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 2017, the TCNWS administered the HNSS to 713 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. 348 (48.8%) hospitals responded to the survey.
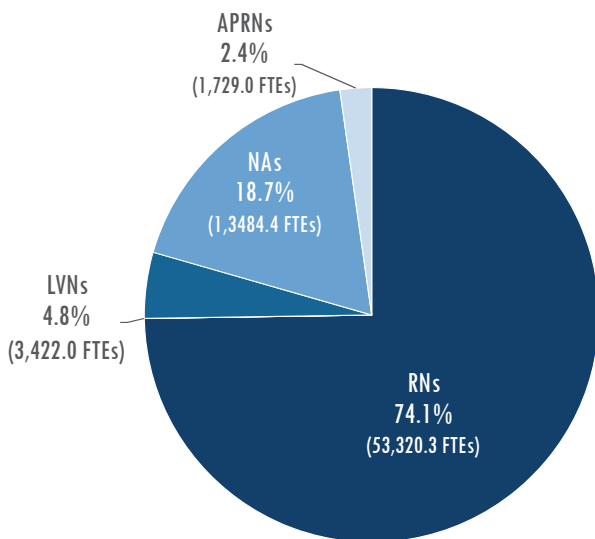
This report presents the relevant findings of this survey related to staffing practices at Texas hospitals. It also reviews changes in numbers of occupied and vacant registered nurse (RN) positions at hospitals and the reasons for these changes.

Note: Analyses by Texas region and geographic designation are not included in this report, as survey repondents were not representative of all Texas hospitals, but responding hospitals are still comparable to previous years' respondents. For more information, see the 2017 HNSS Design and Methods report.

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

Figure 1 presents the nursing staff mix, which represents filled hospital staff positions in responding facilities by nursing staff type.

**Figure 1. Nursing staff mix (n=348), 2017**



- APRNs 2.4% (1,729.0 FTEs)
- NAs 18.7% (1,3484.4 FTEs)
- LVNs 4.8% (3,422.0 FTEs)
- RNs 74.1% (53,320.3 FTEs)

- Registered nurses (RNs) made up the largest proportion of nurses in hospitals, followed by nurse aides (NAs). 8.1% of 53,320 RN positions were filled by first-year RNs.
- Advanced practice registered nurses (APRNs) made up only 2.4% of the staff mix.
- The staff mix has not changed significantly since 2006, although the proportion of RNs and APRNs has increased while the proportion of LVNs has decreased.

- In 2017, 337 hospitals reported employing a total of 455 nursing informaticist FTEs.

### Changes in Budgeted FTEs

In addition to providing employment numbers for the specified periods, hospitals also described changes in the past year in their numbers of direct patient care RN FTEs, the reasons for these changes, and their hiring plans for the coming fiscal year.

166 responding hospitals (47.7%) reported having increased budgeted direct patient care RN FTEs in the past year. These hospitals were then asked to indicate reasons why they had done so (Figure 2).
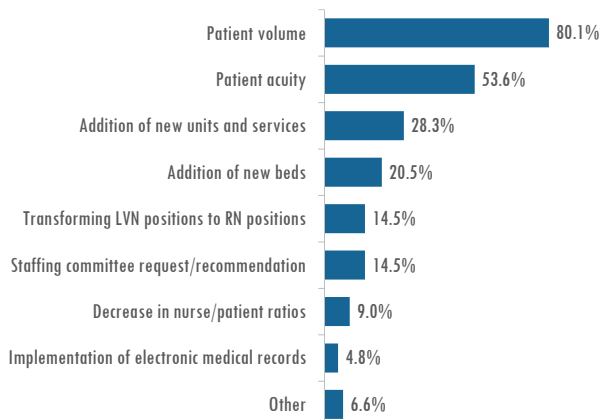
- Patient volume continues to be the leading reason to increase RN FTEs.
- Other reasons included implementation of internship programs and staffing reorganization.

39 responding hospitals (11.2%) reported having decreased budgeted direct patient care RN FTEs in the past year. These hospitals were asked to indicate reasons why they had done so (Figure 3).
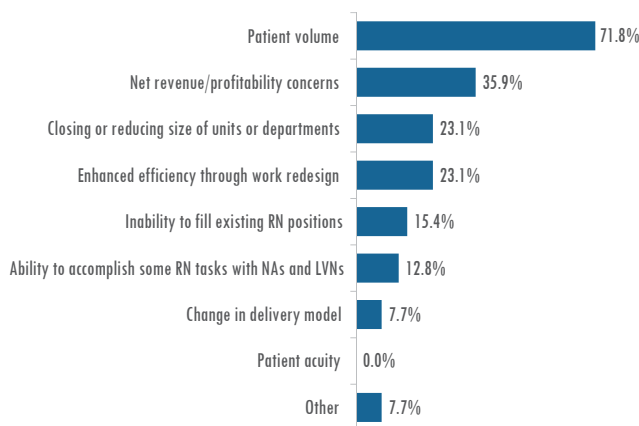
- The top reason for decreasing budgeted RNs was also patient volume.
- Hospitals with fewer than 100 beds were more likely to have decreased their number of RN FTEs than those with 100 beds or more.
- Other reasons included changes in regulations.

143 responding hospitals (41.1%) reported no change in budgeted direct patient care RN FTEs in the past year.

**Figure 2. Reasons hospitals increased budgeted RN FTEs**

| Reason | Percent |
|---|---|
| Patient volume | 80.1% |
| Patient acuity | 53.6% |
| Addition of new units and services | 28.3% |
| Addition of new beds | 20.5% |
| Transforming LVN positions to RN positions | 14.5% |
| Staffing committee request/recommendation | 14.5% |
| Decrease in nurse/patient ratios | 9.0% |
| Implementation of electronic medical records | 4.8% |
| Other | 6.6% |

**Figure 3. Reasons hospitals decreased budgeted RN FTEs**

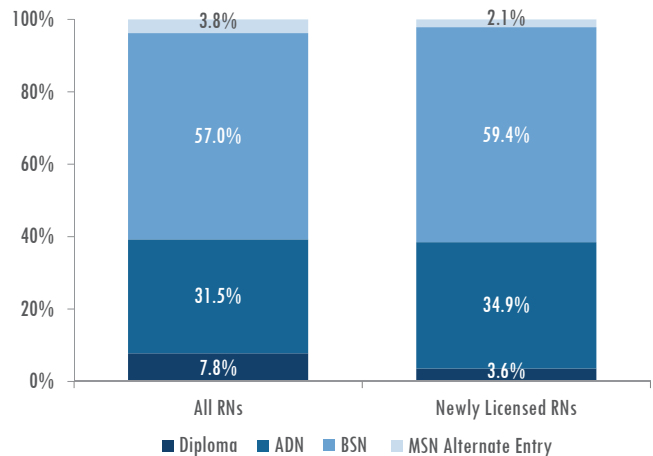| Reason | Percent |
|---|---|
| Patient volume | 71.8% |
| Net revenue/profitability concerns | 35.9% |
| Closing or reducing size of units or departments | 23.1% |
| Enhanced efficiency through work redesign | 23.1% |
| Inability to fill existing RN positions | 15.4% |
| Ability to accomplish some RN tasks with NAs and LVNs | 12.8% |
| Change in delivery model | 7.7% |
| Patient acuity | 0.0% |
| Other | 7.7% |

## RN Degree Type

Respondents reported the degree types of newly licensed RNs hired and of all RNs employed during the hospital's last fiscal year (Figure 4).

- Newly licensed RNs were slightly more likely to have a Bachelor of Science in Nursing (BSN) compared to all employed RNs.

**Figure 4. Newly licensed RNs and all RNs employed last fiscal year by degree type**

| Degree type | All RNs | Newly Licensed RNs |
|---|---|---|
| MSN Alternate Entry | 3.8% | 2.1% |
| BSN | 57.0% | 59.4% |
| ADN | 31.5% | 34.9% |
| Diploma | 7.8% | 3.6% |

Legend: Diploma, ADN, BSN, MSN Alternate Entry

## Additional Budgeted FTEs

Table 1 shows the number of FTEs that responding hospitals expect to budget in the next fiscal year, by nursing staff type.

- RNs were the most commonly reported nursing staff type to be added. 25.8% of the RN positions being added are for first-year RNs.

**Table 1. Number of additional RN, LVN, and NA FTEs hospitals plan to budget next fiscal year (n=253)**

| | n | Additional FTEs |
|---|---|---|
| All RNs | 248 | 2,489.8 |
| *First-year RNs | 235 | 642.3 |
| LVNs | 233 | 96.0 |
| NAs | 235 | 351.9 |
| Total | - | 3,580.0 |

* First-year RNs are included in the "All RNs" totals.
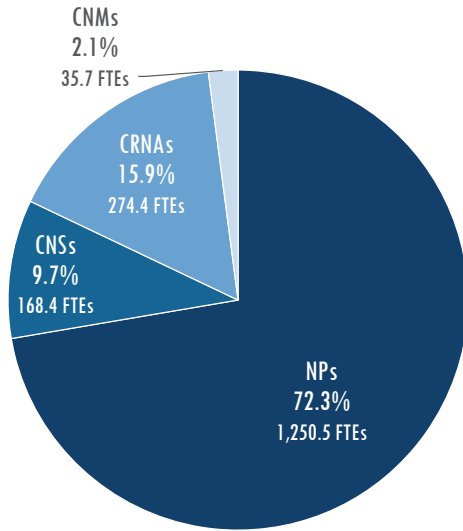
## Advanced Practice Registered Nurses (APRNs)

Advance Practice Registered Nurses (APRNs) are classified as one of four types: Nurse Practitioners (NPs), Clinical Nurse Specialists (CNSs), Certified Registered Nurse Anesthetists (CRNAs), and Certified Nurse Midwives (CNMs).

Figure 5 (page 3) presents the percent of filled APRN positions in responding hospitals by APRN type.

- NPs were the most common APRN type in hospitals (72.3%), followed by CRNAs (15.9%).

Hospitals were asked to specify how their facility employs APRNs - directly, contracted through an outside agency, employed by a private provider group and credentialed by the healthcare organization, unknown/unsure, or the facility does not employ the APRN type (Table 2, page 3).

**Figure 5. APRN staff mix (n=120), 2017**



Pie chart:
- CNMs 2.1% / 35.7 FTEs
- CRNAs 15.9% / 274.4 FTEs
- CNSs 9.7% / 168.4 FTEs
- NPs 72.3% / 1,250.5 FTEs

- NPs were the most common APRN type to be employed directly by hospitals (38.5%).
- CRNAs were most commonly employed by a private provider group (29.3%).

Table 3 shows the number of FTEs that responding hospitals expect to budget in the next fiscal year, by APRN type. Most new positions will be for NPs.

**Table 2. How hospitals in Texas employed APRNs in 2017 (n=335)**

| Method of Employment | NPs | CNSs | CRNAs | CNMs |
|---|---|---|---|---|
| Hospital directly employs this APRN type. | 38.5% | 9.3% | 9.0% | 2.7% |
| Hospital uses these APRN types who are employed by a private provider group and credentialed by the healthcare organization. | 30.7% | 6.3% | 29.3% | 5.7% |
| Hospital contracts this APRN service through an outside agency | 4.5% | 0.0% | 10.4% | 0.0% |
| Unsure whether hospital directly employs or contracts this APRN type. | 0.9% | 0.3% | 0.9% | 0.3% |
| Hospital does not employ this APRN type. | 38.5% | 85.4% | 54.9% | 91.9% |

**Table 3. Number of additional APRN FTEs hospitals plan to budget next fiscal year (n=126)**

| | n | Additional FTEs |
|---|---|---|
| NPs | 111 | 82.4 |
| CNSs | 27 | 7.6 |
| CRNAs | 24 | 12.6 |
| CNMs | 6 | 1.0 |
| Total | - | 103.6 |

## Methods of Interim Staffing

To replace sick or absent RNs, cover budgeted but vacant positions, and handle unusual workloads, hospitals reported using various methods of interim staffing.

Figure 6 shows the percentage of the 348 responding hospitals using each type of interim staffing method.

- Voluntary overtime was the most commonly used method of interim staffing (72.7%), followed by contract/traveling nurses (45.4%).

183 responding hospitals reported filling 3,140.75 FTEs for all nursing staff types using contract/traveling nurses or temporary staffing agencies during the week of 1/23/2017-1/29/2017 (Figure 7, page 4).

- Of these FTEs, the majority of the contract, agency, and traveling staff hours were worked by RNs, followed by APRNs.

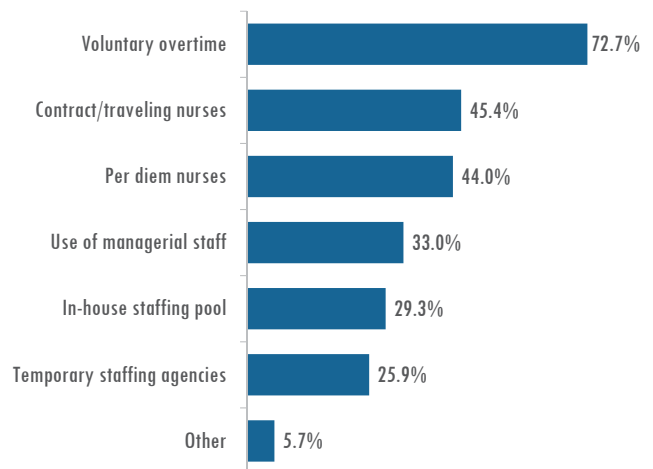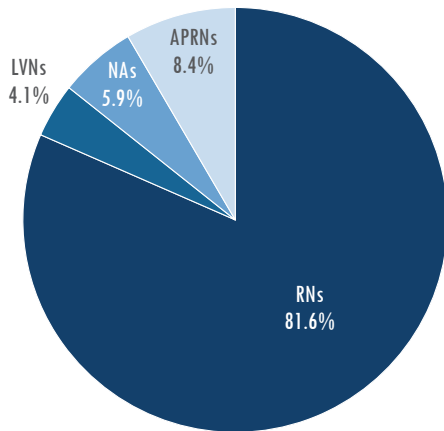**Figure 6. Percentage of responding hospitals using methods of interim staffing**



Bar chart:
- Voluntary overtime: 72.7%
- Contract/traveling nurses: 45.4%
- Per diem nurses: 44.0%
- Use of managerial staff: 33.0%
- In-house staffing pool: 29.3%
- Temporary staffing agencies: 25.9%
- Other: 5.7%

**Figure 7. Temporary staffing agency and contract/traveling nurse hours by nursing staff type**



**Table 4. Hours and cost\* of interim staffing in Texas**

| Method of Interim Staffing | n | Hours | Cost* | Cost/Hour* |
|---|---|---|---|---|
| Voluntary Overtime | 88 | 1,520,600 | $62,412,967.47 | $41.04 |
| In-house Staffing Pool | 27 | 919,852 | $25,185,427.40 | $27.38 |
| Contract/Traveling Nurses | 54 | 1,041,348 | $68,909,427.82 | $66.17 |
| Per Diem Nurses | 51 | 947,957 | $37,568,685.28 | $39.63 |
| Temporary Staffing Agencies | 25 | 86,265 | $4,140,998.63 | $48.00 |
| Use of Managerial Staff | 31 | 155,343 | $5,765,697.84 | $37.12 |
| Other | 6 | 221,356 | $9,554,969.87 | $43.17 |
| Total | - | 4,892,719 | $213,538,174.31 | $43.64 |

In addition to the types of interim staffing methods used, hospitals were asked to detail the hours and cost\* of each method (Table 4).

- A total of 4,892,719 hours of interim staffing were used by 124 responding facilities at a cost of over $213 million, for a cost per hour of $43.64.
- Over half of the cost was expended on voluntary overtime and contract/traveling nurses.

\*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.

- Although it is the most commonly used method of interim staffing, the percent of all interim staffing hours used by voluntary overtime has been decreasing, from 50.7% in 2012 to 31.8% in 2017.

## Consequences of Inadequate Staffing

Hospitals were asked to select consequences their facility had experienced in the past year as a result of an inadequate supply of nursing personnel (Table 5).

- The top 3 consequences were the same as in 2016; however, a larger percentage of hospitals reported an adequate supply of nursing personnel in 2017 (21.0%) than in 2016 (13.3%).

**Table 5. Number and percent of responding hospitals experiencing consequences of inadequate nursing supply**

| Consequence of Inadequate Staffing | # of Hospitals | % of Hospitals |
|---|---|---|
| Increase in voluntary overtime | 211 | 60.6% |
| Increased workloads | 188 | 54.0% |
| Increased use of temporary/agency nurses | 169 | 48.6% |
| Low nursing staff morale | 158 | 45.4% |
| Using administrative staff to cover nursing duties | 131 | 37.6% |
| Increased nursing staff turnover | 109 | 31.3% |
| Delayed admissions | 85 | 24.4% |
| Difficulty completing required documentation on time | 81 | 23.3% |

| Consequence of Inadequate Staffing | # of Hospitals | % of Hospitals |
|---|---|---|
| Wage increases | 58 | 16.7% |
| Increased absenteeism | 56 | 16.1% |
| Increased patient/family complaints | 41 | 11.8% |
| Inability to expand services | 34 | 9.8% |
| Declined referrals | 32 | 9.2% |
| Delays in providing care | 31 | 8.9% |
| Increased number of incident reports | 13 | 3.7% |
| Other | 6 | 1.7% |
| NONE, we had an adequate supply of nursing personnel | 73 | 21.0% |

## Conclusion

RNs made up the largest proportions of nurses in hospitals (74.1%), followed by NAs (18.7%), LVNs (4.8%), and APRNs (2.4%). 47.7% of responding hospitals reported an increase in budgeted RN FTEs in the past year, and responding hospitals reported they expect to add 3,580 additional FTEs in the next fiscal year. NPs were the most common APRN type in hospitals (72.3%), followed by CRNAs (15.9%). NPs were most commonly employed directly by hospitals (38.5%), while CRNAs were most commonly employed by a private provider group (29.3%).

Voluntary overtime was the most commonly used method of interim staffing (72.7%), followed by contract/traveling nurses (45.4%). A total of 4,892,719 hours of interim staffing were used by 124 responding facilities at a cost of over $213 million, for a cost per hour of $43.64. Over half of the cost was expended on voluntary overtime and contract/traveling nurses.

The top 3 reported consequences of inadequate nurse staffing were an increase in voluntary overtime (60.6%), increased workloads (54.0%), and increased use of temporary/agency nurses (48.6%).