



The Long Term Care Nurse Staffing Study (LTCNSS) assesses nurse staffing and related issues in the long term care setting. In 2015, 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 spring of 2016, the TCNWS administered the LTCNSS to 1,202 Texas nursing facilities. A total of 439 facilities participated, for a final response rate of 36.5%.

This report provides survey response rates by region, bed size, and geographic characteristics. See Appendices B and C for a copy of the 9-page survey instrument and the operational definitions, respectively.

Survey Development

The LTCNSS was last administered in 2014. As with all TCNWS employer surveys, the LTCNSS taskforce (see Appendix A), comprised of employers and educators of nurses in long term care, assisted in development of survey content and marketing of the survey to health professionals. The 2016 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 2014 study findings.

Updates to the 2016 survey instrument include removing one question asking about nursing informaticists, revising the question on recruitment and retention strategies by asking for strategies used for full-time and part-time employees, and adding a new question asking to categorize the number of nurses employed during the week of 01/18/2016-01/24/2016 by age. The survey was tested by the taskforce and TCNWS staff in Qualtrics survey software.

Survey Distribution and Marketing

Between March and June of 2016, a multi-faceted strategy was used to maximize survey response, including a mail-out of hard-copy survey materials, electronic announcements, and phone calls.

Initial distribution

A total of 1,202 survey packets were mailed the last week of March 2016 with an initial deadline of May 06, 2016. These mail-outs were addressed to current Directors of Nursing. In addition, an electronic version of the survey packet was emailed to the contact on file with the Department of Disability Services (DADS).

Survey extensions and follow-up

In an attempt to boost response rates, the survey was extended once, with a final deadline of May 31, 2016. The first extension was announced via email to contacts for each facility on May 09, 2016. Additionally, phone calls to all non-responding facilities were made in May to further market the survey and encourage participation. To accommodate respondents who needed additional time, the survey link was left active until June 10, 2016.

Other announcements

Various entities assisted in marketing the survey. These included:

- DADS quality monitoring program email alert to long term care facility administrators, directors of nursing, and/or corporate nurses on file
- Leading Age Texas sent out notices in March and May
- Texas Association of Residential Care Communities published a notice in March
- Texas Nursing Facility Quality Improvement Coalition posted information about the survey on their social media page



Survey Population and Respondents

A list of all long term care facilities that provide licensed, skilled nursing care as of March 2016 was obtained from the DADS, the regulatory body licensing all home and community support services agencies in the state. A total of 1,202 facilities was obtained from this list for inclusion in this study. 439 of the total 1,202 facilities participated for a response rate of 36.5%.

Representativeness

Analyses found that the 439 respondents were not different than the 763 non-responding facilities with respect to facility size and geographic characteristics. Responding and non-responding facilities were compared to one another by facility size, county designation, and region.

Facility size

The number of licensed beds reported by DADS was recoded into size categories ($\leq 49 = 1$, $50-99 = 2$, $100-199 = 3$, $\geq 200 = 4$). Analysis found there was not a statistically significant difference between responding and non-responding facilities by facility size ($\chi^2 (3, N=1,202) = 6.693$, $p=.082$). Table 1 identifies the response rates by facility size.

Table 1. LTCNSS response rates by facility size

	# of responding agencies	# of agencies in population	Response rate
<49	24	43	55.8%
50 - 99	130	353	36.8%
100 - 199	277	769	36.0%
≥ 200	8	37	21.6%
Total	439	1,202	36.5%

County designation

County 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. Analysis determined that survey respondents were not significantly different from survey non-respondents with respect to county designation ($\chi^2 (3, N=1,202) = 2.156$, $p=.541$). Table 2 below shows the response rates by county designation.

Table 2. LTCNSS response rates by metro-border status

	# of responding agencies	# of agencies in population	Response rate
Non-Metro Border	5	9	55.6%
Non-Metro Non-Border	133	340	39.1%
Metro Non-Border	284	802	35.4%
Metro Border	17	51	33.3%

Region

Texas has eight administrative health service regions. Statistical analysis found there was not a statistically significant difference between responding and non-responding facilities by region ($\chi^2 (7, N=1,202) = 5.965$, $p=.544$). Table 3 shows the number of responding and non-responding agencies used to calculate the response rate by region.

Table 3. LTCNSS response rates by region

Public Health Region	# of responding agencies	# of agencies in population	Response rate
Panhandle	30	73	41.1%
North Texas	130	344	37.8%
East Texas	65	149	43.6%
Gulf Coast	61	193	31.6%
Central Texas	57	165	34.5%
South Texas	51	145	35.2%
West Texas	24	58	41.4%
Rio Grande Valley	21	75	28.0%

Data Analysis

All data were analyzed using SPSS (version 22). 2016 LTCNSS data were reviewed and notable inconsistencies were excluded from analyses.

Vacancy and Turnover

The 2016 LTCNSS asked respondents to provide the total number of occupied and vacant RN positions in their facility on the date of 02/26/16. These numbers were used

to calculate vacancy and turnover rates as described in the 2016 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 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 staff positions at two points in the year (1/1/2015 and 12/31/2015) 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.

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 and nurse aides employed in the state, average employees and total separations, additional staff needed, staff characteristics, and contract, agency, and traveling staff. 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 2015. Only facilities that reported both cost and hours for each method were included in this analysis. 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. Facilities were asked to provide hours and costs of each interim staffing method. Total hours and costs were calculated by taking the sum of hours and costs by each method. Cost per hour was calculated by taking the total cost divided by the total hours for each method. 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.

Recruitment and Retention

Respondents were asked several questions related to recruitment and retention of staff. First, facilities were to rate their experience recruiting staff and to explain their experience with an open-ended response. Second, they were asked to indicate how long, in weeks, it takes the facility to fill vacant positions. Third, facilities were to rank four relevant attributes as to their importance in hiring RNs and to provide any other key attributes that are desirable when hiring RNs. Fourth, respondents were to specify how important a bachelor's degree in nursing was for RN staff. Finally, respondents were asked to indicate which strategies they utilize for recruitment and retention by full-time and part-time nurses, which strategies have the greatest impact, and ultimately, what the consequences of inadequate staffing have on the facility. Inductive coding was used to analyze open-ended free response questions.

Transition to Practice Programs for Newly Licensed RNs

Responding to a recent initiative to increase orientation programs for newly licensed nurse graduates, the 2016 LTCNSS asked facilities if they have a transition to practice program and, if so, how and to what extent it had been implemented.

Directors of Nursing

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