



# Financial & Public Health Benefits for Texas of Full Practice Authority for APRNs

Scientific Contributors: Bolin, J.N.<sup>1,2</sup>, Cline, K.<sup>3</sup>, Carruth, L.<sup>4</sup>, Horel, S.<sup>2</sup>

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# Executive Summary

In this report we examine three key areas of research to provide economic, public health and safety evidence of the benefits of eliminating practice restrictions on Advanced Practice Registered Nurses (APRNs) and allowing them to practice to the full extent of their licensure under the Board of Nursing.

This research was conducted between June 2022 –February 2023 and provides evidence that:

**1** Removing practice restrictions on Texas APRNs is projected to generate over **4,000 new jobs in Texas and add nearly half a billion dollars to Texas' state GDP in the first year. The gains to Texas' state GDP jump to \$2.3 billion over a 5-year period and \$4.6 billion over a 10-year period.** These effects are likely to be more significant in rural and underserved areas of Texas.

**2** There is significant unmet need for health care services in Texas that is projected over the next several decades, notably in primary care and psychiatric services. Eliminating APRNs scope of practice restrictions will address the significant health care shortage in the state of Texas and **eliminate a sizable proportion of unmet demand for care, especially in rural areas.** These changes are estimated to **alleviate the primary care provider shortage by 2,376 providers, or 32%, and reduce the psychiatric provider shortage by 13%.**

**3** Removing practice restrictions on APRNs will result in an **estimated cost savings for the state of Texas of up to \$47.7 million in the first biennium** when examining Texas Medicaid and Teacher Retirement System of Texas (TRS) cost savings. This includes up to \$30.5 million in all funds savings and \$12.2 million in general funds savings for Medicaid and \$17.2 million in TRS savings.

**4** **APRNs are as safe** as MDs/DOs when examining safety and malpractice claims brought in Texas. This observation is also true in states that do not require physician supervision of APRNs. **APRNs represent 2% of all medical negligence claims both in Texas and nationally, whereas physicians are responsible for 98% of all malpractice insurance claims.**





# Introduction

## APRN Education and Regulation

Advanced Practice Registered Nurses (APRNs) are highly skilled health care providers, trained with years of clinical practice in the United States at graduate and doctoral levels and licensed by the state. APRNs are an important sector of our primary and mental health care work force and represent 20% of our nation's health care workforce infrastructure, with nurse practitioners making up the largest number of APRNs (Agency for Healthcare Research & Quality, 2010; U.S. Department of Health & Human Services, 2013).

APRNs complete rigorous didactic and clinical training in their population focus, which may be family primary care, psychiatric/mental health, women's health, pediatrics, adult/geriatrics, and other specialties. Unlike physicians, whose scope of practice is all-encompassing, APRNs may only practice and deliver care in their area of specialization and population focus for which they were educated, licensed, and board certified.

APRNs are regulated by each state's licensing board, analogous to the physician workforce. In Texas, APRNs are regulated by the Texas Board of Nursing. Licensure and credentialing of APRN graduates is granted after both Bachelor of Science (BSN) and graduate training which includes didactic and clinical education. This is a process requiring multiple exams, rigorous national board certification (for each specialization), and credentialing overseen by each state's respective licensing board and corresponding degree-granting universities. Individual hospitals and clinics grant clinical privileges within the APRN's population of education and training and must also exercise their own compliance measures to monitor competency.

In the majority of states, APRNs now practice independently and are regulated and monitored through their respective state professional licensing boards which establish standards and requirements. The requirement for physician oversight has been deemed unnecessary. In Texas, physician oversight takes the form of prescriptive authority agreements, or delegation agreements, and are the mechanism by which a physician delegates the authority to order or prescribe drugs or devices. However, APRNs have received education and clinical training in prescribing drugs and devices responsive to their populations of focus with validation of competency through national board certification. The requirement of physician delegation to deliver care that the APRN has

been educated and board certified to perform is therefore duplicative and burdensome for providers, businesses, and the state.

Due to the current laws in Texas, APRNs must still practice and operate their clinics subject to signing a delegation contract with a physician, which can be a significant financial and regulatory burden often costing multiple thousands of dollars a year in payments to individual physicians (Martin, 2019). Because of physician shortages and early retirements exacerbated by the COVID-19 pandemic, with as many as 25% of primary care physicians planning to retire in the next few years, the availability of delegating physicians has become even more limited (Primary Care Collaborative, 2022). If an APRN cannot find and sign a contract with a delegating physician, they cannot provide care to patients, ultimately restricting access to care in the state.

## Full Practice Authority as a Workforce Shortage Solution

Allowing APRNs to practice to the full extent of their training, education, and licensure, without the requirement for physician delegation agreements, has been a critical policy solution to alleviate shortages in primary care and increase access to health care overall, particularly in rural and underserved areas (Ortiz, 2019; Sonenberg, 2015; Xue, 2018). APRNs are more likely than other health care providers to care for vulnerable populations, including rural, uninsured, and Medicaid patients (Buerhaus, 2018). When delegation barriers are removed, APRNs can extend more care to these populations.

Over half of the states in the country and numerous federal organizations have done away with delegation requirements permanently, including the U.S. Department of Veteran Affairs and all branches of the military. An additional 18 states loosened or lifted delegation requirements during the COVID-19 pandemic (American Association of Nurse Practitioners, 2023). Many of these states are taking action to make their delegation waivers permanent as they address ongoing health care workforce shortages.

A significant body of research from the National Academy of Medicine and others shows that allowing APRNs to practice to the full extent of their training or education, what's called

full practice authority, has significant benefits for the health care system. Removing delegation barriers can ease health care provider shortages, reduce health care costs, and improve health care quality (Graves et al. 2016; Traczynski 2018, National Academy of Medicine, 2020).

Texas' requirement that a physician enter into a delegation agreement with APRNs restricts expansion of access to care. This policy has led to an exodus of trained APRNs from our state to other states that allow them to practice to the full extent of their education and clinical training (Texas Center for Nursing Workforce Studies, 2022). Additionally, Texas' delegation requirements can force some APRNs to close a small town or medically underserved practice when a delegating physician dies, retires, or is not available to delegate due to shortages or other reasons, leaving Texans

without access to care (Centers for Disease Control and Prevention, 2020). Eliminating scope of practice (SOP) restrictions and the delegation burden on APRNs will result in significant savings and provide immediate solutions to some of Texas' most pressing health care shortage issues, especially in our rural and underserved communities and health care deserts. (See Appendices A, C, D).

**“Eliminating scope of practice (SOP) restrictions and the delegation burden on APRNs will result in significant savings and provide immediate solutions to some of Texas’ most pressing health care shortage issues, especially in our rural and underserved communities and health care deserts.”**



# Key Findings

In this report we examine three key areas of research to provide economic, public health, and safety evidence of the benefits of allowing APRNs to practice to the full extent of their licensure.

## Part 1: Removing physician delegation requirements will improve access to health care and the health care economy in Texas.

- APRNs are more likely to practice in rural and underserved areas, even under the current regulatory environment, and this trend is amplified when restrictions are lifted. There are **124 Texas counties** where there are **more primary care nurse practitioners than primary care MDs** and **79 Texas rural designated counties** where there are **more primary care nurse practitioners than primary care MDs**.
- There is significant unmet need for health care services in Texas that is projected over the next several decades, notably in primary care and psychiatric services. Eliminating APRN scope of practice restrictions will address the significant health care shortage in the state of Texas and eliminate a sizable proportion of unmet demand for care, especially in rural areas. These changes are estimated to **alleviate the primary care provider shortage by 2,376 providers, or 32%, and reduce the psychiatric provider shortage by 13%**.
- We project that loosening current scope of practice restrictions will generate over **4,000 new jobs in Texas, and add nearly half a billion dollars to Texas' state GDP in the first year. The gains to Texas' state GDP jump to \$2.3 billion over a 5-year period and \$4.6 billion over a 10-year period.**
- Removing practice restrictions on Texas APRNs will have a positive and significant economic impact on Texas, including for population health, business stability, employee income, and productivity. This effect is likely to be more pronounced in rural and underserved areas of Texas.

## Part 2: Removing physician delegation will reduce the cost of health care in Texas and substantially benefit the publicly funded programs, such as Medicaid and the Teacher Retirement System of Texas.

- Medicaid savings to the state of Texas will range from \$9.4 million All Funds (AF), \$3.8 million General Funds (GR) for the 2024-25 **biennium to a savings of \$30.5 million AF, \$12.2 million GR at 100% shift** to APRNs for the biennium. Examining other savings, modeled after a likely scenario and underlying data shift to APRNs from 2018 to 2021 plus the unmet demand, shows a potential savings of \$12.8 million AF and \$5.1 million GR for the biennium in Scenario 2. This increases to \$15.2 million AF and \$6.1 million GR at a 50% shift.
- TRS savings range from a biennial savings of \$4.6 million for Scenario 1, which considers only the shift for unmet demand, **to savings of \$17.2 million for a full (100%) shift** in Scenario 5. If 50% of the visits shift to APRNs, the savings would be \$8.6 million for the biennium.
- Examining savings across the Texas health care system, a shift of less than 1% to APRNs for primary care could **lower costs by more than \$100 million**, putting money into the pocket of every Texan.

**Part 3: Removing physician delegation will not affect patient safety or outcomes as shown by malpractice claims comparisons from 1990–2021 National Provider Data Bank reporting required of all licensed providers, state health systems, commercial insurers, and hospitals.**

- ***APRNs are as safe*** as MDs/DOs when examining National Practitioner Data Bank (NPDB) medical negligence or malpractice claims brought in Texas. This observation is also true in states that do not require physician supervision of APRNs. ***APRNs represent 2% of all medical negligence claims in Texas and nationally, whereas physicians are responsible for 98% of all malpractice insurance claims.***
- APRNs provide safe, high-quality care that is comparable to physicians but at a much lower cost to the state of Texas and to individual commercial payers.

**“In effect, by eliminating supervisory requirements, APRNs would be able to provide care services without having to enter into an agreement with a physician. This is a no-cost way to significantly expand access to care.”**





# Part 1

## Removing Physician Delegation Will Increase Access to Care Without Increasing Cost of Care

**Scientific Contributor:**  
Kayla Cline, PhD, CPA

### Background

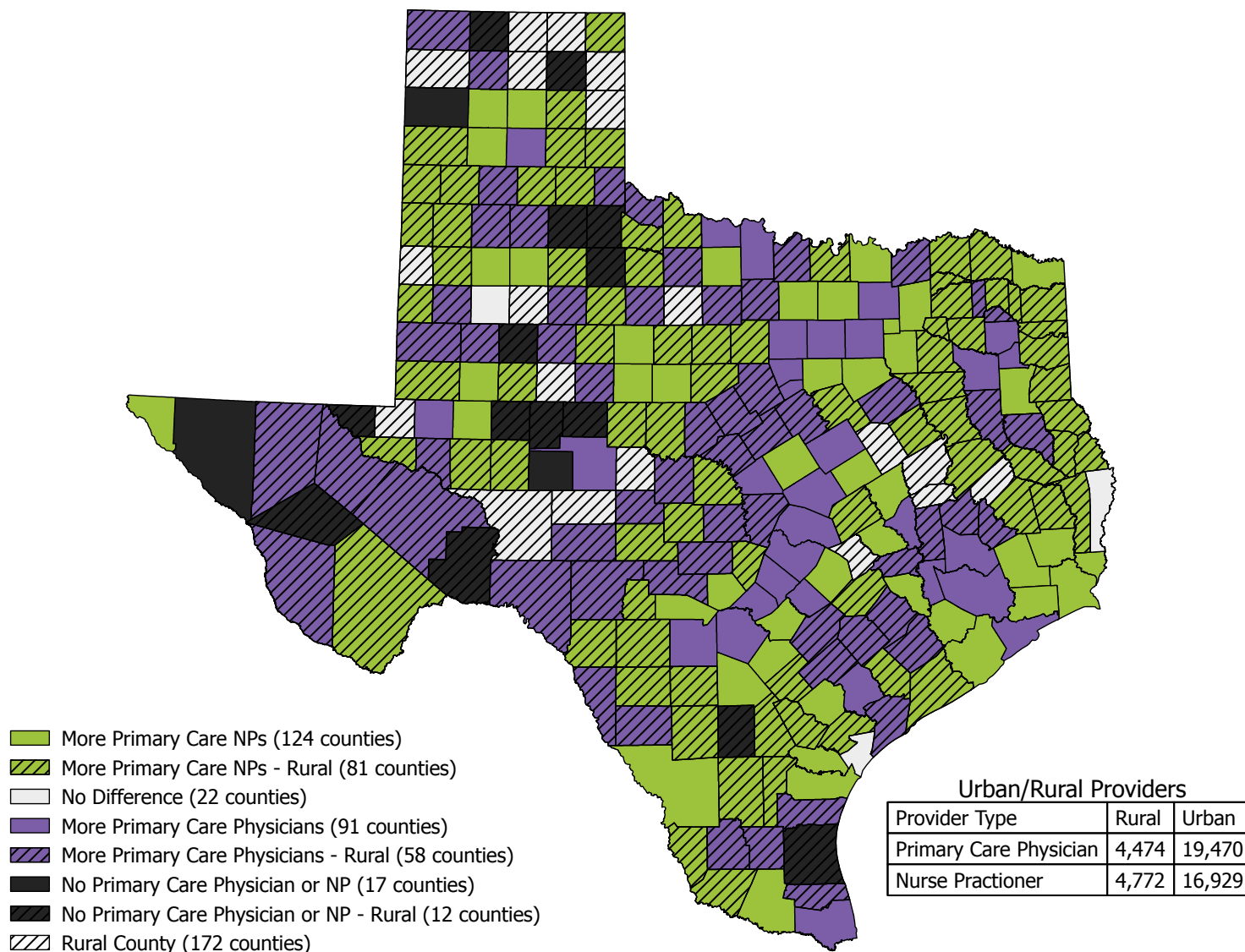
In Part 1, we project future demand for primary care services in Texas given our current state growth rate. A critical impediment preventing movement toward a joint model of primary care featuring both primary care physicians and nurse practitioners are scope of practice restrictions. In a policy proposal released by the Hamilton Project, authors from Emory University and the National Bureau of Economic Research propose that states should consider eliminating requirements that providers such as physician assistants or nurse practitioners be supervised by a medical doctor, which would allow greater ability for one type of provider to substitute for another. In effect, by eliminating supervisory requirements, APRNs would be able to provide care services without having to enter into an agreement with a physician. This is a no-cost way to significantly expand access to care. This policy position is consistent with the findings of our analysis later in this paper (Adams & Markowitz, 2018) and aligns with the recommendations of the National Academy of Medicine (2020).

Evidence on characteristics of primary care offices around the United States show that NP presence in rural areas increased from 17.6% in 2008 to 25.25% in 2016, while physician presence decreased 12.8% over the same period. A higher percentage of rural practices hire nurse practitioners than their urban counterparts, and both rural and non-rural practices employed a greater number of nurse practitioners in 2016 as compared to 2008 (Barnes, Richards et al., 2018). We have also examined Texas data as of October 2022 by practice location confirming primary care APRNs exceed primary care physician presence in rural Texas using data harvested from the National Plan and Provider Enumeration System (NPPES) or NPI data extraction (terms used interchangeably). Data was extracted, based on the Provider Business Practice Location, State Code, and practice locations in Texas. The license type was classified into four categories based on Primary Taxonomy code, and the categories and codes are as follows:

Code	Category	Count
<b>Primary Care Physician</b>		
207Q00000X	Family Medicine	8,464
208D00000X	General Practice	541
207R00000X	Internal Medicine	7,580
207V00000X	Obstetrics & Gynecology	2,781
208000000X	Pediatrics	4,578
<b>Primary Care Physician Total</b>		<b>23,944</b>
<b>Nurse Practitioner</b>		
363LF0000X	Family Nurse Practitioner	14,346
363L00000X	Nurse Practitioner	3,395
363LP0200X	Pediatric	1,708
363LA2200X	Adult Health	926
363LW0102X	Women's Health	755
363LG0600X	Gerontology	571
<b>Nurse Practitioner Total</b>		<b>21,701</b>
<b>Psychiatry</b>		
2084P0800X	Psychiatry	2,150
<b>Nurse Practitioner</b>		
363LP0808X	Psychiatric/Mental Health Nurse Practitioner	1,472

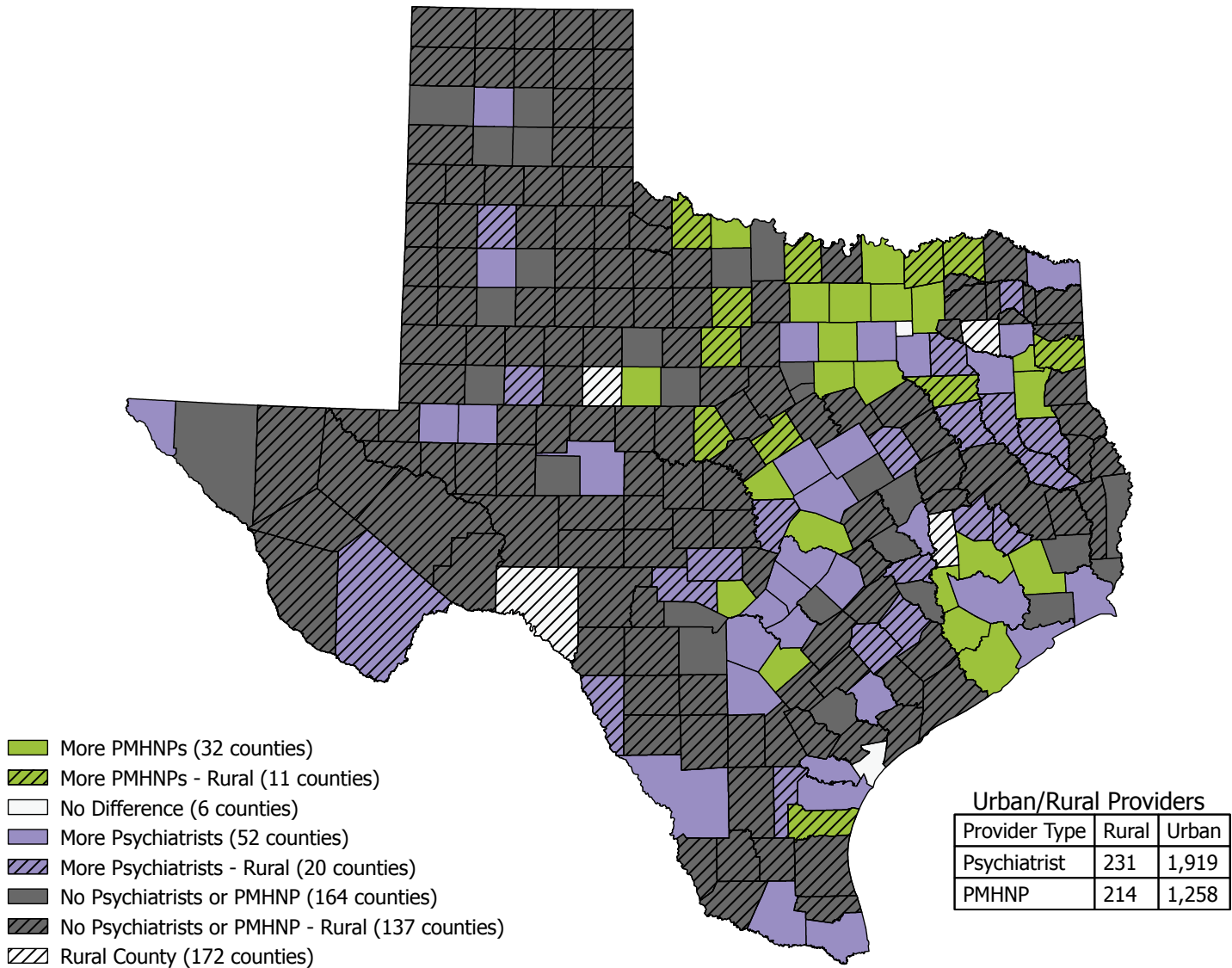
The practice locations and provider types were then geocoded into counties of Texas.

**Map 1: Comparison of Current Distribution of Primary Care Nurse Practitioners to Primary Care Physicians in Texas by Practice Location. October 2022 NPI Practice Location.**



This map demonstrates geographic distribution of primary care nurse practitioners exceeds primary care physicians in rural counties of Texas. It also highlights there are currently 17 counties in Texas without a primary care NP or physician, 14 of which are rural. More Texas counties have more primary care nurse practitioners than physicians, 124 to 91 respectively, and primary care NP presence in rural counties of Texas exceeds that of primary care physicians, 79 to 60 counties respectively. This map highlights a need for primary care access throughout Texas.

**Map 2: Comparison of Current Distribution of Psychiatric Mental Health Nurse Practitioners to Psychiatrists in Texas by Practice Location. October 2022 NPI Practice location.**



This map highlights the profound deficit of psychiatrists and psychiatric mental health nurse practitioners in Texas. There are 164 counties in Texas without a psychiatrist or psychiatric mental health NP, 137 of which are rural. This map highlights a need for mental health care access throughout Texas, and psychiatric mental health nurse practitioners can provide this vital care.

Decreasing scope of practice restrictions in Texas could increase the fluidity of the supply of primary care providers which would increase access to care for all Texans but may have a disproportionate effect in rural areas in which the need for care providers is critical.

## Cost of Care

Increased use of nurse practitioners in primary care is presumed to reduce cost of care in part because nurse practitioners are typically reimbursed at a lower rate than their physician counterparts (Conover and Richards, 2015). One other mechanism by which increased use of nurse practitioners could decrease cost of care is through decreased malpractice payments. McMichael and colleagues examined state law to divide states in the United States into categories based on scope of practice laws: nurse practitioner independence, prescription supervision, or complete supervision. They calculated the malpractice rate by dividing malpractice payments made by physicians by the number of practicing physicians in that state. Malpractice rates in states allowing APRN independence are 31% lower than states that require complete supervision. Malpractice rates in states requiring only prescription supervision are 26% lower than states that require complete supervision. This shows that reducing supervision requirements reduced physician malpractice rates and shows that physicians do in fact bear some of the liability of the NP in states where physician supervision is required (McMichael, Safriet et al., 2018).

A retrospective study of Medicare claims data shows that Medicare evaluation and management (E&M) payments, in in-patient payments, and office-based care payments for patients assigned to an NP as their primary care provider were 29% lower than patients assigned to a physician (Perloff, DesRoches et al., 2016). An economic input-output study by authors in North Carolina showed that increasing the supply of nurse practitioners by loosening scope of practice restrictions could increase statewide economic output and employment levels in both the health care sector and in the broader economy, while also addressing projected physician shortages in the state (Conover & Richards, 2015). This study was replicated in Florida and Tennessee with similar findings (Unruh, Rutherford et al., 2018).



## Introduction

The goal of our study is to understand the broad economic impact of changes to scope of practice laws for nurse practitioners in Texas. To achieve this aim, we use a variety of analytic approaches adapted from methodology used in a similar study carried out in North Carolina, Florida, and Tennessee (Conover & Richards, 2015) (Unruh, Rutherford et al., 2018, Myers, Chang et al., 2020). Each of these studies examines the projected demand for NP services, the effect that scope of practice restrictions will have on the supply of nurse practitioners, and the economic impact of an increase in supply using IMPLAN® software.

The first part of the approach taken by these studies and, by corollary, ours estimates the expected increase in demand for health care services in the upcoming years. This increase in demand is projected to generate shortages of primary care physicians. The second approach estimates the extent to which an increase in the supply of nurse practitioners generated by loosening scope of practice requirements would alleviate the projected primary care shortage. The third approach examines the broader economic impact of an increase in the supply of nurse practitioners in the state of Texas using input-output economic modeling software (IMPLAN®).

## Analysis: Projecting Future Demand for Primary Care Services in Texas

In states that have already loosened scope of practice restrictions for nurse practitioners, studies have shown that the supply of nurse practitioners increases. However, an increase in supply without demand for that supply will not benefit the state. Thus, before we estimate the increase in supply of nurse practitioners, we show that there is in fact excess demand for health care services that will be met by an increase in the supply of nurse practitioners in Texas.

### Methods

The authors of the original North Carolina study published a detailed description of their methodology to facilitate future replications (Conover, 2015). All analyses discussed in this paper utilize this methodological review for study design.

The demand for health care in Texas is expected to grow over the next 10 years due to both population growth and changes in population demographics. To determine the growth in demand for health care services, we used official population growth estimates published by the Texas Population Projections Program (Potter, 2022). We calculated expected population growth percentages by comparing projected population from 2020-2029, using 2020 as a baseline, at both the county and state level.

To determine the expected increase in demand for health care due to changing age and gender population composition, we relied upon a national age curve developed to compare health care spending by age and gender (Yamamoto, 2013). An actuarial team normalized a national health care expenditure

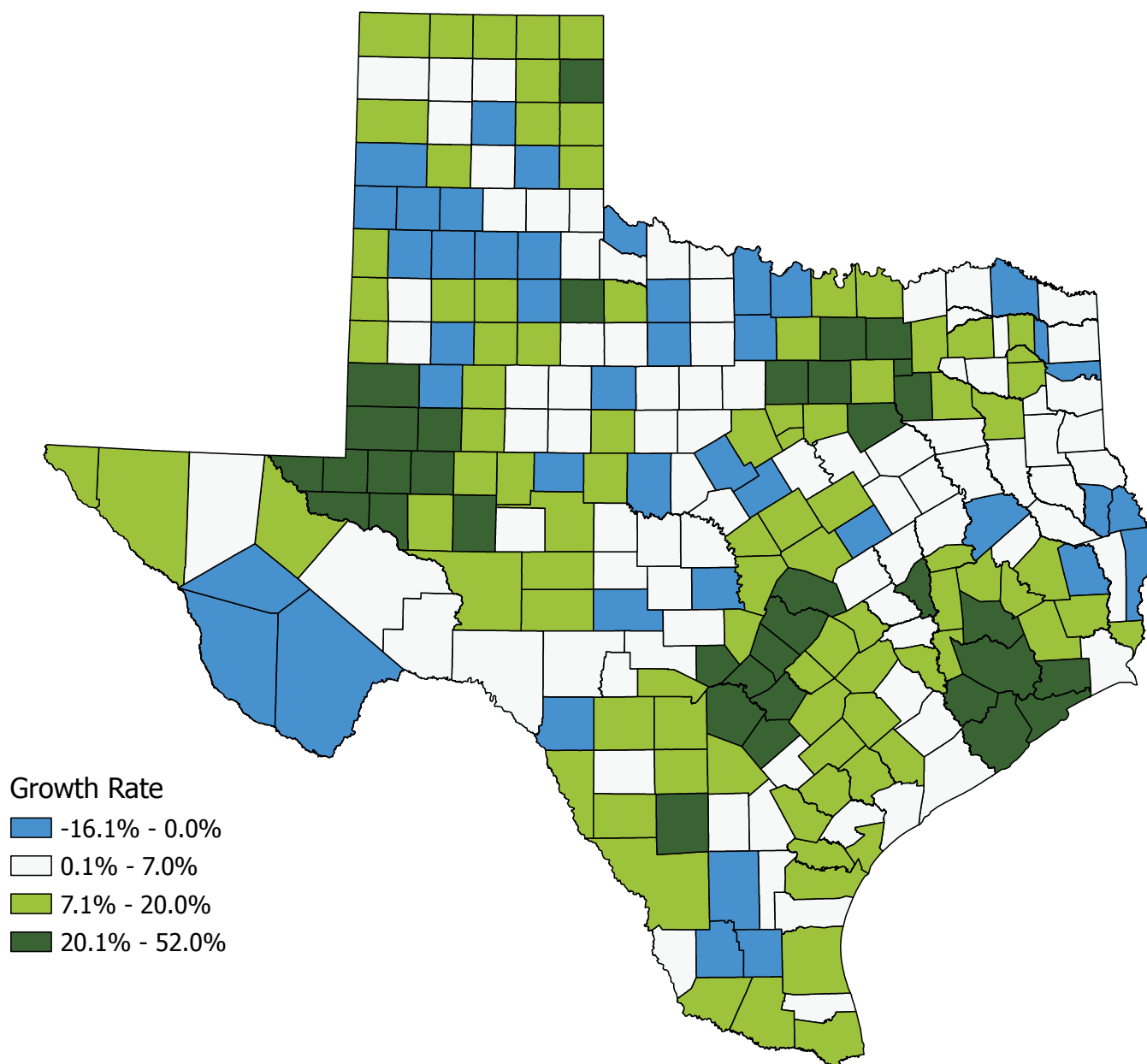
curve so that an index value of 1.0 represents average spending for employer-sponsored PPO members. A value higher than 1.0 index that a group spends more than this baseline group. A value lower than 1.0 index spending less than this baseline group (Yamamoto, 2013). We pulled health care expenditure indices from this curve by gender in 5-year age increments. We pulled population data from the Texas Population Projections Program disaggregated by gender and 5-year-age increments for each county in Texas (Potter, 2022). We used the population data to calculate a weighted-average health index for each county and for the entire state in the year 2020 and in the year 2029. By calculating the growth rate in the average health care expenditure index of the counties and the state of Texas, we estimated the extent to which health care expenditures are expected to rise based on changing population composition from 2020-2029.

### Results

Over the period 2020–2029, we expect to see an overall increase in the demand for health care services of 21.2%. Approximately 15.7% is expected to come from population growth, while 5.3% is expected to come from changes in the population composition in terms of age and gender. Table 1 shows the growth rates by county for population growth, population composition, and total growth. Figure 1 is a graphical depiction of total growth rate by county.



Figure 1. Total Growth Rate by County



**Note:** See Appendix A for detail on demand growth rates for each county, (pages:36-47)

The growth in expected health care spending over the next 10 years demonstrates that we expect a large increase in the demand for health care services due to both population growth and changes in population demographics. 62% of nurse practitioners practice in primary care (Health Resources & Services Administration, 2018). Thus, an increase in the supply of nurse practitioners will be critical in meeting this projected demand for health care services, particularly in the primary care arena.

## Analysis 2: Projecting the Increase in Supply of Nurse Practitioners Following Scope of Practice Restriction Reduction

Reagan and Salsberry (2013) compared states with the most restrictions on APRN scope of practice with states with the fewest restrictions. They found that states with fewer practice restrictions had 10.91 more APRNs for each 100,000 in population (Reagan & Salsberry, 2013) compared to those with the most practice restrictions. This part of our study applies this finding to the supply of nurse practitioners in Texas; if practice restrictions were significantly loosened, how much could the supply of nurse practitioners be expected to increase?

### Methods

Like our first analysis, Analysis 2 replicates the study published by Conover and Richards in 2015. In this analysis, we calculate the dollar value of the current nurse practitioner market in Texas and multiply this amount by a growth rate derived from Reagan and Salsberry (2013) to obtain a projection of the size of the market following scope of practice restriction reduction.

To obtain the size of the current APRN market, we multiplied the number of practicing APRNs in each county in Texas and multiplied by the average APRN salary in the area. We obtained the number of practicing APRNs from the Full Replacement Monthly NPI file published by the Center for Medicaid and Medicare Services (Centers for Medicaid & Medicare Services, 2022). The number provided by this file includes family nurse practitioners, nurse practitioners, pediatric nurse practitioners, adult health nurse practitioners, women's health nurse practitioners, and geriatric nurse practitioners. Salaries were obtained from the salary estimator tool at Salary.com; we used the median nurse practitioner salary for each city (Salary.com 2022). Following Conover and Richards, we used the median salary from the largest city in each Metropolitan Statistical Area (MSA) for metropolitan counties (Conover, 2015). Because data for micropolitan and rural towns was not available in the Salary.com database, in non-metropolitan counties, we used the median salary for the smallest city in that county's Public Health Region (PHR) as defined by the Texas Department of State Health Services (DSHS). We multiplied the number of nurse practitioners in each county by the median salary identified for each county to calculate the size of the market for each county then summed these numbers to calculate the size of the nurse practitioner market in Texas in 2022.

To estimate the percentage of increase in supply of nurse practitioners that could be expected following a restriction of scope of practice reductions, we calculated the number of additional nurse practitioners expected to practice in each county using the ratio from Reagan and Salsberry (Reagan & Salsberry, 2013). They found that loosening nurse practitioner restrictions increased the number of nurse practitioners per 100,000 population by 10.91. For each county, we divided the population by 100,000 and multiplied by 10.91 to calculate the additional number of nurse practitioners expected to practice in each county following scope of practice restriction reductions. We then multiplied this projected number of nurse practitioners by the median salary used in our previous 2022 market size analysis to find an estimation of the size of the nurse practitioner market in each county with fewer scope of practice limitations.

### Results

Our analysis shows that in 2022 the nurse practitioner market was a \$2.5 billion dollar industry in Texas and would grow to a \$2.8 billion dollar industry if scope of practice restrictions were reduced. Table 1A shows the size of the market for each Public Health Region and Table 1B shows the size of the market for each Metropolitan Statistical Area in 2022 following scope of practice restriction reduction. Data on growth in the nurse practitioner market in each county is available in Appendix B.



**Table 1A. Size of Market in 2022 and after Scope of Practice Restriction Reduction by Public Health Region (PHR)**

Public Health Region	No. of APRNs, 2022	Size of APRN Market, 2022	No. of APRNs, Full SOP	Size of APRN Market, Full SOP
1	928	\$98,618,102	1,022	\$108,595,879
2	477	\$51,017,673	534	\$57,114,849
3	5,990	\$683,407,270	6,869	\$783,634,469
4	964	\$103,148,964	1,086	\$116,203,086
5	657	\$74,679,219	739	\$83,999,913
6	5,537	\$665,132,125	6,333	\$760,751,625
7	2,463	\$276,119,736	2,861	\$320,679,161
8	2,163	\$245,338,868	2,493	\$282,743,657
9	436	\$45,614,320	504	\$52,728,480
10	611	\$62,631,777	707	\$72,472,449
11	1,475	\$153,721,254	1,721	\$179,195,109
<b>State</b>	<b>21,701</b>	<b>\$2,459,429,308</b>	<b>24,869</b>	<b>\$2,818,118,677</b>

**“Our analysis shows that in 2022 the nurse practitioner market was a \$2.5 billion dollar industry in Texas and would grow to a \$2.8 billion dollar industry if scope of practice restrictions were reduced.”**



**Table 1B. Size of Market in 2022 and after Scope of Practice Restriction Reduction  
by Metropolitan Statistical Area (MSA)**

MSA	No. of APRNs, 2022	Size of APRN Market, 2022	No. of APRNs, Full SOP	Size of APRN Market, Full SOP
Abilene	206	\$22,017,692	225	\$24,048,450
Amarillo	346	\$37,183,928	375	\$40,300,500
Austin-Round Rock	1,584	\$182,573,424	1,833	\$211,273,413
Beaumont-Port Arthur	410	\$46,603,470	454	\$51,604,818
Brownsville-Harlingen	241	\$24,883,009	287	\$29,632,463
College Station-Bryan	129	\$13,752,690	159	\$16,950,990
Corpus Christi	420	\$46,199,580	470	\$51,699,530
Dallas-Fort Worth-Arlington	5,786	\$661,577,026	6,627	\$757,737,807
El Paso	603	\$61,811,721	697	\$71,447,379
Houston- Woodlands-Sugarland	5,452	\$654,921,500	6,229	\$748,258,625
Killeen-Temple	417	\$44,337,108	468	\$49,759,632
Laredo	163	\$17,026,328	192	\$20,055,552
Longview	166	\$17,762,166	190	\$20,330,190
Lubbock	437	\$46,128,409	473	\$49,928,461
McAllen-Edinburgh-Mission	544	\$54,828,128	639	\$64,402,893
Midland	134	\$14,019,080	154	\$16,111,480
Odessa	104	\$10,880,480	122	\$12,763,640
San Angelo	101	\$10,566,620	114	\$11,926,680
San Antonio-New Braunfels	1,871	\$213,219,160	2,150	\$245,014,000
Sherman-Denison	111	\$11,878,221	126	\$13,483,386
Texarkana	136	\$14,552,136	146	\$15,622,146
Tyler	310	\$33,170,310	335	\$35,845,335
Victoria	86	\$9,459,914	97	\$10,669,903
Waco	177	\$18,869,970	207	\$22,068,270
Wichita Falls	139	\$14,874,529	155	\$16,586,705
Rural/Micropolitan	1,628	\$176,332,709	1,945	\$210,596,429
<b>State</b>	<b>21,701</b>	<b>\$2,459,429,308</b>	<b>24,869</b>	<b>\$2,818,118,677</b>

## SIZE AND PROJECTED GROWTH OF NURSE PRACTITIONER MARKET

These findings show that reducing scope of practice restrictions will increase the supply of nurse practitioners in Texas by 14.6%. This growth in supply will generate a corresponding 14.6% increase in the size of the nurse practitioner market. This is a conservative measure of industry growth because it factors in only the size of the market as measured by nurse practitioner salaries. It does not consider any trickle-down increases in the size of the broader health care market. For example, more nurse practitioners will also generate an increase in the demand for medical supplies and downstream medical services such as phlebotomists or lab technicians. These markets will also increase because of an increase in the number of practicing nurse practitioners, especially because we have demonstrated that there will be adequate demand for these services in future years.

This model assumes that the growth will happen at the same rate across Texas. If this assumption holds true, the increase in the supply of nurse practitioners will disproportionately affect rural areas. While 7.5% of nurse practitioners currently practice in a rural area, 7.8% of all nurse practitioners are predicted to practice in a rural area after reducing scope of practice restrictions. Although this assumption could be erroneous, it's likely that the rural growth rate is understated rather than overstated, as lessening scope of practice restrictions will make it easier to practice in rural areas. This has enormous implications for access to care, a significant problem in rural Texas.

## EFFECT ON PRIMARY CARE SHORTAGE

The most recent report from Texas DSHS shows that in 2032 there will be a deficit of 7,442 MD or DO primary care providers (Texas Department of State Health Services, 2022) and using this data we estimate the 2022 primary care physician deficit to be 5,116. Our previous analysis indicates that reducing scope of practice restrictions would increase the supply of nurse practitioners by 3,168 in 2022 numbers relative to the 21,701 APRNs practicing in Texas in 2022. While nurse practitioners are not trained to provide all the services a physician can, evidence from the Conover and Richards study indicates that a nurse practitioner in primary care can provide approximately 75% of the services provided by a primary care physician (Conover, 2015). Thus, a 3,168-person increase in the number of nurse practitioner FTEs could alleviate the primary care physician shortage by 2,376, or 32% (Figure 2).

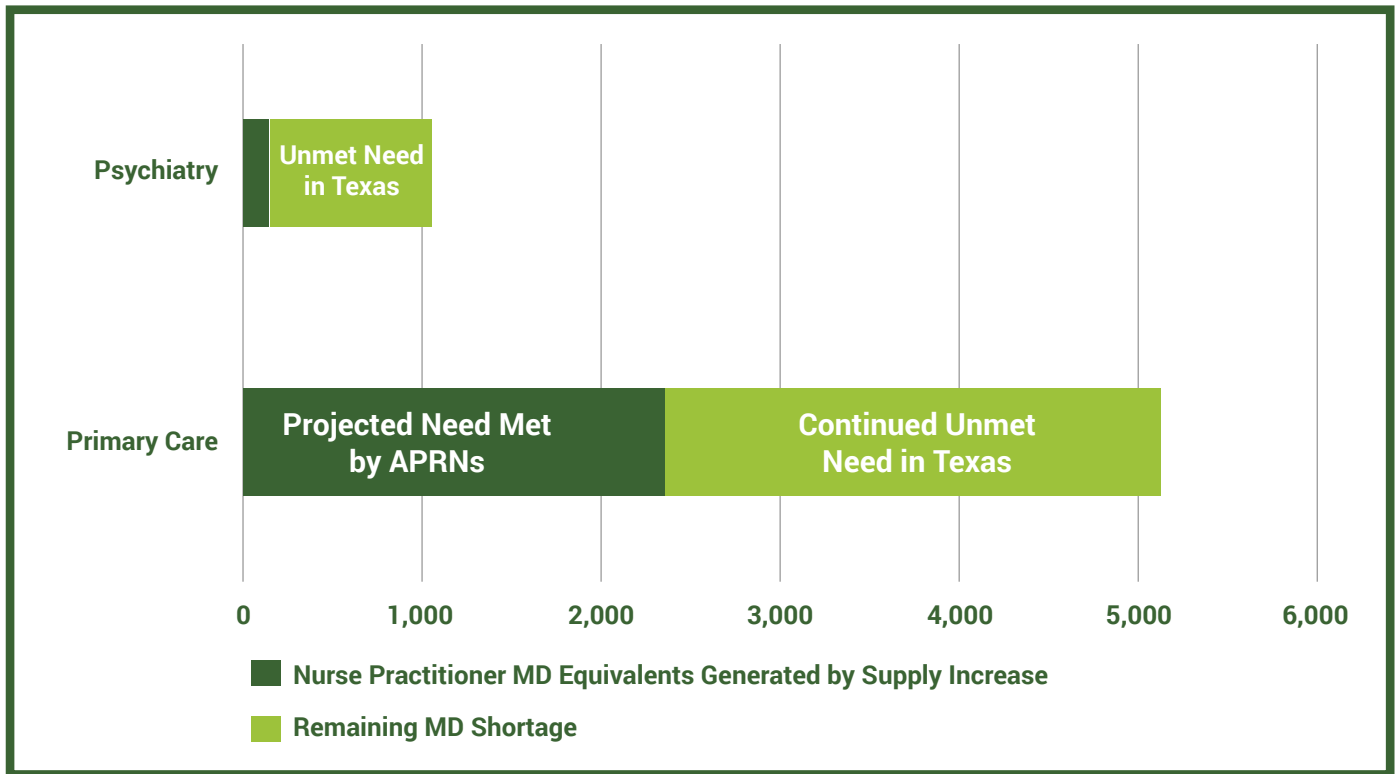
## EFFECT ON PSYCHIATRIC CARE SHORTAGE

The physician shortage report issued by the Texas Department of State Health Services documents a psychiatry shortage of 1,143 MD providers in 2032 (DSHS, 2022), extrapolated to a shortage of 1,061 in 2022. The APRN supply increase of 10.91 per 100,000 residents documented in Reagan and Salsberry (2013) was determined in the context of primary care, not psychiatric care. It is feasible, though, that the supply increase would be similar in the field of mental health services. Data from the National Provider Index file demonstrates that 1,472 psychiatric or mental health nurse practitioners practiced in Texas in October 2022, which comprises approximately 6.78% of all nurse practitioners practicing in Texas. If a reduction in scope of practice regulation caused the total number of practicing nurse practitioners to increase by 10.91 per 100,000, approximately 0.70 of these APRN FTEs would be in primary care which would translate to an additional 202 psychiatric APRN FTEs practicing in the state of Texas. A substitution ratio for psychiatric care is not available in the literature, but extrapolating a 75% substitution ratio from primary care, this would alleviate the psychiatrist shortage by 151, or 13% (Figure 2).





Figure 2. Increased APRN Supply and Physician Shortages, 2022



Increasing the supply of nurse practitioners via reductions in scope of practice restrictions will not solve the primary care and mental health care shortages projected for Texas over the next 10 years. However, these conservative estimates show that an increase in the supply of nurse practitioners can address a substantial fraction of the problem.

**“Thus, a 3,168-person increase in the number of nurse practitioner FTEs could alleviate the primary care physician shortage by 2,376, or 32%.”**

## Analysis 3:

# Economic Effects of an Increase in the Supply of Nurse Practitioners

An increase in the supply of nurse practitioners will address projected shortages in primary care but will also have positive impacts on the broader Texas economy. This analysis will examine various economic outcomes of a larger nurse practitioner market.

## Methods

To analyze the broad economic impact of an increase in the supply of nurse practitioners following scope of practice restriction reductions we used IMPLAN® software. IMPLAN® is an input-output economic modeling software. Input-output modeling is a technique that uses data on the interactions between various industries to predict the effect that a change in one industry (inputs) has on other industries and the overall economy (outputs).

In IMPLAN® we examined the impact of an increase in the statewide supply of nurse practitioners of 3,168 in the context of economic data from 2021 (the most recent year of data available) and showed results in terms of 2023 U.S. Dollars. When we entered this increase in the supply of nurse practitioners into IMPLAN® we specified industry 485 (offices of other health care professionals), which includes all non-physician and non-dentist health care providers. Other members of this category include chiropractors, speech therapists, and occupational therapists, among many others. This is the most granular categorization available in IMPLAN®. However, we see no reason that this limitation changes our results in any meaningful way. This is consistent with the approach taken by other IMPLAN® studies on the supply of nurse practitioners in North Carolina and other states.

## Results

### JOB CREATION

IMPLAN's projections based on the inputs/outputs described above predicted that an increase in the supply of nurse practitioners of 3,168 would generate 4,123 jobs. This includes both the 3,168 nurse practitioners and 1,379 other jobs generated by (a) employees supporting the nurse practitioner such as lab technicians or medical assistants and (b) employees who gain work via the overall increase in the size of the economy due to expenditures by the nurse practitioner's office and personal expenditure of these nurse practitioners' salaries.

### LABOR INCOME

These jobs will generate additional income for workers in the state of Texas totaling \$278,435,118 in 2023. \$197 million of this amount will be salaries generated by the additional nurse practitioners; \$18 million will be wages paid to employees supporting the nurse practitioner; and \$64 million will be wages paid to workers in other industries that are supported via the income generated by personal spending of these additional wages.

See Table 2 for cumulative effects over 5- and 10-year time horizons.

### VALUE ADDED

The overall effect of an increase in the supply of nurse practitioners on the economy is called value added. This includes both the labor income generated by these new jobs (described above) and also the value of transactions between business entities. This number is a measure of gross domestic product, or gross state product since we are only examining the state of Texas. The increase in the supply of nurse practitioners would add \$455,787,851 to the state's 2023 gross state product, of which \$313 million comes directly from the new jobs and the business itself, \$29 million comes from business-to-business transactions generated by nurse practitioners' businesses, and \$114 million comes from household spending from the additional wages generated directly and indirectly.

Table 2 displays cumulative effects of the 3,168-person increase in the supply of nurse practitioners over 1-, 5- and 10-year time horizons. These effects were generated by IMPLAN® in the same way as the 2023 effects described in the preceding paragraphs.

**Table 2. Economic Results of Increase in Nurse Practitioner Supply**

	Labor Income	Effect on Gross State Product
<b>2023 Effect</b>	\$278,435,118	\$455,787,851
<b>5-Year Effect</b>	\$1,399,857,765	\$2,291,945,995
<b>10-Year Effect</b>	\$2,819,036,496	\$4,616,656,845

Note that the cumulative effects on the table above are based on a static 3,168 increase in the supply of nurse practitioners. This supply effect will likely increase each year due to natural growth in the population; thus, the economic effects displayed above are a conservative estimate of the overall economic impact.

## Conclusion

Our analysis shows that the demand for health care services in Texas' growing economy will likewise continue to grow over the following decade and that the current supply of physicians and nurse practitioners is not adequate to meet this demand, notably in the fields of primary care and psychiatry. There is significant unmet need for health care services in Texas that is projected over the next several decades, notably in primary care and psychiatric services.

Eliminating Texas' APRN scope of practice restrictions will address the significant health care shortage in the state of Texas and eliminate a sizable proportion of unmet demand for care, especially in rural areas.

Reducing restrictions on the scope of practice for nurse practitioners could increase the existing supply of nurse practitioners to address some of these projected shortages to some degree. We project that loosening the scope of practice restrictions will generate over 4,000 new jobs in Texas and add nearly half a billion to Texas' state GDP in just one year and \$4.6 billion over a 10-year period.

**“Eliminating Texas’ APRN scope of practice restrictions will address the significant health care shortage in the state of Texas and eliminate a sizable proportion of unmet demand for care, especially in rural areas.”**

# Part 2

## Funding Impact on Texas Medicaid and Teacher Retirement System of Texas

**Scientific Contributor:**  
Lisa Carruth, MBA

### Introduction

In addition to the benefits of eliminating SOP restrictions on APRNs discussed earlier in this paper, there is a direct financial impact to the state for health care benefits programs funded for state employees, teachers, and Medicaid / Children's Health Insurance Program (CHIP) beneficiaries. These benefits can be realized immediately and potentially grow over time, as the market shifts to more APRN utilization for primary care visits. This paper examines the impact of eliminating scope of practice restrictions on the Medicaid program and the Teacher Retirement System

(TRS). CHIP is not used in this analysis but would be expected to add to the savings.

Currently, APRNs are unable to practice at the top of their license and must work under the delegation of a physician. With full practice, basic primary care visits can shift more to APRNs, freeing up physicians, improving access to care for patients, and resulting in reduced costs, as APRNs are reimbursed at 92% of the Medicaid rate.



### Funding Impact

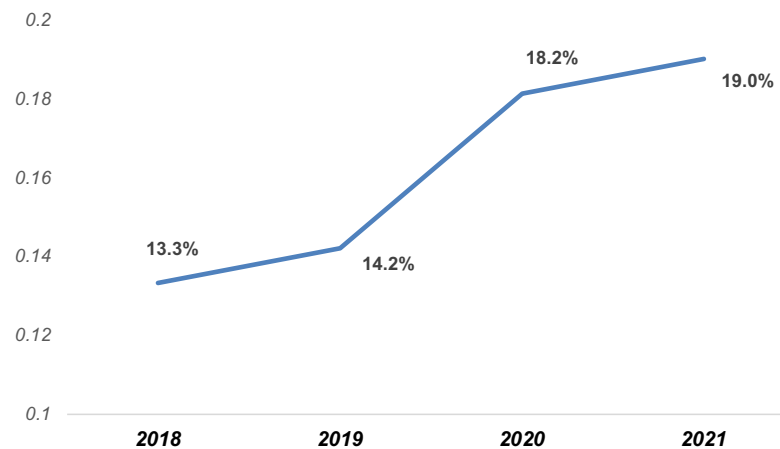
#### Data

We obtained four years of data (fiscal years 2018–2021) from the Texas Health and Human Services Commission for all Medicaid primary care visits by provider type (MD/DO or APRN). Aggregate data on visits and costs by provider type (APRN/physician) for TRS health insurance enrollees for fiscal years 2019–2022 was obtained through TRS and analyzed as well. Medicaid enrollees comprise the largest number of enrollees, with the greatest costs. Approximately 60% of the Medicaid costs are matched by the federal government, and this analysis provides both the all funds (AF) impact as well as general revenue (GR) impact.

#### Assumptions and Methods

Medicaid data was analyzed by number of clients (not unduplicated) seen by either an APRN or physician for the years 2018 through 2021. Data showed an increase in the proportion of clients seen by APRNs in this time period, although the overall number of clients and visits declined (see chart below). While the reasons for an overall decline in primary care visits are not fully known, one explanation is the decrease in utilization during the COVID-19 pandemic (Alexander et al., 2020).

**Figure 3: Percent of Clients Seen by APRN to Total Primary Care Clients 2018-2021**



This same shift in the proportion of clients seen by APRNs is seen in the visits to an APRN (a client can have multiple visits), growing from 10.7% of visits to 15.8% by 2021. This increase in the proportion of total visits seen by an APRN is used in quantifying the expected shift to increased utilization of APRNs. Another component used to quantify the shift from physician to APRN is the unmet demand of Primary Care Physicians, including Family Medicine physicians, Pediatricians, and Psychiatrists (Texas Department of State Health Services, 2022). Using the percentage of unmet demand for each physician group, provided by the

Department of State Health Services, combined with the underlying shift to APRNs in the data, yields two sets of shift proportions for the upcoming biennium (continuing through 2026). The assumption for Scenario 1 continues the last percentage increase of total visits to APRNs, 4.6%, combined with the unmet demand, and Scenario 2 assumes the average proportional increase to APRNs, 13.8%, combined with unmet demand. Three additional scenarios were used assuming shifts of 50%, 75%, and 100% to APRNs. The APRN shift assumptions are listed in Table 3 below for each scenario.

**Table 3. Scenarios, Texas Medicaid APRN Shift Assumptions**

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	4.5% Shift to APRN + Unmet Demand	13.8% Shift (yearly avg) to APRN + Unmet Demand	Overall 50% Shift	Overall 75% Shift	Overall 100% Shift
FY 2024	30%	39%	50%	75%	100%
FY 2025	32%	45%	50%	75%	100%
FY 2026	33%	51%	50%	75%	100%

To provide an estimate for the upcoming biennium, overall caseload forecasts from HHSC were used, applying the proportion of visits to the monthly caseload for the years 2018–2021 (Texas Health and Human Services Commission, 2022). This proportion was trended forward and applied to the caseload forecast for fiscal years 2024, 2025, and 2026. The overall cost per client was calculated from the data and used to determine the savings based on the number of clients shifted from physician to APRN, at 92% of the cost. APRNs are paid at 92% of the cost for an office visit for a physician, per Texas Medicaid reimbursement policies

(Texas Medicaid Health Plan, 2022). This same percentage is applied to TRS data.

Data for TRS did not show the same underlying shift in utilization from physician to APRN, therefore the scenario shifts are slightly different, and are unmet demand, 40, 50, 75% and 100% shifts. For the TRS impact, visits are used and projected forward using the average trend from 2019–2022. The savings are based on the shifts in Table 4 below, using 92% of the aggregate cost per visit for the savings.



**Table 4. Teacher Retirement System Medical APRN Utilization Shift Assumptions**

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Unmet Demand: Physicians (Family Medicine, Pediatrics, Psychiatry)	Overall 40% Shift	Overall 50% Shift	Overall 75% Shift	Overall 100% Shift
FY 2024	27%	40%	50%	75%	100%
FY 2025	27%	40%	50%	75%	100%
FY 2026	27%	40%	50%	75%	100%

## Results

Medicaid savings range from \$9.4 million AF, \$3.8 million GR for the 2024-25 biennium under Scenario 1 to a savings of \$30.5 million AF, \$12.2 million GR at 100% shift to APRN for the biennium. Scenario 2 savings, which is modeled after the annual underlying data shift to APRN from 2018 to 2021 plus the unmet demand shows a potential savings of \$12.8 million AF and \$5.1 million GR for the biennium. This increases to \$15.2 million AF and \$6.1 million GR at 50% shift. See the tables below for the AF / GR savings by scenario.

Teacher Retirement System savings range from a biennial savings of \$4.6 million for Scenario 1, which considers only the shift for unmet demand, to savings of \$17.3 million for a full (100%) shift in Scenario 5. If 50% of the visits shift to APRNs, the savings would be \$8.6 million for the biennium.

**Table 5. All Funds (AF) Savings for Medicaid Scenarios**

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	4.5% Shift to APRN + Unmet Demand	13.8% Shift (yearly avg) to APRN + Unmet Demand	Overall 50% Shift	Overall 75% Shift	Overall 100% Shift
FY 2024	\$4,617,993	\$5,968,376	\$7,607,281	\$11,410,922	\$15,214,563
FY 2025	\$4,824,034	\$6,791,087	\$7,619,115	\$11,428,672	\$15,238,229
FY 2026	\$5,227,528	\$8,014,704	\$7,901,856	\$11,852,784	\$15,803,712
<b>FY 2024-25 Biennial Savings</b>	<b>\$9,442,027</b>	<b>\$12,759,463</b>	<b>\$15,226,396</b>	<b>\$22,839,594</b>	<b>\$30,452,792</b>
5-YR Savings (2026 held)	\$25,124,611	\$36,803,577	\$38,931,964	\$58,397,946	\$77,863,928

**Table 6. General Revenue (GR) Savings for Medicaid Scenarios**

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	4.5% Shift to APRN + Unmet Demand	13.8% Shift (yearly avg) to APRN + Unmet Demand	Overall 50% Shift	Overall 75% Shift	Overall 100% Shift
FY 2024	\$1,841,194	\$2,379,592	\$3,033,023	\$4,549,535	\$6,066,046
FY 2025	\$1,935,402	\$2,724,584	\$3,056,789	\$4,585,183	\$6,113,578
FY 2026	\$2,097,284	\$3,215,499	\$3,170,225	\$4,755,337	\$6,340,449
<b>FY 2024-25 Biennial Savings</b>	<b>\$3,776,596</b>	<b>\$5,104,176</b>	<b>\$6,089,812</b>	<b>\$9,134,718</b>	<b>\$12,179,624</b>
5-YR Savings (2026 held)	\$10,068,449	\$14,750,674	\$15,600,486	\$23,400,729	\$31,200,971

**Table 7. Savings for TRS Scenarios**

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	Unmet Demand: Physicians (Family Medicine, Pediatrics, Psychiatry)	Overall 40% Shift	Overall 50% Shift	Overall 75% Shift	Overall 100% Shift
FY 2024	\$2,229,181	\$3,340,848	\$4,176,060	\$6,264,090	\$8,352,119
FY 2025	\$2,364,013	\$3,549,569	\$4,436,962	\$6,655,443	\$8,873,924
FY 2026	\$2,511,707	\$3,771,331	\$4,714,164	\$7,071,246	\$9,428,328
<b>FY 2024-25 Biennial Savings</b>	<b>\$4,593,194</b>	<b>\$6,890,417</b>	<b>\$8,613,022</b>	<b>\$12,919,532</b>	<b>\$17,226,043</b>
5-YR Savings (2026 held)	\$12,128,314	\$18,204,411	\$22,755,514	\$34,133,270	\$45,511,027

## Conclusion

The impacts shown above provide a picture of savings ranging from \$9.4 to \$30.5 million for the Texas Medicaid program, and ranging from \$4.6 to \$17.2 million for the TRS, with different scenarios of patient shift to APRNs. This does not include the impact to the Employees Retirement System, nor does it include a much larger shift overall for Texas employers as well as families and individuals as they pay portions of their own health care.

It is estimated that the percentage of total U.S. health care for primary care ranges from 5.8% to 7.7%, and expenditures for health care in Texas are just under \$7,000 per capita—putting total spending at more than \$200 billion in Texas. Even on the low end for primary care, a shift of less than 1% to APRN utilization could lower costs by more than \$100 million, putting money into the pocket of every Texan.

# Part 3

## Comparisons of Professional Malpractice Liability Claims: APRNs Deliver Health Care That is as Safe as Physicians

**Scientific Contributors:**  
Jane Bolin, BSN, JD, PhD,  
Scott Horel, MPH

### Introduction

Some legislative policy makers question whether removal of physician delegation for APRNs will promote patient safety and whether lifting anticompetitive restrictions on APRNs' ability to compete with physicians will maintain safety while reducing costs (McMichael, Safriet, & Buerhaus, 2018; Conover & Richards, 2015). When patients are harmed or injured due to the negligence or incompetence of the health care provider, malpractice claims often ensue. Professional malpractice claims are an indicator of unsafe care delivery. In addition, increased malpractice claims lead to increased malpractice liability coverage rates. McMichael and colleagues (2018) found that

less restrictive SOP laws for nurse practitioners had a significant effect on decreasing physician malpractice rates by as much as 31%. And a study looking at the National Practitioner Data Bank 2005 through 2014 found more physician malpractice claims: 11.2 to 19.0 per 1,000 physicians, compared to 1.1 to 1.4 per 1,000 nurse practitioners. Physician median payments ranged from 1.3 to 2.3 times higher than nurse practitioners (Brock, Nicholson & Hooker, 2017). We have found no research that indicates removal of physician delegation requirements for APRNs has a negative impact on patient safety. In fact, the experience of full APRN SOP states shows that safety has improved.

### Quality of Care

Several studies demonstrate that nurse practitioners improve overall outcomes for patients while meeting or exceeding standards for practice, particularly in the areas of family practice, pediatrics, and chronic disease management (Bauer, 2010; DesRoches et al., 2013; Fletcher, Copeland, Lowery, & Reeves, 2011; Gielen, Dekker, Francke, Mistiaen, & Kroezen, 2014; Kurtzman & Barnow, 2017; Newhouse et al., 2011; Regan & Salsberry, 2013; Stanik-Hutt et al., 2013). In a study examining quality measures from Medicare claims data provided by APRNs versus MDs/DOs, it was found that nurse practitioners reduced hospital admissions and readmissions compared to MDs/DOs and that key quality measures between APRNs versus MDs/DOs were comparable. For hospital-based care, it has been shown that the quality of care of nurse practitioners in a hospital setting reduced the odds of 30-day mortality or 7-day hospital readmissions compared to MDs/DOs and patients had an overall shorter length of stay. Medicare spending per beneficiary was also 5.4% lower, while both patients and nurses were more likely to report better care quality and safety.

The safety and qualifications of APRNs practicing in Texas is monitored and tracked through the Texas State Board of Nursing. For all licensed health care providers (nursing, medicine, dentistry, pharmacy), each licensing board (Texas' Board of Nursing, Board of Medicine, Board of Pharmacy, Board of Dentistry, etc.) is required to monitor the safety and compliance of their members, not only under state laws and regulations, but also through the mechanism of the federal **National Practitioner Data Bank**, (NPDB), which is required to ensure patient safety under the **Health Care Quality Improvement Act** of 1986 (HCQIA).

The HCQIA applies to, and monitors all health care providers, including clinical systems, hospitals, federally qualified health centers, and rural clinics, as well as commercial liability insurers. The HCQIA requires all states, insurers, and providers to report malpractice insurance payments and adverse privilege decisions to the NPDB if the penalty or adverse action imposed is 30 days or more. Comparisons of safety and quality can be accomplished by examining professional claims data reported to the NPDB. The U.S. Department of Health & Human Services maintains the NPDB, which reports 550,844 claims against MDs/DOs and 12,185 claims against APRNs.

## RESEARCH QUESTIONS:

We examine Texas NPDB data as well as national NPDB malpractice claims comparing APRNs to MDs/DOs. We then compare the same NPDB data examining states that allow APRNs to practice to the full scope of their license.

1. **How do APRNs compare to MDs/DOs in providing safe patient care across the same types of medical negligence categories reported to the National Practitioner Data Bank?**
2. **How do malpractice claims against APRNs in states that do not require physician delegation compare to Texas?**

## Data, Methods, and Analysis

To compare APRNs versus MDs/DOs in reported professional medical negligence claims we conducted in-depth statistical analysis of the national NPDB database during the time period from June 1990–December 2021. We then identified those reports for MDs/DOs versus APRNs, comparing negligence claims against MDs/DOs, Nurse Practitioners, Certified Registered Nurse Anesthetists, Certified Nurse-Midwives, and Clinical Nurse Specialists. Our analysis of all research

questions was conducted using Stata16 (2021). We seek to provide meaningful comparisons to provide policy makers with an opportunity to review reported medical negligence claims nationally, in Texas, and in states where APRNs are not required to have physician delegation, also known as full practice authority states.

Examining Figure 4, analyzing 30 years of data, we see that APRNs in Texas have significantly fewer professional medical negligence claims than MDs and DOs in Texas. Under Texas law allowing joint & several liability if APRNs are involved in a claim reported to the NPDB, the data would reflect this. Instead, reported malpractice claims against APRNs remain a relatively small percent of the overall number of claims. Table 8 provides a comparison of the types of Texas malpractice claims against MDs/DOs versus APRNs for the time period from 1990–2021. As shown in Figure 5, in Texas, APRNs have significantly fewer medical negligence claims filed in every category. Across all APRN roles, including Nurse Practitioners, Certified Nurse-Midwives, and Certified Registered Nurse Anesthetists, claims are lower relative to the number of APRNs granted privileges and practicing.

Figure 4: Comparison of Malpractice Claims in Texas, by Year, APRNs versus MDs/DOs 1990 - 2021

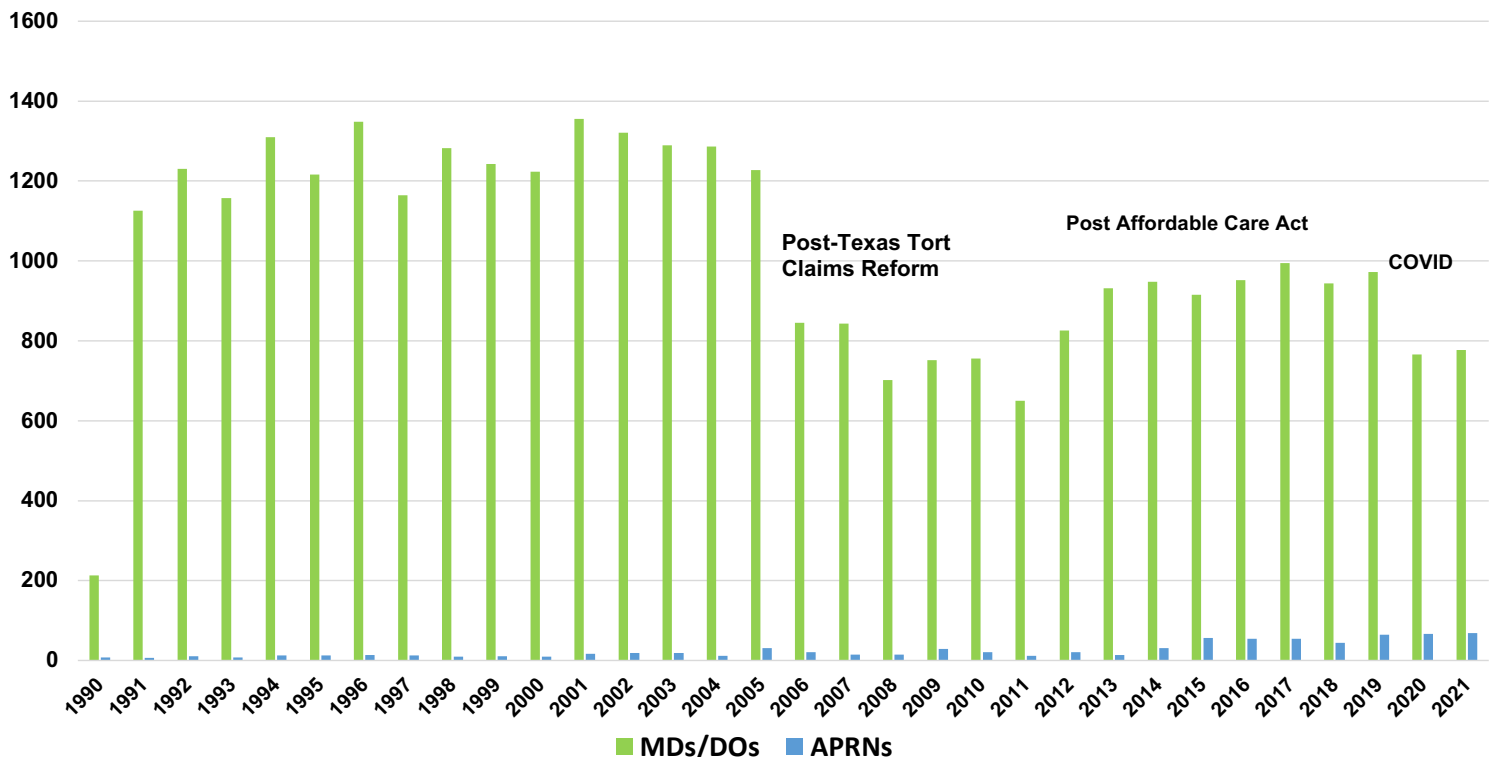
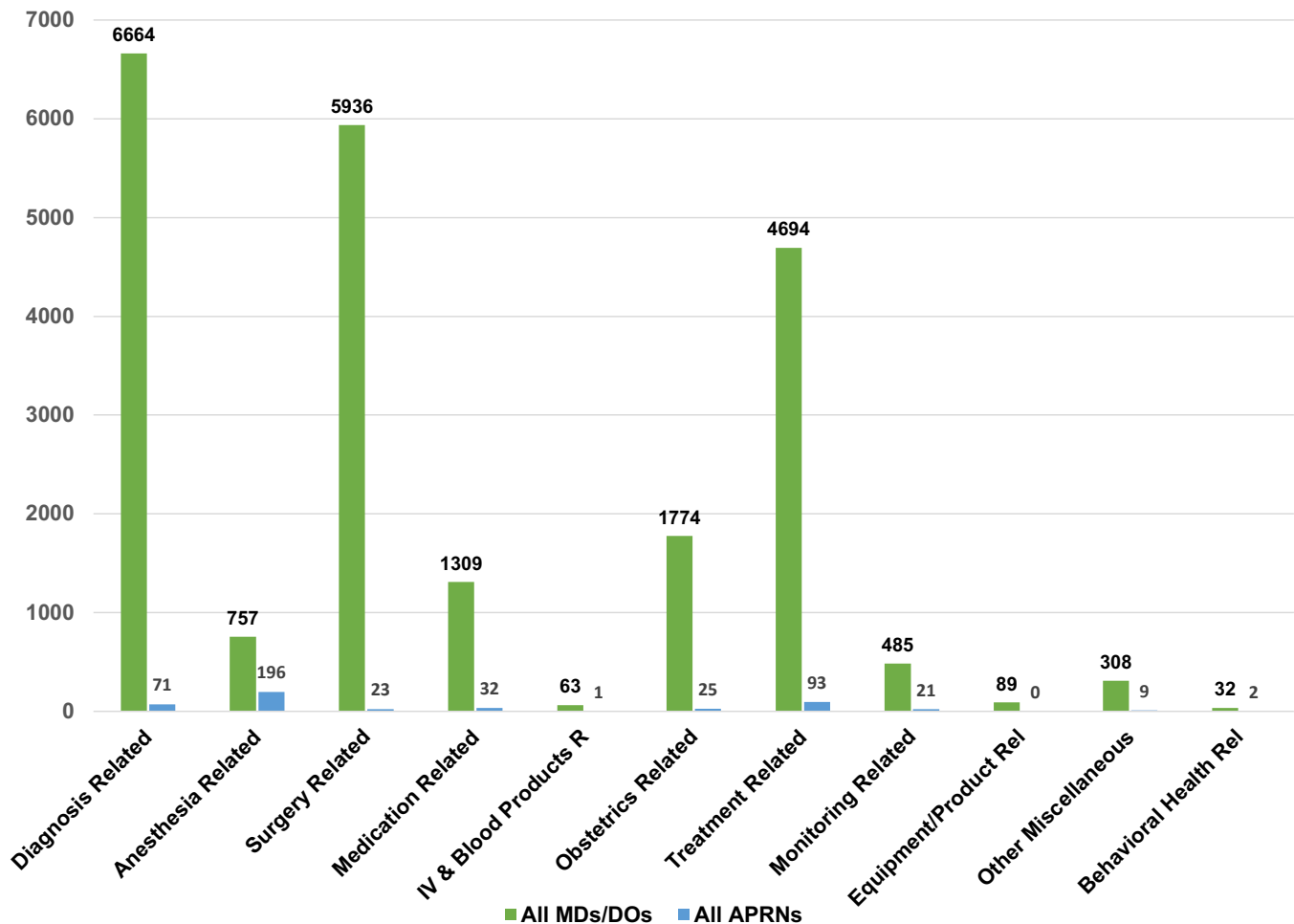


Table 8: Comparison of Texas Malpractice Claims: 1990-2021

Nature of Claim	All MDs/DOs	All APRNs	Total
Diagnosis Related	6664	71	6735
Anesthesia Related	757	196	953
Surgery Related	5936	23	5959
Medication Related	1309	32	1341
IV & Blood Products R	63	1	64
Obstetrics Related	1774	25	1799
Treatment Related	4694	93	4787
Monitoring Related	485	21	506
Equipment/Product Rel	89	0	89
Other Miscellaneous	308	9	317
Behavioral Health Rel	32	2	34
Total	22111	473	22584

Figure 5: Comparison of Types of Texas Malpractice Claims 1990-2021





Shifting our attention to overall claims comparisons between Texas and other states which have lifted restrictions on nurse practitioners, which includes 26 states total, the Armed Forces, and Puerto Rico, we see that the relative number of malpractice claims are on par or lower than Texas.

Across this 30-year time period, APRNs represent 1.88% of all malpractice claims, compared to 1.92% of all malpractice claims in states that grant full practice authority to nurse practitioners. In either case, the claims for APRNs are very low and not appreciably different in full practice states.

**Table 9: National Comparison of All NPDB Malpractice Claims: 1990-2021**

**Legend**

Green	Full Practice State
White	Non-Full Practice State

States	MDs/DOs	APRNs	Percent of Claims with APRNs
Alabama	1,637	76	4.44%
Alaska	488	25	4.87%
Arizona	6,128	174	2.76%
Arkansas	1,905	64	3.25%
California	36,740	359	0.97%
Colorado	3,875	124	3.10%
Connecticut	4,139	63	1.50%
Delaware	935	15	1.58%
District of Columbia	1,185	17	1.41%
Florida	29,199	920	3.05%
Georgia	7,566	208	2.68%
Hawaii	883	18	2.00%
Idaho	852	48	5.33%
Illinois	14,115	178	1.25%
Indiana	7,966	94	1.17%
Iowa	2,761	59	2.09%
Kansas	4,528	112	2.41%
Kentucky	4,257	127	2.90%
Louisiana	8,358	274	3.17%
Maine	1,146	33	2.80%
Maryland	6,859	167	2.38%
Massachusetts	7,552	246	3.15%
Michigan	16,403	200	1.20%
Minnesota	2,514	54	2.10%
Mississippi	2,801	92	3.18%

Missouri	6,501	143	2.15%
Montana	1,568	32	2.00%
Nebraska	1,869	43	2.25%
Nevada	2,379	54	2.22%
New Hampshire	1,486	62	4.01%
New Jersey	16,108	233	1.43%
New Mexico	2,928	133	4.34%
New York	50,027	560	1.11%
North Carolina	5,368	123	2.24%
North Dakota	538	13	2.36%
Ohio	12,535	173	1.36%
Oklahoma	3,778	113	2.90%
Oregon	2,753	120	4.18%
Pennsylvania	31,772	356	1.11%
Rhode Island	1,643	36	2.14%
South Carolina	3,954	102	2.51%
South Dakota	635	13	2.01%
Tennessee	4,586	207	4.32%
Texas	23,074	469	1.99%
Utah	2,732	51	1.83%
Vermont	607	6	0.98%
Virginia	5,137	121	2.30%
Washington	5,677	150	2.57%
West Virginia	3,624	51	1.39%
Wisconsin	2,451	44	1.76%
Wyoming	582	19	3.16%
Puerto Rico	6,089	2	0.03%
Other Territories	70	2	2.78%
Armed Forces	58	2	3.33%
<b>National Total</b>	<b>375,321</b>	<b>7,180</b>	<b>1.88%</b>
<b>Full practice states, territories</b>	<b>122,684</b>	<b>2,400</b>	<b>1.92%</b>

## Conclusion & Policy Implications

Examining decades of publicly available data demonstrates that APRNs meet or exceed the safety record of MDs/DOs, and that they meet high quality standards. Data from the NPDB shows that APRNs are accountable for only 2% of all medical negligence claims in Texas and nationally, whereas physicians are responsible for 98% of all malpractice insurance claims. Comparing states like Texas, but which have lifted APRN practice restrictions, negligence claims are on par or lower and patient access improved.

William Sage, MD, JD, a member of the National Academy of Medicine and contributing author and expert in the national major consensus study of the future of the nursing profession in the United States produced by the National Academies of Sciences, Engineering, and Medicine entitled *The Future of Nursing 2020-2030: Charting a Path to Achieve Health Equity*, stated that it is time for physicians to eliminate this undue burden on nurse practitioners. Indeed, this research shows that elimination of these monopolistic and burdensome delegation requirements will significantly impact access to health care for millions of citizens.

### **Eliminating Restrictions on APRNs Will Improve Access to Care, Maintain Safety & Quality, and Will Save the State of Texas Billions of Dollars.**

Granting full scope of practice to APRNs in Texas will positively impact safety and quality of care and address the extreme shortage of health care workers across Texas. Even more importantly, granting full scope of practice to APRNs in Texas will improve the supply of primary care providers especially in rural and underserved areas of Texas, which, in turn, will increase access to care for all Texans. Making this simple, cost-saving, and important legislative change will significantly improve access to care, improve quality, and significantly increase access to care in rural and underserved areas where Texas' need for care providers is critical.

**“Fulfilling the promise of nursing means speaking truth to the medical establishment and making it acknowledge an ethical obligation to reform professional hierarchies. The laws and norms that constrain nurses’ ability to practice to the full extent of their skills and training were put in place by physicians to protect their privileges, independence, and income. Such outdated, unwarranted restrictions often apply not only to advanced practice nurses but also to other nurses and health professionals, and they include the payment policies that continue to fill health industry coffers primarily from orders, prescriptions, and referrals that originate with the physician’s pen.”**

**—William Sage, MD, JD**

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# Appendix A

## Projected Growth In Demand for Healthcare, 2020-2029

	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
<b>State</b>	<b>14,740,035</b>	<b>14,937,633</b>	<b>1.265</b>	<b>17,067,989</b>	<b>17,277,168</b>	<b>1.332</b>	<b>21.1%</b>	<b>15.7%</b>	<b>5.3%</b>
Anderson	36,072	22,127	1.322	36,073	21,328	1.354	1.1%	-1.4%	2.4%
Andrews	11,486	10,783	1.119	18,009	16,023	1.041	45.8%	52.8%	-7.0%
Angelina	44,384	46,053	1.368	45,492	46,963	1.420	6.0%	2.2%	3.8%
Aransas	13,836	13,863	1.711	16,500	16,069	1.680	15.8%	17.6%	-1.8%
Archer	4,119	4,225	1.552	3,905	4,075	1.629	0.6%	-4.4%	4.9%
Armstrong	959	989	1.804	956	984	1.868	3.2%	-0.4%	3.6%
Atascosa	26,278	25,553	1.310	30,862	28,468	1.318	15.1%	14.5%	0.6%
Austin	15,020	15,382	1.512	15,654	16,263	1.594	10.4%	5.0%	5.4%
Bailey	3,950	3,742	1.285	4,248	3,966	1.309	8.7%	6.8%	1.9%
Bandera	10,472	10,774	1.799	10,595	11,076	1.907	8.0%	2.0%	6.0%
Bastrop	43,738	42,367	1.385	49,297	48,575	1.461	19.2%	13.7%	5.5%
Baylor	1,808	1,816	1.660	1,829	1,776	1.621	-2.9%	-0.5%	-2.4%
Bee	20,911	13,534	1.198	22,392	14,058	1.215	7.2%	5.8%	1.4%
Bell	178,709	174,920	1.143	201,900	190,605	1.183	14.5%	11.0%	3.5%
Bexar	1,036,039	1,057,463	1.235	1,227,619	1,234,011	1.287	21.8%	17.6%	4.2%
Blanco	5,709	5,795	1.722	6,039	6,301	1.845	14.4%	7.3%	7.1%
Borden	359	326	1.892	373	333	2.036	10.7%	3.1%	7.6%
Bosque	8,678	9,087	1.686	8,203	8,930	1.771	1.5%	-3.6%	5.0%
Bowie	46,593	45,977	1.417	45,992	45,912	1.493	4.7%	-0.7%	5.4%
Brazoria	189,800	186,069	1.272	223,200	220,883	1.351	24.4%	18.1%	6.2%
Brazos	116,216	113,194	1.078	135,792	131,937	1.149	23.4%	16.7%	6.7%
Brewster	4,540	4,593	1.515	4,339	4,433	1.562	-0.9%	-4.0%	3.1%
Briscoe	790	778	1.771	770	738	1.846	0.4%	-3.8%	4.2%
Brooks	3,710	3,465	1.463	3,721	3,285	1.473	-1.7%	-2.4%	0.7%
Brown	19,177	19,746	1.556	19,091	19,773	1.647	5.7%	-0.2%	5.9%
Burleson	8,844	8,874	1.557	9,082	9,107	1.599	5.3%	2.7%	2.7%
Burnet	23,535	24,661	1.595	25,750	27,277	1.648	13.3%	10.0%	3.3%

	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Caldwell	22,227	22,057	1.338	25,026	25,121	1.411	18.7%	13.2%	5.5%
Calhoun	11,682	11,158	1.426	12,248	11,446	1.467	6.6%	3.7%	2.9%
Callahan	6,685	6,771	1.612	6,766	6,792	1.689	5.5%	0.8%	4.8%
Cameron	207,575	220,306	1.271	214,044	223,831	1.367	9.9%	2.3%	7.5%
Camp	6,526	6,796	1.436	6,918	7,198	1.471	8.4%	6.0%	2.4%
Carson	2,923	2,876	1.451	2,913	2,779	1.427	-3.5%	-1.8%	-1.7%
Cass	14,684	15,643	1.622	14,232	15,186	1.712	2.5%	-3.0%	5.5%
Castro	3,583	3,520	1.399	3,156	3,152	1.484	-5.1%	-11.2%	6.1%
Chambers	21,376	20,944	1.261	26,219	25,271	1.294	24.3%	21.7%	2.6%
Cherokee	26,506	25,672	1.399	26,589	25,947	1.454	4.6%	0.7%	3.9%
Childress	4,114	2,948	1.327	4,105	2,886	1.373	2.5%	-1.0%	3.5%
Clay	4,964	4,823	1.647	4,573	4,229	1.778	-2.1%	-10.1%	7.9%
Cochran	1,667	1,681	1.398	1,785	1,778	1.466	11.3%	6.4%	4.9%
Coke	1,572	1,643	1.762	1,538	1,618	1.726	-3.9%	-1.8%	-2.1%
Coleman	4,271	4,207	1.642	4,214	4,045	1.601	-5.1%	-2.6%	-2.5%
Collin	509,415	529,954	1.254	660,233	690,193	1.365	38.8%	29.9%	8.8%
Collingsworth	1,592	1,618	1.488	1,668	1,702	1.557	9.6%	5.0%	4.7%
Colorado	10,706	10,567	1.577	10,903	10,460	1.593	1.4%	0.4%	1.0%
Comal	72,853	74,477	1.466	99,030	99,158	1.462	34.3%	34.5%	-0.3%
Comanche	6,418	6,657	1.658	5,840	6,164	1.761	-2.0%	-8.2%	6.2%
Concho	2,792	1,355	1.436	2,760	1,380	1.493	3.8%	-0.2%	4.0%
Cooke	19,427	20,300	1.500	19,569	21,005	1.581	7.6%	2.1%	5.4%
Coryell	39,347	38,970	1.108	42,207	39,654	1.143	7.6%	4.5%	3.1%
Cottle	726	784	1.826	748	807	1.846	4.1%	3.0%	1.1%
Crane	3,199	3,010	1.285	4,630	3,878	1.310	38.9%	37.0%	1.9%
Crockett	1,996	2,044	1.544	2,085	2,116	1.603	7.9%	4.0%	3.9%
Crosby	3,115	3,349	1.526	3,257	3,491	1.583	8.2%	4.4%	3.8%
Culberson	1,052	1,193	1.674	983	1,106	1.860	4.2%	-6.9%	11.1%
Dallam	3,740	3,497	1.146	4,026	3,782	1.147	7.9%	7.9%	0.0%
Dallas	1,341,558	1,392,553	1.200	1,494,918	1,574,332	1.265	17.7%	12.3%	5.4%
Dawson	7,559	6,033	1.280	7,484	6,011	1.261	-2.2%	-0.7%	-1.5%
Deaf Smith	8,942	9,201	1.230	8,475	8,952	1.276	-0.2%	-3.9%	3.7%
Delta	2,667	2,700	1.672	2,714	2,652	1.789	7.0%	0.0%	7.0%

	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Denton	439,041	458,912	1.219	579,178	614,916	1.340	42.9%	33.0%	9.9%
DeWitt	11,454	10,283	1.520	12,317	10,812	1.550	8.4%	6.4%	2.0%
Dickens	1,266	908	1.701	1,208	806	1.807	-1.2%	-7.4%	6.2%
Dimmit	5,824	5,919	1.295	7,017	6,820	1.244	13.9%	17.8%	-4.0%
Donley	1,657	1,753	1.633	1,503	1,647	1.713	-2.7%	-7.6%	4.9%
Duval	6,084	5,712	1.431	5,898	5,519	1.458	-1.3%	-3.2%	1.9%
Eastland	9,209	8,996	1.585	9,120	8,425	1.652	0.6%	-3.6%	4.2%
Ector	95,834	89,007	1.124	133,317	113,768	1.098	31.4%	33.7%	-2.3%
Edwards	1,019	972	1.813	974	947	1.931	3.0%	-3.5%	6.5%
Ellis	87,132	90,589	1.306	100,411	105,932	1.393	22.7%	16.1%	6.6%
El Paso	430,725	445,395	1.253	464,816	466,959	1.331	12.5%	6.4%	6.2%
Erath	20,639	20,887	1.297	22,571	22,560	1.345	12.4%	8.7%	3.7%
Falls	7,905	8,698	1.489	7,426	8,332	1.525	-2.7%	-5.1%	2.4%
Fannin	18,330	16,267	1.537	18,353	16,385	1.630	6.4%	0.4%	6.0%
Fayette	12,620	13,466	1.669	13,125	14,498	1.693	7.3%	5.9%	1.4%
Fisher	1,979	2,006	1.695	1,988	1,979	1.737	2.0%	-0.5%	2.5%
Floyd	2,902	2,884	1.521	2,716	2,663	1.584	-2.9%	-7.0%	4.2%
Foard	602	638	1.812	596	610	1.887	1.4%	-2.7%	4.1%
Fort Bend	412,670	427,713	1.260	571,276	590,363	1.365	46.5%	38.2%	8.3%
Franklin	5,451	5,473	1.498	5,578	5,541	1.522	3.3%	1.8%	1.5%
Freestone	10,364	9,496	1.488	10,170	9,506	1.536	2.3%	-0.9%	3.3%
Frio	11,871	8,152	1.192	13,821	9,035	1.185	13.6%	14.1%	-0.5%
Gaines	11,332	10,789	1.155	14,146	13,071	1.173	24.7%	23.0%	1.6%
Galveston	175,112	180,084	1.341	205,998	213,670	1.402	22.7%	18.2%	4.5%
Garza	4,274	2,510	1.186	4,455	2,658	1.222	7.9%	4.8%	3.1%
Gillespie	12,637	13,554	1.790	13,322	14,286	1.802	6.1%	5.4%	0.7%
Glasscock	721	644	1.582	791	701	1.734	18.9%	9.3%	9.6%
Goliad	3,850	3,867	1.681	4,134	4,107	1.722	9.2%	6.8%	2.5%
Gonzales	10,699	10,648	1.424	11,277	11,329	1.460	8.4%	5.9%	2.5%
Gray	12,914	11,338	1.337	14,457	12,202	1.316	8.4%	9.9%	-1.5%
Grayson	64,273	67,437	1.468	68,267	71,852	1.536	11.0%	6.4%	4.6%
Gregg	61,896	63,834	1.353	63,005	64,625	1.413	5.9%	1.5%	4.4%
Grimes	15,764	13,166	1.466	16,667	13,981	1.555	12.0%	5.9%	6.1%



	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Guadalupe	84,377	85,889	1.316	107,956	107,881	1.366	30.6%	26.8%	3.8%
Hale	17,277	15,925	1.274	15,922	14,379	1.335	-3.9%	-8.7%	4.8%
Hall	1,669	1,636	1.634	1,622	1,633	1.676	1.1%	-1.5%	2.6%
Hamilton	4,094	4,126	1.638	4,080	4,075	1.597	-3.3%	-0.8%	-2.5%
Hansford	2,907	2,913	1.365	3,081	3,063	1.434	10.6%	5.6%	5.1%
Hardeman	1,973	1,897	1.506	1,925	1,803	1.533	-1.9%	-3.7%	1.8%
Hardin	28,060	28,426	1.442	28,723	28,690	1.541	8.5%	1.6%	6.8%
Harris	2,477,112	2,501,733	1.182	2,897,417	2,931,557	1.243	22.3%	17.1%	5.2%
Harrison	33,045	35,202	1.398	33,432	36,452	1.459	6.8%	2.4%	4.4%
Hartley	3,718	2,349	1.347	3,720	2,479	1.402	6.3%	2.2%	4.1%
Haskell	3,371	2,826	1.540	3,732	2,911	1.489	3.9%	7.2%	-3.3%
Hays	116,699	118,197	1.239	165,577	168,169	1.357	51.6%	42.1%	9.5%
Hemphill	2,290	2,354	1.268	2,925	3,113	1.204	25.0%	30.0%	-5.0%
Henderson	39,507	41,672	1.600	39,778	42,254	1.675	5.7%	1.1%	4.6%
Hidalgo	424,880	445,486	1.183	464,958	483,533	1.275	16.7%	9.0%	7.8%
Hill	17,673	18,000	1.546	17,610	17,647	1.608	2.9%	-1.2%	4.0%
Hockley	12,212	12,424	1.307	13,043	13,002	1.322	6.9%	5.7%	1.1%
Hood	28,686	29,957	1.692	31,850	33,574	1.743	14.6%	11.6%	3.0%
Hopkins	18,138	18,902	1.500	18,408	19,575	1.594	8.8%	2.5%	6.3%
Houston	12,083	10,537	1.552	11,487	10,114	1.593	-1.8%	-4.5%	2.7%
Howard	23,906	17,330	1.244	28,863	19,620	1.199	13.9%	17.6%	-3.7%
Hudspeth	1,676	1,724	1.587	1,622	1,681	1.782	9.5%	-2.9%	12.3%
Hunt	46,994	48,330	1.417	51,103	52,816	1.478	13.3%	9.0%	4.3%
Hutchinson	10,814	10,647	1.389	10,779	10,405	1.426	1.4%	-1.3%	2.7%
Irion	771	737	1.755	786	681	1.875	4.1%	-2.7%	6.8%
Jack	4,994	3,847	1.405	4,948	3,680	1.427	-0.9%	-2.4%	1.6%
Jackson	7,934	7,965	1.425	8,912	8,742	1.410	9.9%	11.0%	-1.1%
Jasper	17,717	17,808	1.512	17,484	17,135	1.579	1.9%	-2.6%	4.5%
Jeff Davis	1,041	1,072	1.996	938	981	2.090	-4.4%	-9.2%	4.7%
Jefferson	133,203	125,475	1.318	135,078	126,228	1.364	4.5%	1.0%	3.5%
Jim Hogg	2,582	2,495	1.368	2,487	2,305	1.388	-4.2%	-5.6%	1.4%
Jim Wells	21,298	21,592	1.330	21,944	21,950	1.368	5.1%	2.3%	2.8%
Johnson	85,177	86,524	1.349	94,409	97,479	1.422	17.2%	11.8%	5.4%

2020			2029			% Increase in Spending from 2020-2029			
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Jones	12,563	7,172	1.334	12,649	6,733	1.355	-0.2%	-1.8%	1.6%
Karnes	8,941	6,452	1.330	9,223	7,076	1.342	6.8%	5.9%	0.9%
Kaufman	61,855	63,279	1.315	74,209	75,496	1.391	25.4%	19.6%	5.8%
Kendall	22,545	23,733	1.528	31,382	33,503	1.527	40.2%	40.2%	0.0%
Kenedy	246	230	1.645	268	243	1.803	17.0%	7.4%	9.6%
Kent	388	407	1.916	414	416	2.015	9.6%	4.4%	5.1%
Kerr	25,311	26,956	1.720	26,380	28,065	1.761	6.6%	4.2%	2.4%
Kimble	2,141	2,203	1.813	1,978	2,066	1.894	-2.5%	-6.9%	4.4%
King	155	154	1.725	167	172	1.971	24.0%	9.7%	14.3%
Kinney	1,953	1,509	1.608	1,966	1,426	1.566	-4.6%	-2.0%	-2.6%
Kleberg	15,857	15,130	1.235	15,723	14,793	1.258	0.3%	-1.5%	1.9%
Knox	1,941	1,996	1.573	2,033	2,124	1.603	7.5%	5.6%	1.9%
Lamar	24,270	25,744	1.521	23,953	25,161	1.624	5.0%	-1.8%	6.8%
Lamb	6,304	6,472	1.477	5,769	5,859	1.542	-4.6%	-9.0%	4.4%
Lampasas	10,300	10,737	1.550	10,914	11,286	1.655	12.3%	5.5%	6.8%
La Salle	4,800	3,509	1.285	5,579	4,225	1.317	20.5%	18.0%	2.5%
Lavaca	10,151	10,584	1.542	11,232	11,834	1.478	7.1%	11.2%	-4.2%
Lee	8,921	8,674	1.491	9,290	9,060	1.553	8.5%	4.3%	4.2%
Leon	8,833	8,874	1.623	9,184	9,264	1.628	4.4%	4.2%	0.3%
Liberty	41,984	43,300	1.342	46,594	47,853	1.412	15.9%	10.7%	5.2%
Limestone	12,113	11,431	1.491	11,857	11,461	1.589	5.6%	-1.0%	6.5%
Lipscomb	1,863	1,788	1.474	2,011	1,920	1.553	13.1%	7.7%	5.4%
Live Oak	6,430	5,600	1.525	6,660	5,794	1.507	2.3%	3.5%	-1.2%
Llano	9,315	10,137	1.955	9,295	10,219	1.946	-0.2%	0.3%	-0.5%
Loving	51	41	1.998	50	41	2.538	25.9%	-1.1%	27.0%
Lubbock	157,033	160,177	1.236	179,550	182,613	1.263	16.4%	14.2%	2.2%
Lynn	2,901	2,687	1.459	2,809	2,507	1.522	-0.6%	-4.9%	4.3%
McCulloch	4,390	4,270	1.617	4,605	4,292	1.657	5.2%	2.7%	2.5%
McLennan	124,023	129,043	1.303	131,910	135,985	1.356	9.9%	5.9%	4.1%
McMullen	406	377	2.089	400	375	2.145	1.7%	-1.0%	2.7%
Madison	8,313	6,214	1.287	8,737	6,813	1.294	7.5%	7.0%	0.5%
Marion	5,074	5,220	1.708	4,790	4,874	1.743	-4.1%	-6.1%	2.0%
Martin	3,041	3,003	1.316	3,774	3,674	1.311	22.8%	23.2%	-0.4%

2020			2029			% Increase in Spending from 2020-2029			
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Mason	1,943	1,956	1.820	1,914	1,948	1.852	0.8%	-0.9%	1.7%
Matagorda	18,450	18,614	1.421	18,136	18,427	1.476	2.5%	-1.4%	3.8%
Maverick	30,278	29,660	1.222	33,517	30,761	1.267	10.9%	7.2%	3.7%
Medina	26,373	24,221	1.394	29,232	25,971	1.438	12.3%	9.1%	3.2%
Menard	1,081	1,107	1.912	1,044	1,080	1.973	0.3%	-2.9%	3.2%
Midland	96,518	90,846	1.129	138,396	120,030	1.080	33.6%	37.9%	-4.3%
Milam	12,230	12,405	1.553	12,161	12,156	1.637	4.1%	-1.3%	5.4%
Mills	2,373	2,497	1.755	2,282	2,477	1.811	0.9%	-2.3%	3.2%
Mitchell	5,863	4,002	1.335	5,914	4,274	1.382	6.8%	3.3%	3.5%
Montague	9,506	9,693	1.607	9,203	9,219	1.667	-0.3%	-4.0%	3.8%
Montgomery	303,718	310,233	1.313	397,656	408,969	1.381	36.6%	31.4%	5.2%
Moore	11,101	10,474	1.209	10,794	10,544	1.278	4.6%	-1.1%	5.7%
Morris	6,022	6,426	1.615	5,646	6,128	1.699	-0.3%	-5.4%	5.1%
Motley	597	575	1.919	590	531	1.973	-1.5%	-4.4%	2.8%
Nacogdoches	30,883	33,223	1.329	30,898	32,938	1.421	6.5%	-0.4%	6.9%
Navarro	23,531	24,454	1.460	23,007	24,439	1.573	6.6%	-1.1%	7.7%
Newton	7,139	6,585	1.519	6,819	6,164	1.580	-1.4%	-5.4%	4.0%
Nolan	7,862	7,780	1.420	8,139	7,851	1.418	2.1%	2.2%	-0.1%
Nueces	191,286	192,432	1.295	214,238	210,940	1.323	13.0%	10.8%	2.2%
Ochiltree	5,748	5,561	1.221	6,251	6,212	1.280	15.1%	10.2%	4.9%
Oldham	1,129	1,071	1.485	1,158	1,110	1.578	9.4%	3.1%	6.3%
Orange	42,736	43,419	1.446	43,969	44,961	1.528	8.9%	3.2%	5.7%
Palo Pinto	13,590	14,269	1.519	13,119	14,034	1.592	2.3%	-2.5%	4.8%
Panola	12,226	12,350	1.470	12,450	12,556	1.534	6.1%	1.7%	4.3%
Parker	66,816	68,805	1.449	74,477	80,696	1.556	21.8%	14.4%	7.4%
Parmer	4,665	4,535	1.347	4,148	4,048	1.478	-1.1%	-10.9%	9.8%
Pecos	9,522	7,011	1.272	9,954	7,001	1.294	4.2%	2.6%	1.7%
Polk	26,449	22,631	1.515	28,111	23,753	1.588	10.5%	5.7%	4.8%
Potter	63,516	59,190	1.302	64,082	58,340	1.388	6.4%	-0.2%	6.6%
Presidio	2,984	2,922	1.566	2,451	2,154	1.659	-16.1%	-22.0%	5.9%
Rains	5,718	5,660	1.674	5,812	5,730	1.759	6.5%	1.4%	5.1%
Randall	68,784	69,320	1.344	82,022	78,357	1.390	19.6%	16.1%	3.4%
Reagan	2,290	1,936	1.303	2,840	2,307	1.337	24.4%	21.8%	2.6%

	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Real	1,688	1,719	1.868	1,681	1,712	1.887	0.6%	-0.4%	1.0%
Red River	6,131	6,479	1.659	5,861	6,170	1.711	-1.4%	-4.6%	3.2%
Reeves	9,394	6,313	1.210	10,622	7,062	1.204	12.1%	12.6%	-0.5%
Refugio	3,731	3,842	1.626	3,713	3,925	1.658	2.8%	0.9%	2.0%
Roberts	496	487	1.669	514	505	1.859	15.0%	3.7%	11.4%
Robertson	8,413	8,475	1.510	8,456	8,527	1.565	4.3%	0.6%	3.7%
Rockwall	49,969	52,274	1.328	63,396	67,128	1.450	36.9%	27.7%	9.2%
Runnels	5,512	5,497	1.580	5,864	5,683	1.621	7.5%	4.9%	2.6%
Rusk	27,570	25,197	1.409	26,930	25,091	1.468	2.8%	-1.4%	4.2%
Sabine	4,910	5,026	1.834	4,549	4,507	1.878	-6.4%	-8.9%	2.4%
San Augustine	4,054	4,351	1.763	3,699	4,194	1.831	-2.2%	-6.1%	3.9%
San Jacinto	14,428	14,416	1.569	15,324	15,451	1.610	9.3%	6.7%	2.6%
San Patricio	36,000	35,325	1.339	39,794	37,828	1.363	10.6%	8.8%	1.8%
San Saba	3,155	2,718	1.589	3,008	2,711	1.676	2.9%	-2.6%	5.5%
Schleicher	1,703	1,609	1.482	1,809	1,639	1.535	7.7%	4.1%	3.6%
Scurry	10,058	8,310	1.305	11,072	8,769	1.291	6.9%	8.0%	-1.1%
Shackelford	1,640	1,765	1.541	1,677	1,831	1.584	5.8%	3.0%	2.8%
Shelby	12,707	12,838	1.429	12,386	12,605	1.487	1.9%	-2.2%	4.1%
Sherman	1,692	1,584	1.444	1,787	1,676	1.547	12.9%	5.7%	7.2%
Smith	113,364	121,779	1.389	122,826	132,733	1.459	13.7%	8.7%	5.0%
Somervell	4,558	4,736	1.549	4,982	5,197	1.662	16.8%	9.5%	7.2%
Starr	31,816	32,915	1.209	32,974	33,246	1.277	7.9%	2.3%	5.6%
Stephens	5,081	4,489	1.487	5,182	4,369	1.527	2.5%	-0.2%	2.7%
Sterling	636	616	1.715	678	638	1.846	12.8%	5.1%	7.7%
Stonewall	739	784	1.908	753	803	1.938	3.7%	2.2%	1.6%
Sutton	2,221	2,160	1.524	2,307	2,188	1.629	9.5%	2.6%	6.9%
Swisher	3,966	3,448	1.463	3,776	3,246	1.521	-1.3%	-5.3%	4.0%
Tarrant	1,046,539	1,097,216	1.251	1,200,622	1,269,447	1.341	22.4%	15.2%	7.2%
Taylor	68,121	71,336	1.314	71,234	74,296	1.355	7.5%	4.4%	3.1%
Terrell	536	518	1.875	543	522	1.980	6.6%	1.0%	5.6%
Terry	7,015	6,025	1.313	7,268	6,343	1.300	3.4%	4.4%	-1.0%
Throckmorton	752	767	1.755	724	710	1.822	-1.7%	-5.6%	3.8%
Titus	16,177	16,776	1.340	16,061	16,849	1.462	8.9%	-0.1%	9.1%

	2020			2029			% Increase in Spending from 2020-2029		
	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total Male Population	Total Female Population	Age-Weighted Average Health Spending Index	Total	Due to Population Growth	Due to Aging
Tom Green	62,362	60,914	1.330	70,949	65,722	1.350	12.3%	10.9%	1.4%
Travis	648,419	643,083	1.192	756,259	760,344	1.313	27.6%	17.4%	10.1%
Trinity	6,949	7,284	1.735	6,656	6,961	1.813	0.2%	-4.3%	4.5%
Tyler	11,591	9,752	1.548	11,458	9,362	1.585	0.0%	-2.5%	2.4%
Upshur	20,770	20,885	1.492	21,885	21,922	1.551	9.1%	5.2%	3.9%
Upton	2,047	1,936	1.449	2,460	2,182	1.456	17.0%	16.5%	0.5%
Uvalde	13,793	14,144	1.339	15,047	15,065	1.337	7.6%	7.8%	-0.1%
Val Verde	24,779	23,474	1.275	24,845	22,389	1.308	0.5%	-2.1%	2.6%
Van Zandt	27,262	28,207	1.561	28,260	29,370	1.625	8.0%	3.9%	4.1%
Victoria	48,514	49,230	1.340	54,476	53,506	1.356	11.7%	10.5%	1.2%
Walker	43,331	30,666	1.258	46,757	34,161	1.315	13.9%	9.4%	4.5%
Waller	25,503	25,228	1.239	29,405	28,777	1.282	18.2%	14.7%	3.5%
Ward	6,929	6,663	1.267	9,377	8,256	1.192	23.8%	29.7%	-5.9%
Washington	17,382	17,773	1.543	17,842	18,228	1.592	5.8%	2.6%	3.2%
Webb	135,184	140,999	1.140	146,102	150,449	1.234	15.6%	7.4%	8.2%
Wharton	20,659	21,282	1.421	20,803	21,508	1.490	5.7%	0.9%	4.8%
Wheeler	2,874	2,909	1.542	3,020	3,021	1.584	7.1%	4.5%	2.7%
Wichita	68,958	64,180	1.354	69,163	63,384	1.431	5.2%	-0.4%	5.6%
Wilbarger	6,477	6,561	1.498	6,104	6,267	1.608	2.3%	-5.1%	7.4%
Willacy	12,156	9,978	1.241	12,091	9,641	1.287	1.9%	-1.8%	3.7%
Williamson	288,646	301,268	1.266	390,523	411,341	1.363	43.6%	35.9%	7.7%
Wilson	26,316	25,486	1.433	31,577	29,634	1.513	23.8%	18.2%	5.6%
Winkler	4,956	4,339	1.185	6,790	5,287	1.117	24.2%	29.9%	-5.8%
Wise	32,928	32,879	1.430	35,510	35,874	1.535	15.8%	8.5%	7.3%
Wood	22,686	22,606	1.729	24,123	23,362	1.752	6.2%	4.8%	1.3%
Yoakum	4,581	4,644	1.250	5,443	5,452	1.262	19.1%	18.1%	1.0%
Young	9,207	9,505	1.561	9,200	9,578	1.625	4.4%	0.4%	4.1%
Zapata	7,077	7,332	1.229	6,875	7,423	1.321	6.7%	-0.8%	7.5%
Zavala	6,469	6,213	1.229	7,096	6,389	1.235	6.8%	6.3%	0.5%

# Appendix B

## Size of the Nurse Practitioner Market in Texas in 2022 and Following Scope of Practice Restrictions

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Randall	140,753	Amarillo	1	75	\$8,060,100	90	\$9,672,120
Potter	118,525	Amarillo	1	258	\$27,726,744	271	\$29,123,828
Carson	5,807	Amarillo	1	13	\$1,397,084	14	\$1,504,552
Armstrong	1,848	Amarillo	1	0	\$0	0	\$0
Oldham	1,758	Amarillo	1	0	\$0	0	\$0
Lubbock	310,639	Lubbock	1	432	\$45,600,624	466	\$49,189,562
Lynn	5,596	Lubbock	1	3	\$316,671	4	\$422,228
Crosby	5,133	Lubbock	1	2	\$211,114	3	\$316,671
Hale	32,522	Micropolitan/Rural	1	16	\$1,688,912	20	\$2,111,140
Hockley	21,537	Micropolitan/Rural	1	13	\$1,372,241	15	\$1,583,355
Moore	21,358	Micropolitan/Rural	1	4	\$422,228	6	\$633,342
Gray	21,227	Micropolitan/Rural	1	13	\$1,372,241	15	\$1,583,355
Hutchinson	20,617	Micropolitan/Rural	1	11	\$1,161,127	13	\$1,372,241
Deaf Smith	18,583	Micropolitan/Rural	1	15	\$1,583,355	17	\$1,794,469
Lamb	13,045	Micropolitan/Rural	1	6	\$633,342	7	\$738,899
Terry	11,831	Micropolitan/Rural	1	5	\$527,785	6	\$633,342
Ochiltree	10,015	Micropolitan/Rural	1	5	\$527,785	6	\$633,342
Parmer	9,869	Micropolitan/Rural	1	4	\$422,228	5	\$527,785
Yoakum	7,694	Micropolitan/Rural	1	4	\$422,228	5	\$527,785
Castro	7,371	Micropolitan/Rural	1	5	\$527,785	6	\$633,342
Dallam	7,115	Micropolitan/Rural	1	0	\$0	1	\$105,557
Swisher	6,971	Micropolitan/Rural	1	2	\$211,114	3	\$316,671
Bailey	6,904	Micropolitan/Rural	1	6	\$633,342	7	\$738,899
Childress	6,664	Micropolitan/Rural	1	9	\$950,013	10	\$1,055,570
Garza	5,816	Micropolitan/Rural	1	1	\$105,557	2	\$211,114
Floyd	5,402	Micropolitan/Rural	1	2	\$211,114	3	\$316,671
Hartley	5,382	Micropolitan/Rural	1	3	\$316,671	4	\$422,228
Hansford	5,285	Micropolitan/Rural	1	2	\$211,114	3	\$316,671
Wheeler	4,990	Micropolitan/Rural	1	3	\$316,671	4	\$422,228
Hemphill	3,382	Micropolitan/Rural	1	5	\$527,785	5	\$527,785
Donley	3,258	Micropolitan/Rural	1	2	\$211,114	2	\$211,114

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Lipscomb	3,059	Micropolitan/Rural	1	1	\$105,557	1	\$105,557
Hall	2,825	Micropolitan/Rural	1	1	\$105,557	1	\$105,557
Sherman	2,782	Micropolitan/Rural	1	0	\$0	0	\$0
Collingsworth	2,652	Micropolitan/Rural	1	3	\$316,671	3	\$316,671
Cochran	2,547	Micropolitan/Rural	1	2	\$211,114	2	\$211,114
Dickens	1,770	Micropolitan/Rural	1	1	\$105,557	1	\$105,557
Briscoe	1,435	Micropolitan/Rural	1	1	\$105,557	1	\$105,557
Motley	1,063	Micropolitan/Rural	1	0	\$0	0	\$0
Roberts	827	Micropolitan/Rural	1	0	\$0	0	\$0
King	265	Micropolitan/Rural	1	0	\$0	0	\$0
Taylor	143,208	Abilene	2	190	\$20,307,580	206	\$22,017,692
Jones	19,663	Abilene	2	10	\$1,068,820	12	\$1,282,584
Callahan	13,708	Abilene	2	6	\$641,292	7	\$748,174
Wichita	129,350	Wichita Falls	2	136	\$14,553,496	150	\$16,051,650
Clay	10,218	Wichita Falls	2	1	\$107,011	2	\$214,022
Archer	8,560	Wichita Falls	2	2	\$214,022	3	\$321,033
Brown	38,095	Micropolitan/Rural	2	27	\$2,889,297	31	\$3,317,341
Montague	19,965	Micropolitan/Rural	2	4	\$428,044	6	\$642,066
Young	17,867	Micropolitan/Rural	2	15	\$1,605,165	17	\$1,819,187
Eastland	17,725	Micropolitan/Rural	2	8	\$856,088	10	\$1,070,110
Scurry	16,932	Micropolitan/Rural	2	4	\$428,044	6	\$642,066
Nolan	14,738	Micropolitan/Rural	2	10	\$1,070,110	12	\$1,284,132
Comanche	13,594	Micropolitan/Rural	2	7	\$749,077	8	\$856,088
Wilbarger	12,887	Micropolitan/Rural	2	7	\$749,077	8	\$856,088
Runnels	9,900	Micropolitan/Rural	2	8	\$856,088	9	\$963,099
Stephens	9,101	Micropolitan/Rural	2	6	\$642,066	7	\$749,077
Mitchell	8,990	Micropolitan/Rural	2	4	\$428,044	5	\$535,055
Jack	8,472	Micropolitan/Rural	2	5	\$535,055	6	\$642,066
Coleman	7,684	Micropolitan/Rural	2	4	\$428,044	5	\$535,055
Haskell	5,416	Micropolitan/Rural	2	1	\$107,011	2	\$214,022
Fisher	3,672	Micropolitan/Rural	2	4	\$428,044	4	\$428,044
Hardeman	3,549	Micropolitan/Rural	2	3	\$321,033	3	\$321,033
Baylor	3,465	Micropolitan/Rural	2	2	\$214,022	2	\$214,022
Knox	3,353	Micropolitan/Rural	2	5	\$535,055	5	\$535,055
Shackelford	3,105	Micropolitan/Rural	2	3	\$321,033	3	\$321,033
Throckmorton	1,440	Micropolitan/Rural	2	1	\$107,011	1	\$107,011
Cottle	1,380	Micropolitan/Rural	2	0	\$0	0	\$0



County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Stonewall	1,245	Micropolitan/Rural	2	3	\$321,033	3	\$321,033
Foard	1,095	Micropolitan/Rural	2	1	\$107,011	1	\$107,011
Kent	753	Micropolitan/Rural	2	0	\$0	0	\$0
Dallas	2,613,539	Dallas-Fort Worth-Arlington	3	2400	\$274,418,400	2685	\$307,005,585
Tarrant	2,110,640	Dallas-Fort Worth-Arlington	3	1556	\$177,914,596	1786	\$204,213,026
Collin	1,064,465	Dallas-Fort Worth-Arlington	3	821	\$93,873,961	937	\$107,137,517
Denton	906,422	Dallas-Fort Worth-Arlington	3	462	\$52,825,542	561	\$64,145,301
Ellis	192,455	Dallas-Fort Worth-Arlington	3	113	\$12,920,533	134	\$15,321,694
Johnson	179,927	Dallas-Fort Worth-Arlington	3	79	\$9,032,939	99	\$11,319,759
Parker	148,222	Dallas-Fort Worth-Arlington	3	60	\$6,860,460	76	\$8,689,916
Kaufman	145,310	Dallas-Fort Worth-Arlington	3	66	\$7,546,506	82	\$9,375,962
Rockwall	107,819	Dallas-Fort Worth-Arlington	3	81	\$9,261,621	93	\$10,633,713
Hunt	99,956	Dallas-Fort Worth-Arlington	3	60	\$6,860,460	71	\$8,118,211
Wise	68,632	Dallas-Fort Worth-Arlington	3	47	\$5,374,027	54	\$6,174,414
Hood	61,598	Dallas-Fort Worth-Arlington	3	35	\$4,001,935	42	\$4,802,322
Somervell	9,205	Dallas-Fort Worth-Arlington	3	6	\$686,046	7	\$800,387
Grayson	135,543	Sherman-Denison	3	111	\$11,878,221	126	\$13,483,386
Navarro	52,624	Micropolitan/Rural	3	18	\$1,926,198	24	\$2,568,264
Erath	42,545	Micropolitan/Rural	3	18	\$1,926,198	23	\$2,461,253
Cooke	41,668	Micropolitan/Rural	3	30	\$3,210,330	35	\$3,745,385
Fannin	35,662	Micropolitan/Rural	3	10	\$1,070,110	14	\$1,498,154
Palo Pinto	28,409	Micropolitan/Rural	3	17	\$1,819,187	20	\$2,140,220
Gregg	124,239	Longview	4	141	\$15,087,141	155	\$16,585,155
Rusk	52,214	Longview	4	21	\$2,247,021	27	\$2,889,027
Upshur	40,892	Longview	4	4	\$428,004	8	\$856,008
Bowie	92,893	Texarkana	4	136	\$14,552,136	146	\$15,622,146
Smith	233,479	Tyler	4	310	\$33,170,310	335	\$35,845,335

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Henderson	82,150	Micropolitan/Rural	4	52	\$5,564,052	61	\$6,527,061
Harrison	68,839	Micropolitan/Rural	4	36	\$3,852,036	44	\$4,708,044
Van Zandt	59,541	Micropolitan/Rural	4	19	\$2,033,019	25	\$2,675,025
Anderson	57,922	Micropolitan/Rural	4	35	\$3,745,035	41	\$4,387,041
Cherokee	50,412	Micropolitan/Rural	4	27	\$2,889,027	32	\$3,424,032
Lamar	50,088	Micropolitan/Rural	4	49	\$5,243,049	54	\$5,778,054
Wood	44,843	Micropolitan/Rural	4	25	\$2,675,025	30	\$3,210,030
Hopkins	36,787	Micropolitan/Rural	4	29	\$3,103,029	33	\$3,531,033
Titus	31,247	Micropolitan/Rural	4	35	\$3,745,035	38	\$4,066,038
Cass	28,454	Micropolitan/Rural	4	12	\$1,284,012	15	\$1,605,015
Panola	22,491	Micropolitan/Rural	4	9	\$963,009	11	\$1,177,011
Camp	12,464	Micropolitan/Rural	4	3	\$321,003	4	\$428,004
Rains	12,164	Micropolitan/Rural	4	3	\$321,003	4	\$428,004
Morris	11,973	Micropolitan/Rural	4	5	\$535,005	6	\$642,006
Red River	11,587	Micropolitan/Rural	4	6	\$642,006	7	\$749,007
Franklin	10,359	Micropolitan/Rural	4	1	\$107,001	2	\$214,002
Marion	9,725	Micropolitan/Rural	4	4	\$428,004	5	\$535,005
Delta	5,230	Micropolitan/Rural	4	2	\$214,002	3	\$321,003
Jefferson	256,526	Beaumont-Port Arthur	5	339	\$38,533,113	367	\$41,715,789
Orange	84,808	Beaumont-Port Arthur	5	35	\$3,978,345	44	\$5,001,348
Hardin	56,231	Beaumont-Port Arthur	5	33	\$3,751,011	39	\$4,433,013
Newton	12,217	Beaumont-Port Arthur	5	3	\$341,001	4	\$454,668
Angelina	86,395	Micropolitan/Rural	5	86	\$9,775,362	95	\$10,798,365
Nacogdoches	64,653	Micropolitan/Rural	5	53	\$6,024,351	60	\$6,820,020
Polk	50,123	Micropolitan/Rural	5	24	\$2,728,008	29	\$3,296,343
Jasper	32,980	Micropolitan/Rural	5	24	\$2,728,008	28	\$3,182,676
San Jacinto	27,402	Micropolitan/Rural	5	2	\$227,334	5	\$568,335
Shelby	24,022	Micropolitan/Rural	5	18	\$2,046,006	21	\$2,387,007
Houston	22,066	Micropolitan/Rural	5	14	\$1,591,338	16	\$1,818,672
Tyler	19,798	Micropolitan/Rural	5	8	\$909,336	10	\$1,136,670
Trinity	13,602	Micropolitan/Rural	5	4	\$454,668	5	\$568,335
Sabine	9,894	Micropolitan/Rural	5	9	\$1,023,003	10	\$1,136,670
San Augustine	7,918	Micropolitan/Rural	5	5	\$568,335	6	\$682,002
Harris	4,731,145	Houston-Woodlands-Sugarland	6	3822	\$459,117,750	4338	\$521,102,250
Fort Bend	822,779	Houston-Woodlands-Sugarland	6	598	\$71,834,750	688	\$82,646,000

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Montgomery	620,443	Houston-Woodlands-Sugarland	6	434	\$52,134,250	502	\$60,302,750
Brazoria	372,031	Houston-Woodlands-Sugarland	6	222	\$26,667,750	263	\$31,592,875
Galveston	350,682	Houston-Woodlands-Sugarland	6	304	\$36,518,000	342	\$41,082,750
Liberty	91,628	Houston-Woodlands-Sugarland	6	32	\$3,844,000	42	\$5,045,250
Waller	56,794	Houston-Woodlands-Sugarland	6	4	\$480,500	10	\$1,201,250
Chambers	46,571	Houston-Woodlands-Sugarland	6	22	\$2,642,750	27	\$3,243,375
Austin	30,167	Houston-Woodlands-Sugarland	6	14	\$1,681,750	17	\$2,042,125
Walker	76,400	Micropolitan/Rural	6	36	\$4,324,500	44	\$5,285,500
Wharton	41,570	Micropolitan/Rural	6	21	\$2,522,625	26	\$3,123,250
Matagorda	36,255	Micropolitan/Rural	6	22	\$2,642,750	26	\$3,123,250
Colorado	20,557	Micropolitan/Rural	6	6	\$720,750	8	\$961,000
Travis	1,290,188	Austin-Round Rock	7	1065	\$122,752,965	1206	\$139,004,766
Williamson	609,017	Austin-Round Rock	7	349	\$40,226,089	415	\$47,833,315
Hays	241,067	Austin-Round Rock	7	125	\$14,407,625	151	\$17,404,411
Bastrop	97,216	Austin-Round Rock	7	33	\$3,803,613	44	\$5,071,484
Caldwell	45,883	Austin-Round Rock	7	12	\$1,383,132	17	\$1,959,437
Brazos	233,849	College Station-Bryan	7	117	\$12,473,370	143	\$15,245,230
Burleson	17,642	College Station-Bryan	7	6	\$639,660	8	\$852,880
Robertson	16,757	College Station-Bryan	7	6	\$639,660	8	\$852,880
Bell	370,647	Killeen-Temple	7	366	\$38,914,584	406	\$43,167,544
Coryell	83,093	Killeen-Temple	7	43	\$4,571,932	52	\$5,528,848
Lampasas	21,627	Killeen-Temple	7	8	\$850,592	10	\$1,063,240
McLennan	260,579	Waco	7	171	\$18,230,310	199	\$21,215,390
Falls	16,968	Waco	7	6	\$639,660	8	\$852,880
Burnet	49,130	Micropolitan/Rural	7	27	\$2,870,748	32	\$3,402,368
Hill	35,874	Micropolitan/Rural	7	12	\$1,275,888	16	\$1,701,184
Washington	35,805	Micropolitan/Rural	7	17	\$1,807,508	21	\$2,232,804
Grimes	29,268	Micropolitan/Rural	7	6	\$637,944	9	\$956,916
Milam	24,754	Micropolitan/Rural	7	19	\$2,020,156	22	\$2,339,128
Fayette	24,435	Micropolitan/Rural	7	12	\$1,275,888	15	\$1,594,860
Limestone	22,146	Micropolitan/Rural	7	15	\$1,594,860	17	\$1,807,508
Llano	21,243	Micropolitan/Rural	7	5	\$531,620	7	\$744,268

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Freestone	19,435	Micropolitan/Rural	7	10	\$1,063,240	12	\$1,275,888
Bosque	18,235	Micropolitan/Rural	7	8	\$850,592	10	\$1,063,240
Lee	17,478	Micropolitan/Rural	7	5	\$531,620	7	\$744,268
Leon	15,719	Micropolitan/Rural	7	4	\$425,296	6	\$637,944
Madison	13,455	Micropolitan/Rural	7	2	\$212,648	3	\$318,972
Blanco	11,374	Micropolitan/Rural	7	5	\$531,620	6	\$637,944
Hamilton	8,222	Micropolitan/Rural	7	4	\$425,296	5	\$531,620
San Saba	5,730	Micropolitan/Rural	7	3	\$318,972	4	\$425,296
Mills	4,456	Micropolitan/Rural	7	2	\$212,648	2	\$212,648
Bexar	2,009,324	San Antonio-New Braunfels	8	1610	\$183,475,600	1829	\$208,432,840
Guadalupe	172,706	San Antonio-New Braunfels	8	61	\$6,951,560	80	\$9,116,800
Comal	161,501	San Antonio-New Braunfels	8	93	\$10,598,280	111	\$12,649,560
Medina	50,748	San Antonio-New Braunfels	8	6	\$683,760	12	\$1,367,520
Wilson	49,753	San Antonio-New Braunfels	8	23	\$2,621,080	28	\$3,190,880
Atascosa	48,981	San Antonio-New Braunfels	8	24	\$2,735,040	29	\$3,304,840
Kendall	44,279	San Antonio-New Braunfels	8	48	\$5,470,080	53	\$6,039,880
Bandera	20,851	San Antonio-New Braunfels	8	6	\$683,760	8	\$911,680
Victoria	91,319	Victoria	8	85	\$9,349,915	95	\$10,449,905
Goliad	7,012	Victoria	8	1	\$109,999	2	\$219,998
Maverick	57,887	Micropolitan/Rural	8	16	\$1,759,984	22	\$2,419,978
Kerr	52,598	Micropolitan/Rural	8	54	\$5,939,946	60	\$6,599,940
Val Verde	47,586	Micropolitan/Rural	8	19	\$2,089,981	24	\$2,639,976
Gillespie	26,725	Micropolitan/Rural	8	14	\$1,539,986	17	\$1,869,983
Uvalde	24,564	Micropolitan/Rural	8	19	\$2,089,981	22	\$2,419,978
Lavaca	20,337	Micropolitan/Rural	8	7	\$769,993	9	\$989,991
Calhoun	20,106	Micropolitan/Rural	8	13	\$1,429,987	15	\$1,649,985
De Witt	19,824	Micropolitan/Rural	8	10	\$1,099,990	12	\$1,319,988
Gonzales	19,653	Micropolitan/Rural	8	8	\$879,992	10	\$1,099,990
Frio	18,385	Micropolitan/Rural	8	11	\$1,209,989	13	\$1,429,987
Jackson	14,988	Micropolitan/Rural	8	10	\$1,099,990	12	\$1,319,988
Karnes	14,710	Micropolitan/Rural	8	5	\$549,995	7	\$769,993

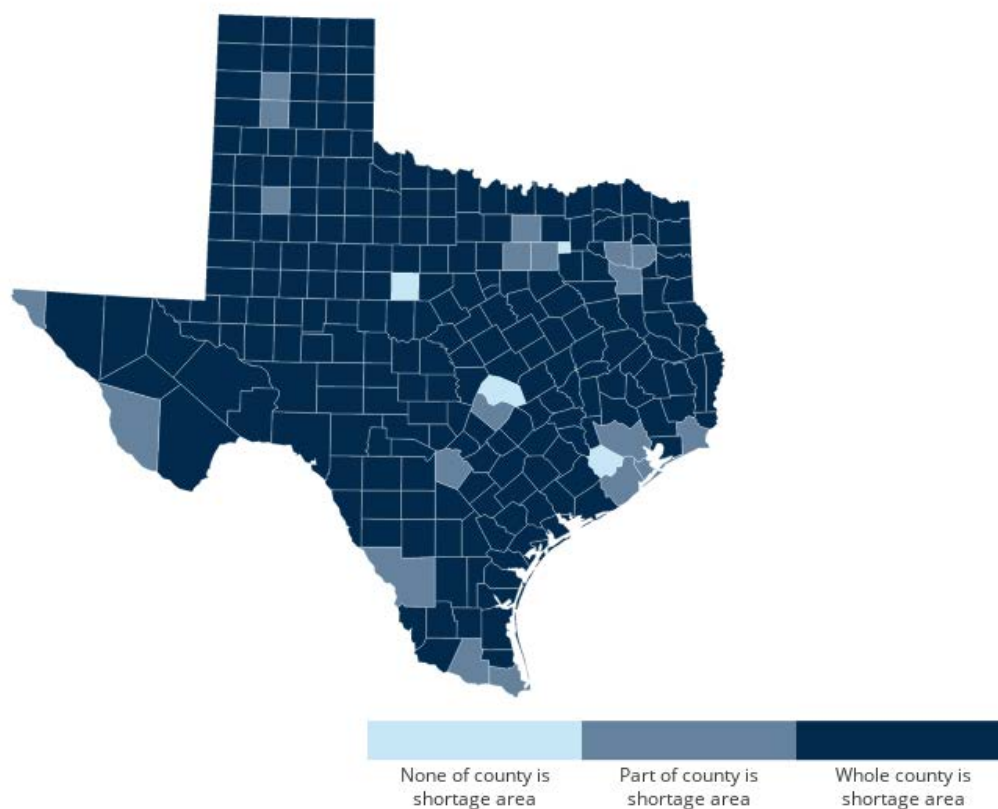
County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Zavala	9,670	Micropolitan/Rural	8	8	\$879,992	9	\$989,991
Dimmit	8,615	Micropolitan/Rural	8	4	\$439,996	5	\$549,995
La Salle	6,664	Micropolitan/Rural	8	6	\$659,994	7	\$769,993
Kinney	3,129	Micropolitan/Rural	8	1	\$109,999	1	\$109,999
Real	2,758	Micropolitan/Rural	8	1	\$109,999	1	\$109,999
Edwards	1,422	Micropolitan/Rural	8	0	\$0	0	\$0
Midland	169,983	Midland	9	131	\$13,705,220	150	\$15,693,000
Martin	5,237	Midland	9	3	\$313,860	4	\$418,480
Ector	165,171	Odessa	9	104	\$10,880,480	122	\$12,763,640
Tom Green	120,003	San Angelo	9	101	\$10,566,620	114	\$11,926,680
Irion	1,513	San Angelo	9	0	\$0	0	\$0
Howard	34,860	Micropolitan/Rural	9	34	\$3,557,080	38	\$3,975,560
Gaines	21,598	Micropolitan/Rural	9	4	\$418,480	6	\$627,720
Andrews	18,610	Micropolitan/Rural	9	14	\$1,464,680	16	\$1,673,920
Pecos	15,193	Micropolitan/Rural	9	10	\$1,046,200	12	\$1,255,440
Reeves	14,748	Micropolitan/Rural	9	2	\$209,240	4	\$418,480
Dawson	12,456	Micropolitan/Rural	9	7	\$732,340	8	\$836,960
Ward	11,644	Micropolitan/Rural	9	8	\$836,960	9	\$941,580
Winkler	7,791	Micropolitan/Rural	9	2	\$209,240	3	\$313,860
Mcculloch	7,630	Micropolitan/Rural	9	1	\$104,620	2	\$209,240
Crane	4,675	Micropolitan/Rural	9	0	\$0	1	\$104,620
Kimble	4,286	Micropolitan/Rural	9	2	\$209,240	2	\$209,240
Mason	3,953	Micropolitan/Rural	9	2	\$209,240	2	\$209,240
Reagan	3,385	Micropolitan/Rural	9	3	\$313,860	3	\$313,860
Sutton	3,372	Micropolitan/Rural	9	2	\$209,240	2	\$209,240
Upton	3,308	Micropolitan/Rural	9	2	\$209,240	2	\$209,240
Concho	3,303	Micropolitan/Rural	9	2	\$209,240	2	\$209,240
Coke	3,285	Micropolitan/Rural	9	0	\$0	0	\$0
Crockett	3,098	Micropolitan/Rural	9	1	\$104,620	1	\$104,620
Schleicher	2,451	Micropolitan/Rural	9	1	\$104,620	1	\$104,620
Menard	1,962	Micropolitan/Rural	9	0	\$0	0	\$0
Sterling	1,372	Micropolitan/Rural	9	0	\$0	0	\$0
Glasscock	1,116	Micropolitan/Rural	9	0	\$0	0	\$0
Terrell	760	Micropolitan/Rural	9	0	\$0	0	\$0
Borden	631	Micropolitan/Rural	9	0	\$0	0	\$0
Loving	64	Micropolitan/Rural	9	0	\$0	0	\$0
El Paso	865,657	El Paso	10	603	\$61,811,721	697	\$71,447,379

County	Population	MSA	Public Health Region	Number of APRNs, 2022	Current Market Size	Number of APRNs, SOP Restriction Elimination	Market, SOP Restriction Elimination
Hudspeth	3,202	El Paso	10	0	\$0	0	\$0
Brewster	9,546	Micropolitan/Rural	10	7	\$717,549	8	\$820,056
Presidio	6,131	Micropolitan/Rural	10	1	\$102,507	2	\$205,014
Culberson	2,188	Micropolitan/Rural	10	0	\$0	0	\$0
Jeff Davis	1,996	Micropolitan/Rural	10	0	\$0	0	\$0
Cameron	421,017	Brownsville-Harlingen	11	241	\$24,883,009	287	\$29,632,463
Nueces	353,178	Corpus Christi	11	374	\$41,139,626	413	\$45,429,587
San Patricio	68,755	Corpus Christi	11	36	\$3,959,964	44	\$4,839,956
Aransas	23,830	Corpus Christi	11	10	\$1,099,990	13	\$1,429,987
Webb	267,114	Laredo	11	163	\$17,026,328	192	\$20,055,552
Hidalgo	870,781	McAllen-Edinburgh-Mission	11	544	\$54,828,128	639	\$64,402,893
Starr	65,920	Micropolitan/Rural	11	22	\$2,217,314	29	\$2,922,823
Jim Wells	38,891	Micropolitan/Rural	11	34	\$3,426,758	38	\$3,829,906
Bee	31,047	Micropolitan/Rural	11	18	\$1,814,166	21	\$2,116,527
Kleberg	31,040	Micropolitan/Rural	11	12	\$1,209,444	15	\$1,511,805
Willacy	20,164	Micropolitan/Rural	11	4	\$403,148	6	\$604,722
Zapata	13,889	Micropolitan/Rural	11	5	\$503,935	7	\$705,509
Live Oak	11,335	Micropolitan/Rural	11	5	\$503,935	6	\$604,722
Duval	9,831	Micropolitan/Rural	11	3	\$302,361	4	\$403,148
Brooks	7,076	Micropolitan/Rural	11	1	\$100,787	2	\$201,574
Refugio	6,741	Micropolitan/Rural	11	3	\$302,361	4	\$403,148
Jim Hogg	4,838	Micropolitan/Rural	11	0	\$0	1	\$100,787
McMullen	600	Micropolitan/Rural	11	0	\$0	0	\$0
Kenedy	350	Micropolitan/Rural	11	0	\$0	0	\$0
<b>Size of Texas Market</b>				<b>21,701</b>	<b>\$2,459,429,308</b>	<b>24,869</b>	<b>\$2,818,118,677</b>

# Appendix C

## Counties in Texas Designated as Health Professional Shortage Areas (HPSAs), November 2022

Health Professional Shortage Areas: Primary Care, by County, 2022 - Texas



Source: [data.HRSA.gov](https://data.HRSA.gov), November 2022.

Citation: <https://www.ruralhealthinfo.org/charts/5?state=TX>



# Appendix D

## Healthcare Deserts in the US: County by County

(<https://hitconsultant.net/2021/09/10/healthcare-deserts-goodrx-report/>)

### Healthcare Deserts, County by County

Counties where most people lack adequate access to pharmacies, primary care providers, hospitals, hospital beds, trauma centers, and/or low-cost health centers.

Number of healthcare deserts

1 2 3 4 5 6

