0.31	\$50.47	\$96.74	3.29	DOCT+
29-1122	Occupational Therapists	9,004	10,801	20.0	716	4,680	0.82	\$35.09	\$48.85	1.66	MD
29-1123	Physical Therapists	17,073	20,813	21.9	1,103	8,230	0.80	\$37.44	\$51.42	1.75	DOCT
29-1124	Radiation Therapists	1,410	1,612	14.3	82	453	1.20	\$38.77	\$51.66	1.75	AD
29-1125	Recreational Therapists	900	1,013	12.6	80	1,115	0.57	\$18.52	\$26.98	0.92	BD
29-1126	Respiratory Therapists	11,517	14,275	23.9	911	3,151	1.00	\$29.51	\$37.56	1.28	AD
29-1127	Speech-Language Pathologists	16,045	21,021	31.0	1,476	6,162	1.22	\$30.95	\$43.77	1.49	MD+
29-1128	Exercise Physiologists	1,134	1,390	22.6	101	310	1.53	\$18.67	\$28.50	0.97	BD
29-1131	Veterinarians	5,888	7,980	35.5	435	2,985	0.81	\$40.73	\$62.42	2.12	DOCT
29-1141	Registered Nurses	233,854	267,981	14.6	16,904	138,043	0.89	\$32.65	\$43.37	1.47	BD
29-1151	Nurse Anesthetists	3,029	3,615	19.3	189	409	1.26	\$78.94	\$103.98	3.53	MD
29-1161	Nurse Midwives	497	589	18.5	33	53	0.34	\$36.24	\$54.16	1.84	MD
29-1171	Nurse Practitioners	19,063	30,490	59.9	2,241	8,686	0.81	\$47.77	\$62.51	2.12	MD
29-1181	Audiologists	982	1,212	23.4	76	418	0.41	\$28.94	\$45.73	1.55	DOCT
29-1211	Anesthesiologists	1,005	1,140	13.4	42	515	0.46	\$58.87	\$123.66	4.20	DOCT+
29-1212	Cardiologists	734	843	14.9	32	710	0.85	\$61.93	\$155.44	5.28	DOCT+
29-1213	Dermatologists	1,299	1,494	15.0	57	231	0.68	\$68.95	\$132.75	4.51	DOCT+
29-1215	Family Medicine Physicians	9,303	10,713	15.2	406	2,078	0.59	\$43.39	\$103.23	3.51	DOCT+
29-1216	General Internal Medicine Physicians	3,669	4,155	13.2	152	599	0.45	\$62.65	\$108.00	3.67	DOCT+
29-1217	Neurologists	159	181	13.8	7	549	0.77	\$74.07	\$132.55	4.50	DOCT+
29-1218	Obstetricians and Gynecologists	1,654	1,875	13.4	68	1,689	0.51	\$66.59	\$138.14	4.69	DOCT+
29-1222	Physicians, Pathologists	898	1,067	18.8	43	275	0.90	\$71.96	\$133.72	4.54	DOCT+
29-1223	Psychiatrists	1,240	1,412	13.9	52	775	0.47	\$36.43	\$98.69	3.35	DOCT+
29-1224	Radiologists	1,657	1,957	18.1	78	674	0.64	\$82.75	\$157.62	5.35	DOCT+

29-1229	Physicians, All Other	23,373	26,581	13.7	982	3,864	1.04	\$37.68	\$115.31	3.92	DOCT+
29-1241	Ophthalmologists, Except Pediatric	1,004	1,163	15.8	41	169	1.22	\$89.87	\$140.06	4.76	DOCT+
29-1242	Orthopedic Surgeons, Except Pediatric	982	1,115	13.5	37	596	0.43	--	--	--	DOCT+
29-1243	Pediatric Surgeons	140	161	15.0	6	104	-	--	--	--	DOCT+
29-1249	Surgeons, All Other	1,811	2,010	11.0	64	1,079	0.71	\$39.31	\$133.02	4.52	DOCT+
29-1291	Acupuncturists	2,112	2,459	16.4	173	69	0.55	\$22.37	\$36.29	1.23	MD
29-1292	Dental Hygienists	11,365	13,718	20.7	1,047	2,136	0.61	\$35.24	\$41.96	1.43	AD
29-1299	Healthcare Diagnosing or Treating Practitioners, All Other	2,299	2,563	11.5	161	8	0.58	\$29.66	\$56.72	1.93	MD
29-2010	Clinical Laboratory Technologists and Technicians	24,883	29,172	17.2	2,146	9,223	0.98	\$17.54	\$27.44	0.93	BD
29-2031	Cardiovascular Technologists and Technicians	4,228	4,828	14.2	335	4,953	0.95	\$16.67	\$27.04	0.92	AD
29-2032	Diagnostic Medical Sonographers	6,690	8,576	28.2	575	2,775	1.00	\$30.63	\$39.04	1.33	AD
29-2033	Nuclear Medicine Technologists	1,211	1,351	11.6	72	805	0.83	\$31.50	\$42.61	1.45	AD
29-2034	Radiologic Technologists and Technicians	18,785	22,392	19.2	1,432	6,628	1.00	\$25.63	\$34.84	1.18	AD
29-2035	Magnetic Resonance Imaging Technologists	2,591	3,092	19.3	200	6,447	0.67	\$32.76	\$40.76	1.38	AD+
29-2036	Medical Dosimetrists	272	323	18.8	19	99	1.63	\$50.86	\$62.74	2.13	BD
29-2042	Emergency Medical Technicians	11,555	14,369	24.4	1,177	1,846	0.83	\$14.06	\$18.42	0.63	PS
29-2043	Paramedics	8,422	10,348	22.9	616	1,140	1.04	\$19.70	\$26.33	0.89	PS+
29-2051	Dietetic Technicians	887	1,004	13.2	113	229	0.76	\$11.41	\$14.76	0.50	AD
29-2052	Pharmacy Technicians	35,607	42,983	20.7	4,255	11,258	0.95	\$16.52	\$20.67	0.70	HS MT-OJT
29-2053	Psychiatric Technicians	6,863	8,047	17.3	724	2,193	0.95	\$14.76	\$18.41	0.63	PS+ ST-OJT
29-2055	Surgical Technologists	9,197	10,617	15.4	730	4,958	0.96	\$20.97	\$28.88	0.98	PS
29-2056	Veterinary Technologists and Technicians	12,645	17,307	36.9	1,820	2,644	1.19	\$13.39	\$18.06	0.61	AD
29-2057	Ophthalmic Medical Technicians	6,819	8,532	25.1	989	1,396	0.99	\$14.68	\$18.82	0.64	PS
29-2061	Licensed Practical and Licensed Vocational Nurses	62,837	70,658	12.4	5,831	14,898	1.05	\$21.99	\$27.16	0.92	PS
29-2072	Medical Records Specialists	19,526	23,453	20.1	1,812	4,686	1.20	\$15.99	\$23.09	0.78	PS
29-2081	Opticians, Dispensing	6,164	7,163	16.2	653	1,118	0.98	\$14.38	\$18.22	0.62	HS LT-OJT
29-2091	Orthotists and Prosthetists	624	763	22.3	60	134	0.42	\$24.10	\$38.53	1.31	MD+
29-2092	Hearing Aid Specialists	552	708	28.3	57	338	0.57	\$22.63	\$31.07	1.06	HS MT-OJT
29-2099	Health Technologists and Technicians, All Other	14,675	16,976	15.7	1,279	21,253	1.03	\$17.31	\$25.98	0.88	PS
29-9021	Health Information Technologists and Medical Registrars	3,624	4,746	31.0	364	1,231	1.04	\$23.22	\$37.15	1.26	AD
29-9091	Athletic Trainers	3,321	3,990	20.1	287	765	0.96	--	--	--	MD
29-9092	Genetic Counselors	118	150	27.1	11	71	0.34	\$38.54	\$47.76	1.62	MD
29-9093	Surgical Assistants	1,841	2,129	15.6	149	854	1.19	\$23.39	\$34.39	1.17	PS

29-9099	Healthcare Practitioners and Technical Workers, All Other	1,611	1,898	17.8	135	38	0.32	\$18.62	\$33.54	1.14	PS
31-1120	Home Health and Personal Care Aides	313,672	367,496	17.2	55,349	27,230	0.95	\$9.42	\$11.47	0.39	HS ST-OJT
31-1131	Nursing Assistants	82,398	93,150	13.0	13,501	11,220	0.70	\$13.81	\$17.01	0.58	PS
31-2011	Occupational Therapy Assistants	4,281	5,623	31.3	811	2,311	1.48	\$27.14	\$35.43	1.20	AD
31-2012	Occupational Therapy Aides	253	280	10.7	39	329	0.54	\$12.58	\$16.88	0.57	HS ST-OJT
31-2021	Physical Therapist Assistants	8,482	11,181	31.8	1,603	4,837	1.09	\$23.37	\$34.64	1.18	AD
31-2022	Physical Therapist Aides	4,400	4,665	6.0	641	672	1.02	\$10.50	\$14.29	0.49	HS ST-OJT
31-9011	Massage Therapists	10,503	13,547	29.0	1,909	1,225	0.66	\$14.16	\$24.24	0.82	PS
31-9091	Dental Assistants	32,825	39,408	20.1	5,603	9,703	1.04	\$14.62	\$20.04	0.68	PS
31-9092	Medical Assistants	66,739	83,567	25.2	11,247	22,648	0.98	\$15.14	\$18.69	0.63	PS
31-9093	Medical Equipment Preparers	3,696	4,296	16.2	591	1,958	0.63	\$16.95	\$22.05	0.75	HS MT-OJT
31-9094	Medical Transcriptionists	3,955	4,203	6.3	726	988	0.89	\$11.36	\$17.44	0.59	PS
31-9095	Pharmacy Aides	2,728	3,031	11.1	541	254	0.89	\$13.10	\$16.91	0.57	HS ST-OJT
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	7,356	10,079	37.0	1,953	1,815	0.78	\$11.61	\$16.00	0.54	HS ST-OJT
31-9097	Phlebotomists	12,898	16,292	26.3	2,192	4,699	1.07	\$15.88	\$19.79	0.67	PS
31-9099	Healthcare Support Workers, All Other	11,832	14,099	19.2	1,950	1,510	1.12	\$14.66	\$22.14	0.75	HS
43-3021	Billing and Posting Clerks	38,749	43,058	11.1	4,613	4,331	0.90	\$15.50	\$20.71	0.70	HS MT-OJT
43-6013	Medical Secretaries and Administrative Assistants	56,850	66,109	16.3	7,300	8,359	0.93	\$14.96	\$19.11	0.65	HS MT-OJT

Sources: Texas Workforce Commission Sources in cooperation with the Bureau of Labor Statistics: 2022-2032 Occupational Projections Texas Workforce Commission & Occupational Employment and Wage Statistics 2023.
Other Sources: The Conference Board-Lightcast® Help Wanted OnLine.

Appendix F: Endnotes

Please cite this report as follows: Texas Higher Education Coordinating Board. (2024). Building Texas' Future Healthcare Workforce. Austin, TX.

ⁱ Texas Department of State Health Services. (n.d.). *Live births*. Texas Health Data. <https://healthdata.dshs.texas.gov/dashboard/births-and-deaths/live-births>

ⁱⁱ Texas Department of State Health Services. (2023). *Texas Diabetes Council 2023 state plan to prevent and treat diabetes and obesity report*. [https://www.dshs.texas.gov/sites/default/files/legislative/2023-Reports/Texas Diabetes Council 2023 State Plan to Prevent%20and Treat Diabetes and Obesity Report.pdf](https://www.dshs.texas.gov/sites/default/files/legislative/2023-Reports/Texas%20Diabetes%20Council%202023%20State%20Plan%20to%20Prevent%20and%20Treat%20Diabetes%20and%20Obesity%20Report.pdf)

ⁱⁱⁱ United Health Foundation. (n.d.). *Hypertension in Texas*. America's Health Rankings. <https://www.americashealthrankings.org/explore/measures/Hypertension/TX>

^{iv} Texas Department of State Health Services. (n.d.). *Cancer in Texas*. Texas Comprehensive Cancer Control Program. <https://www.dshs.texas.gov/texas-comprehensive-cancer-control-program/cancer-texas>

^v Texas Department of State Health Services. (n.d.). *Texas Emergency Department Public Use Data File*. Texas DSHS. [Texas Emergency Department Public Use Data File | Texas DSHS](#)

^{vi} Rural Health Information Hub. (2024). *Map of health professional shortage areas: Primary care, by county*. <https://data.hrsa.gov/tools/shortage-area/hpsa-find>

^{vii} See Appendix D

^{viii} Texas Higher Education Coordinating Board. (n.d.). *Building a Talent Strong Texas*. <https://highered.texas.gov/about/talent-strong-texas/>

^{ix} Texas Education Agency. (n.d.). *Career and technical education high school course development* [Presentation]. Texas Education Agency. <https://reportcenter.highered.texas.gov/training-materials/presentations/healthcare-workforce-task-force-meeting-31/>

^x Texas Legislature Online. (2021). *87(R) history for HB 3767*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=87R&Bill=HB3767>

^{xi} Texas Department of State Health Services. (n.d.). *Texas Statewide Health Coordinating Council*. <https://www.dshs.texas.gov/center-health-statistics/health-professions-resource-center-hprc/texas-statewide-health-coordinating-council>

^{xii} Texas Workforce Commission. (2024). *Workforce report*. Texas Workforce Commission. https://lmc.state.tx.us/shared/PDFs/Workforce_Report.pdf

^{xiii} Vernon College. (2024). *Department of labor registered apprenticeship* [Presentation]. Vernon College. [Vernon College Presentation](#)

^{xiv} HMG University. (n.d.). *Healthcare scholarship program*. <https://hmg-u.org>

-
- ^{xv} Texas Education Agency. (n.d.). *Career and technical education high school course development* [Presentation]. Texas Education Agency. <https://reportcenter.highered.texas.gov/training-materials/presentations/healthcare-workforce-task-force-meeting-31/>
- ^{xvi} Texas Legislature Online. (2003). *78(R) history for SB 286*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=78R&Bill=SB286>
- ^{xvii} Texas Legislature Online. (2017). *85(R) history for SB 2118*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=85R&Bill=SB2118>
- ^{xviii} Texas Legislature Online. (2021). *87(R) history for HB 3348*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=87R&Bill=HB3348>
- ^{xix} Texas Medical & Dental Schools Application Service. (n.d.). *TMDSAS homepage*. <https://www.tmdsas.com>
- ^{xx} Mercer. (2022). *Future of the U.S. healthcare industry: Labor market projections by 2028*. <https://www.mercer.com>
- ^{xxi} Ohio State University Government Resource Center. (2021, August 23). *Medicaid Technical Assistance and Policy Program (MEDTAPP)* [Archived webpage]. Ohio State University. <https://grc.osu.edu/archive/MEDTAPP-retired08232021>
- ^{xxii} Amarillo College. (n.d.). *Amarillo College*. <https://actx.edu>
- ^{xxiii} Workforce Solutions Capital Area (2024). *Solving healthcare shortages partnership model* [Presentation]. <https://reportcenter.highered.texas.gov/training-materials/presentations/healthcare-workforce-task-force-meeting-34/>
- ^{xxiv} Texas Legislature Online. (2023). *88(R) history for SB 25*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=88R&Bill=SB25>
- ^{xxv} Texas Higher Education Coordinating Board. (n.d.). *My Texas future: Adult learner resources for schools & careers*. <https://www.mytexasfuture.com>
- ^{xxvi} Texas Legislature Online. (2021). *85(R) history for HB 1638*. <https://capitol.texas.gov/BillLookup/History.aspx?LegSess=85R&Bill=HB1638>

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