

The Texas Governmental Public Health Nurse Staffing Survey (TGPHNSS) assesses nurse staffing and related issues in Texas governmental public health agencies. In the spring of 2022, the Texas Center for Nursing Workforce Studies (TCNWS) administered the TGPHNSS to public health agencies across Texas. This included local health departments, public health service regions, and Department of State Health Services (DSHS) and Health and Human Services (HHS) central offices in Austin. DSHS and HHS central office programs will be referred to as state offices. A total of 50 agencies participated for a final response rate of 56.8%. It is important to note that between the 2019 and 2022 TGPHNSS, the COVID-19 pandemic occurred.

Vacancy and turnover rates are among the key measures for assessing nurse staffing adequacy. The Institute of Medicine (IOM) has asserted that vacancy rates “are widely accepted as evidence of supply shortages of RNs” and can be used to estimate current and future nursing shortages.¹ Vacancy rates indicate the ability of an organization to recruit and fill nursing positions and turnover rates indicate the ability of the organization to retain its current employees.^{2,3} This report features the results of the 2022 TGPHNSS nurse vacancy and turnover in Texas governmental public health agencies. It includes statewide vacancy and turnover rates as well as vacancy and turnover by region, geographic designation, and agency type.

¹IOM (Institute of Medicine). (2011). *The Future of nursing: Leading change, advancing health*. Washington, DC: The National Academies Press.

²Rondeau, K.V., Williams, E.S., & Wagar, T.H. (2008). Turnover and vacancy rates for registered nurses: Do local labor market factors matter?. *Health Care Management Review*, 33(1), 69-78.

³Hayes, L., O’Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, K.S., & North, N. (2012). Nurse turnover: A literature review – An update. *International Journal of Nursing Studies*, 49(7), 887-905.

Vacancy

Vacancy Rates - Statewide

Table 1 displays vacancy data for all governmental public health agencies that responded to the survey. In the current study, position vacancy rates and median agency vacancy rates were assessed for January 21, 2022.

- For the 46 agencies that reported employment information for RNs, 27 (58.7%) of those agencies had a 0% vacancy rate.
- Of the 41 agencies that reported employment information for LVNs, 29 (70.7%) of those agencies had a 0% vacancy rate.

Table 1. Statewide vacancy rates among responding agencies by nurse type, 2022

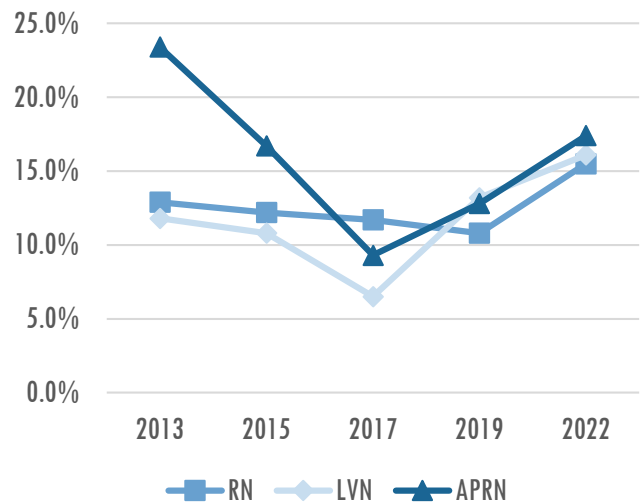
	n	Occupied FTE positions	Vacant FTE positions	Statewide position vacancy rate	Statewide median agency vacancy rate	# of agencies that reported zero vacancies
RNs	46	579	106	15.5%	23.0%	27
APRNs	17	38	8	17.4%	40.0%	12
LVNs	41	183	35	16.1%	46.0%	29

Note: n=number of agencies in Texas that reported FTE positions for each nurse type. Agencies with inconsistent staffing data were excluded from these calculations.

- 17 agencies reported vacancy information on APRN positions, and 12 (70.6%) of those agencies had a 0% vacancy rate.

Figure 1 represents the position vacancy rates for Texas from 2013-2022 by nursing staff type.

Figure 1. Position vacancy rates by nurse type, 2013 - 2022



- Overall, the statewide position vacancy rate was highest for APRN positions (17.4%) and lowest for RN positions (15.5%).
- The position vacancy rate for LVNs was 16.1%.

Table 2 shows median public health agency vacancy rates, which represent the middle value among all position vacancy rates calculated for each individual agency. The median agency vacancy rate gives a sense of how widespread an issue staff vacancy is.

- Statewide median agency vacancy rates were 0% for RNs, LVNs and APRNs.

Table 2. Public health agency vacancy rate descriptive statistics

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
RNs	43	0%	0%	0%	23.1%	50.0%	10.7%
APRN	14	0%	0%	0%	8.3%	63.0%	9.7%
LVNs	31	0%	0%	0%	40.0%	100.0%	17.4%

Note: n=number of agencies in Texas that reported each nursing staff type

Vacancy Rates - Agency Types

Table 3 shows position vacancy rates by the different types of responding governmental public health agencies.

- The highest position vacancy rate for RNs (25.6%) was found among Department of State Health offices. The highest reported vacancy rate in 2019 (16.7%) was found in DSHS public health service regions.
- Among local health departments, the position vacancy rate for RNs was 16.9%.
- The majority of agencies reporting on APRNs (68.9%) were local health departments.
- The highest position vacancy rate was found among LVNs employed by Department of State Health Services agencies (43.5%).

Table 3. Position vacancy rates in responding agencies by agency type, 2022

	Local Health Departments		Department of State Health Services		Health and Human Services		Statewide	
	Number of Agencies	Position Vacancy Rate	Number of Agencies	Position Vacancy Rate	Number of Agencies	Position Vacancy Rate	Number of Agencies	Position Vacancy Rate
RNs	34	16.9%	7	25.6%	9	10.4%	46	15.5%
APRNs	31	18.6%	6	-	8	-	41	17.4%
LVNs	34	12.8%	6	43.5%	8	-	41	16.1%

Note: Agencies that reported zero nurse positions for a nurse type were excluded from the vacancy rate calculation.

Vacancy Rates - Regions

Nursing position vacancy rates were also analyzed by region. Table 5 breaks down position vacancy rates by region.

- South Texas reported the lowest RN position vacancy rate (0.0%) followed by the Rio Grande Valley (6.8%) and the Gulf Coast (7.2%).
- North Texas again had the highest RN vacancy rate at 35.2%, reporting 16.9% in 2019.
- North Texas also had the highest vacancy rate among LVN positions (35.6%).
- 3 regions had zero vacancies among their LVN positions.
- Only 2 regions provided enough data to calculate vacancy rates for APRNs.

Table 5. Position vacancy rates by region and nursing staff type

Region	RNs	LVNs	APRNs
n	50	48	45
Panhandle	28.6%	-	-
Rio Grande Valley	6.8%	6.5%	-
North Texas	35.2%	35.6%	50.0%
East Texas	18.2%	-	-
Gulf Coast	7.2%	7.0%	-
Central Texas	11.8%	33.3%	-
South Texas	-	22.2%	-
West Texas	34.5%	-	40.0%

Note: n = number of respondents who reported each nursing staff type.

“-” means data was unavailable to report the position vacancy rates by region and nursing staff type.



Turnover Rates - Statewide

Table 5 displays the total average headcount for 2021, total number of separations, and median agency turnover rate for RNs, LVNs, and APRNs in responding governmental public health agencies. Turnover rates were assessed for the calendar year of 2021 (January 1, 2021 to December 31, 2021).

Table 5. Headcount and separations in responding agencies by nurse type, 2021

	n	Average Headcount 01/01/21 – 12/31/21	Number of Separations 01/01/22 – 12/31/22	Median Agency Turnover Rate	Number of Agencies that Reported Zero Separations
RNs	48	501.5	70	12.3%	14
APRNs	42	35.5	4	0.0%	10
LVNs	44	165	18	0.0%	19

Note: n=number of agencies in Texas that reported both head counts and number of separations for each nurse type.

Table 6 shows median turnover rates, which represent the middle value among all turnover rates calculated for each agency. The median value is reported because it is less sensitive to outliers than the mean.

- The median turnover rate for APRNs and LVNs was 0.0%.
- The median turnover rate for RNs was 12.3%.
- RNs also had the highest mean turnover rate of all nurse license types (26.7%) compared to APRNs (19.8%) and LVNs (16.9%).

Table 6. Agency turnover rate descriptive statistics

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
RNs	40	0.0%	0.0%	12.3%	39.1%	200.0%	26.7%
APRN	15	0.0%	0.0%	0.0%	40.0%	100.0%	19.8%
LVNs	29	0.0%	0.0%	0.0%	27.8%	100.0%	16.9%

Note: n=number of agencies in Texas that reported each nursing staff type

Turnover Rates - Agency Types

Table 7 shows median turnover rates for each nurse type by the different types of responding governmental public health agencies.

- The median turnover rate for RNs was highest among the 25 responding local health departments (28.6%) and lowest for the Health and Human Services offices (0.0%).
- The median turnover rate among local health departments was also 0% for LVNs and APRNs, which was the same in 2019.

No Health and Human Services offices reported employing LVNs or APRNs, so they were excluded from this analysis.

Table 7. Turnover rates in responding agencies by agency type, 2022

	Local Health Department			Department of State Health Services			Health and Human Services			Statewide		
	n	Mean Turnover Rate	Median Turnover Rate	n	Mean Turnover Rate	Median Turnover Rate	n	Mean Turnover Rate	Median Turnover Rate	n	Mean Turnover Rate	Median Turnover Rate
RNs	25	34.0%	28.6%	7	20.2%	19.1%	8	9.7%	0.0%	40	26.7%	12.3%
APRNs	14	11.9%	0.0%	1	0.0%	0.0%	-	-	-	15	19.8%	0.0%
LVNs	26	18.7%	0.0%	3	7.4%	0.0%	-	-	-	29	16.9%	0.0%

Note: Agencies that reported zero nurse positions for a nurse type were excluded from the turnover rate calculation.

Turnover Rates - Public Health Service Regions

In Table 8, median turnover rates for RNs, LVNs, and APRNs are displayed by region.

- Agencies in two regions of Texas reported a 0% median turnover rate for RNs (North Texas and East Texas).
- Six regions reported a 0.0% median turnover rate for LVNs.
- South Texas had the highest median turnover rate for RNs (40.0%) and North Texas had the highest median turnover rate for LVNs (25.0%).
- Two regions did not provide enough data to calculate median turnover rates for APRNs.

Table 8. Turnover rates by region and nursing staff type

Region	RNs	LVNs	APRNs
n	40	29	15
Panhandle	9.5%	0.0%	-
Rio Grande Valley	12.5%	0.0%	50.0%
North Texas	0.0%	25.0%	70.0%
East Texas	0.0%	0.0%	0.0%
Gulf Coast	22.2%	7.4%	0.0%
Central Texas	12.1%	0.0%	0.0%
South Texas	40.0%	0.0%	-
West Texas	28.6%	0.0%	0.0%

Note: n = number of respondents who reported each nursing staff type

Conclusion

Position vacancy rates increased for RNs, LVNs, and APRNs from 2019. Overall, the statewide position vacancy rate was highest for APRN positions (17.4%) and lowest for RN positions (15.5%) while the position vacancy rate for LVNs was 16.1%.

Statewide median agency vacancy rates were 0% for RNs, LVNs and APRNs. Among local health departments, the position vacancy rate for RNs was 16.9%. South Texas reported the lowest RN position vacancy rate (0.0%) followed by the Rio Grande Valley (6.8%) and the Gulf Coast (7.2%). North Texas again had the highest RN vacancy rate at 35.2%, reporting 16.9% in 2019.

The median turnover rate for APRNs and LVNs was 0.0% while the median turnover rate for RNs was 12.3%. The median turnover rate for RNs was highest among the 25 responding local health departments (28.6%) and lowest for the Health and Human Services offices (9.7%). South Texas had the highest median turnover rate for RNs (40.0%) and North Texas had the highest median turnover rate for LVNs (25.0%).