Health Workforce Supply and Demand Projections

Physician Supply and Demand Projections

2020-2032

About the Projection Model

- DSHS contracted with IHS Markit to develop state-level projections for physicians, nurses, and oral health providers

- Same model used by Health Resources and Services Administration, American Association of Medical Colleges, and other state-level workforce entities

- Comprised of two models
  - Health Care Workforce Supply Model
    - Uses a microsimulation approach that models likely career choices of providers based on what we know about them from licensure data, education data and other sources such as the American Community Survey
  - Healthcare Demand Model
    - Demand for health care services and providers based on population characteristics, health care use patterns, and staffing patterns

- Projections in the following slides were developed using data from 2015-2018 and do NOT include the impact of COVID-19 on the healthcare workforce

Physician Supply Trends, 2015-2021

	2015	2016	2017	2018	2019	2020	2021
All Direct Patient Care Physicians	49,122	50,948	52,550	54,233	55,358	56,765	57,693
Family Medicine	9,207	9,405	9,682	9,843	10,012	10,256	10,518
Pediatrics	3,870	4,015	4,106	4,231	4,296	4,367	4,399
Psychiatry	2,052	2,112	2,172	2,233	2,280	2,361	2,438

- The numbers in the table above represent the actual number of physicians practicing in Texas from 2015-2021
- Family medicine, pediatrics, and psychiatry represent just three specialties a direct patient care physician may practice
- These numbers come from the Texas Medical Board's licensure data that is submitted to the Health Professions Resource Center annually and then geocoded and reported

Source: Health Professions Resource Center – Supply Tables - https://www.dshs.texas.gov/chs/hprc/health.shtm

Projections for Family Medicine Physician FTEs

Supply of and Demand for Family Medicine Physician FTEs
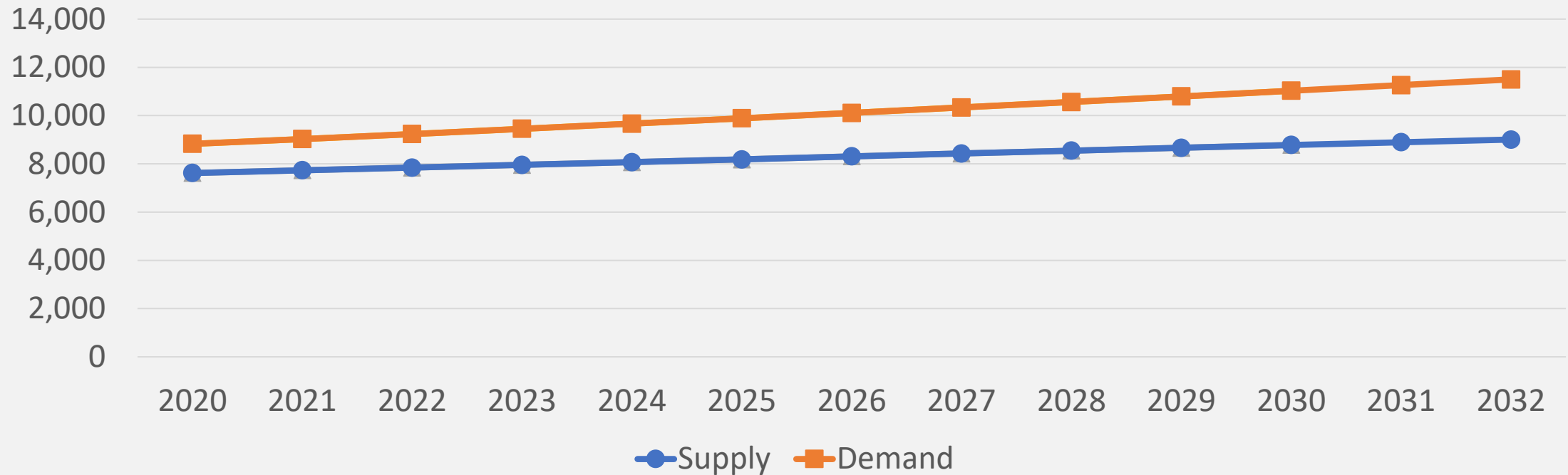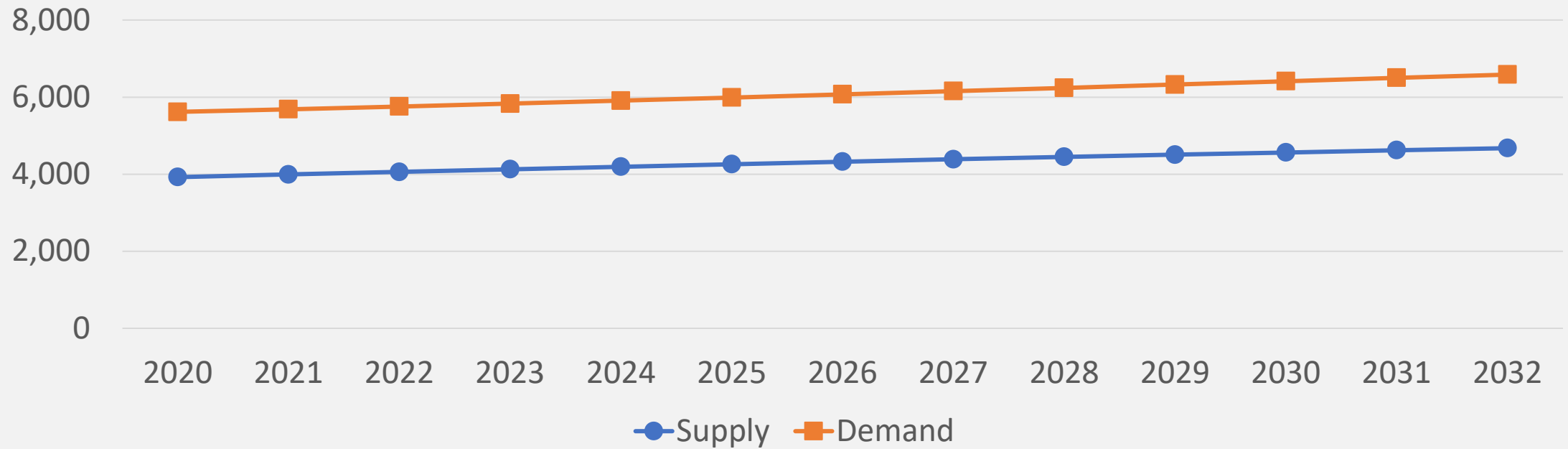

- Based on the projection models, demand for physicians practicing family medicine is projected to outpace supply every year, and the deficit is projected to grow from a shortage of 1,209 FTEs in 2020 to 2,495 FTEs in 2032.

Projections for Family Medicine Physician FTEs

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	7,623	7,735	7,843	7,957	8,071	8,185	8,309	8,427	8,549	8,665	8,784	8,895	9,004
Demand	8,832	9,027	9,238	9,454	9,666	9,889	10,111	10,336	10,566	10,795	11,032	11,265	11,499
FTE Unmet Demand	1,209	1,292	1,395	1,497	1,595	1,704	1,802	1,909	2,017	2,130	2,248	2,370	2,495
% Unmet Demand	13.7%	14.3%	15.1%	15.8%	16.5%	17.2%	17.8%	18.5%	19.1%	19.7%	20.4%	21.0%	21.7%

Projections for Pediatrician FTEs

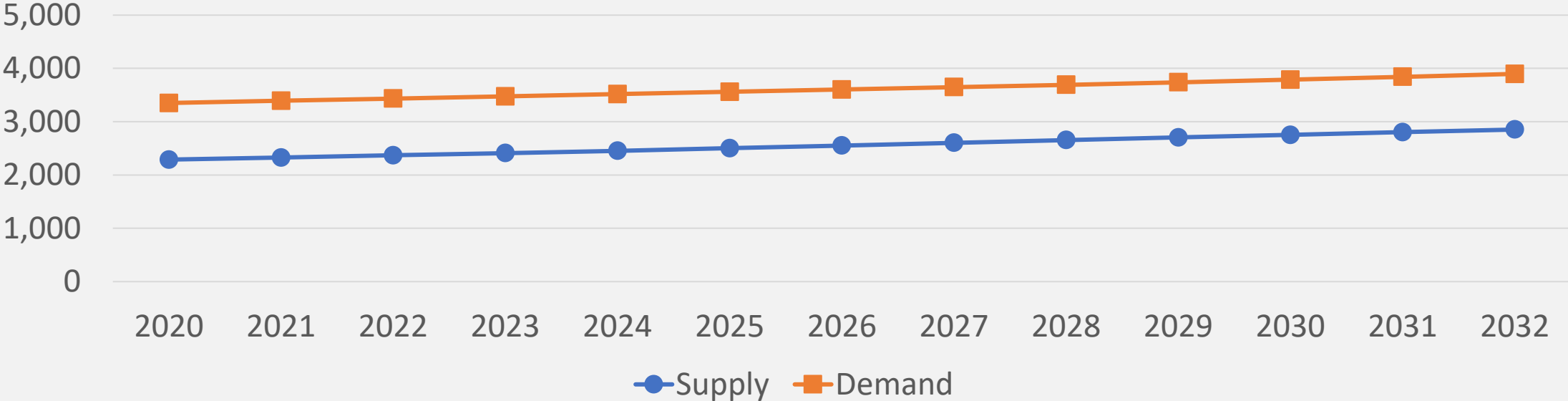## Supply of and Demand for Pediatrician FTEs

- Based on the projection models, demand for physicians practicing pediatric medicine is projected to outpace supply every year, and the deficit is projected to grow from a shortage of 1,695 FTEs in 2020 to 1,912 FTEs in 2032.

Projections for Pediatrician FTEs

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	3,923	3,991	4,059	4,126	4,191	4,257	4,323	4,387	4,449	4,506	4,564	4,621	4,675
Demand	5,618	5,686	5,758	5,831	5,908	5,989	6,073	6,157	6,242	6,328	6,415	6,502	6,588
FTE Unmet Demand	1,695	1,695	1,698	1,706	1,717	1,731	1,750	1,770	1,793	1,822	1,850	1,881	1,912
% Unmet Demand	30.2%	29.8%	29.5%	29.2%	29.1%	28.9%	28.8%	28.8%	28.7%	28.8%	28.8%	28.9%	29.0%

Source: Texas Health Data - https://healthdata.dshs.texas.gov/dashboard/health-care-workforce/workforce-supply-and-demand-projections

Projections for Psychiatrist FTEs

Supply of and Demand for Psychiatrist FTEs

- Based on the projection models, demand for physicians practicing psychiatric medicine is projected to outpace supply every year, and the deficit is projected to decrease slightly from a shortage of 1,062 FTEs in 2020 to 1,043 FTEs by 2032.

10

Projections for Psychiatrist FTEs

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	2,287	2,327	2,369	2,411	2,454	2,503	2,552	2,604	2,655	2,704	2,752	2,803	2,852
Demand	3,349	3,391	3,432	3,474	3,516	3,559	3,603	3,647	3,691	3,738	3,788	3,841	3,895
FTE Unmet Demand	1,062	1,064	1,063	1,063	1,063	1,057	1,050	1,043	1,037	1,034	1,036	1,038	1,043
% Unmet Demand	31.7%	31.4%	31.0%	30.6%	30.2%	29.7%	29.2%	28.6%	28.1%	27.7%	27.3%	27.0%	26.8%

Texas Physician Pipeline Model

- The Physician Supply and Demand Projections report released in May 2022 was based on a tool that focuses on the impact of changes in the number of Undergraduate Medical Education (UME) and Graduate Medical Education (GME) spaces and the projected number of physicians that will practice in the state.

- Between 2000 and 2019
  - 49.4% of Texas UME graduates remained in Texas for their GME
  - 58.9% of physicians who completed their GME in Texas stayed in state to practice after their residency

Texas Physician Pipeline Model – Annual Increase to Close Gap

Specialty	2032 Supply (FTEs)	2032 Demand (FTEs)	2032 Deficit (FTEs)	2032 Percent Demand Met	Additional GME Residency Slots Each Year Over Previous Year to Meet Demand
Family Medicine	9,004	11,499	2,495	78.3%	61
Pediatrics	4,675	6,588	1,913*	71.0%	55
Psychiatry	2,852	3,895	1,043	73.2%	31

- The table below shows the projected supply and demand for physicians specializing in family medicine, pediatrics, and psychiatry in 2032, the projected percent of demand met, as well as the additional number of GME slots that would need to be added EACH year from 2023 through 2032 to <u>close</u> the supply and demand gap by 2032.

* Note – Not an exact match to supply projection figure and table in slides 8 and 9 due to rounding differences

Texas Physician Pipeline Model – 10% Scenario

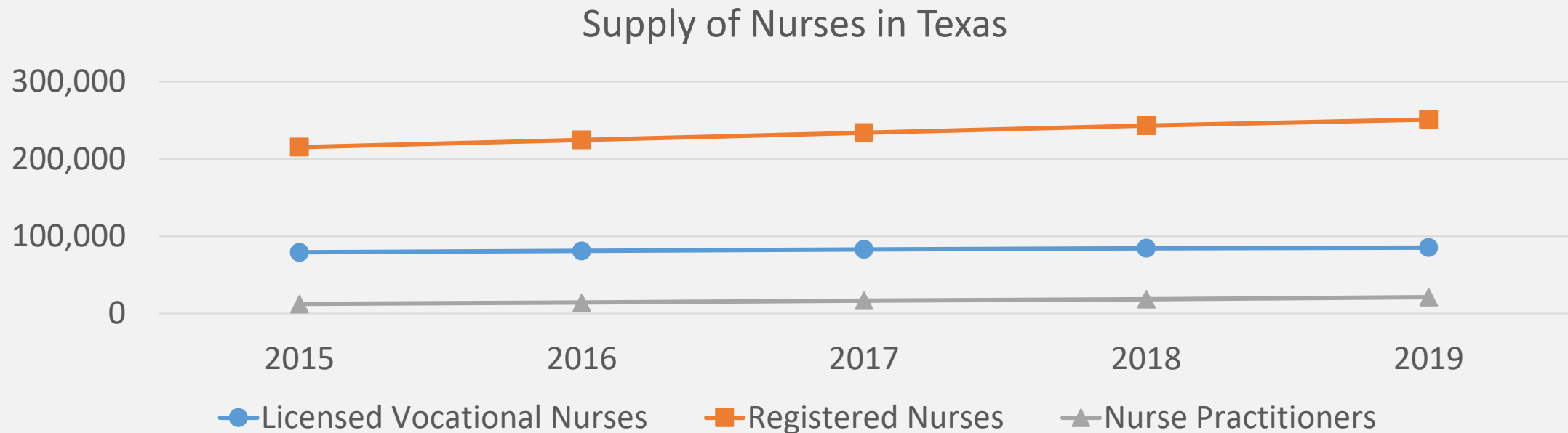| Specialty	2032 Supply (FTEs)	2032 Demand (FTEs)	2032 Deficit (FTEs)	10 Percent Increase per Year GME Resident Yield	Percent of Deficit Met by 10 Percent Increase
Family Medicine	9,004	11,499	2,495	1,758	70.4%
Pediatrics	4,675	6,588	1,913*	951	49.7%
Psychiatry	2,852	3,895	1,043	671	64.3%

- As alternative to the number of additional GME slots that would need to be added each year to close the supply and demand gap by 2032, this table how many additional physicians would be produced by increasing residency slots by 10% year-over-year for each of the three specialties and what percent of the deficit would be met by an annual 10% increase.

* Note – Not an exact match to supply projection figure and table in slides 8 and 9 due to rounding differences

Nurse Supply and Demand Projections

2020-2032

TEXAS
Health and Human Services

Texas Department of State Health Services

Supply of Nurses, 2015-2019

Supply of Nurses in Texas

- Supply numbers are based on counts of nurses with active licenses, working in a nursing position, in a Texas county
- Data obtained from the Texas Board of Nursing Licensure Renewal Files and then geocoded and filtered to "active, working in nursing, in Texas" by the Health Professions Resource Center and Texas Center for Nursing Workforce Studies
- More current files are expected from Board of Nursing this Fall

Source: Health Professions Resource Center – Supply Tables - https://www.dshs.texas.gov/chs/hprc/health.shtm

Supply of Nurses, 2015-2019

	2015	2016	2017	2018	2019
Licensed Vocational Nurses	79,154	80,993	82,901	84,524	85,345
Registered Nurses	215,436	224,780	234,027	243,288	251,253
Nurse Practitioners	12,421	14,191	16,776	18,563	21,281

Source: Health Professions Resource Center – Supply Tables - https://www.dshs.texas.gov/chs/hprc/health.shtm

Nursing Graduation Trends

Graduates from Nursing Education Programs

Legend: Licensed Vocational Nurses — Registered Nurses — Nurse Practitioners
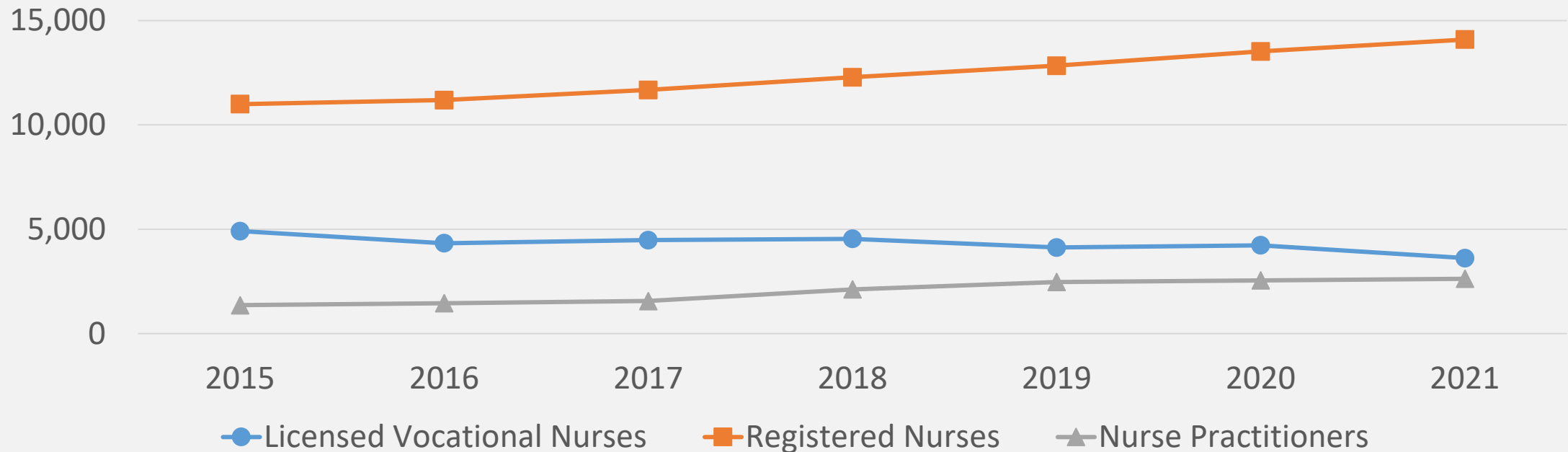
- Number of graduates as reported by vocational, professional, and graduate-level nursing education programs in annual Nursing Education Program Information Survey (NEPIS)
- Nursing programs continue to increase the number of RN and NP graduates while the number of LVN graduates is on the decline.

Nursing Graduation Trends

	2015	2016	2017	2018	2019	2020	2021
Licensed Vocational Nurses	4,909	4,331	4,477	4,539	4,123	4,229	3,618
Registered Nurses	10,999	11,189	11,677	12,284	12,839	13,525	14,096
Nurse Practitioners	1,364	1,454	1,561	2,121	2,472	2,552	2,629

Licensed Vocational Nurses Projections

## Supply of and Demand for Licensed Vocational Nurse FTEs
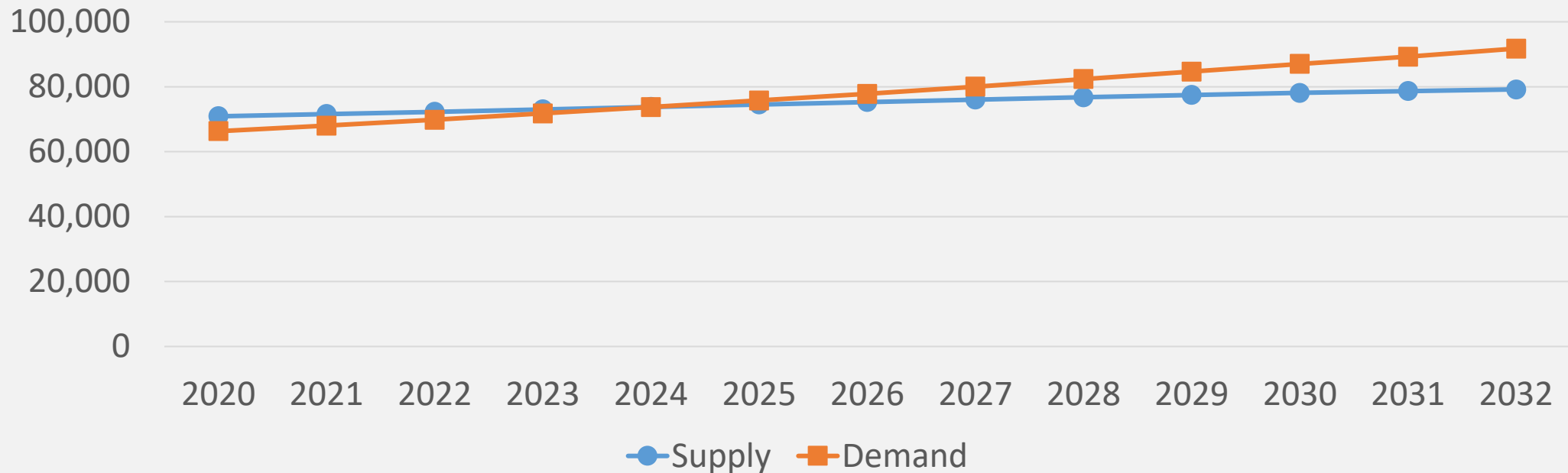
- Based on the projection models, demand for licensed vocational nurses is projected to outpace supply by 2025 and lead to a deficit of 12,572 FTEs by 2032.

Licensed Vocational Nurse Projections

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	70,925	71,593	72,299	73,048	73,779	74,538	75,288	76,030	76,771	77,491	78,108	78,693	79,179
Demand	66,319	68,008	69,837	71,808	73,758	75,799	77,800	80,045	82,381	84,667	87,031	89,280	91,750
FTE Unmet Demand	-4,606	-3,586	-2,462	-1,240	-21	1,261	2,512	4,015	5,609	7,176	8,923	10,588	12,572
% Unmet Demand	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	3.2%	5.0%	6.8%	8.5%	10.3%	11.9%	13.7%

Registered Nurse Projections

## Supply of and Demand for Registered Nurse FTEs
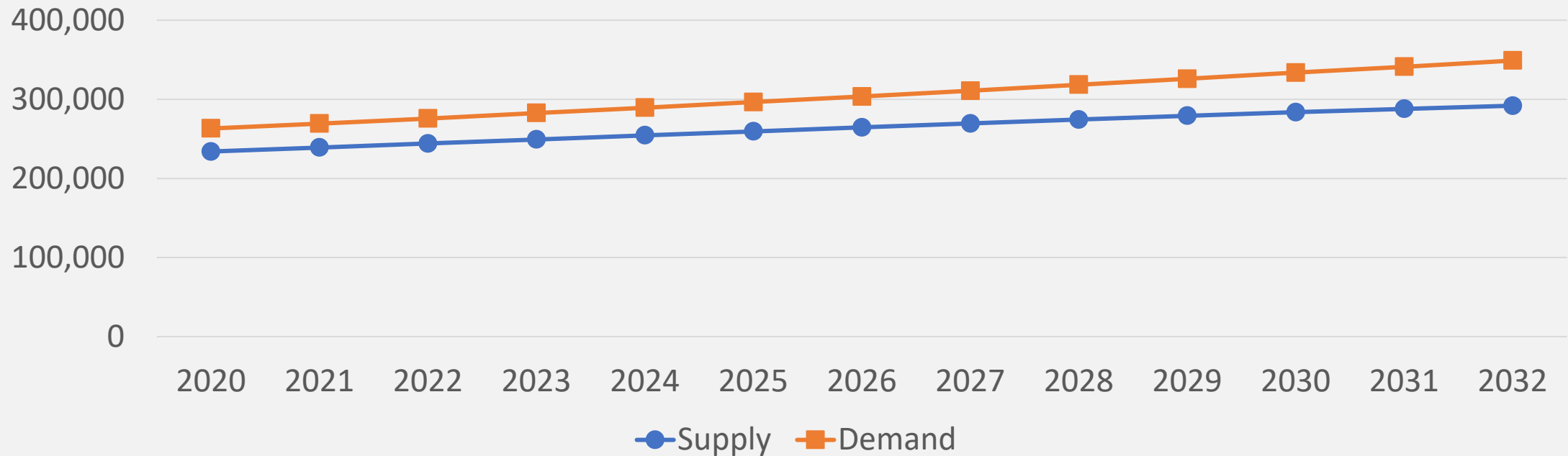
- Based on the projection models, demand for registered nurses is projected to outpace supply every year through 2032.
- The projected shortage of registered nurses is expected to increase from over 29,000 FTEs to 57,012 FTEs by 2032.

Registered Nurse Projections

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	233,968	239,007	244,127	249,240	254,379	259,451	264,491	269,462	274,349	279,096	283,656	287,925	291,872
Demand	263,133	269,197	275,713	282,580	289,352	296,416	303,363	310,755	318,375	325,860	333,602	341,086	348,883
FTE Unmet Demand	29,165	30,190	31,586	33,340	34,973	36,965	38,871	41,293	44,026	46,764	49,946	53,161	57,012
% Unmet Demand	11.1%	11.2%	11.5%	11.8%	12.1%	12.5%	12.8%	13.3%	13.8%	14.4%	15.0%	15.6%	16.3%

Nurse Practitioner Projections

Supply of and Demand for Nurse Practitioner FTEs
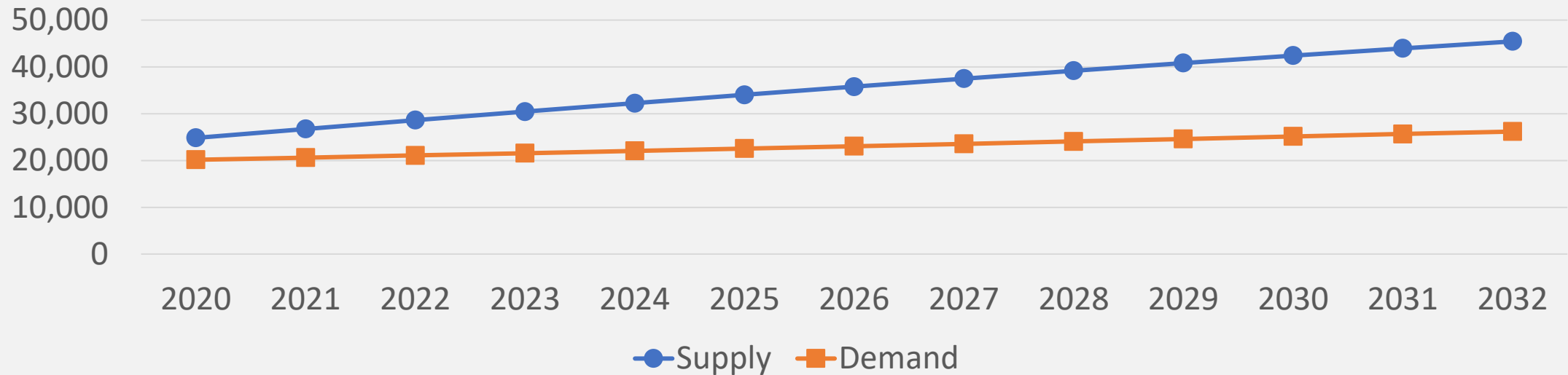
- Based on the projection models, the supply of nurse practitioners is projected to outpace demand every year through 2032, with the surplus growing from 4,676 to 19,271 FTEs by 2032.

Nurse Practitioner Projections

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Supply	24,854	26,750	28,620	30,455	32,250	34,034	35,781	37,491	39,175	40,827	42,417	43,974	45,462
Demand	20,178	20,616	21,087	21,574	22,055	22,558	23,055	23,565	24,086	24,604	25,139	25,664	26,191
Surplus	4,676	6,134	7,533	8,881	10,195	11,477	12,725	13,927	15,089	16,223	17,277	18,310	19,271

Source: Texas Health Data - https://healthdata.dshs.texas.gov/dashboard/health-care-workforce/workforce-supply-and-demand-projections

Impact of COVID-19 on the Healthcare Workforce

Impact of COVID-19

- Limited data available on the impact of COVID-19 on healthcare workforce
  - Supply trends through 2021 indicate that growth in supply of physicians in Texas was already slowing pre-pandemic
  - The impact on the supply of nurses in Texas will be assessed upon availability of updated nurse licensure data
  - Nursing education data show increased faculty retirements and resignations in FY21 academic year
  - Nurse staffing data results will be published in October 2022 and address impact on COVID-19 on nurse staffing in hospitals, home health and hospice care agencies, long term care nursing facilities, and governmental public health agencies

Thank you!