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Health and Human
Services

**Texas Department of State
Health Services**

Texas Border Public Health Issues

Presentation to the House Committee on Public Health

October 5, 2021

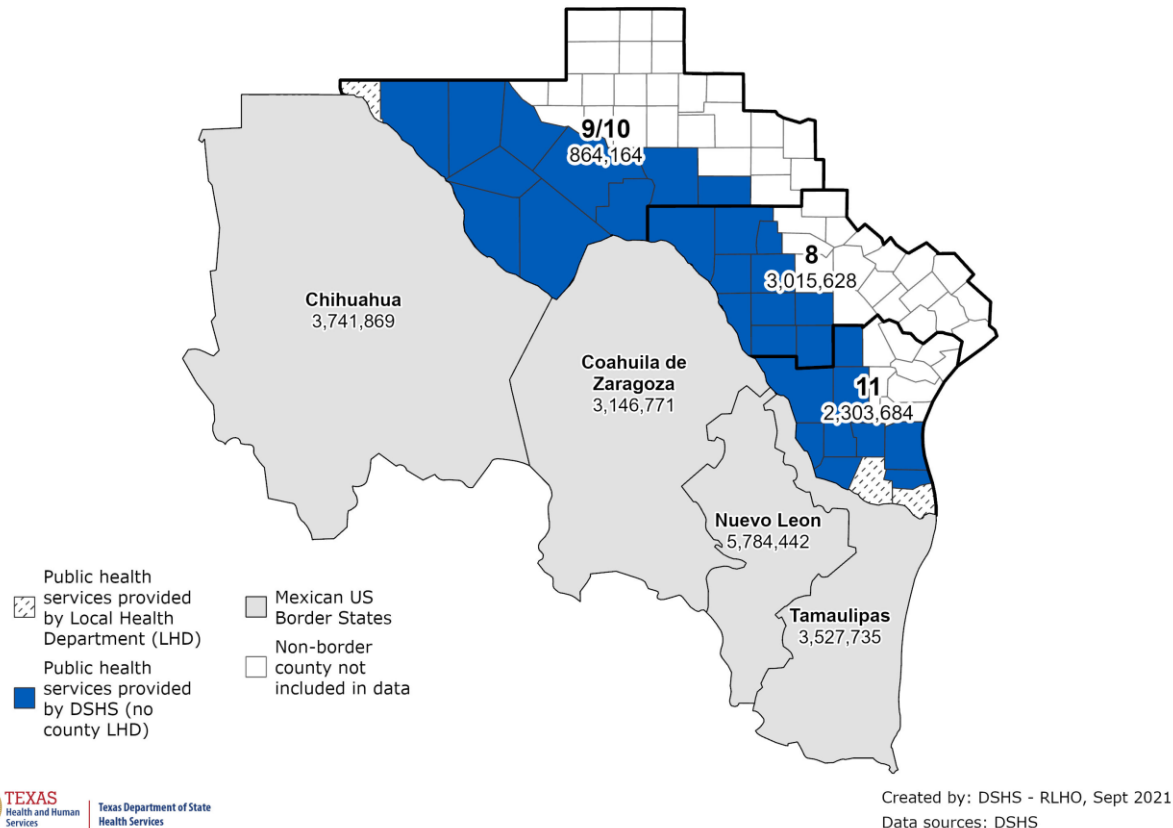
David Gruber – DSHS Associate Commissioner,
Regional and Local Health Operations Division

Overview

- Border Region Population and Demographic Characteristics
- DSHS Roles in Border Public Health
 - State/Local Coordination
 - US/Mexico Binational Coordination
 - Texas Population Health
- Disease Burden
- Workforce Shortages
- Appendix of Additional Data

Border Region Population

TX PHR and Mexican Border State 2020 Populations



- Texas border Public Health Regions population
 - 864,164 PHR 9/10
 - 3,015,628 PHR 8
 - 2,303,684 PHR 11
- Mexican border states population
 - 3,741,869 Chihuahua
 - 3,146,771 Coahuila
 - 5,784,442 Nuevo Leon
 - 3,527,735 Tamaulipas

Demographic Characteristics

Texas Border	Texas Non-border
2.8 million Population	26.4 million Population
88% Hispanic	34% Hispanic
26% Below poverty level	14% Below poverty level
38% Adults ages 19-64 no health insurance	22% Adults ages 19-64 no health insurance
14% Children under 19 no health insurance	11% Children under 19 no health insurance
30% Do not speak English very well	12% Do not speak English very well
30% No high school diploma ages 25 and older	15% No high school diploma ages 25 and older

DSHS – Roles in Border Public Health

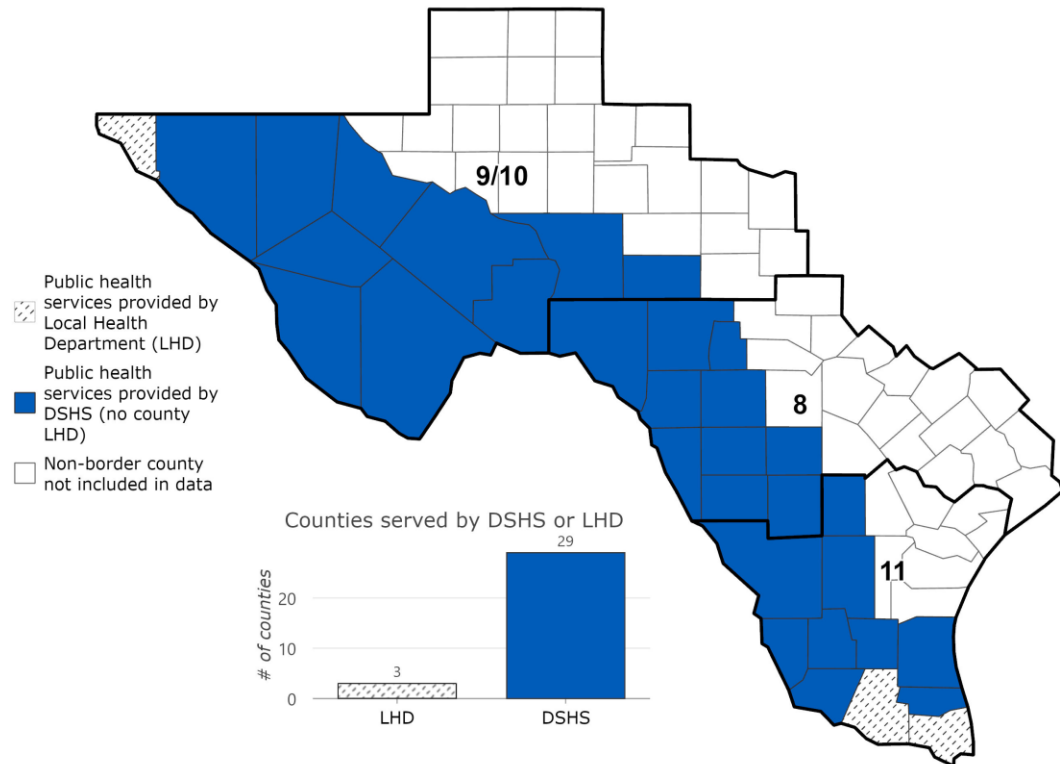


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DSHS Border Public Health Coverage

DSHS and Local Health Department Coverage

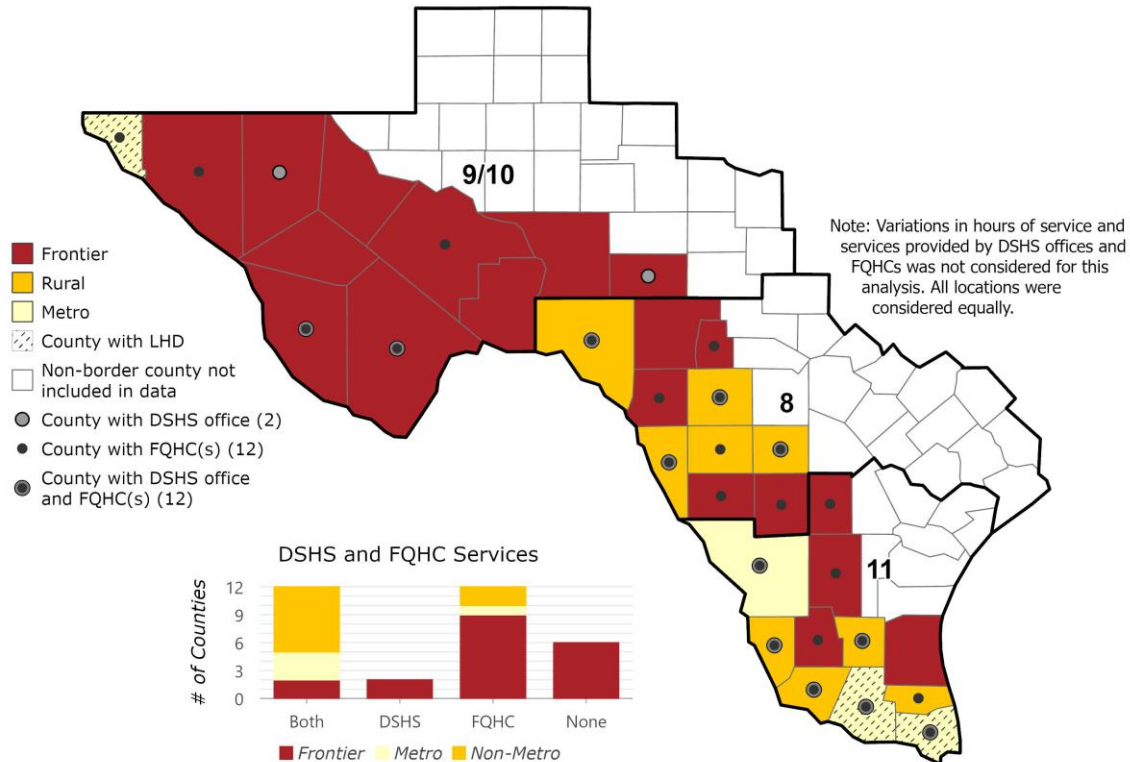


Created by: DSHS - RLHO, Sept 2021
Data sources: DSHS

- 32 Texas border counties
- 29 have no county local health department, public health services are provided by DSHS
- 3 counties have local health departments

Border Public Health Providers

Rural and Frontier Counties Public Health Service Providers



- 4 metro counties
- 9 rural counties
- 19 frontier counties
- 12 counties with DSHS office and Federally Qualified Health Center (FQHC)
- 12 counties with only FQHC
- 2 counties with only DSHS office
- 6 counties with no public health provider

DSHS Office of Border Public Health

- **Vision:** A healthy Texas-Mexico border
- **Mission:** To improve health and well-being along the Texas-Mexico border
- **Goals:**
 - Build sustainable partnerships with key border and binational organizations at federal, state, and local levels to promote communication, coordination and collaboration.
 - Heighten awareness of border issues to facilitate public health funding and coordination along our border.
 - Improve access to develop and strengthen the use of border data to identify priorities, trends, and emerging public health issues.
 - Improve border public health outcomes by targeting culturally competent, outcome-based outreach, educational and training opportunities.
 - Develop strategies to measure and enhance program effectiveness to enhance public health services to border communities.
 - Identify effective intervention models that will increase the impact of border public health services.

U.S.-Mexico Binational Coordination

- **Origin:** In 1991, the 72nd Texas Legislature enacted [Health and Safety Code, Section 12.071](#):
 - “The department shall establish and maintain an office in the department to coordinate and promote health and environmental issues between this state and Mexico.”
- **Scope:** All four U.S. southern border states have border health offices
 - Texas, California, Arizona, and New Mexico

U.S.-Mexico Border Health Commission

- **Origin:**
 - Public Law 103-400 established the United States-Mexico Border Health Commission in 1994
 - Created as a binational health commission in July 2000 with the signing of an agreement by the U.S. Secretary of Health and Human Services and the Secretary of Health of Mexico
- **Mission:** Provide international leadership to improve health and quality of life along the U.S.-México border.
- **Composition:** Federal secretaries of health of the two countries, the chief health officers of the 10 binational border states, and community health professionals from both nations
 - DSHS Commissioner Hellerstedt is the official Texas government representative

Binational Health Councils

- **Binational Health Councils:** Known as COBINAS (Consejos Binacionales de Salud)
- **Origin:** Established during the XXI U.S. Mexico Border Health Association meeting in Nogales, Arizona in 1963
- **Scope:**
 - Created to promote unity and collaboration between health officials of U.S. - México border sister cities
 - Purpose includes examining health needs, problems, and programs within their geographical area and to promote joint actions which benefit residents on both sides of the border
 - Some COBINAS integrate Border Epidemiology Surveillance Teams (BEST)

Binational Health Councils

- **Eight COBINAS currently:**

- Paso del Norte Binational Health Council (El Paso/Juarez/Las Cruces)
- Presidio/Ojinaga Binational Health Council
- Del Rio/Ciudad Acuña Binational Health Council
- HOPE-K Trinational Health Council (Eagle Pass/Kickapoo Traditional Tribe of Texas/Piedras Negras)
- Los Dos Laredos Binational Health Council (Laredo/Nuevo Laredo/Nuevo León)
- SMAC Binational Health Council (Starr County/Miguel Aleman/Camargo)
- HIDA REY Binational Health Council (Hidalgo County/Reynosa)
- Brownsville / Matamoros Binational Health Council

Texas Binational Tuberculosis Program

- **Purpose:** Provides TB prevention and care services addressing the high incidence of TB cases along the Texas-Mexico border to reduce transmission of TB and to protect public health in Texas
- **Coverage:** Four binational program sites serve the Texas-Mexico border
 - **Juntos:** El Paso, Texas partners with Ciudad Juarez, Chihuahua
 - **Esperanza y Amistad:** has two sites
 - Eagle Pass, Texas partners with Piedras Negras, Coahuila
 - Del Rio, Texas partners with Acuña, Coahuila
 - **Los Dos Laredos:** Laredo, Texas partners with Nuevo Laredo, Tamaulipas
 - **Grupo Sin Fronteras:** has two sites
 - Brownsville, Texas partners with Matamoros, Tamaulipas
 - McAllen and Pharr, Texas partner with Reynosa, Tamaulipas
- [Texas DSHS TB Program – Texas Binational Tuberculosis \(TB\) Program](#)

Binational Infectious Disease Surveillance

- **Program goals:**
 - Improve surveillance for infectious diseases of binational importance
 - Develop strategies to control infectious diseases in the border region
 - Improve binational communication and coordination related to disease case and outbreak notifications, to enhance bilateral infectious disease preparedness and response
 - Border Epidemiology Surveillance Teams (BEST) contribute to binational information exchange
- **Current projects in Texas (PHR 11, 8, and 9/10):**
 - Integrate binational variables into disease surveillance
 - Conduct surveys at border sites including US-Mexico land ports of entry and border clinics to understand border crossers' mobility patterns, as well as knowledge, attitudes, and practices related to COVID-19 and other diseases

Task Force of Border Public Health Officials

- **Origin:** Created by Senate Bill 1680, 85th Legislature, Regular Session, 2017, codified in [Health and Safety Code, Chapter 120](#).
- **Vision:** A Healthy and Equitable Border Community
- **Mission:** To identify and raise awareness of health issues impacting border communities and establish policy priorities to enhance border public health, creating a healthy bi-national community.
- **General Duties of the Task Force:** *The task force shall make recommendations to the [DSHS] commissioner for short-term and long-term border health improvement plans.*
- **Work Products:** [2018 Report submitted](#); Updated recommendations for 2020-21 pending final vote

Task Force of Border Public Health Officials - Topics

- **Primary topics of interest:**

- Access to preventative and specialized healthcare services
 - Lack of transit systems and transportation, especially in rural areas
 - High population of elderly living alone
- High population of uninsured or underinsured resident

- **2018 Biennial Report Topics Covered:**

- ***Border Public Health Infrastructure:***
 - Improve border surveillance
 - Extend year-round lab capacity (southmost counties without breaks in mosquito season)
- ***Communicable Diseases:***
 - Expand community health worker training curricula

- Establish border-centric multi-disciplinary response teams

- ***Environmental Health:***

- Improve process for recruitment and retention of registered sanitarians

- ***Chronic Diseases:***

- Establish education-based components for:
 - Child obesity prevention
 - Advanced age pulmonary complications

- ***Maternal and Child Health:***

- Establish outreach program for high-risk pregnant mothers
- Improve knowledge-sharing/training of border health professionals
- Collaboration with Texas Medical Association and Texas Border Health Caucus

Disease Burden



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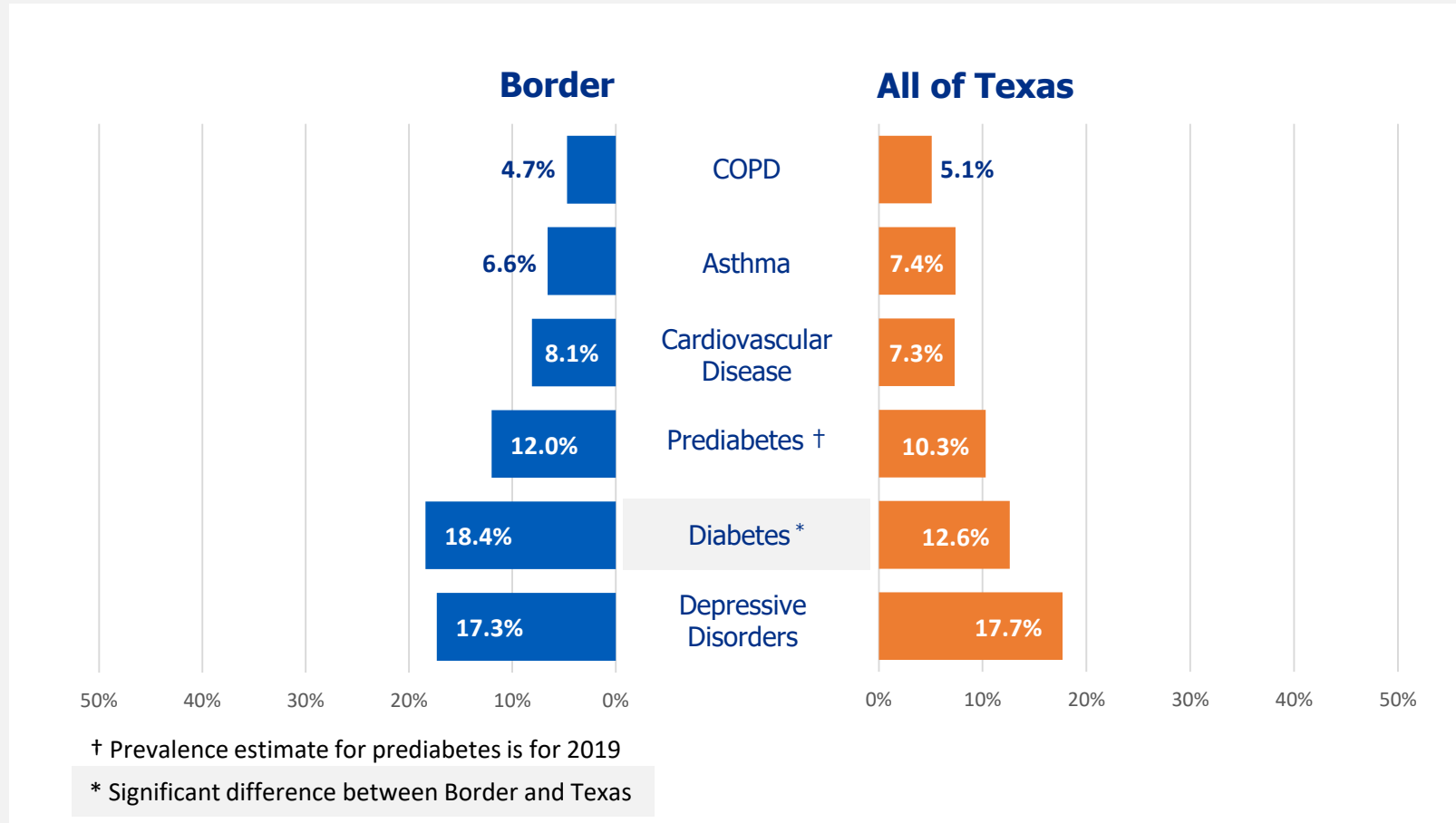
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Disease Burden: Key Points

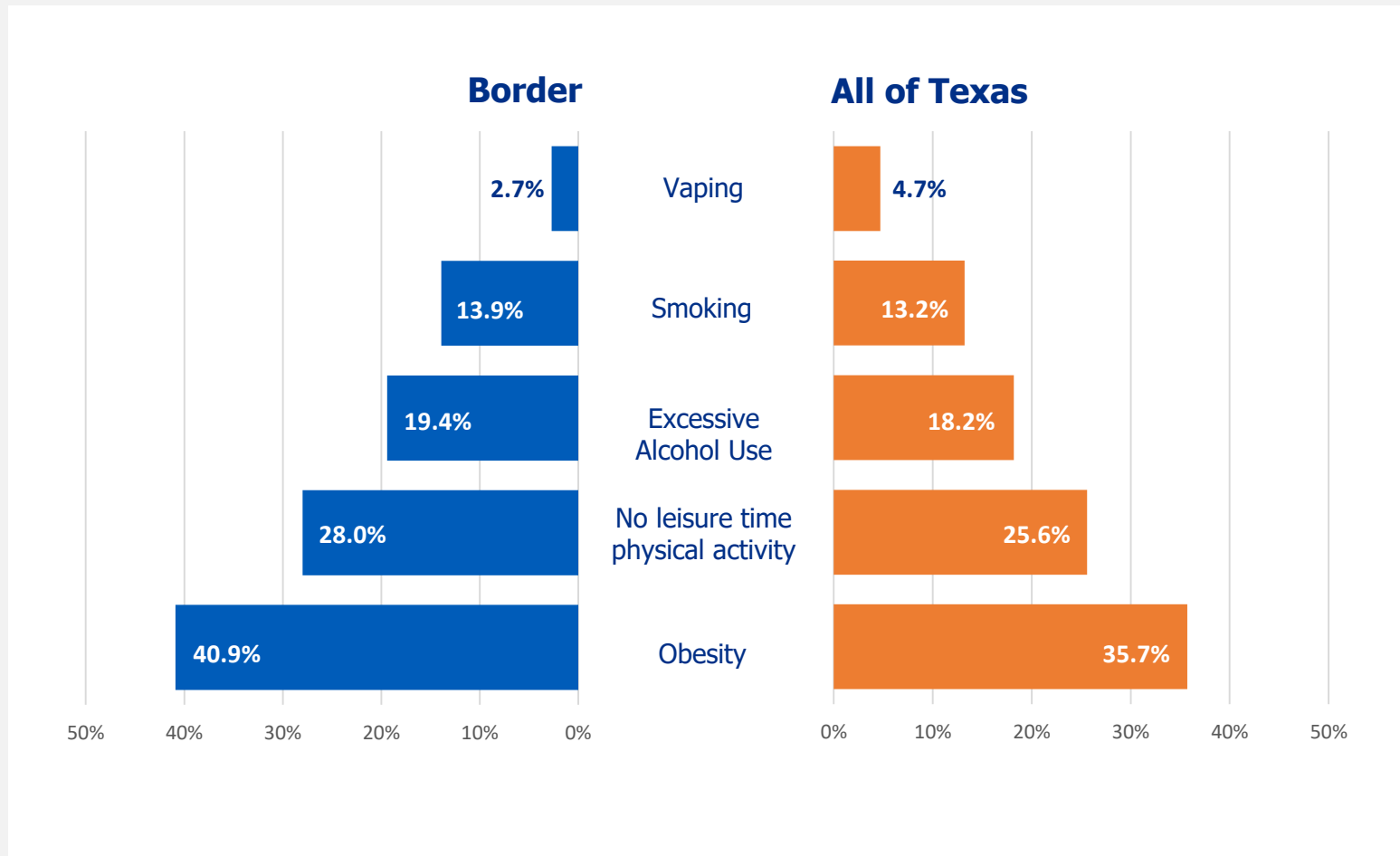
- **Border Health Indicators Noticeably Higher Compared to All of Texas:***
 - Diabetes prevalence
 - Poor physical health days (14 or more days total)
 - Food insecurity
 - Could not see a doctor/healthcare provider due to cost
- **Most common inpatient admissions in Border Counties during 2020:**
 - Deliveries, sepsis, COVID-19, heart attacks, kidney disease, pneumonia

*Data from Texas Behavioral Risk Factor Surveillance System – annual data derived from telephonic surveys of adult Texans

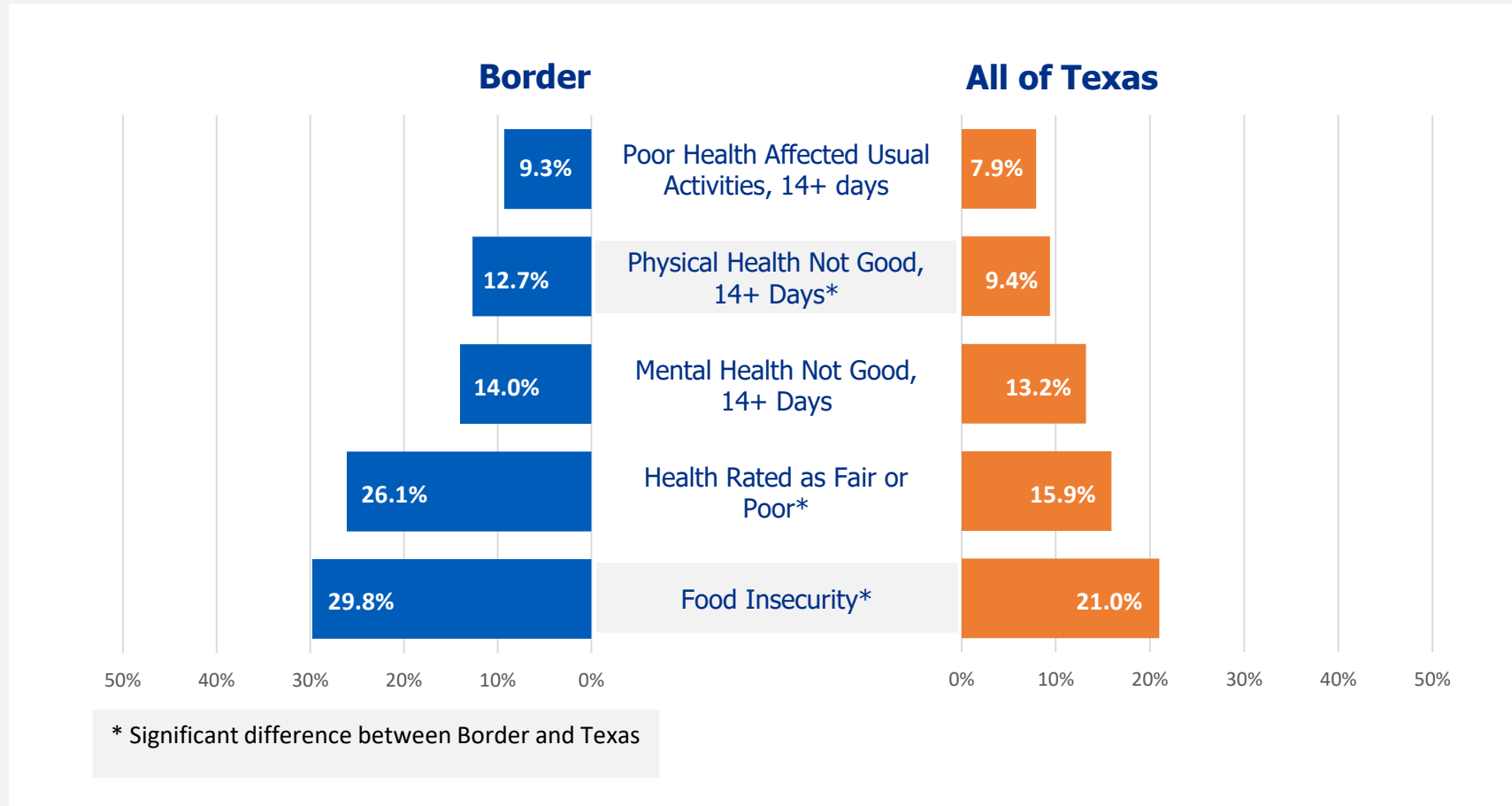
Chronic Health Conditions



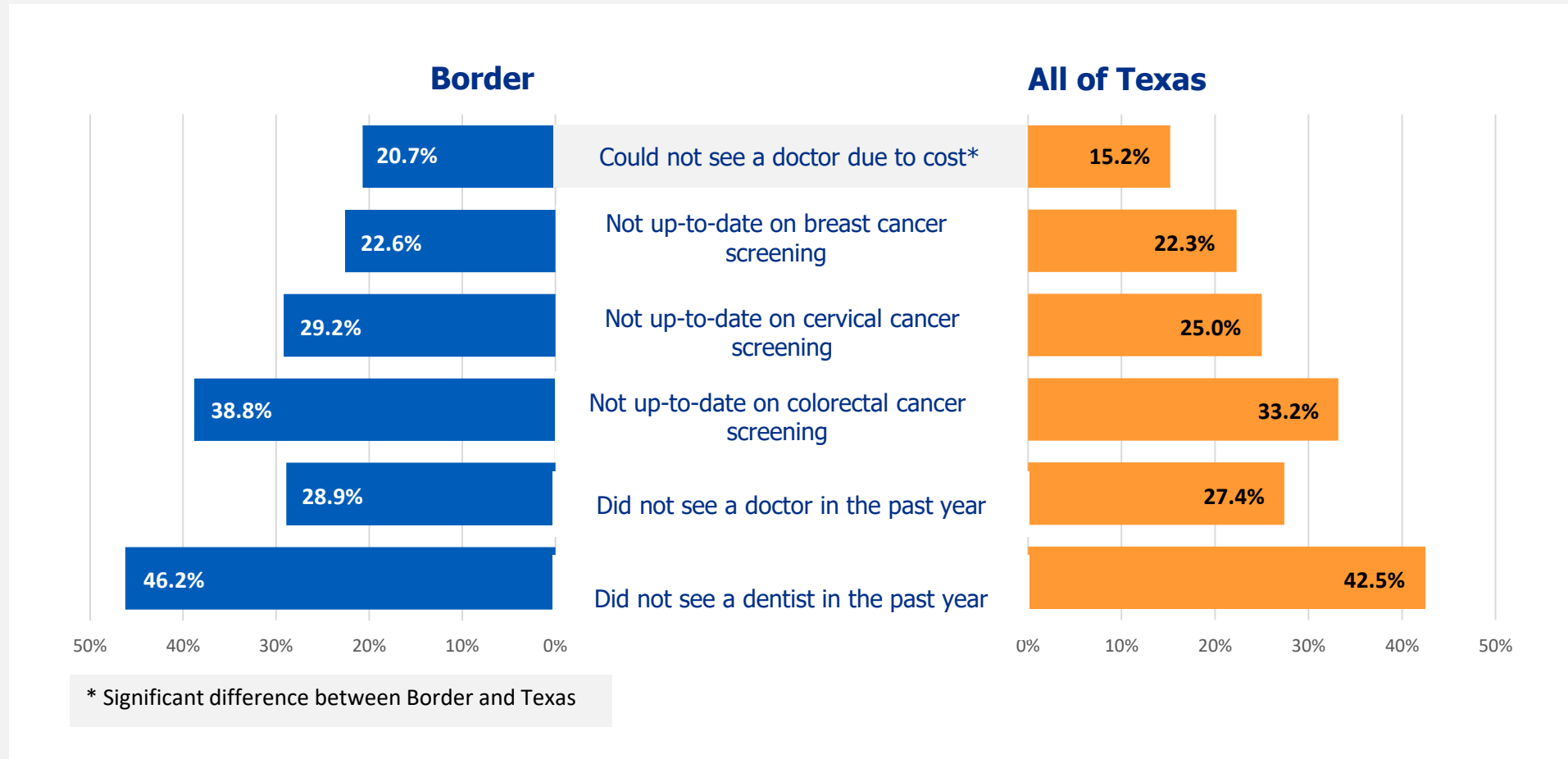
Risk Factors



Health Status Indicators



Healthcare Access Indicators



Top 10 Principal Diagnoses – Inpatient Admissions

Border (Total Visits = 246,485)

Rank	Top 10 Discharge Diagnoses (ICD-10 code) for 2020	Count	Percent of Total
1	Single liveborn infant, delivered vaginally (Z3800)	21,100	8.6%
2	Sepsis, unspecified organism (A419)	15,874	6.4%
3	Single liveborn infant, delivered by cesarean (Z3801)	13,612	5.5%
4	COVID-19 (U071)	12,454	5.1%
5	Maternal care for low transverse scar from previous cesarean delivery (O34211)	5,474	2.2%
6	Other specified sepsis (A4189)	5,308	2.2%
7	Non-ST elevation (NSTEMI) myocardial infarction (I214)	2,559	1.0%
8	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease (I130)	2,497	1.0%
9	Encounter for full-term uncomplicated delivery (O80)	2,427	1.0%
10	Pneumonia, unspecified organism (J189)	2,151	0.9%

All of Texas (Total Visits = 2,925,712)

Rank	Top 10 Discharge Diagnoses (ICD-10 code) for 2020	Count	Percent of Total
1	Single liveborn infant, delivered vaginally (Z3800)	223,737	7.6%
2	Sepsis, unspecified organism (A419)	136,651	4.7%
3	Single liveborn infant, delivered by cesarean (Z3801)	115,737	4.0%
4	COVID-19 (U071)	107,301	3.7%
5	Maternal care for low transverse scar from previous cesarean delivery (O34211)	45,165	1.5%
6	Major depressive disorder, recurrent severe w/o psych features (F332)	42,940	1.5%
7	Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or unspecified chronic kidney disease (I130)	37,112	1.3%
8	Other specified sepsis (A4189)	36,360	1.2%
9	Hypertensive heart disease with heart failure (I110)	33,709	1.2%
10	Acute kidney failure, unspecified (N179)	33,248	1.1%

Data Source: Inpatient Public Use Data File (First through Fourth Quarters, 2020).

Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. September 2021.

Underlying Causes of Death

Top 10 Leading Causes of Death for 2020 [^]	Border Counties			Texas		
	Total	Death Rate	Rank	Total	Death Rate	Rank
COVID-19 ¹	6,765	238.3	1	31,273	105.4	3
Diseases of heart	4,745	167.1	2	49,797	167.8	1
Malignant neoplasms	3,285	115.7	3	41,880	141.1	2
Alzheimer's disease	1,204	42.4	4	11,838	39.9	5
Diabetes mellitus	1,166	41.1	5	7,903	26.6	8
Accidents	870	30.6	6	12,600	42.5	4
Cerebrovascular diseases	837	29.5	7	11,570	39	6
Chronic liver disease and cirrhosis	673	23.7	8	4,898	16.5	9
Chronic lower respiratory disease	626	22	9	10,338	34.8	7
Nephritis, nephrotic syndrome and nephrosis	531	18.7	10	4,372	14.7	10

¹ Count of COVID-19 Related Deaths as determined by visual inspection of Texas death certificates conducted by the Department of State Health Services Laboratory and Infectious Disease Services Division as of September 24, 2021. All other death totals in this report are calculated based on underlying cause ICD-10 codes assigned to the death record by the National Center for Health Statistics.

CDR: Crude Death Rate per 100,000 populations. Population projections for 2020 provided by the Texas Demographics Center.

[^]Death data for 2020 are provisional. Provisional statistics are based on data that has not yet been finalized and may be incomplete and subject to change.

Workforce Shortages



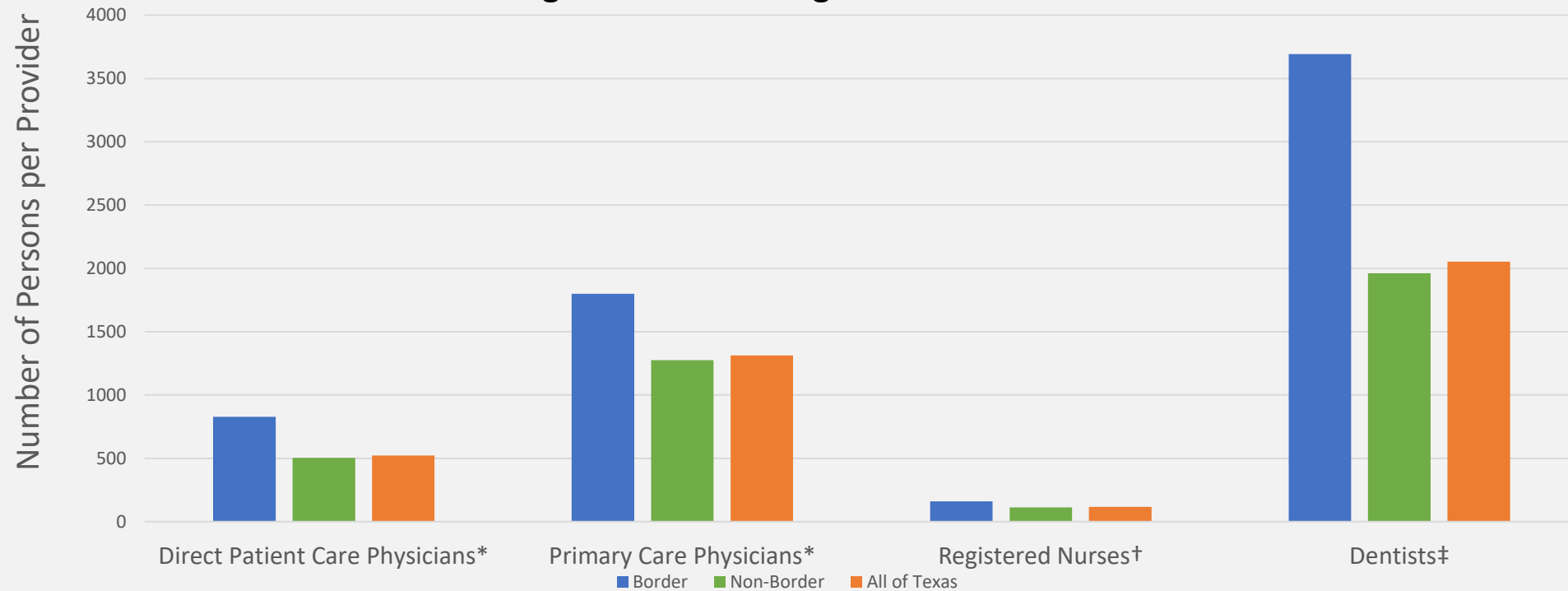
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Healthcare Providers

Population to Provider Ratio

Higher Ratios = Higher Unmet Need



Data Sources:

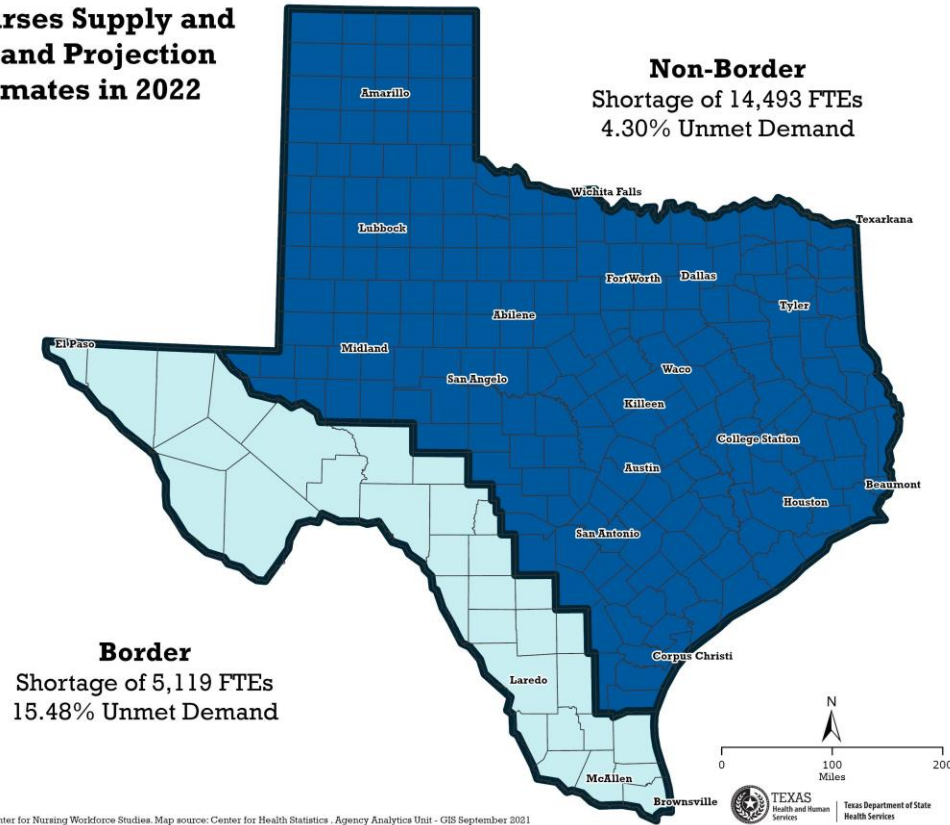
* Texas Medical Board, 2020

† Texas Board of Nursing, 2019

‡ Texas State Board of Dental Examiners, 2020

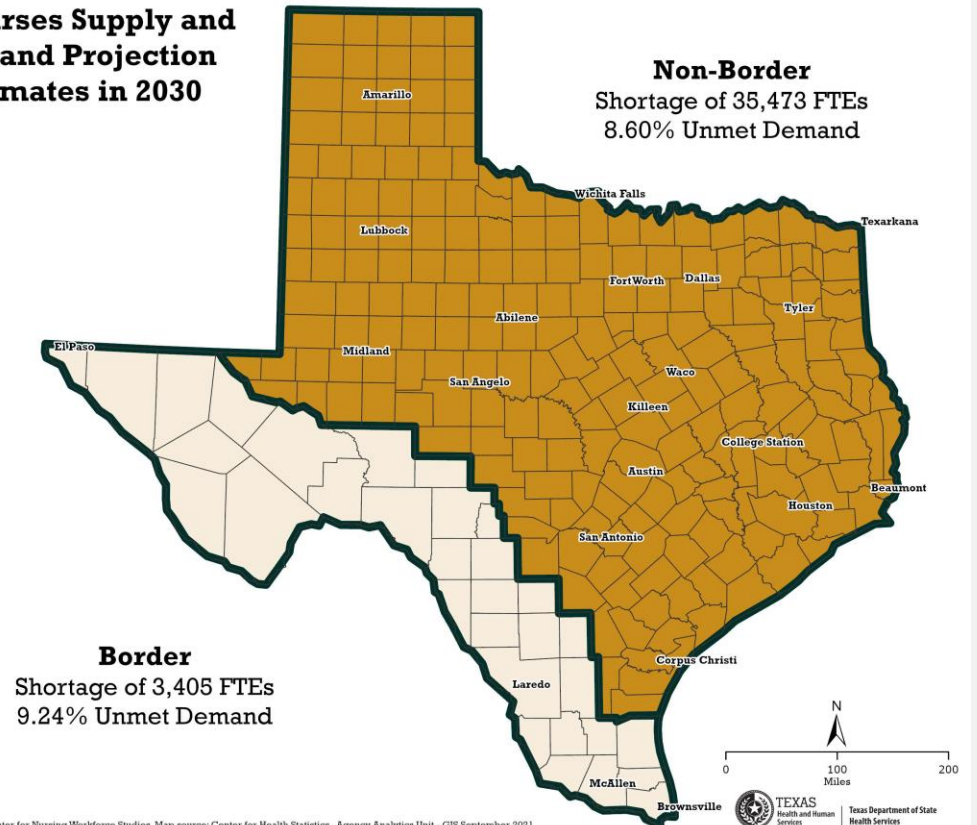
Nursing Shortages

All Nurses Supply and Demand Projection Estimates in 2022



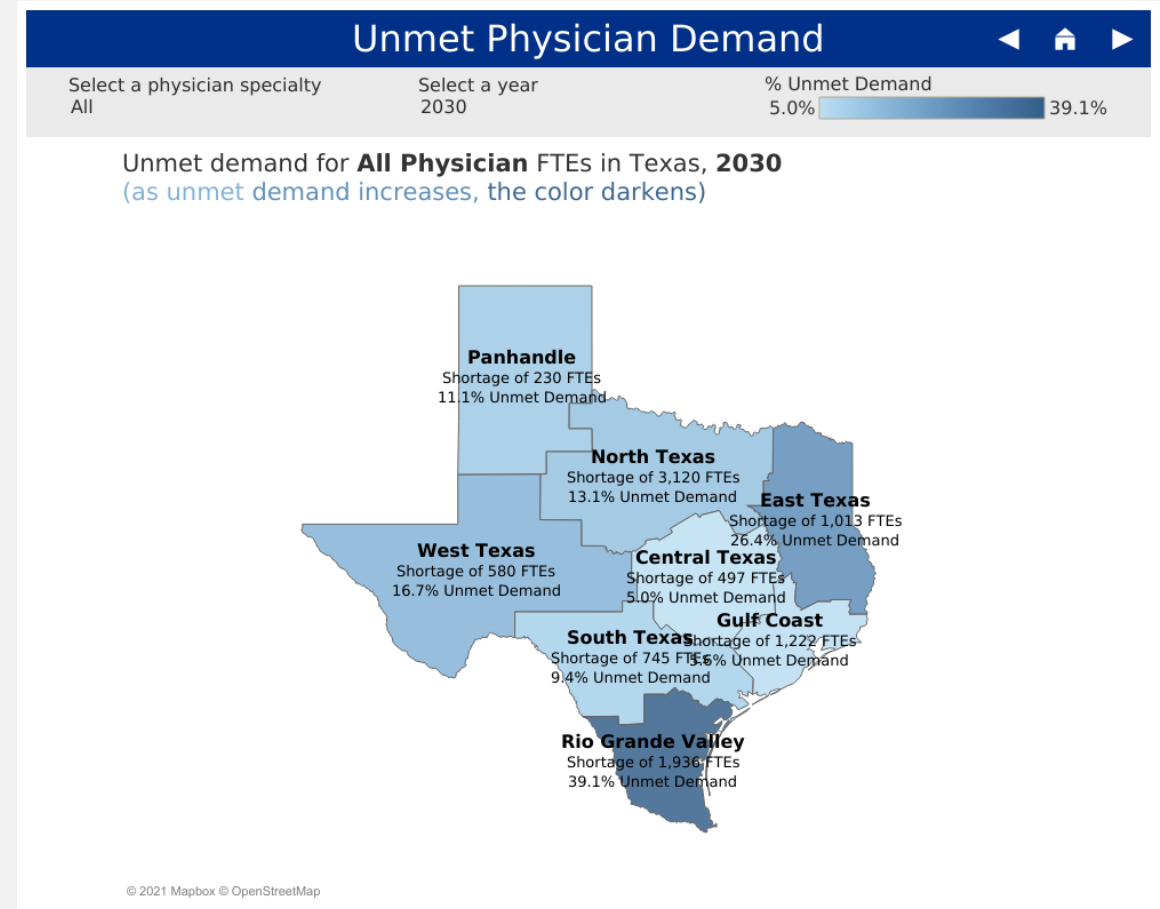
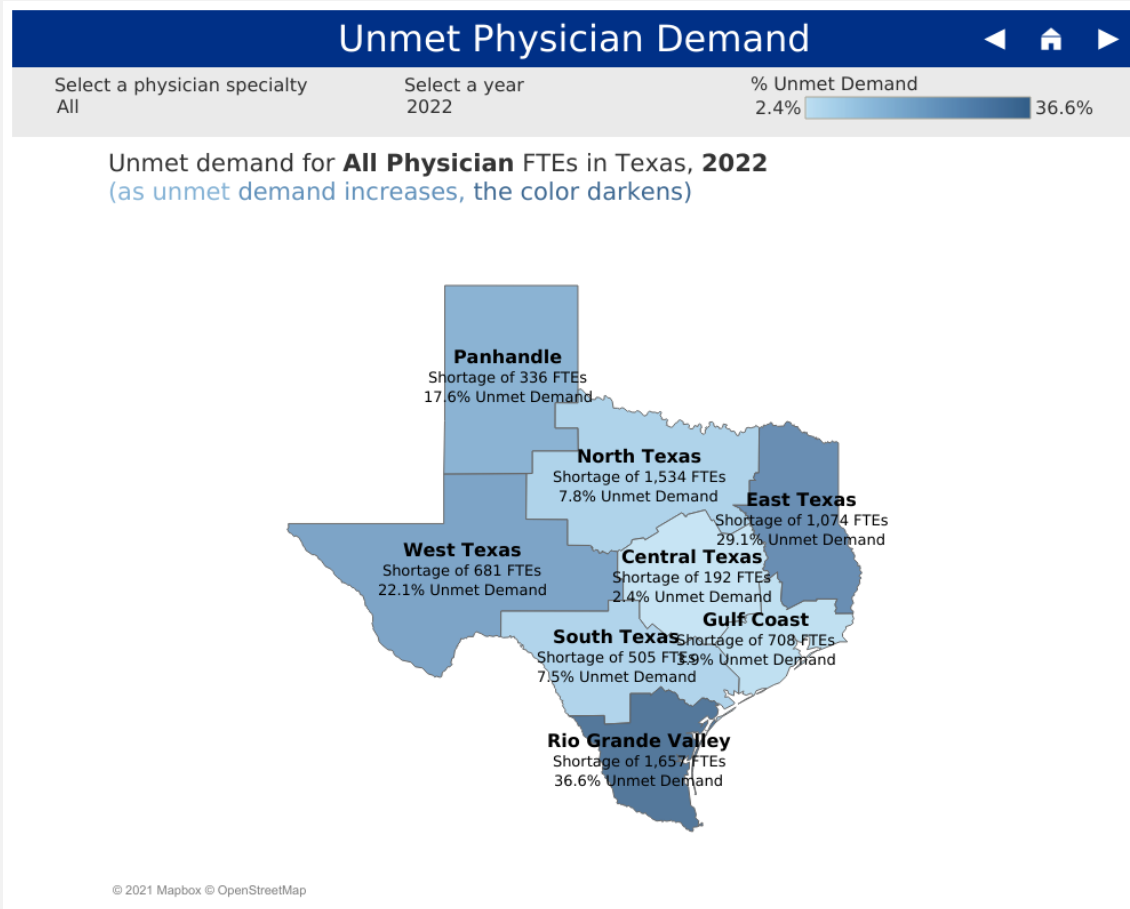
Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics - Agency Analytics Unit - GIS September 2021

All Nurses Supply and Demand Projection Estimates in 2030



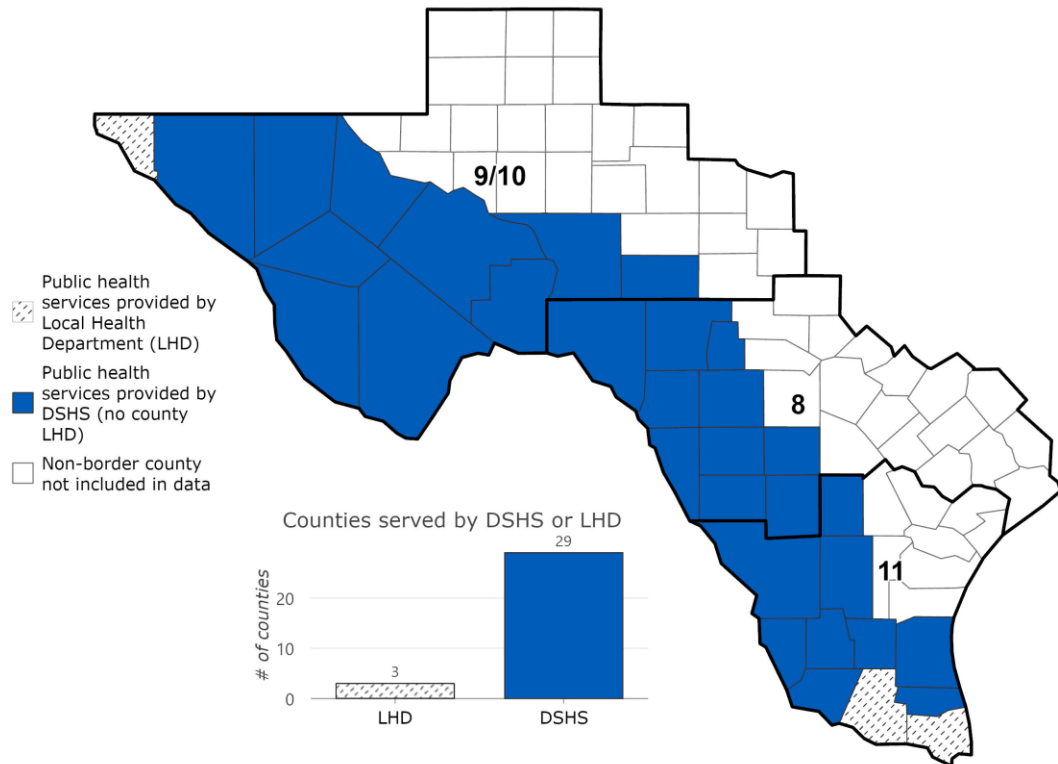
Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics - Agency Analytics Unit - GIS September 2021

Physician Shortages



CDC Public Health Workforce Grant (PHWG)

DSHS and Local Health Department Coverage



Created by: DSHS - RLHO, Sept 2021
Data sources: DSHS

- Current DSHS Border Public Health Program is 24 FTEs
 - 7 FTEs central office
 - 6 FTEs PHR 08
 - 4 FTEs PHR 09/10
 - 7 FTEs PHR 11
- PHWG will add 18 new FTEs
 - 6 FTES central office
 - 2 FTEs PHR 08
 - 6 FTEs PHR 09/10
 - 4 FTEs PHR 11
- PHWG adds **\$1,118,723 per year** personnel investment to the DSHS Border Public Health Program
- DSHS PHWG also provides grants to 6 local health entities in the border region, adding 60.5 FTEs
- Grant will end in 2023

Additional Data

- The Appendix includes additional information:
 - Emergency department utilization
 - Nursing and physician workforce shortage demand and supply projections
- More information is available on the DSHS Texas Health Data portal:
<https://healthdata.dshs.texas.gov/>

Appendix of Additional Data



Top 10 Principal Diagnoses – Emergency Department Visits

Border (Total Visits = 792,486)

Rank	Top 10 Discharge Diagnoses (ICD-10 code) for 2020	Count	Percent of Total
1	COVID-19 (U071)	33,693	4.3%
2	Urinary tract infection, site not specified (N390)	17,283	2.2%
3	Acute upper respiratory infection, unspecified (J069)	16,798	2.1%
4	Sepsis, unspecified organism (A419)	14,631	1.8%
5	Contact with and exposure to other viral communicable diseases (Z20828)	12,478	1.6%
6	Other chest pain (R0789)	12,010	1.5%
7	Viral infection, unspecified (B349)	10,757	1.4%
8	Flu due to other identified influenza virus with other respiratory manifestation (J101)	9,622	1.2%
9	Chest pain, unspecified (R079)	8,473	1.1%
10	Encounter for observation for suspected exposure to other biological agents ruled out (Z03818)	7,637	1.0%

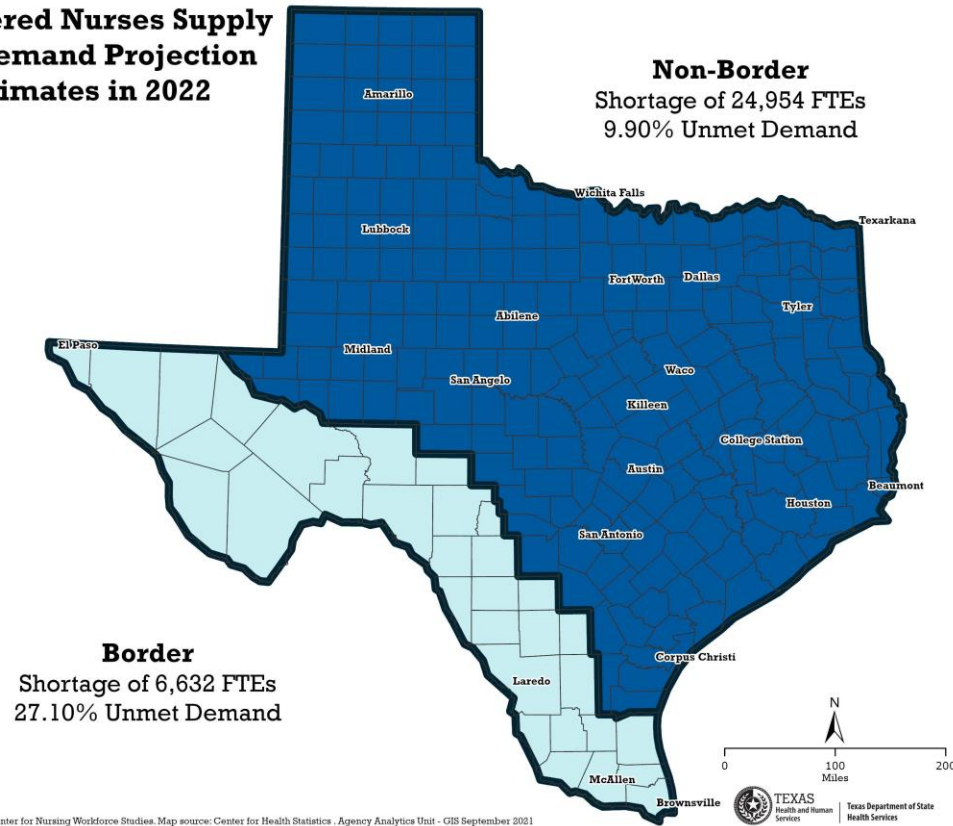
All of Texas (Total Visits = 9,984,936)

Rank	Top 10 Discharge Diagnoses (ICD-10 code) for 2020	Count	Percent of Total
1	COVID-19 (U071)	377,193	3.8%
2	Contact with and exposure to other viral communicable diseases (Z20828)	232,163	2.3%
3	Other chest pain (R0789)	185,071	1.9%
4	Acute upper respiratory infection, unspecified (J069)	182,113	1.8%
5	Urinary tract infection, site not specified (N390)	172,074	1.7%
6	Chest pain, unspecified (R079)	145,566	1.5%
7	Sepsis, unspecified organism (A419)	122,750	1.2%
8	Viral infection, unspecified (B349)	106,580	1.1%
9	Acute pharyngitis, unspecified (J029)	93,551	0.9%
10	Cough (R05)	89,615	0.9%

Data Source: Inpatient Public Use Data Files and Outpatient Public Use Data Files (First through Fourth Quarters, 2020).
Texas Department of State Health Services, Center for Health Statistics, Austin, Texas. September 2021.

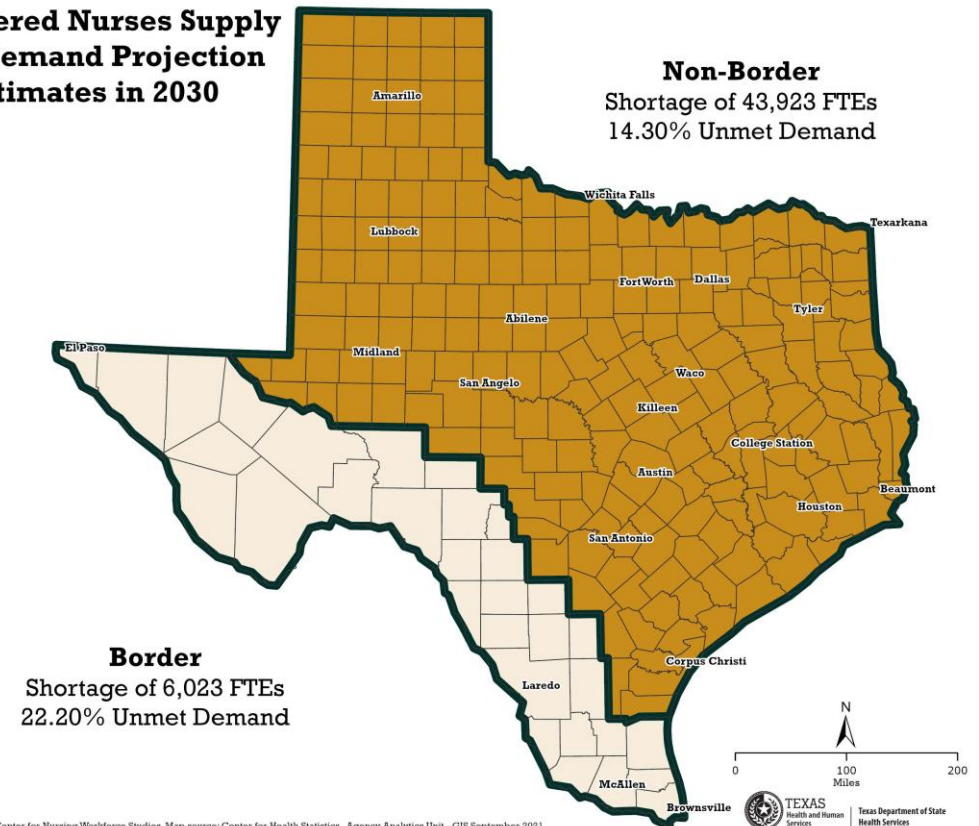
Nursing Shortages by Type

Registered Nurses Supply and Demand Projection Estimates in 2022



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

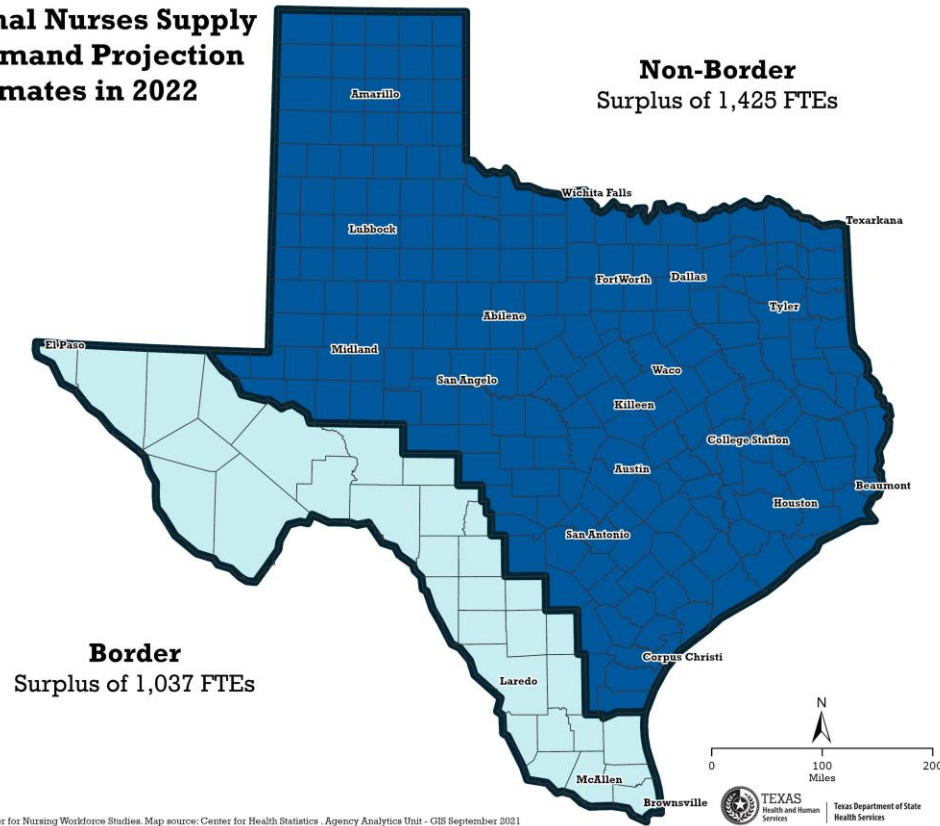
Registered Nurses Supply and Demand Projection Estimates in 2030



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

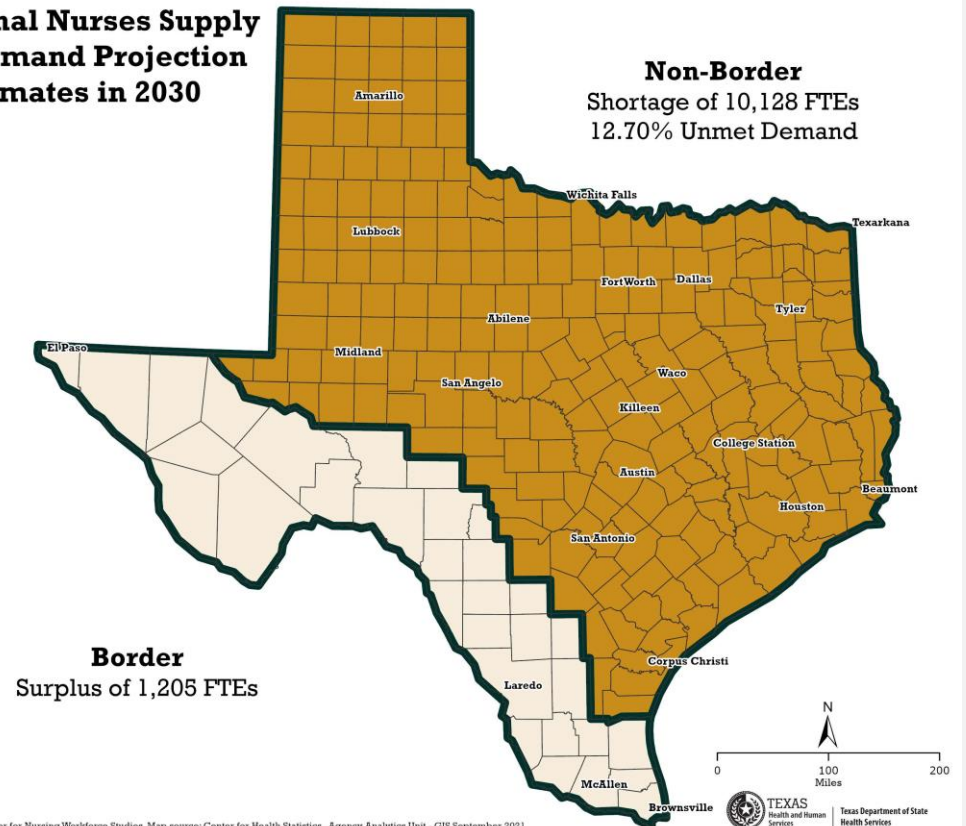
Nursing Shortages by Type

Vocational Nurses Supply and Demand Projection Estimates in 2022



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

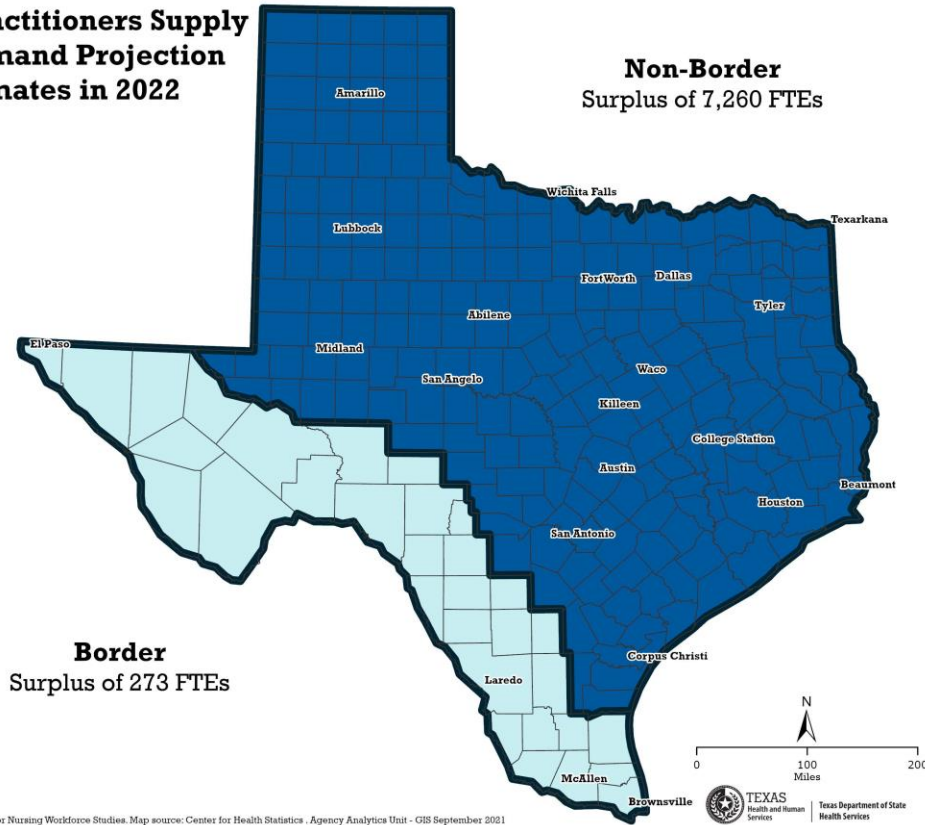
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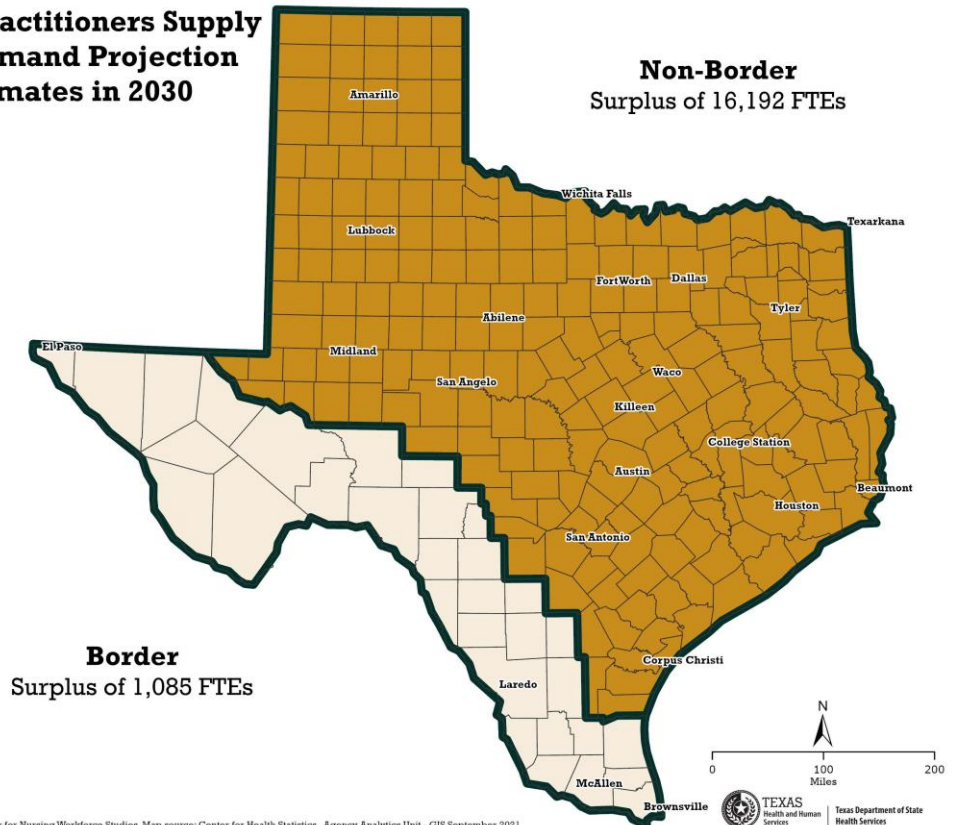
Nursing Shortages by Type

Nurse Practitioners Supply and Demand Projection Estimates in 2022



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

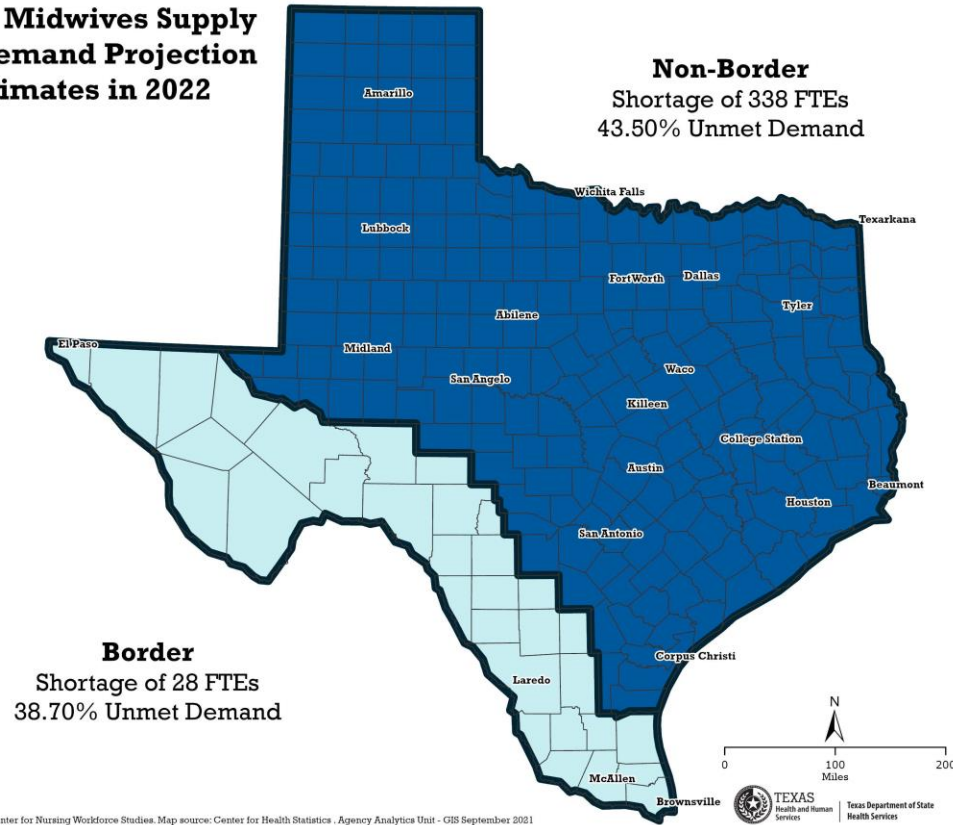
Nurse Practitioners Supply and Demand Projection Estimates in 2030



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

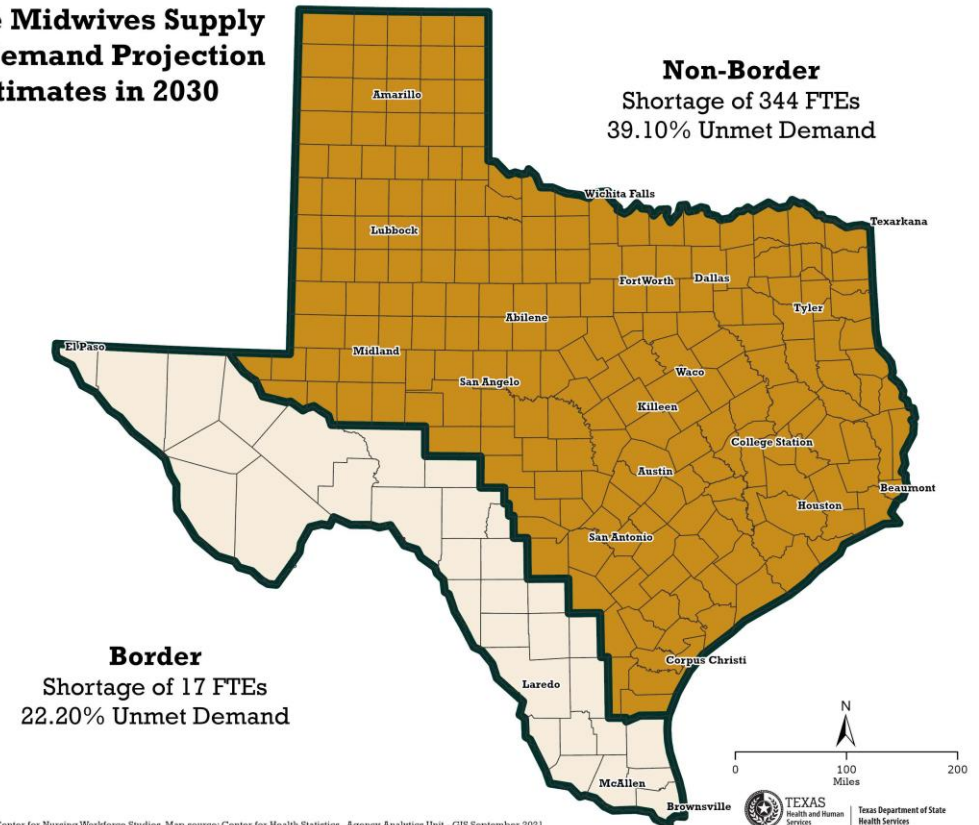
Nursing Shortages by Type

Nurse Midwives Supply and Demand Projection Estimates in 2022



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

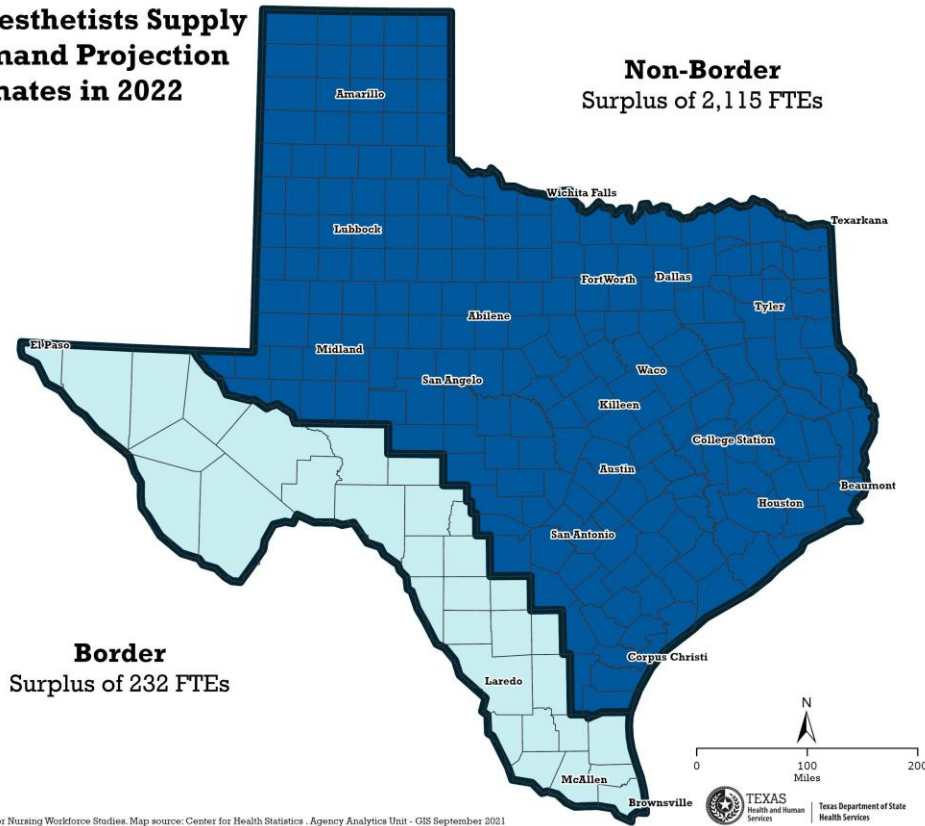
Nurse Midwives Supply and Demand Projection Estimates in 2030



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

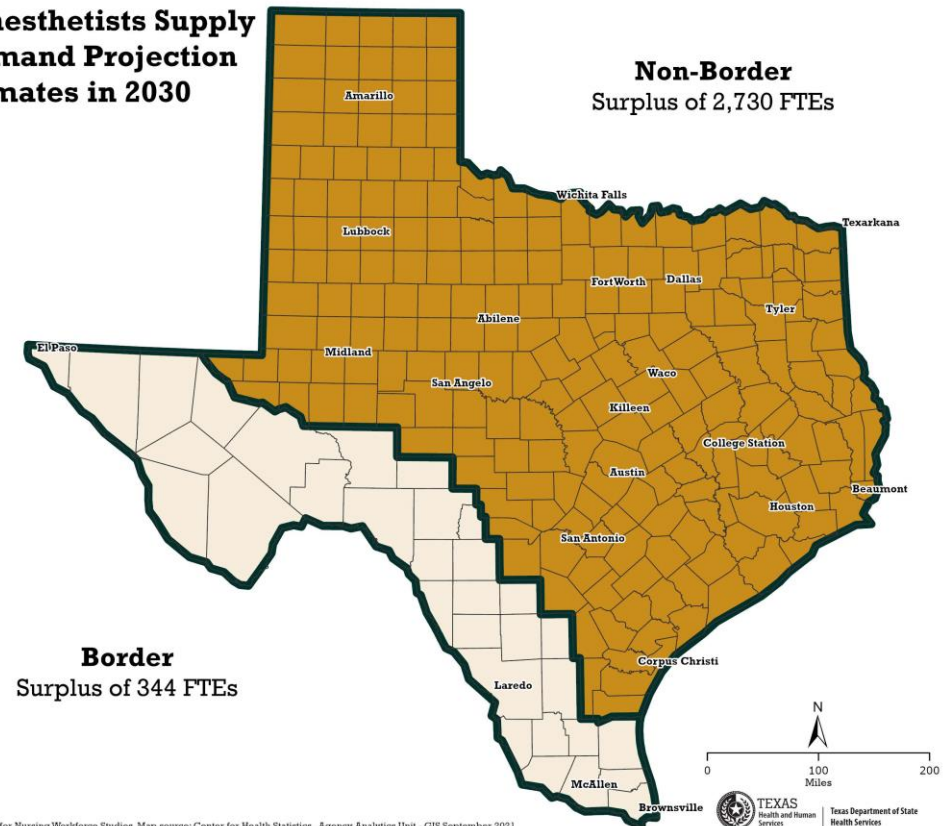
Nursing Shortages

Nurse Anesthetists Supply and Demand Projection Estimates in 2022



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

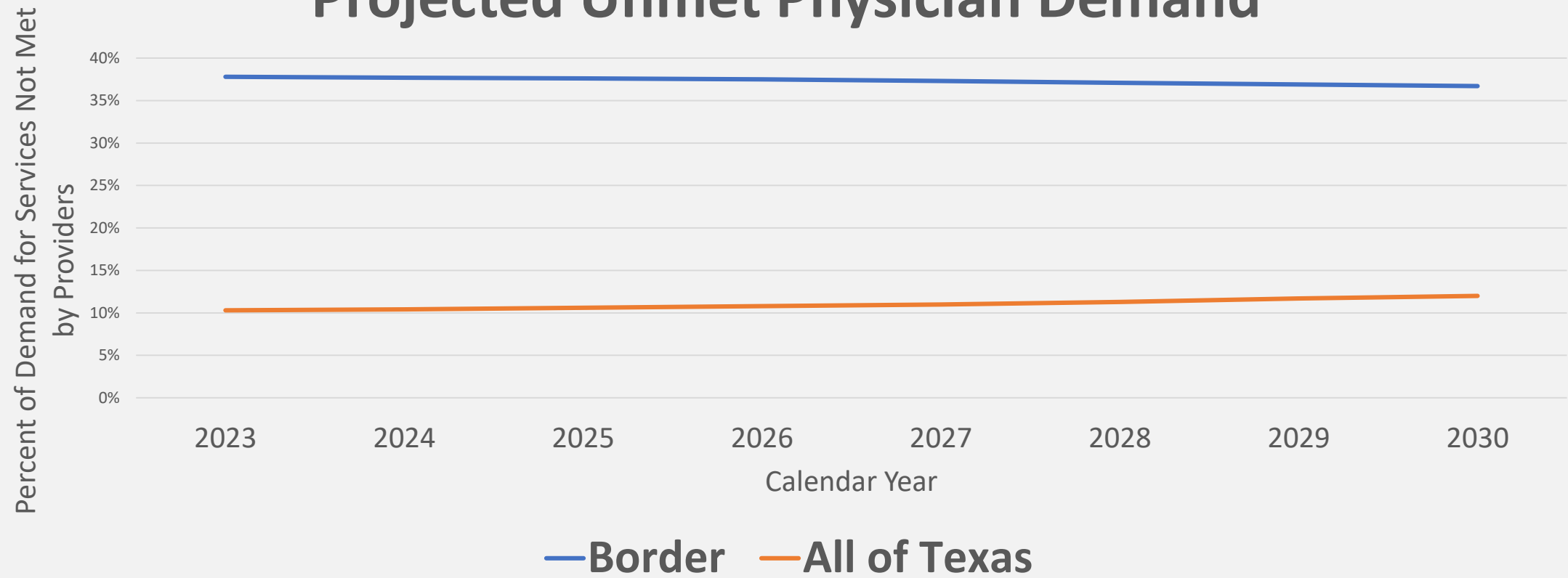
Nurse Anesthetists Supply and Demand Projection Estimates in 2030



Data source: Texas Center for Nursing Workforce Studies. Map source: Center for Health Statistics, Agency Analytics Unit - GIS September 2021

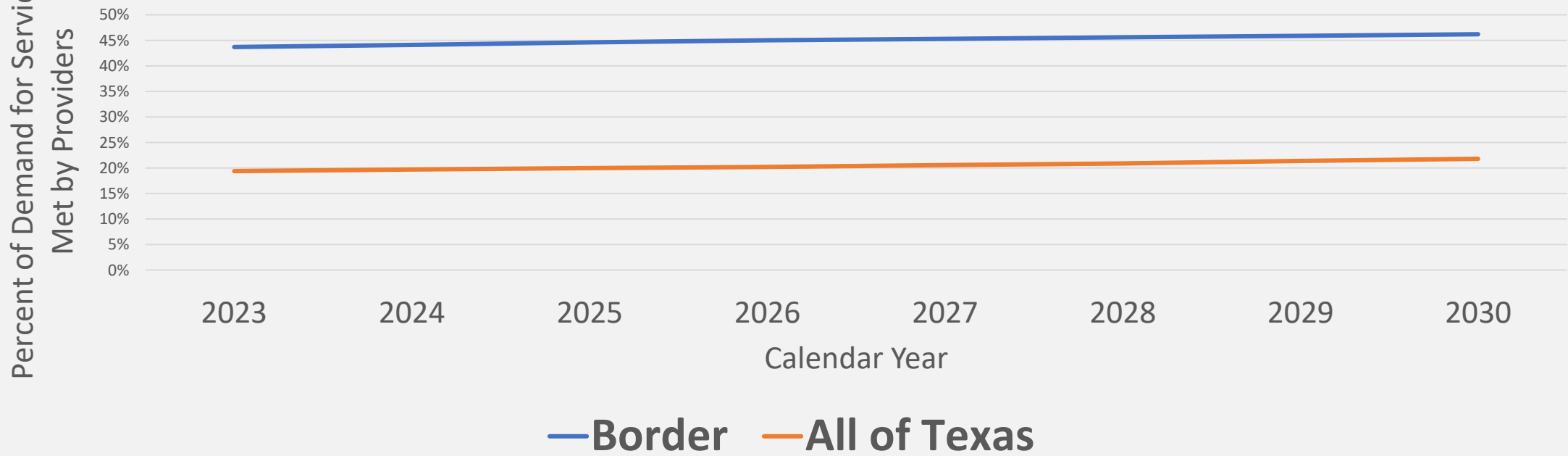
Physician Shortages

Projected Unmet Physician Demand



Primary Care Projected Shortages

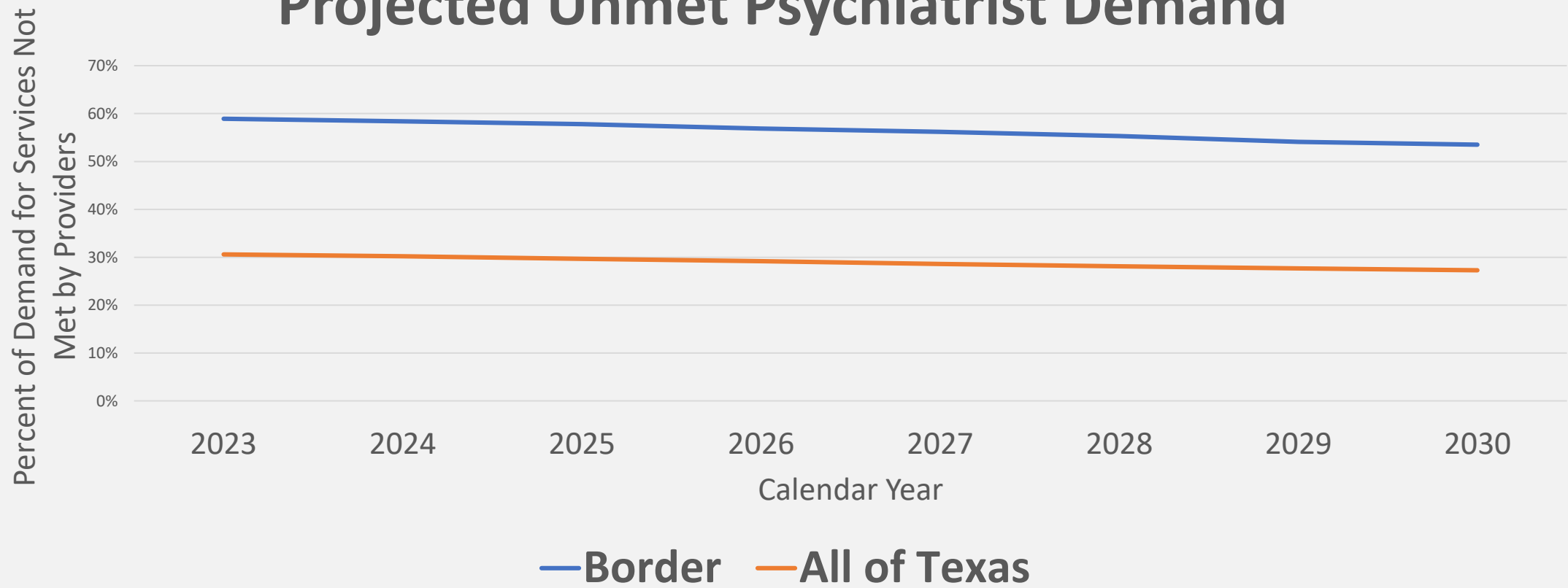
Projected Unmet Primary Care Physician Demand



Data Source: IHS Markit Health Workforce Model

Psychiatrist Projected Shortages

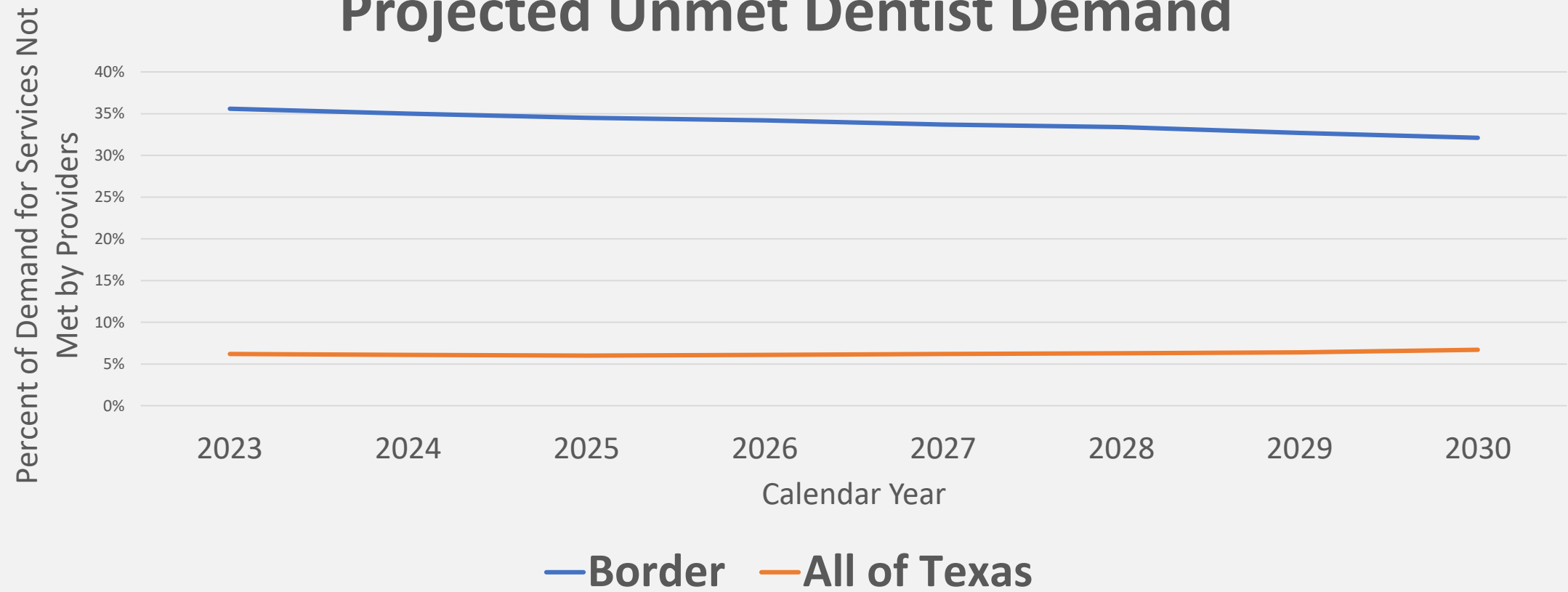
Projected Unmet Psychiatrist Demand



Data Source: IHS Markit Health Workforce Model

Dentist Projected Shortages

Projected Unmet Dentist Demand



Data Source: IHS Markit Health Workforce Model



Thank you

Texas Border Health Issues

Presentation to the House Committee on Public Health

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