

The Long Term Care Nurse Staffing Study (LTCNSS) assesses nurse staffing and related issues in the long term care setting. In 2018, approximately 27% of licensed vocational nurses (LVNs) and 3% of registered nurses (RNs) in Texas worked in the nursing home/extended care setting. Long term care facilities may also employ certified nurse aides (CNAs), certified medication aides (CMAs), and advanced practice registered nurses (APRNs). During the summer of 2019, the Texas Center for Nursing Workforce Studies (TCNWS) administered the LTCNSS to directors of nursing (DONs) or facility administrators of 1,205 Texas nursing facilities. A total of 314 facilities participated for a final response rate of 26.1%.

Survey Development

As with all TCNWS employer surveys, the LTCNSS taskforce (see Appendix A), comprising employers and educators of nurses in long term care, assisted in development of survey content and marketing of the survey to health professionals. The 2019 iteration of the LTCNSS survey instrument was collaboratively reviewed by the LTCNSS taskforce and TCNWS staff. Content was revised based on feedback of the taskforce and 2017 study findings.

The 2019 LTCNSS survey instrument was similar to that of previous years, though some changes were adopted:

- The question regarding disciplines that provide services in the facility added an option for mental health providers.
- The questions regarding whether the facility will need fewer, the same, or more staff and why expanded to differentiate between nurses in direct resident care and administrative roles.
- Questions about staffing changed to ask for per diem staffing numbers in FTEs rather than headcounts.
- Questions regarding recruiting experience were simplified to ask if positions were difficult to fill.

- The question regarding number of days to fill positions changed from a selection among categories to an open-ended response of the number of days.
- The question regarding which interventions would be most impactful on retention changed to a rank response and added an option for effective management/leadership.
- The open-ended question regarding other key attributes for RN staff was removed.
- The option for using medication aide staff to cover nursing duties as a consequence of inadequate staffing was removed.
- Degree type categories for RNs collapsed from four into two categories.
- Outcomes of a transition to practice program were broadened to include all nursing positions rather than RN positions only.
- An open-ended question regarding consequences of the Five-Star Quality Rating System was added.

The 2019 LTCNSS survey instrument and its operational definitions can be found in Appendices B and C, respectively.

Survey Distribution and Marketing

Between April and July of 2019, a multi-faceted strategy was used to maximize survey response, including a mail-out of hard-copy survey materials, electronic announcements, and phone calls. The survey was distributed to DONs or facility administrators of 1,205 Texas long term care facilities.

Initial distribution

Survey materials were first distributed by email on April 1, 2019. A printed survey packet was mailed to current directors of nursing the first week of April 2019. Surveys were also distributed via fax on April 11, 2019. The survey's initial deadline was May 31, 2019. The survey was hosted by Qualtrics, an online survey software. Facilities

were strongly encouraged to complete the survey online, however, faxed, emailed, and mailed submissions were also accepted.

Survey extensions and follow-up

In an attempt to boost response rates, the survey was extended through July 19, 2019. The extension was announced via email. Additionally, phone calls to all non-responding facilities were made in June and July to further market the survey and encourage participation.

Survey Population

A list of all long term care facilities that provide licensed, skilled nursing care as of March 2019 was obtained from Texas HHS, the regulatory body licensing all home and community support services agencies in the state. 314 of the total 1,205 facilities participated for a response rate of 26.1%, compared to 36.2% in 2017.

Responding facilities were compared to the facility population by facility size, county designation, and region. Analyses found that the 314 respondents were not different than the population with respect to region. However, responding facilities were different than the population in respect to county designation and facility size.

Bed size

The number of licensed beds reported by Texas HHS was recoded into bed size categories ($\leq 49 = 1$, $50-99 = 2$, $100-199 = 3$, $\geq 200 = 4$). Analysis found there was a statistically significant difference between responding facilities and the facility population by bed size (χ^2 (df=3)=8.786 p=.032).

Data Analysis

All data were analyzed using SPSS (version 24). 2019 LTCNSS data were reviewed and notable inconsistencies were excluded from analyses. Analyses of APRNs were largely excluded from reports due to limited data.

Facility Characteristics

Frequency counts were conducted on each variable reported in the Facility Characteristics report. These frequencies were analyzed by region, geographic designation, and bed size category. Also included in this report was information on nurses on boards.

Other announcements

Various entities assisted in marketing the survey by sending emails or including information in their organizational newsletters. These included:

- Texas HHS Provider Alerts
- Leading Age Texas
- Texas Nursing Facility Quality Improvement Coalition

Geographic designation

Geographic designation refers to the breakdown of all Texas' 254 counties into four exclusive county types based on metropolitan and border statuses: metropolitan border, metropolitan non-border, non-metropolitan border, and non-metropolitan non-border. Due to an assumption violation, the chi-square test results were invalid (an expected cell frequency was less than 5), so results cannot be generalized to the population by geographic designation.

Region

Texas has eight administrative health service regions. Analysis found there was not a statistically significant difference between responding facilities and the population by region (χ^2 (df=7)=9.847, p=.197).

Vacancy and Turnover

The 2019 LTCNSS asked respondents to provide the total number of occupied and vacant nursing staff positions in their facility on 1/25/19. These numbers were used to calculate vacancy rates as described in the 2019 LTCNSS Vacancy and Turnover report.

This report describes one method for calculating vacancy rates, the position vacancy rate. The position vacancy rate describes the proportion of all full-time equivalent (FTE) positions that are vacant across a group of responding facilities. Rates were calculated by staff type.

Facility vacancy rate =

$$\frac{(\text{Sum vacant FTEs being recruited, on hold or frozen in a facility})}{(\text{Sum Occupied} + \text{vacant FTE positions in a facility})} \times 100$$

Statewide position vacancy rate =

$$\frac{(\text{Sum vacant FTE positions being recruited, on hold or frozen across the state})}{(\text{Sum occupied} + \text{vacant FTE positions across the state})} \times 100$$

In order to calculate turnover rates, respondents provided their number of occupied full-time and part-time employees at two points in the year (1/1/2019 and 12/31/2019) and these numbers were averaged to determine an average number of employees. Turnover rates were calculated for each facility and by each staff type by dividing the number of employee separations reported by the sum of average full-time and part-time staff. The median facility turnover rate was reported for the state and by region.

Facility turnover rate =

$$\frac{\text{Total Number of Separations}}{(\text{Average \# Full-time} + \text{Average \# Part-time})} \times 100$$

Staffing

Data in the Staffing report pertain to number of nurses, certified nurse aides, and certified medication aides employed in the state; degree types of RNs; additional staff needed; staff characteristics; methods of interim staffing; and consequences of inadequate staffing. Inductive coding was used to analyze open-ended free response questions.

The LTCNSS asks facilities about their needs for interim staffing and the methods they use to fill these needs. Facilities reported the hours and cost of interim staffing for calendar year 2018. Only facilities that reported both cost and hours for each method were included in this analysis. Average hourly cost was determined by dividing the total hours of each staffing type by the total cost of this staffing type. Please note that the analysis on cost of interim staffing is to demonstrate the cost differential between staffing methods, and is not intended for use in estimating nurse wages. Outliers were not included in the analysis. For types of interim staffing methods used, frequency counts were conducted to show the number of facilities that reported using each type of interim staffing method.

Recruitment and Retention

Respondents were asked several questions related to recruitment and retention of staff. Facilities were to rank four relevant attributes as to their importance in hiring RNs. Facilities were asked to indicate whether it was difficult to fill direct resident care staff positions and indicate the number of days it takes the facility to fill vacant positions. Facilities listed the entry- and experienced level wages among staff types and the number of staff employed at the facility for a year or longer. Finally, respondents were asked to indicate which strategies they utilize for recruitment and retention and to rank strategies have the greatest impact. Inductive coding was used to analyze open-ended free response questions.

Transition to Practice

The Transition to Practice report describes features of transition to practice programs, including the type and length of the program, whether the program used an employment model, the type and number of participants in the program, how the program was coordinated, and the benefits of the program.

Directors of Nursing

Respondents were asked to provide a variety of data pertaining to DONs in long term care facilities, including salary range, longevity in long term care and tenure in current position, educational qualifications, orientation, and reasons for DON turnover.