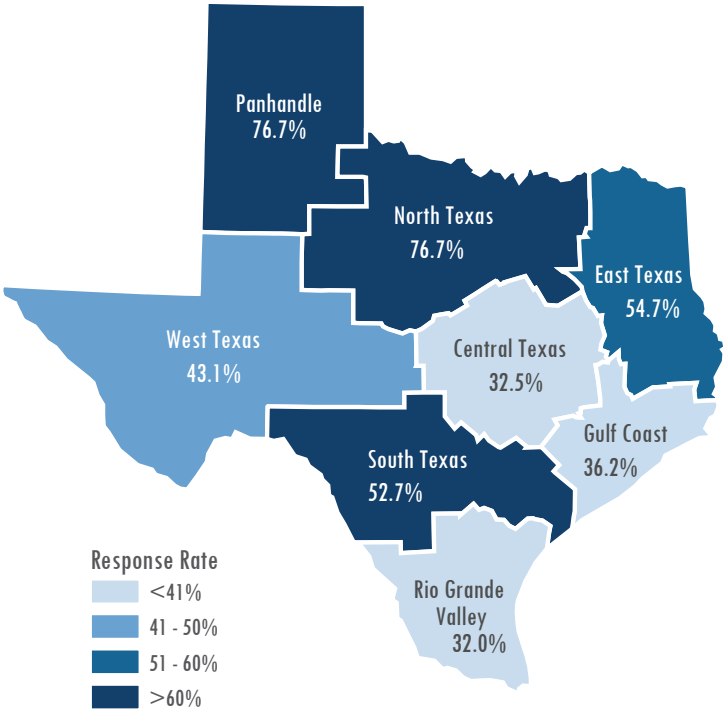
The Hospital Nurse Staffing Survey (HNSS) assesses the size and effects of the nursing shortage in hospitals, Texas' largest employer of nurses. During the summer of 2017, the TCNWS administered the HNSS to 713 Texas hospitals. These included for-profit, nonprofit, public, and Texas Department of State 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.

The hospitals that completed the 2017 HNSS were representative of all Texas hospitals by bed size, but not by region or geographic designation. This report provides survey response rates by region, geographic designation, and bed size. It also includes relevant hospital characteristics such as the number and distribution of teaching, rural, Magnet, Pathway to Excellence, and trauma center designated hospitals in the 2017 HNSS sample.

Geographic Characteristics of Hospitals

Figure 1. Response rate by region



The overall response rate for 2017 was 48.8%, down from the 2016 response rate of 51.8%.

- The Panhandle (76.7%) and North Texas (60.2%) had the highest response rates, while Central Texas (32.5%) and the Rio Grande Valley (32.0%) had the lowest (Table 1).
- Analysis found that there was a significant difference between responding hospitals and non-responding hospitals by region.[1]

Table 1. 2017 HNSS response rate by region

Region	# of Respondents in Region	Total # of Hospitals in Region	Response Rate
Central Texas	25	77	32.5%
East Texas	29	53	54.7%
Gulf Coast	54	149	36.2%
North Texas	130	216	60.2%
Panhandle	33	43	76.7%
Rio Grande Valley	16	50	32.0%
South Texas	39	74	52.7%
West Texas	22	51	43.1%
Texas	348	713	48.8%

Table 2 shows the number of responding hospitals by geographic designation.

- Non-metropolitan, non-border counties had the highest response rate (66.2%), while metropolitan, border counties had the lowest (33.3%).
- Analysis found that there was a significant difference between responding hospitals and non-responding hospitals by geographic designation.[2]

Table 2. 2017 HNSS response rate by geographic designation

Geographic Designation	# of Respondents in Designation	Total # of Hospitals in Designation	Response Rate
Metro Border	16	48	33.3%
Metro Non-Border	236	517	45.6%
Non-Metro Border	6	12	50.0%
Non-Metro Non-Border	90	136	66.2%

Table 3 displays information on the proportion of hospitals responding to the survey by region and bed size categories.

- Hospitals with greater than 499 beds had the highest response rate (74.1%), while those with between 50 and 99 beds had the lowest (41.0%).
- Analysis found that there was not a significant difference between responding hospitals and non-responding hospitals by bed size categories.[3]

Table 3. Number of responding hospitals over total number of hospitals by region and bed size

Region	Bed Size					Total
	<50	50-99	100-299	300-499	>499	
Central Texas	10/31	5/20	9/20	0/4	1/2	25/77
East Texas	14/22	2/15	8/10	5/6	0/0	29/53
Gulf Coast	24/56	10/32	8/37	10/16	2/8	54/149
North Texas	48/97	31/54	30/44	11/11	10/10	130/216
Panhandle	21/28	7/7	1/4	3/3	1/1	33/43
Rio Grande Valley	4/16	3/13	5/15	0/4	4/2	16/50
South Texas	15/34	3/10	11/19	8/7	2/4	39/74
West Texas	12/29	3/5	3/11	4/6	0/0	22/51
Texas	148/313	64/156	75/160	41/57	20/27	348/713

[1] ($\chi^2(7, N = 713) = 48.2, p < 0.001$)
[2] ($\chi^2(3, N = 713) = 15.9, p = 0.001$)
[3] ($\chi^2(3, N = 713) = 6.4, p = 0.168$)

Hospital Designations

Hospitals were asked to indicate applicable hospital designations from the following choices: teaching hospital, Magnet hospital, Pathway to Excellence hospital, trauma hospital, and rural hospital. For hospital designation definitions, please see the 2017 HNSS Appendices.

Table 4 shows the percentage of responding hospitals in each class of hospital designation by region.

- 56.3% of responding teaching hospitals were located in North Texas and the Gulf Coast.
- 65.9% of Magnet hospitals and 67.9% of Pathway to Excellence hospitals in Texas responded to the survey. 77.8% of responding Magnet hospitals and 55.3% of responding Pathway to Excellence hospitals were located in North Texas.
- The Panhandle had the greatest percentage of responding rural hospitals (69.7% of responding hospitals in the Panhandle), while the Rio Grande Valley had the lowest percentage (12.5% of responding hospitals in the Rio Grande Valley).

Trauma Centers

Trauma facilities are hospitals that are designated by the Texas Department of State Health Services to provide emergency and specialized intensive care to critically ill and injured patients. They range from Level 1, which is a comprehensive trauma facility that manages major and severe trauma patients, to Level 4, a basic trauma facility that transfers major and severe trauma patients to a higher-level trauma facility. There are a total of 293 trauma centers (TCs) in Texas as of August 29, 2017.

- Of 18 level 1 TCs, 10 responded.
- Of 19 level 2 TCs, 10 responded.
- Of 60 level 3 TCs, 39 responded.
- Of 196 level 4 TCs, 108 responded.

Table 5 shows the percentage of responding hospitals in each region that were designated to be certain trauma center levels.

Table 4. Number and percentage of responding hospitals in each hospital designation by region

		Region								
		Central Texas	East Texas	Gulf Coast	North Texas	Panhandle	Rio Grande Valley	South Texas	West Texas	Texas
Teaching	n	1	1	8	10	1	6	4	1	32
	%	4.0%	3.4%	14.8%	7.7%	3.0%	37.5%	10.3%	4.5%	9.2%
Magnet	n	0	1	5	21	0	0	0	0	27
	%	0.0%	3.4%	9.3%	16.2%	0.0%	0.0%	0.0%	0.0%	7.8%
Pathway to Excellence	n	4	0	6	21	2	0	2	3	38
	%	16.0%	0.0%	11.1%	16.2%	6.1%	0.0%	5.1%	13.6%	10.9%
Trauma Center	n	16	14	15	51	24	9	23	15	167
	%	64.0%	48.3%	27.8%	39.2%	72.7%	56.3%	59.0%	68.2%	48.0%
Rural	n	8	16	17	40	23	2	13	12	131
	%	32.0%	55.2%	31.5%	30.8%	69.7%	12.5%	33.3%	54.5%	37.6%

Table 5. Level of responding trauma centers by region

Trauma Center Level		Region								Texas
		Central Texas	East Texas	Gulf Coast	North Texas	Panhandle	Rio Grande Valley	South Texas	West Texas	
1	n	0	0	3	6	1	0	0	0	10
	%	0.0%	0.0%	5.6%	4.6%	3.0%	0.0%	0.0%	0.0%	2.9%
2	n	2	1	0	4	2	1	0	0	10
	%	8.0%	3.4%	0.0%	3.1%	6.1%	6.3%	0.0%	0.0%	2.9%
3	n	2	6	6	10	1	6	4	4	39
	%	8.0%	20.7%	11.1%	7.7%	3.0%	37.5%	10.3%	18.2%	11.2%
4	n	12	7	6	31	20	2	19	11	108
	%	48.0%	24.1%	11.1%	23.8%	60.6%	12.5%	48.7%	50.0%	31.0%
Non-Trauma Centers	n	9	15	39	79	9	7	16	7	181
	%	36.0%	51.7%	72.2%	60.8%	27.3%	43.8%	41.0%	31.8%	52.0%

Nurses on Boards

The Institute of Medicine has recommended preparing and enabling nurses to lead change to advance health, which includes having representation on boards and other key leadership positions.[4]

- 170 out of 345 (49.3%) responding hospitals reported having RNs on their boards, an increase from 48.4% in 2016.
- 112 out of 170 (65.9%) respondents that did have RN board members reported that RNs had voting privileges, the same as reported in 2016.

[4] Institute of Medicine, Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing. (2011). Front matter. The future of nursing: Leading change, advancing health.

Conclusion

In 2017, the HNSS response rate was 48.8%. The Panhandle (76.7%) and North Texas (60.2%) had the highest response rate, while the Rio Grande Valley (32.0%) and Central Texas (32.5%) had the lowest. Response rates were also higher in non-metropolitan counties. Responding agencies were representative of all Texas hospitals by bed size, but not by region or geographic designation.

Nearly half of responding hospitals were designated trauma centers (48.0%), most of which were level 4 trauma centers. 49.3% of responding facilities reported having RNs on their boards, and 65.9% of these RNs had voting privileges.