

The Hospital Nurse Staffing Survey (HNSS) assesses the size and effects of the nursing shortage in hospitals, Texas' largest employer of nurses. During the spring and summer of 2022, the Texas Center for Nursing Workforce Studies (TCNWS) administered the HNSS to the Chief Nursing Officers/Directors of Nursing of 657 Texas hospitals. These included for-profit, nonprofit, public, and Texas Health and Human Services Commission-operated hospitals, as well as hospitals linked to academic institutions; military hospitals were not surveyed. The facilities surveyed were general acute care, psychiatric, special, and rehabilitation hospitals; outpatient or community-based clinics were not included. Respondents provided data for 333 hospitals for a response rate of 50.7%. It is important to note that between the 2019 and 2022 HNSS, the COVID-19 pandemic occurred.

This report presents the findings of the 2022 HNSS related to vacancy and turnover in Texas hospitals. The vacancy rates reported measure the percentage of positions that were vacant on one day during one of the year's peak occupancy times (1/21/2022). The turnover rates measure the frequency of staff separations, both voluntary and involuntary, over a one year period (1/1/2021-12/31/2021). Nurse vacancy and turnover rates are among the key measures for assessing a nursing workforce shortage, the severity of the shortage, and changes in the nursing labor market over time. High vacancy and turnover rates can lead to negative outcomes that can affect quality of care such as losing experienced staff and increasing the workload and stress levels of existing staff.<sup>1</sup> High vacancy and turnover is also costly to hospitals due to the high cost associated with overtime or the use of agency nurses to fill vacant positions, as well as the cost associated with recruiting qualified nurses.<sup>2</sup>

<sup>1</sup> American Association of Colleges of Nursing. (2019). Nursing shortage fact sheet. <https://www.aacnursing.org/Portals/42/News/Factsheets/Nursing-Shortage-Factsheet.pdf>

<sup>2</sup> Waldman, J. D., Kelly, F., Sanjeev, A., & Smith, H. L. (2004). The shocking cost of turnover in health care. *Health Care Management Review*, 29:1, 2-7.

## Registered Nurses (RNs), Licensed Vocational Nurses (LVNs), and Nurse Aides (NAs)

### Vacancy Rates

Table 1 presents the total number of occupied and vacant FTE positions in Texas by nursing staff type and the resulting position vacancy rate for each.

- RNs were the most numerous nursing staff type.
- LVNs had the highest position vacancy rate.
- Fewer hospitals reported zero vacancies in 2022 for all nursing staff types (Figure 1).

**Table 1. Number of occupied and vacant FTE positions in Texas by nursing staff type**

	n	Total Occupied FTE Positions	Total Vacant FTE Positions	Statewide Position Vacancy Rate	Number of Hospitals that Reported Zero Vacancies
RNs	285	69,906.9	14,910.1	17.6%	25
LVNs	233	3,542.9	1,062.7	23.1%	85
NAs	258	14,903.2	3,042.7	17.0%	46

n=number of hospitals in Texas that reported each nursing staff type

**Figure 1. Percent of hospitals reporting zero vacancies for RNs, LVNs, and NAs, 2012- 2022**

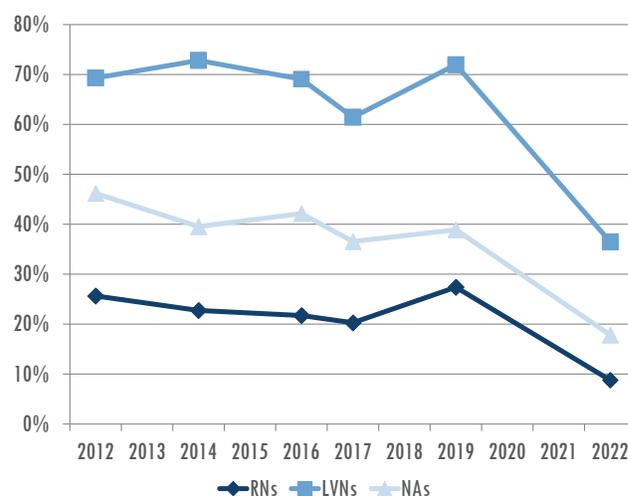


Figure 2 represents the position vacancy rates for Texas from 2012-2022 by nursing staff type.

- Vacancy rates for RNs, LVNs, and NAs all rose by at least 5 percentage points between 2019 and 2022.

The position vacancy rates in Table 2 represent the total percentage of vacancies for a position across a region.

- The RN vacancy rate was highest in Central Texas (20.8%) and lowest in the Panhandle (12.2%).
- The LVN vacancy rate was highest in the Gulf Coast (41.8%), and lowest in the Rio Grande Valley (11.7%).

Figure 2. Position vacancy rates for RNs, LVNs, and NAs, 2012-2022

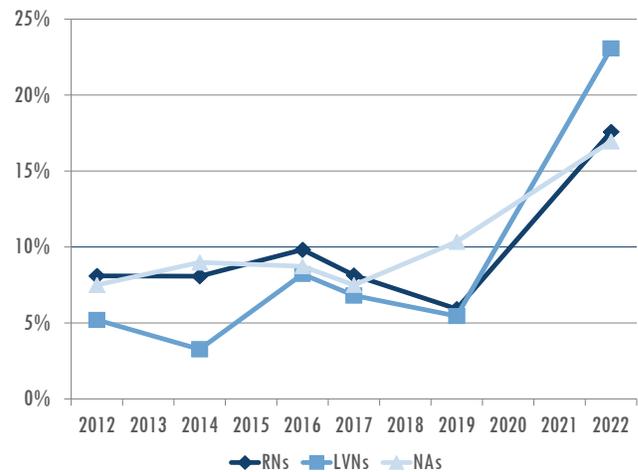


Table 2. Position vacancy rates in Texas by region and nurse type

	Panhandle	Rio Grande Valley	North Texas	East Texas	Gulf Coast	Central Texas	South Texas	West Texas
RNs	12.2%	15.0%	18.8%	17.3%	15.9%	20.8%	19.1%	18.3%
LVNs	17.7%	11.7%	14.1%	23.7%	41.8%	26.2%	22.1%	16.9%
NAs	22.3%	10.9%	15.7%	16.3%	14.4%	27.9%	24.2%	18.0%

Table 3 shows median facility vacancy rates, which represent the middle value among all position vacancy rates calculated for each individual hospital. Median facility vacancy rate gives a sense of how widespread an issue staff vacancy is.

- RNs had a median facility vacancy rate of 17.7%.
- The median facility vacancy rate for LVNs was 11.5%.
- The mean and median facility vacancy rates for RNs, LVNs, and NAs all increased from 2019 to 2022.

Table 3. Facility vacancy rate descriptive statistics

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
RNs	265	0.0%	9.6%	17.7%	25.0%	66.7%	18.2%
LVNs	209	0.0%	0.0%	11.5%	27.3%	100.0%	18.8%
NAs	234	0.0%	4.8%	15.5%	26.8%	100.0%	18.4%

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



## Turnover Rates

The numbers in Tables 4 and 5 represent the median facility turnover rate in Texas by nursing staff type among responding hospitals that reported an average number of employees and the total number of separations for the reporting period. These numbers represent the middle value when turnover is calculated for each individual hospital facility. The median value is reported because it is less sensitive to outliers than the mean.

- Statewide, turnover rates were highest among NAs, followed by RNs.
- Magnet or Pathway designated hospitals had a lower median turnover rate for RNs and NAs than those without a designation.

**Table 4. Average number of employees and separations in Texas by nursing staff type, 2021**

	n	Average Full-time Employees	Average Part-time Employees	Separations
RNs	260	66,376.3	7,659.6	20,081
LVNs	197	3,196.4	302.2	1,007
NAs	222	12,764.4	1,795.5	5,423

Note: n=number of hospitals in Texas that reported average number of employees and separations

**Table 5. Median facility turnover rate descriptive statistics**

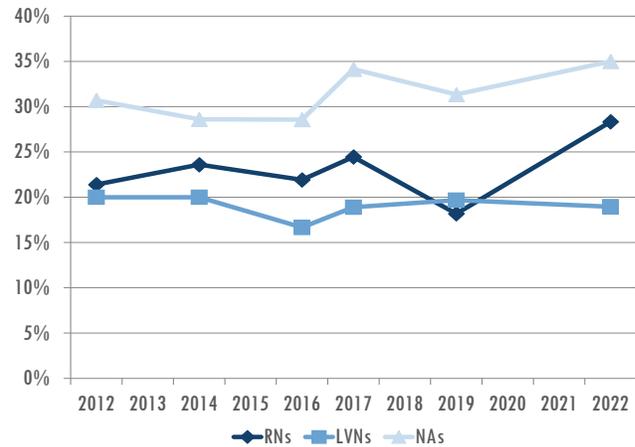
	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
RNs	285	0.0%	18.4%	28.3%	42.1%	263.2%	33.9%
LVNs	233	0.0%	0.0%	18.9%	43.4%	400.0%	30.5%
NAs	258	0.0%	19.8%	35.0%	60.7%	350.0%	44.3%

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

Figure 3 shows median facility turnover rates for nursing staff types from 2012 to 2022.

- Turnover for RNs and NAs increased from 2019 to 2022.
- Turnover for LVNs remained steady from 2019 to 2022.
- Turnover for NAs continues to be higher than that for RNs and LVNs.

**Figure 3. Median facility turnover rates for RNs, LVNs, and NAs, 2012-2022**



## Vacancy Rates

Texas is projected to face a growing surplus of nurse practitioners (NPs) and certified registered nurse anesthetists (CRNAs) from 2018 through 2032.<sup>3</sup> Table 6 presents the total number of occupied and vacant FTE positions in responding Texas hospitals by APRN type and the resulting position vacancy rate for each.

- NPs were the most numerous APRN type in responding Texas hospitals.
- CRNAs had the highest position vacancy rate.

Figure 4 represents the position vacancy rates for Texas from 2012-2022 for APRN types.

- Rates for all APRN types except CNSs increased from 2019 to 2022.

The position vacancy rates in Table 7 represent the total percentage of vacancies for a position across a region.

- The NP vacancy rate was highest in Central Texas (28.8%) and lowest in the Rio Grande Valley (4.2%).
- Some regions did not report employing CNSs, CRNAs, or CNMs, or there was insufficient data to report those vacancy rates.

Table 8 presents median facility vacancy rates for the different APRN types.

- The median facility vacancy rate for all APRN types was 0%.

**Table 5. Number of occupied and vacant FTE positions in Texas by APRN type**

	n	Total Occupied FTE Positions	Total Vacant FTE Positions	Statewide Position Vacancy Rate	Number of Hospitals that Reported Zero Vacancies
NPs	131	2,152.7	290.9	11.9%	71
CNSs	13	97.9	7.0	6.7%	11
CRNAs	22	496.7	99.8	16.7%	11
CNMs	7	41.5	2.0	4.6%	4

Note: n=number of hospitals in Texas that reported each APRN type; NP=nurse practitioner; CNS=clinical nurse specialist; CRNA=certified registered nurse anesthetist; CNM=certified nurse midwife

**Figure 4. Position vacancy rates for APRNs, 2012-2022**



**Table 7. Position vacancy rates in Texas by region and APRN type**

	Panhandle	Rio Grande Valley	North Texas	East Texas	Gulf Coast	Central Texas	South Texas	West Texas
NPs	12.8%	4.2%	13.7%	13.1%	9.1%	28.8%	12.8%	7.6%
CNSs	-	-	5.4%	0.0%	6.2%	100.0%	-	-
CRNAs	0.0%	-	17.4%	4.6%	14.0%	87.5%	-	28.6%
CNMs	-	-	3.2%	0.0%	0.0%	-	25.0%	-



**Table 8. Facility vacancy rate descriptive statistics by APRN types**

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
NPs	131	0.0%	0.0%	0.0%	15.4%	100.0%	12.1%
CNSs	13	0.0%	0.0%	0.0%	2.0%	50.0%	4.9%
CRNAs	22	0.0%	0.0%	0.0%	19.7%	100.0%	15.3%
CNMs	7	0.0%	0.0%	0.0%	18.8%	25.0%	6.9%

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

## Turnover Rates

The numbers in Tables 9 and 10 represent the median facility turnover rate in responding Texas hospitals by APRN type among hospitals with APRNs.

- The median facility turnover rate in Texas was 0% for all APRN types except CRNAs.

**Table 9. Average number of employees and separations in Texas by APRN type, 2021**

	n	Average Full-time Employees	Average Part-time Employees	Separations
NPs	113	1,978.0	181.5	262
CNSs	11	85.5	4.0	5
CRNAs	19	460.5	81.5	56
CNMs	6	41.5	8.0	1

Note: n=number of hospitals in Texas that reported average number of employees and separations

**Table 10. Median facility turnover rate descriptive statistics by APRN types**

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
NPs	113	0.0%	0.0%	0.0%	15.7%	200.0%	15.3%
CNSs	11	0.0%	0.0%	0.0%	5.0%	66.7%	8.2%
CRNAs	19	0.0%	0.0%	4.2%	18.2%	100.0%	13.4%
CNMs	6	0.0%	0.0%	0.0%	4.5%	18.2%	3.0%

Note: n=number of hospitals in Texas that reported each APRN type

<sup>1</sup> Texas Center for Nursing Workforce Studies. (2022). 2022 Hospital Nurse Staffing Survey: COVID-19. <https://dshs.texas.gov/chs/cnws/Nurse-Staffing-Studies.aspx>



## Conclusion

Overall, the position vacancy rate for RNs in responding Texas hospitals was 17.6%, for LVNs was 23.1%, and for NAs was 17.0%. Over half of responding hospitals experienced vacancy rates of greater than 10% for RNs, LVNs, and NAs, and zero vacancy for all APRN types. Vacancy rates for RNs, LVNs, and NAs all rose between 2019 and 2022.

The median facility turnover rate among RN positions was 18.2%, among LVN positions was 19.7% and among NAs was 31.3%. Turnover rates for all NPs, CNSs, and CNMs stayed the same (0%) from 2019 to 2022, while those for CRNAs rose.

## TCNWS Advisory Committee Recommendations

### Vacancy and Turnover

Texas continues to have higher vacancy and turnover rates than other states with comparable populations. High vacancy and turnover rates can lead to negative outcomes that affect quality of care, such as losing experienced staff and increasing the workload and stress levels of existing staff.<sup>4</sup> High vacancy and turnover is also costly to hospitals due to the high cost associated with overtime and recruiting qualified nurses. In order to decrease vacancy and turnover hospitals need to identify factors influencing recruitment and retention of nurses. Employers of nurses should invite practicing nurses' input to decrease vacancy and turnover rates for nurses in the workplace. Some of these strategies could include the following:

- Continue to improve work environment, including:
  - Care delivery models, including professional practice models
  - Institute flexible work schedules and part-time or per diem work. 95.2% of responding hospitals used shift differentials and 66.4% used flexible scheduling and job sharing as retention strategies for full-time employees. Other creative work schedules could include seasonal employment (e.g., working winters with summers off), overlapping shifts, and self-scheduling.
- Continue to support endeavors to increase funding levels as well as provide resources such as mentors/preceptors and clinical space to nursing programs in order to increase capacity to admit and graduate nursing students.
- Explore a wide range of compensation models that align experience, workload, and positive patient outcomes.
- Develop and support health promotion and return-to-work programs (after an employee injury or illness).
- Promote nursing apprenticeship and residency programs that encourage continuing education and career pathways for military medics, LVNs, and RNs with associate degrees.
- Develop and support programs for new and novice nurses beyond transition to practice.
- For nurses throughout their careers, offer more career development experiences such as tuition assistance and financial assistance for certifications.
- Consider using a team nursing model (using a mix of RNs, LVNs, and NAs to provide comprehensive care to patients) to mitigate the RN shortage.

<sup>4</sup> American Association of Colleges of Nursing. (2019). Nursing shortage fact sheet. <https://www.aacnnursing.org/Portals/42/News/Factsheets/Nursing-Shortage-Factsheet.pdf>

