



The Hospital Nurse Staffing Survey (HNSS) assesses the size and effects of the nursing shortage in hospitals, Texas' largest employer of nurses. During the summer of 2019, the Texas Center for Nursing Workforce Studies (TCNWS) administered the HNSS to the Chief Nursing Officers/Directors of Nursing of 715 Texas hospitals. These included for-profit, nonprofit, public, and Texas Department of State Health Services-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 404 hospitals for a response rate of 56.5%.

This report presents the findings of the 2019 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 (1/25/2019). The turnover rates measure the frequency of staff separations, both voluntary and involuntary, over a one year period (1/1/2018-12/31/2018). 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.¹ 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.

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

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 and had the highest position vacancy rate.
- More hospitals reported zero vacancies than in 2017 for all nursing staff types.

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

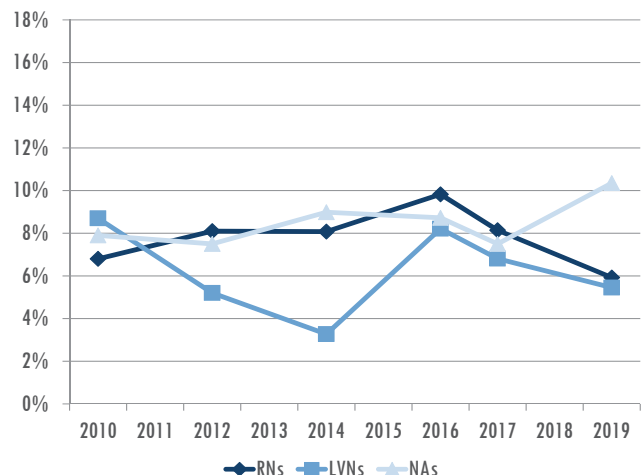
	n	Total Occupied FTE Positions	Total Vacant FTE Positions	Statewide Position Vacancy Rate	Number of Hospitals that Reported Zero Vacancies
All RNs	354	106,915.4	6,734.0	5.9%	97
LVNs	271	3,636.1	209.7	5.5%	195
NAs	311	17,414.9	2,010.3	10.3%	121

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

Figure 1 represents the position vacancy rates for Texas from 2010-2019 by nursing staff type.

- Vacancy rates for RNs and NAs have remained relatively steady since 2010, while rates for LVNs have fluctuated.

Figure 1. Position vacancy rates for RNs, LVNs, and NAs, 2010-2019



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 West Texas (13.1%) and lowest in North Texas (3.9%).

- The LVN vacancy rate was highest in West Texas (11.1%), and lowest in South Texas (2.9%).

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	4.0%	8.2%	3.9%	6.9%	9.2%	9.0%	8.9%	13.1%
LVNs	8.7%	3.6%	4.5%	7.8%	3.5%	6.3%	2.9%	11.1%
NAs	9.9%	7.5%	10.9%	11.6%	10.5%	12.3%	8.0%	10.7%

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.

- The median facility vacancy rate for LVNs was 0.0%.
- RNs had a median facility vacancy rate of 6.2%.

Table 3. Facility vacancy rate descriptive statistics

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
RNs	354	0.0%	0.0%	6.2%	12.6%	60.7%	8.2%
LVNs	270	0.0%	0.0%	0.0%	4.2%	56.6%	4.3%
NAs	311	0.0%	0.0%	5.8%	15.0%	75.0%	9.5%

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

Turnover Rates

The numbers in Table 4 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 LVNs.
- Magnet or Pathway designated hospitals had a lower median turnover rate than those without a designation for all nursing staff types.

Table 4. Median facility turnover rates in Texas by nursing staff type

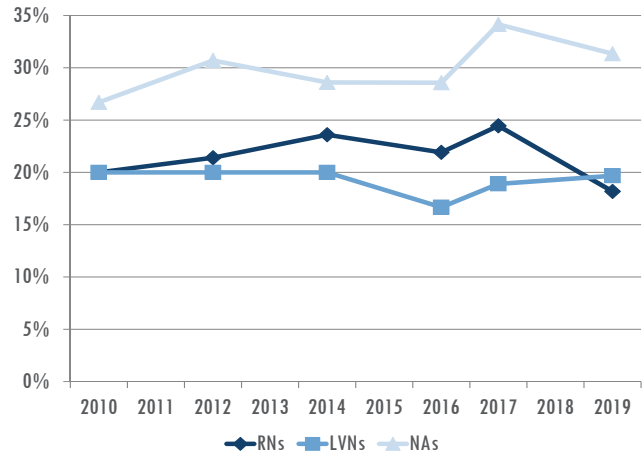
	n	Average Full-time Employees	Average Part-time Employees	Separations	Median Facility Turnover Rate
RNs	270	63,036.9	10,145.1	34,839	18.2%
LVNs	212	3,389.7	429.0	861	19.7%
NAs	271	14,422.1	2,507.5	5,408	31.3%

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

Figure 2 shows that median facility turnover rates have increased for all nursing staff types from 2010 to 2019.

- Turnover for RNs and NAs decreased from 2017 to 2019.
- Turnover for RNs was lower than that for LVNs for the first time since 2010.
- Turnover for NAs continues to be higher than that for RNs and LVNs.

Figure 2. Median facility turnover rates for RNs, LVNs, and NAs, 2010-2019



Advanced Practice Registered Nurses (APRNs)

Vacancy Rates

Table 5 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.

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	144	2,008.1	182.6	8.3%	97
CNSs	24	130.3	10.0	7.1%	20
CRNAs	23	381.0	21.1	5.2%	16
CNMs	8	39.4	-	0.0%	8

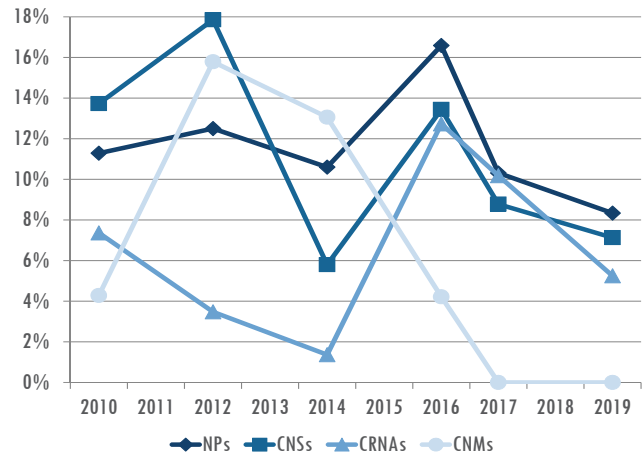
Note: n=number of hospitals in Texas that reported each APRN type; NP=nurse practitioner; CNS=clinical nurse specialist; CRNA=certified registered nurse anesthetist; CNM=certified nurse midwife

- Nurse practitioners (NPs) were the most numerous APRN type in responding Texas hospitals and also had the highest position vacancy rate.

Figure 4 represents the position vacancy rates for Texas from 2010-2019 for APRN types.

- Rates for all APRN types continued to decrease or stay the same from 2017 to 2019.

Figure 4. Position vacancy rates for APRNs, 2010-2019



The position vacancy rates in Table 6 represent the total percentage of vacancies for a position across a region.

- The NP vacancy rate was highest in the Panhandle (16.1%) and lowest in South Texas (4.4%).

- The CNM vacancy rate was 0% across all regions.

Table 6. 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	16.1%	14.6%	8.8%	8.3%	6.4%	9.7%	4.4%	12.0%
CNSs	0.0%	0.0%	3.2%	0.0%	10.0%	0.0%	0.0%	0.0%
CRNAs	0.0%	0.0%	7.6%	3.4%	0.0%	24.4%	0.0%	5.0%
CNMs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Table 7 presents median facility vacancy rates for the different APRN types.

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

Table 7. Facility vacancy rate descriptive statistics

	n	Minimum	25th Percentile	Median	75th Percentile	Maximum	Mean
NPs	144	0.0%	0.0%	0.0%	12.6%	100.0%	7.9%
CNSs	24	0.0%	0.0%	0.0%	0.0%	20.7%	2.4%
CRNAs	23	0.0%	0.0%	0.0%	4.1%	50.0%	5.6%
CNMs	8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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

Turnover Rates

The numbers in Table 8 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.

Table 8. Median facility turnover rates in Texas by APRN type

	n	Average Full-time Employees	Average Part-time Employees	Separations	Median Facility Turnover Rate
NPs	113	1,455.0	139.0	188	0.0%
CNSs	20	200.0	5.5	37	0.0%
CRNAs	22	321.0	50.0	28	0.0%
CNMs	7	32.5	11.0	2	0.0%

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



Conclusion

Overall, the position vacancy rate for RNs in responding Texas hospitals was 5.9%, for LVNs was 5.5%, and for NAs was 10.3%. The majority of responding hospitals experienced vacancy rates of less than 20% for RNs, LVNs, and NAs, and zero vacancy for all APRN types. Vacancy rates for RNs and NAs have remained relatively steady since 2010, while rates for LVNs have fluctuated. Vacancy rates for all APRN types continued to decrease or stay the same from 2017 to 2019.

The median facility turnover rate among RN positions was 18.2%, among LVN positions was 19.7% and among NAs was 31.3%. Median turnover was 0% for all APRN types.

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.² 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. 91.4% of responding hospitals used shift differentials and 58.4% 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).
- Develop and support programs for new and novice nurses beyond transition to practice.

² American Association of Colleges of Nursing. (2019). Nursing shortage fact sheet. <https://www.aacnnursing.org/Portals/42/News/Factsheets/Nursing-Shortage-Factsheet.pdf>

