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HOSPITAL AND HEALTH CARE  
FACILITIES PREPAREDNESS PROJECT

FINAL PROJECT REPORT

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PREPARED FOR:

THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES- REGULATORY DIVISION

BY:

THE OFFICE OF SPECIAL PROGRAMS



**RURAL PUBLIC HEALTH**  
TEXAS A&M HEALTH SCIENCE CENTER

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## PROJECT OVERVIEW

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In May 2013, the Texas Department of State Health Services (DSHS) Division of Regulatory Services contracted with the Texas A&M School of Rural Public Health Office of Special Programs (OSP) to conduct a public health preparedness assessment with licensed hospital, End Stage Renal Disease (ESRD) facilities, nursing homes and assisted living centers, and residential child care facilities throughout the state. This project consists of two phases. In the first phase of the project, OSP administered and analyzed online surveys for the four facility-types. The deliverables for this quantitative phase included a summary report, a sortable data table, and associated user guide, which were submitted to DSHS on August 23, 2013. In the second phase, OSP scheduled, conducted, transcribed, and analyzed qualitative data from representative(s) at eligible licensed hospitals who agreed to participate in telephone interviews. The summary qualitative report was submitted to DSHS on September 12, 2013. The final deliverable includes this final report, the qualitative project file with coded interview transcripts, and a qualitative project file user guide.

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## METHODS

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### SURVEY INSTRUMENT

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The Texas DSHS Division of Regulatory Services staff worked with other DSHS divisions, state agencies, and stakeholders to develop and vet quantitative surveys for licensed hospitals, End Stage Renal Disease (ERSD) facilities, nursing homes and assisted living centers (NH/AL), and residential child care facilities. DSHS provided sets of vetted questions for each facility type to OSP, who reviewed and amended the questions based on previous online survey experience and provided the survey instrument to DSHS staff for final review and approval. OSP programmed the quantitative survey instrument using Qualtrics and conducted usability testing of the online surveys.

The original number of surveys to be administered was estimated to be:

- Hospitals – 650
- ESRD Facilities– 600
- Nursing Homes – 1200
- Assisted Living Centers – 1750
- Child Care Residential Facilities – 150

Survey questions can be found in Appendix A.

## TELEPHONE INTERVIEW INSTRUMENT

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The Texas DSHS Division of Regulatory Services staff worked with other DSHS divisions, state agencies, and stakeholders to develop and vet qualitative interview questions for licensed hospitals. DSHS provided the vetted questions to OSP, who reviewed and amended the questions, based on previous interview experience and provided the instrument to DSHS staff for final review and approval. Interview questions can be found in Appendix B.

## INSTITUTIONAL REVIEW BOARD APPLICATION

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An IRB Protocol for all project activities was submitted to and approved by Texas A&M University IRB prior to commencing data collection. All respondents were notified via survey information sheets that identifiable results would be provided to the project funder, the Texas DSHS, Division of Regulatory Services. OSP is only permitted to transmit identifiable results to the Texas DSHS project officer, per the approved protocol.

## PROJECT TRACKING DATABASE

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To facilitate the tracking and management of this project, OSP created a program tracking database in MS ACCESS. The database allowed for importing and review of provided contact lists (see next section) as well as response tracking throughout the project. The information tracking process included completion of the online survey, changes in hospital contact information, pre-sending interview questions to hospital contacts, sending eligible contacts and contact information to PPRI, completion of interviews by PPRI, receipt of transcripts from PPRI, and completion of transcript coding by a primary and secondary coder.

In addition, the database allowed integration of various data sources, including linking specific facilities to census data, Health Service Regions, Trauma Service Areas, Councils of Government, Education Service Centers, and hazard probabilities for hurricane/tropical storm and flooding from the Texas Public Health Risk Assessment Tool (v1.1).

## CONTACT LISTS

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DSHS provided OSP with contact lists for the facilities, including facility type, facility name, license number, facility address, facility phone number, contact name, and contact email address. Primarily,

the contact name was the facility CEO, Administrator, or Director. Initial review of the lists revealed many facility entries to be incomplete, particularly in regard to valid email addresses. OSP reached out to DSHS to determine if other sources or additional time during the preparatory phase would aid identification of missing contact information. DSHS staff indicated that the lists provided were the primary source of information and elected to use only the existing contact information in the lists. See Table 1 for the number of facilities that were eligible to participate in the project.

TABLE 1. ESTIMATED AND ACTUAL NUMBERS BY FACILITY TYPE

Facility Type	Estimated Number	Actual Number	Number with Email Address
Hospitals	650	688	652
ESRD Facilities	600	557	368
Nursing Homes	1200	2950	599
Assisted Living Centers	1750		
Child Care Residential Facilities	150	149	148

## SURVEY ADMINISTRATION

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OSP opened the online survey on Thursday, June 13, 2013 via email to hospitals, ESRD facilities, nursing homes and assisted living centers, and residential child care facilities. Survey links were unique to each facility, as each survey was pre-populated with the facility information. The recruitment email contained information about the survey, its purpose, respondent expectations, the survey Web link, and contact information to follow-up with the Principal Investigator and Co-Investigator with any questions or concerns about the survey. DSHS and the Texas Department of Aging and Disability Services (DADS) contacted partners to announce the survey in an effort to encourage participation. OSP sent weekly reminders to non-respondents by email to encourage participation. To improve a low response rates, DSHS requested and OSP agreed to extend the survey period from three and one-half weeks to five and one-half weeks, as well as reach out to DSHS and DADS partners, including the Texas Hospital Association (THA) and the Texas Organization of Residential Care Homes (TORCH), to aid publicizing of the survey. OSP closed the survey on Friday, July 19, 2013. OSP updated the project tracking database upon completion of the survey with completion date and contact information, if different from the contact in the DSHS contact list.

## QUANTITATIVE DATA ANALYSIS

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OSP aggregated and broadly analyzed the survey results in SPSS for this summary report. Data cleaning was conducted in Microsoft Excel and data were imported into SPSS. During the data cleaning process, some variables were recoded to enable data analysis. However, the original survey response remains in the sortable data table (see below).

## ONLINE SURVEY: SORTABLE QUANTITATIVE PROJECT DATA TABLE

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The quantitative deliverable also includes a data table in Microsoft Excel by specific facility responses. This data table enables DSHS and other state agency staff to sort the responses by county, urban or rural, hurricane prone areas, the eleven (11) DSHS Public Health Service Regions (HSR), the eight (8) Administrative Regions, and the twenty two (22) Trauma Regional Advisory Councils (RAC) outlined in Chapter 773 of the Health and Safety Code. The sortable data table is composed of four Excel files, one per facility-type. Each file contains worksheet tabs by survey respondent, survey non-respondent, and a complete sortable list with both respondents and non-respondents. To facilitate the use of the sortable data table, OSP staff developed a user guide that includes instructions on sorting and filtering the data table, sorting and filtering examples with screen shots, variable description by facility-type, and original surveys.

## INTERVIEW ADMINISTRATION

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As part of the contract, DSHS requested collection of additional information from hospital respondents via telephone interviews. Once a hospital respondent completed the on-line survey, they were asked to participate in the follow-up telephone interview. OSP subcontracted with the Public Policy Research Institute (PPRI) at Texas A&M University to schedule, conduct, and transcribe telephone interviews with hospitals. OSP created a scheduling and interview guide with a script, probes for interviewers and definitions of terms and acronyms unfamiliar to PPRI staff. The interview guide can be found in Appendix C.

OSP conducted training with PPRI staff on June 12, 2013. Training also included the process of information exchange and file transfer between OSP and PPRI. Once a hospital respondent completed the on-line survey, they were asked to participate in the follow-up telephone interview. The initial recruitment email sent to hospitals contained information about the follow-up telephone interviews. Upon completion of the online survey, OSP emailed interviewees the questions in

advance of contact by PPRI to schedule the phone interview. After interviewees were emailed the questions, OSP compiled and sent PPRI a weekly list of hospitals, including contact information, eligible to participate in the interview. PPRI maintained a continuous log of any scheduling, interviewing, and transcription activities, which was provided to OSP weekly, as well as a list of completed transcripts and a summary of the number of interviews scheduled and completed. OSP imported transcripts into QRS NVivo 10 and conducted the qualitative analysis of the transcripts. OSP staff held weekly meetings to discuss the qualitative analysis and coding process using a constant comparative analysis method. OSP updated the project tracking database throughout this project process (see below).

## QUALITATIVE DATA ANALYSIS

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OSP imported the hospital interview transcripts into QRS NVivo 10 qualitative software and analyzed transcripts using a constant comparative method. The constant comparative method involved analyzing and coding transcripts as they were received and adding, expanding, and collapsing the coding structure as common and disparate themes emerged. OSP staff met weekly to discuss findings and changes in the coding structure. Five OSP staff conducted the analysis; one staff person served as the primary coder. A secondary coder performed quality checks on a portion of the transcripts for agreement and disagreement.

## HOSPITAL TELEPHONE INTERVIEWS: QUALITATIVE NVIVO FILE

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The qualitative deliverable also includes a means of viewing telephone interview data by facility. Qualitative data are provided in QRS NVivo 10, the qualitative software program used to organize and analyze data for the *Hospital and Health Care Facilities Preparedness Project*. NVivo aids researchers and practitioners in importing, organizing, exploring, analyzing, searching, and visualizing qualitative data. With the final deliverable, OSP has provided a single, perpetual NVivo license code, NVivo user guide, and the *Hospital and Health Care Facilities Preparedness Project* qualitative data file. The file contains all coded interview transcripts and is accompanied by a user guide with instructions on running various types of queries for sorting data by themes and/or categories.



## RESULTS

### QUANTITATIVE RESPONSE RATES

Six-hundred fifty-two (652) emails were sent to the hospital contacts. One-hundred thirty-eight (138) (126 complete and 12 partial) responded to the online survey for a 21.2% response rate. Three-hundred sixty-eight (368) emails were sent to the ESRD facility contacts. One-hundred forty-six (143 complete and 3 partial) responded to the online survey for a 39.9% response rate. Five-hundred ninety-nine (599) emails were sent to the nursing home and assisted living center contacts. Seventy-two (72) (63 complete and 9 partial) responded to the online survey for a 12.0% response rate. One-hundred forty-eight (148) emails were sent to the residential child care facility contacts. Fifty-two (52) (47 complete and 5 partial) responded to the online survey for a 35.2% response rate. Partially completed responses were designated by the program software as responding to approximately half of the questions. See Table 2 for survey response rates by facility type.

TABLE 2. NUMBER OF RESPONDENTS AND RESPONSE RATES BY FACILITY TYPE

Facility Type	Number Emailed (n)	Completed	Partially Completed	Total	Response Rate (%)	% increase over last 2 weeks
Hospitals	652	126	12	<b>138</b>	<b>21.2%</b>	8.6%
ESRD Facilities	368	143	3	<b>146</b>	<b>39.9%</b>	9.2%
Nursing Homes/ Assisted Living Centers	599	63	9	<b>72</b>	<b>12.0%</b>	2.3%
Child Care Residential Facilities	148	47	5	<b>52</b>	<b>35.2%</b>	9.5%

### RESPONSE RATES BY TSA AND DSHS REGIONS

The majority of areas and regions of the state were represented by survey respondents by all facility-types. All DSHS Health Service Regions (HSR) were represented by hospitals, ESRDs, and nursing homes/assisted living facilities. All regions except Health Service Region 9/10 were represented by residential child care facilities. HSR 2/3 had the greatest number of hospital respondents (n=43; 31.2%) followed by HSR 7 (n=27; 19.6%). The greatest number of ESRD facility respondents were in HSR Regions 2/3 and 6/5S, with 28.1 percent (n=41) and 27.4 percent (n=40) respectively. The greatest number of NH/AL facility respondents were in HSR 2/3 and 6/5S, with 34.7 percent (n=25) and 25.0 percent (n=18) respectively. The greatest number of residential child

care facility respondents were in HSR 6/5S, 7, and 2/3, with 28.8 percent (n=15), 23.1 percent (n=12), and 17.3 percent (n=9) respectively.

All twenty-two Trauma Service Area (TSA) Regions were represented by hospital respondents. ESRD facility respondents represented eighteen (81.8%) of the twenty-two TSA Regions. Nursing home and assisted living facility respondents represented seventeen (77.3%) of the TSA Regions. Residential child care facility respondents represented fifteen (68.2%) of the TSA Regions. TSA Region E had the largest number of hospital respondents (n=29; 21.0%), followed by TSA Region O (n=15; 10.9%). TSA Region E and Q together had over 50 percent of the ESRD respondents with 27.4 percent (n=40) and 23.3 percent (n=34) respectively. TSA Region E and Q together had just under 50 percent of the NH/AL facility respondents with 29.2 percent (n=21) and 18.1 percent (n=13) respectively. TSA Region O and Q had the greatest number of residential child care facility respondents with 19.2 percent (n=10) each.

The survey email was sent to one-hundred ninety Texas counties which had at least one hospital located in each county. Of these, seventy-nine (41.6%) counties were represented by hospital respondents. The survey email was sent to one-hundred twenty-two Texas counties with at least one ESRD located in each county. Of these, fifty-three (43.4%) counties were represented by ESRD respondents. The survey email was sent to two-hundred twenty-nine Texas counties with at least one nursing home and/or assisted living facility located within each county. Of these, thirty-three (14.4%) counties were represented by nursing home/assisted living center respondents. Forty-seven Texas counties with at least one residential child care facility were sent the survey email. Of these, thirty (63.8%) counties were represented by residential child care facility respondents. Maps illustrating responses by TSA Region, HSR, and county can be found in Appendix D.

## QUALITATIVE RESPONSE RATES

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Six-hundred fifty-two (652) emails were sent to the hospital contacts. One-hundred thirty-eight (138) (126 complete and 12 partial) responded to the online survey for a 21.2% response rate. Of the 138 online survey completed, 72 interviews were conducted for 85 hospitals (four interviews were completed on behalf of multiple facilities within the same health system). See Table 3 for telephone interview response rates.

TABLE 3. NUMBER OF HOSPITAL RESPONDENTS AND RESPONSE RATES

Online Surveys Completed	Online Surveys Partially Completed	Total Online Surveys Completed	Online Survey Response Rate (%)	Interviews Completed (# of facilities)	Interview Response Rate (%)
126	12	138	21.2%	85	61.6%

RESPONSE RATES BY TSA AND DSHS REGIONS

All DSHS Regions were represented by the licensed hospital telephone interviews, with a much greater number completed in DSHS region 2/3 (n=23). Similarly, all TSA Regions were represented, with a much greater number completed in TSA Region E (n=18). DSHS region 2/3 and TSA Region E (North Central Texas RAC) both cover the Dallas/Fort Worth metropolitan area. As one would imagine, lower response rates were seen in rural areas that have fewer hospital facilities, such as TSA Regions C, K, and T, with only one respondent each (North Texas RAC, Concho Valley RAC, and Seven Flags RAC). Tables 4 and 5 show number of completed interviews by DSHS Region and TSA Region.

TABLE 4. NUMBER OF COMPLETED INTERVIEWS BY DSHS REGION

DSHS Region	No. of Interviews
HSR Administrative Region 1	6
HSR Administrative Region 2/3	23
HSR Administrative Region 4/5N	9
HSR Administrative Region 6/5S	8
HSR Administrative Region 7	12
HSR Administrative Region 8	6
HSR Administrative Region 9/10	3
HSR Administrative Region 11	5
<b>Total</b>	<b>72*</b>

\*Individual interviews counted, not facilities represented

TABLE 5. NUMBER OF COMPLETED INTERVIEWS BY TSA REGION

TSA Region	No. of Interviews
TSA-A	4
TSA-B	2
TSA-C	1
TSA-D	4
TSA-E	18
TSA-F	2
TSA-G	4
TSA-H	2
TSA-J	2
TSA-K	1
TSA-L	2
TSA-M	2
TSA-N	3
TSA-O	5
TSA-P	4
TSA-Q	5
TSA-R	3
TSA-S	3
TSA-T	1
TSA-U	2
TSA-V	2
<b>Total</b>	<b>72*</b>

\*Individual interviews counted, not facilities represented

## QUANITATIVE FINDINGS

The findings included in this section of the report include quantitative survey findings statewide, and stratified by DSHS Region, and TSA Region.

### HOSPITALS

**FACILITY DESCRIPTION.** Most hospitals (n=83) self-categorized as general hospitals. Twenty-four have a special hospital designation; special designations primarily include critical access hospitals, children’s hospitals, and surgical hospitals. Sixteen hospitals are rehabilitation hospitals or long term care hospitals. Nine are psychiatric hospitals. Figure 1 shows the types of hospitals. Table 6 and Table 7 show hospital type stratified by DSHS and TSA Regions, respectively.

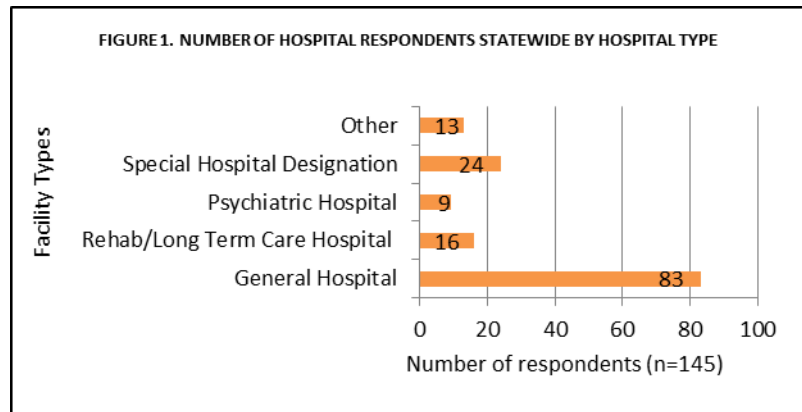


TABLE 6. NUMBER OF RESPONDENTS BY HOSPITAL TYPE STRATIFIED BY DSHS REGION

Hospital Type	DSHS Region								TOTAL
	1	2/3	4/5N	6/5S	7	8	9/10	11	
General hospital	5	4	24	9	11	18	10	2	83
Rehabilitation or long term care hospital	1	3	6	2	1	2	1	0	16
Psychiatric hospital	0	2	4	1	1	1	0	0	9
Special Hospital	5	1	9	0	3	2	1	3	24
Other	1	1	2	0	2	5	2	0	13
<b>TOTAL</b>	<b>12</b>	<b>11</b>	<b>45</b>	<b>12</b>	<b>18</b>	<b>28</b>	<b>14</b>	<b>5</b>	<b>145</b>

TABLE 7. NUMBER OF RESPONDENTS BYHOSPITAL TYPE STRATIFIED BY TSA REGION

Hospital Type	TSA Region																				TOTAL	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U		V
General	3	2	2	6	16	1	4	3	1	1	2	3	3	10	8	5	6	3	1	1	2	83
Rehab/long term care	1	0	1	0	5	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	3	16
Psychiatric	0	0	1	1	2	0	1	0	0	0	0	0	0	1	0	1	0	0	0	1	1	9
Special Hospital	2	3	0	1	7	0	0	0	2	2	0	0	1	1	1	2	1	0	0	1	0	24
Other	0	1	0	0	2	0	0	0	0	0	2	0	0	3	2	1	1	0	1	0	0	13
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>32</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>16</b>	<b>12</b>	<b>10</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>145</b>

Forty-five percent (n=62) of hospital survey respondents indicated they are a designated trauma center. Of those that are designated a trauma center, the majority (66.1%) have Level 4 designation. The remaining hospitals are fairly evenly distributed with 11.3 percent designated Level 1, 9.7 percent designation Level 2, and 12.9 percent designated Level 3.

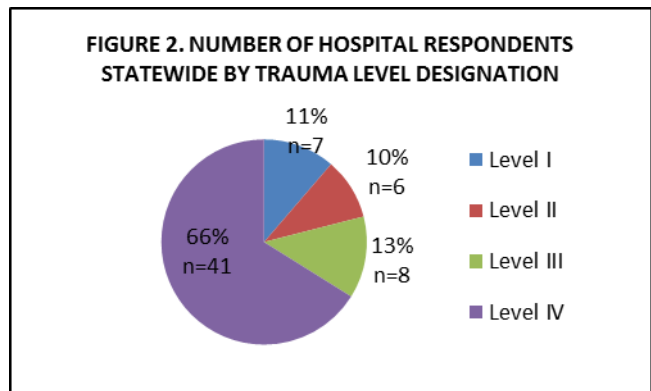


Figure 2 shows the break-down of respondents by trauma center designation. Figure 3 and Figure 4 show these designations, stratified by DSHS Region and TSA Region.

FIGURE 3. NUMBER OF HOSPITAL RESPONDENTS BY TRAUMA LEVEL DESIGNATION STRATIFIED BY DSHS REGION

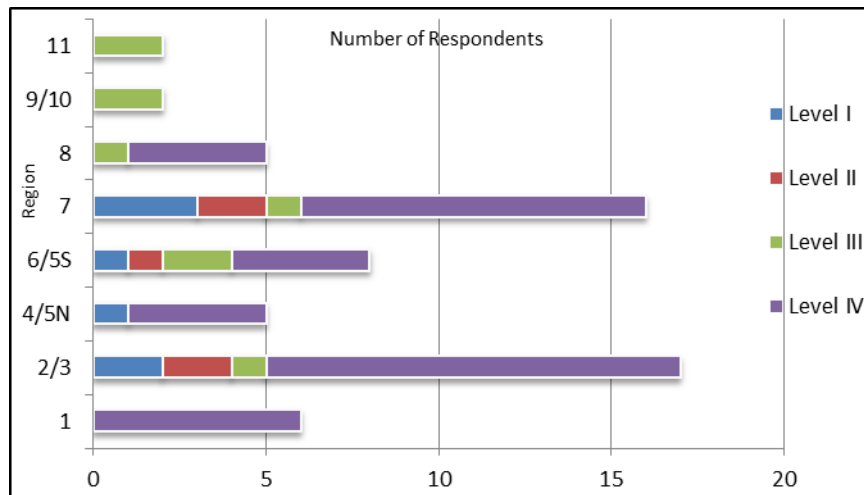
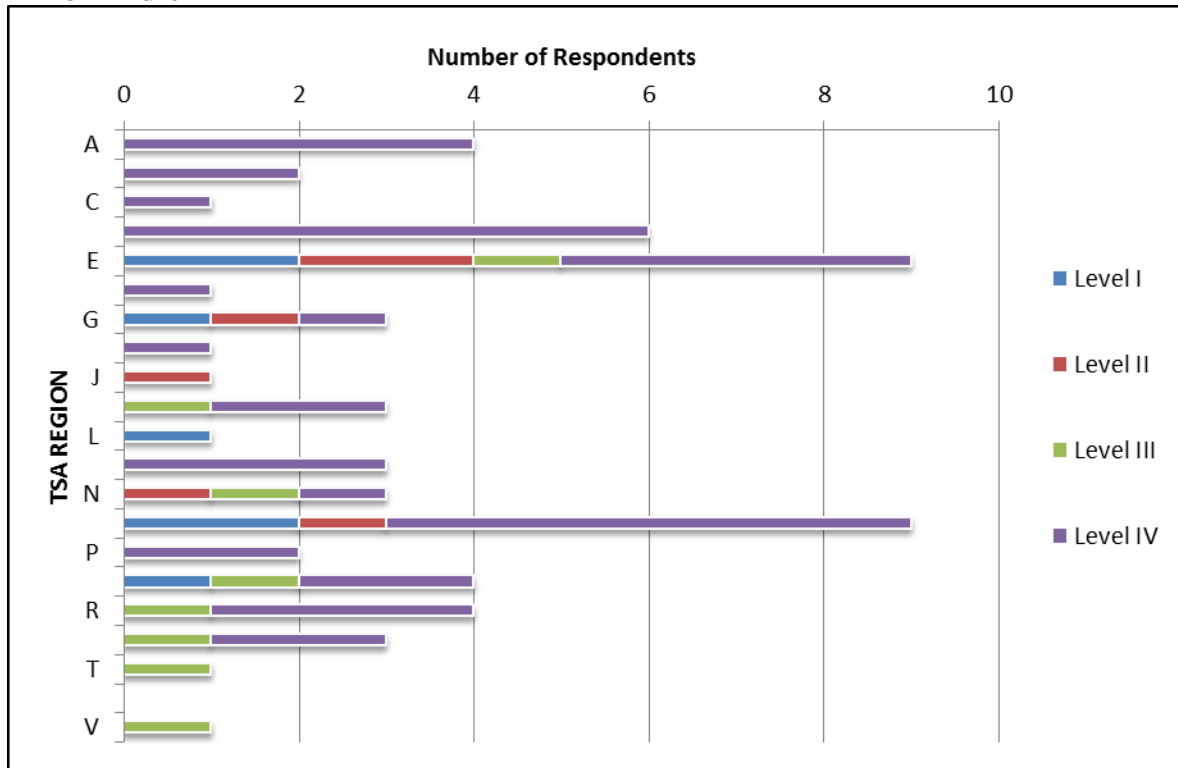


FIGURE 4. NUMBER OF HOSPITAL RESPONDENTS BY TRAUMA LEVEL DESIGNATION STRATIFIED BY TSA REGION



Fifty-nine percent (n=81) of hospital respondents indicated their facility has multiple floors. Of those with multiple floors, over 60 percent have two to four floors. Total responses are below:

- 20.8 percent (n=16) have two floors
- 23.4 percent (n=18) have three floors
- 19.5 percent (n=15) have four floors
- 10.4 percent (n=8) have five floors
- 26.0 percent (n=20) have six to twelve floors

Table 8 shows hospital respondents by number of floors stratified by DSHS Region. Table 9 shows the number of floors by TSA Region.

TABLE 8. NUMBER OF HOSPITAL RESPONDENTS BY NUMBER OF FLOORS STRATIFIED BY HEALTH SERVICE REGION

Number of Floors	DSHS Region								TOTAL
	1	2/3	4/5N	6/5S	7	8	9/10	11	
2	1	5	2	3	4	0	0	1	16
3	1	7	1	0	3	3	1	2	18
4	1	3	1	0	6	2	0	2	15
5	0	2	1	2	2	1	0	0	8
>6	0	8	2	4	3	2	1	0	20
<b>TOTAL</b>	<b>3</b>	<b>25</b>	<b>7</b>	<b>9</b>	<b>18</b>	<b>8</b>	<b>2</b>	<b>5</b>	<b>77</b>

TABLE 9. NUMBER OF HOSPITAL RESPONDENTS BY NUMBER OF FLOORS STRATIFIED BY TSA REGION

Number of Floors	TSA Region																				TOTAL	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U		V
2	0	1	1	1	3	0	2	0	0	0	0	2	1	1	0	2	1	0	0	1	0	16
3	1	0	0	0	7	0	0	1	0	1	1	0	1	1	3	0	0	0	1	0	1	18
4	0	1	0	0	3	1	0	0	0	0	1	0	1	4	1	0	0	1	0	1	1	15
5	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	1	1	1	0	0	0	8
>6	0	0	0	0	8	0	2	1	1	0	1	0	0	2	2	3	0	0	0	0	0	20
<b>TOTAL</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>23</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>10</b>	<b>7</b>	<b>6</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>77</b>

The mean average daily census (ADC) reported by respondent facilities was 97 with a median of 350. ADC ranged from a low of 0 to a high of 700.

- 0-10 ADC: 39 facilities (28.0%)
- 11-20 ADC: 13 facilities (9.2%)
- 21-30 ADC: 15 facilities (10.6%)
- 31-40 ADC: 9 facilities (6.5%)
- 41-50 ADC: 9 facilities (6.5%)
- 51-100 ADC: 24 facilities (17.0%)
- Greater than 100 ADC: 19 facilities (13.3%)

Table 10 shows the number of hospital respondents by ADC, stratified by DSHS Region. Table 11 shows the number of hospital respondents by ADC, stratified by TSA Region.

TABLE 10. NUMBER OF HOSPITAL RESPONDENTS BY ADC, STRATIFIED BY DSHS REGION

Average Daily Census	DSHS Region								TOTAL
	1	2/3	4/5N	6/5S	7	8	9/10	11	
0-10	6	13	2	4	9	3	2	0	39
11-20	0	5	1	3	1	1	0	2	13
21-30	3	4	2	0	1	3	1	1	15
31-40	0	3	1	1	4	0	0	0	9
41-50	1	3	2	0	2	1	0	0	9
51-100	1	6	2	3	4	5	1	2	24
>100	0	6	2	4	4	1	0	2	19
<b>TOTAL</b>	<b>11</b>	<b>40</b>	<b>12</b>	<b>15</b>	<b>25</b>	<b>14</b>	<b>4</b>	<b>7</b>	<b>128</b>

TABLE 11. NUMBER OF HOSPITAL RESPONDENTS BY ADC, STRATIFIED BY TSA REGION

Average Daily Census	TSA Region																				TOTAL	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U		V
0-10	3	3	2	5	5	0	1	1	1	2	0	3	2	4	2	1	3	1	0	0	0	39
11-20	0	0	0	2	3	0	1	0	0	0	0	0	1	0	1	2	1	0	0	2	0	13
21-30	2	1	0	0	4	0	1	0	1	0	0	0	0	1	2	0	1	1	0	0	1	15
31-40	0	0	0	0	3	1	0	0	0	0	3	0	0	1	0	1	0	0	0	0	0	9
41-50	0	1	1	0	2	1	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	9
51-100	0	1	1	1	4	0	1	0	0	1	0	0	1	3	5	2	1	1	1	0	1	24
>100	0	0	0	0	6	0	2	1	0	0	1	0	0	3	1	3	0	0	0	0	2	19
<b>TOTAL</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>8</b>	<b>27</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>14</b>	<b>12</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>128</b>

Number of beds is reported as licensed beds versus staffed beds. The mean number of beds for respondent facilities was 134 beds with a median of 440 beds. Number of beds ranged from a low of 3 beds to a high of 877 beds.

- Less than 30 beds: 20 facilities (14.5%)
- 30-59 beds: 20 facilities (14.5%)
- 60-99 beds: 15 facilities (10.6%)
- Greater than 100 beds: 26 facilities (18.2%)

Table 12 shows the number of hospital respondents by number of beds stratified by DSHS Region.

Table 13 shows the number of hospital respondents by number of beds stratified by TSA Region.

TABLE 12. NUMBER OF HOSPITAL RESPONDENTS BY NUMBER OF BEDS STRATIFIED BY DSHS REGION

Number of Beds	DSHS Region								TOTAL
	1	2/3	4/5N	6/5S	7	8	9/10	11	
<30	5	4	1	3	4	2	1	0	20
30-59	0	9	4	1	3	2	0	1	20
60-99	2	6	2	3	1	0	0	1	15
>100	1	4	1	5	8	4	1	2	26
<b>TOTAL</b>	<b>8</b>	<b>23</b>	<b>8</b>	<b>12</b>	<b>16</b>	<b>8</b>	<b>2</b>	<b>4</b>	<b>81</b>

TABLE 13. NUMBER OF HOSPITAL RESPONDENTS BY NUMBER OF BEDS STRATIFIED BY TSA REGION

Number of Beds	TSA Region																				TOTAL	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U		V
<30	2	3	0	1	2	0	1	0	1	1	0	0	1	3	1	2	1	1	0	0	0	20
30-59	0	0	0	1	8	0	2	1	0	0	1	1	0	1	2	1	1	0	0	0	1	20
60-99	0	2	1	0	5	2	0	0	0	0	0	0	0	1	0	2	1	0	0	0	1	15
>100	1	0	0	0	4	0	1	1	0	1	0	0	1	7	2	3	1	1	1	0	1	25
<b>TOTAL</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>2</b>	<b>19</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>81</b>



The mean bed capacity, including surge, for respondent facilities is 142 beds with a median of 500 beds. Bed capacity, including surge, number of beds ranged from a low of 0 beds to a high of 1,000 beds.

- Less than 30 beds: 26 facilities (18.5%)
- 30-59 beds: 31 facilities (22.1%)
- 60-99 beds: 14 facilities (9.8%)
- Greater than 100 beds: 35 facilities (24.6%)

Figure 5 shows the number of hospital respondents grouped by number of beds, statewide. Table 14 and Table 15 show the number of hospital respondents grouped by number of beds, including surge, stratified by DSHS Region and TSA Region.

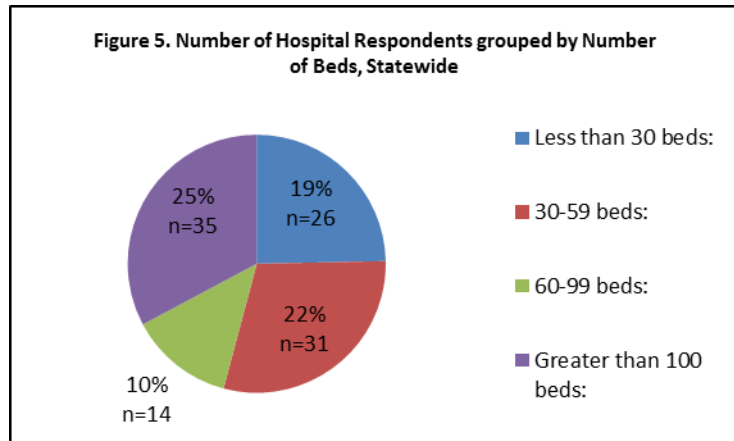


TABLE 14. NUMBER OF HOSPITAL RESPONDENTS GROUPED BY NUMBER OF BEDS, STRATIFIED BY DSHS REGION

# of Beds with Surge	DSHS Region								DSHS Region
	1	2/3	4/5N	6/5S	7	8	9/10	11	
<30	2	8	1	6	5	3	1	0	26
30-59	2	9	5	2	7	3	1	2	32
60-99	4	6	1	0	1	0	0	2	14
100+	1	9	5	5	8	3	2	2	35
<b>Total</b>	<b>9</b>	<b>32</b>	<b>12</b>	<b>13</b>	<b>21</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>106</b>

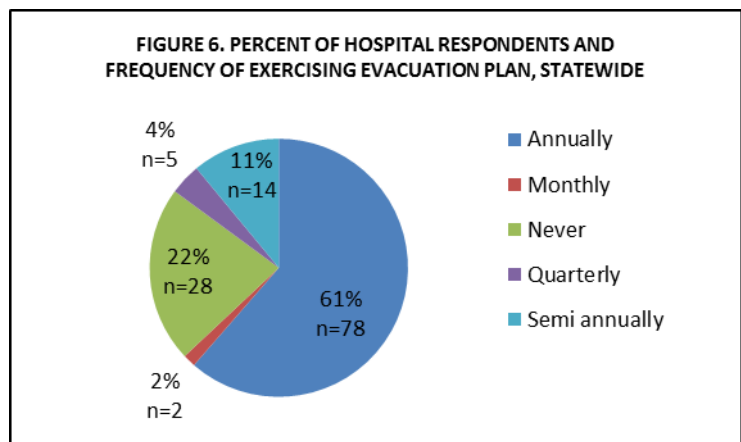
TABLE 15. NUMBER OF HOSPITAL RESPONDENTS GROUPED BY NUMBER OF BEDS, STRATIFIED BY TSA REGION

# of Beds with Surge	TSA Region																				Total	
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U		V
<30	1	1	1	4	2	1	0	0	1	1	0	1	2	2	2	3	3	1	0	0	0	<b>26</b>
30-59	1	1	2	2	5	0	3	1	0	1	1	2	1	3	3	1	2	0	0	1	1	<b>31</b>
60-99	1	3	1	0	5	1	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	<b>14</b>
100+	1	0	0	0	9	0	3	2	1	1	1	0	1	6	4	3	1	0	1	0	1	<b>35</b>
<b>Total</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>21</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>12</b>	<b>9</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>106</b>

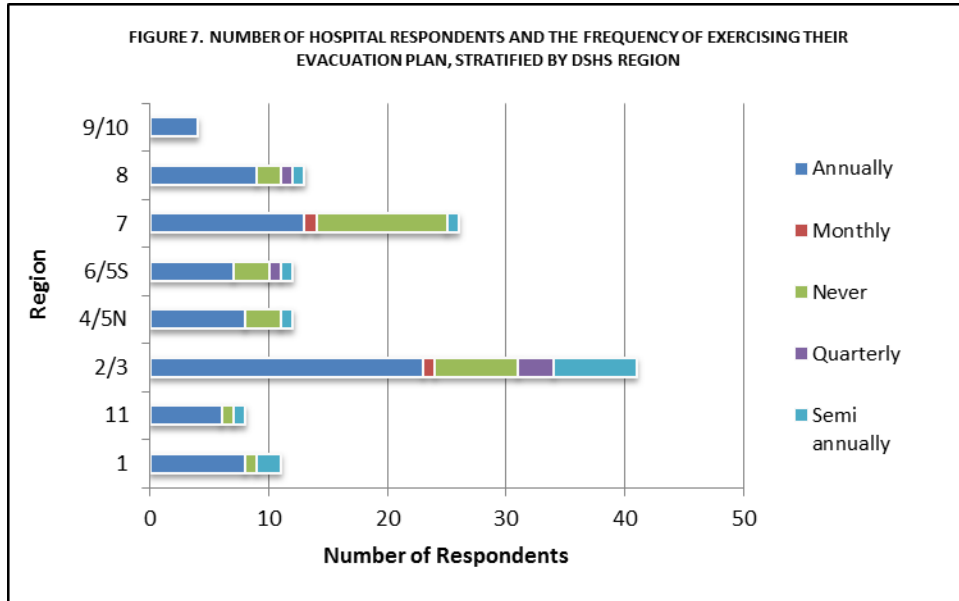
**DISASTER PROBABILITY.** Flood probability scores from the Texas Public Health Risk Assessment Tool v1.1 (TxPHRAT) were linked at the county level. The TxPHRAT uses frequency data for the event which is then converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). Forty-five percent (n=62) of hospital survey respondents had a likely or almost certain probability of flooding.

Hurricane and tropical storm probability scores from the TxPHRAT v1.1 and linked at the county level. The TxPHRAT uses frequency data for the event which is then converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). Probability of hurricanes or tropical storms is less likely than flooding with 27.5 percent (n=38) of hospital survey respondents experiencing a possible risk. The hurricane or tropical storm probability for the remaining respondents (72.4%; n=100) is not possible or rare.

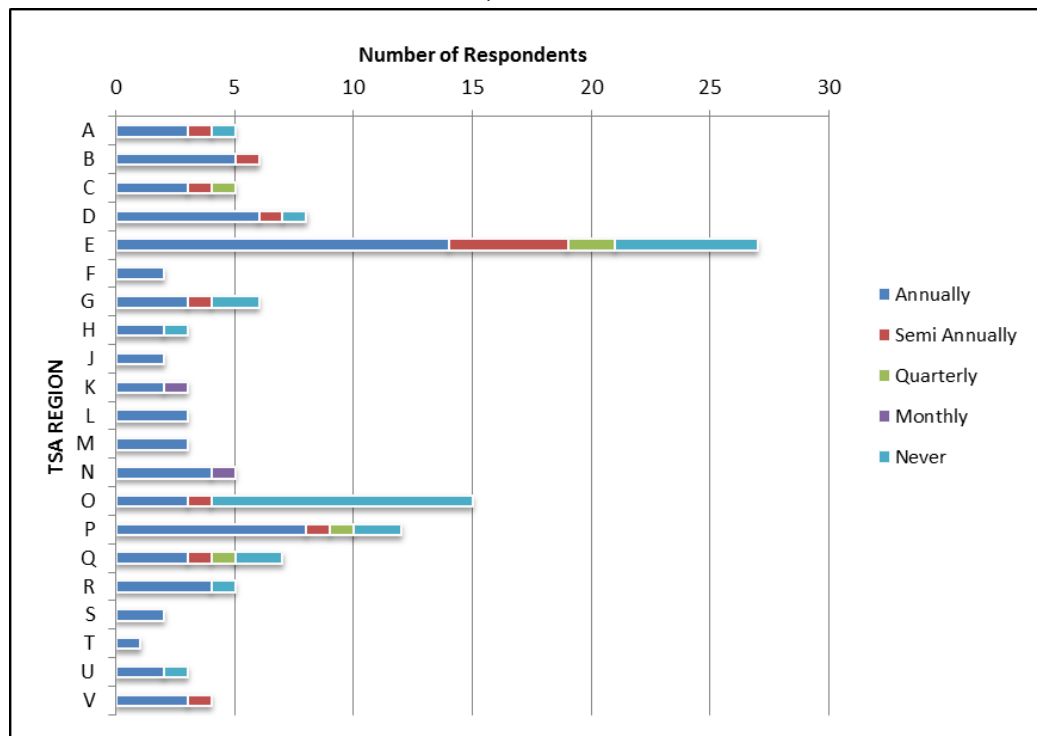
**EMERGENCY PLANS.** When asked about the facility evacuation plan, 127 indicated they have a plan to evacuate from the entire facility, 83 have a plan to evacuate from a wing, and 80 have a plan to evacuate from a floor (respondents were able to choose more than one evacuation plan type). Two hospital respondents indicated they do not have an evacuation plan. Of those that indicated they have an evacuation plan, seventy-eight (61.4%) exercise their plan annually, fourteen (11.0%) exercise their plan semi-annually, five (4%) exercise their plan quarterly, two (2%) exercise their plan monthly, and twenty-eight (22%) exercise their plan never.



(3.9%) exercise their plan quarterly, and two (1.6%) exercise it monthly. Over one-fifth (22.1%, n=28) reported never practicing their evacuation plan. Figure 6 shows the percent of hospital respondents and frequency of exercising their evacuation plan, statewide. Figures 7 and 8 show the number of hospital respondents and the frequency of exercising their evacuation plan, stratified by DSHS Region and TSA Region.



**FIGURE 8. NUMBER OF HOSPITAL RESPONDENTS AND THE FREQUENCY OF EXERCISING THE EVACUATION PLAN, STRATIFIED BY TSA REGION**



One-hundred eighteen respondents indicated their facility plan is evaluated annually. Eighty-six responded their facility plan is revised annually. Figure 9 shows the number of respondents who exercised, revised and evaluated their plan, statewide. Seventy-five (58.6%) exercised their evacuation plan with other supporting response agencies within their community. Figures 10, 11, and 12 show the number of hospitals that exercised their plan with other agencies overall, as well as stratified by DSHS and TSA Regions. Of those seventy-five facilities that exercised their plan with other agencies, sixty-four exercised with local emergency management and EMS, sixty exercised with the fire department, forty-nine exercised with their EMS Trauma RAC, and forty-seven exercised with the police department. Only twenty (26.7%) indicated they exercised their evacuation plan with public health. Figure 13 shows the types of agencies/partners with which facilities exercised their plan.

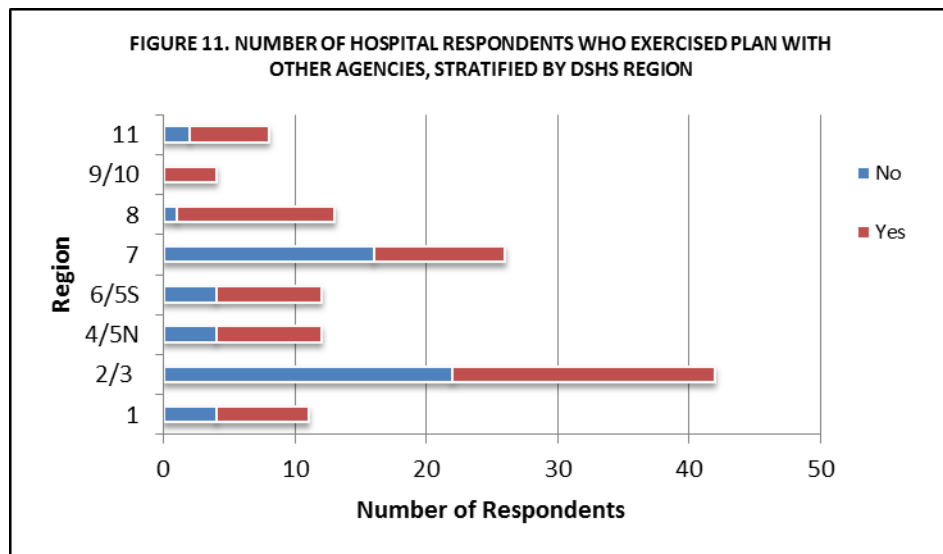
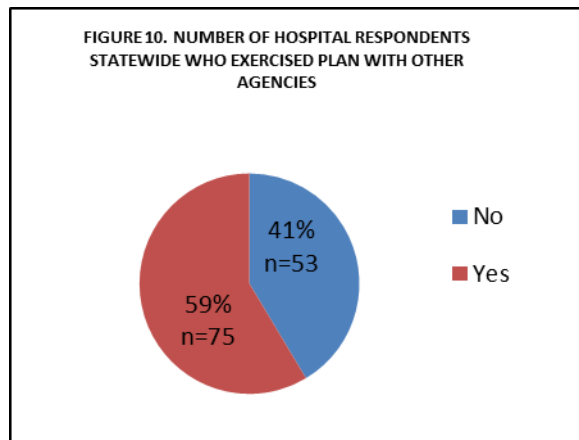
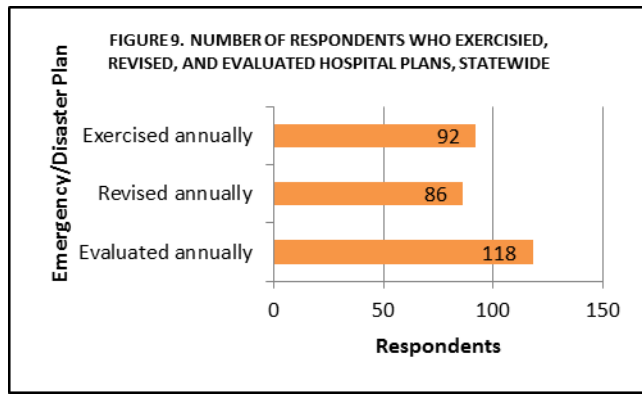
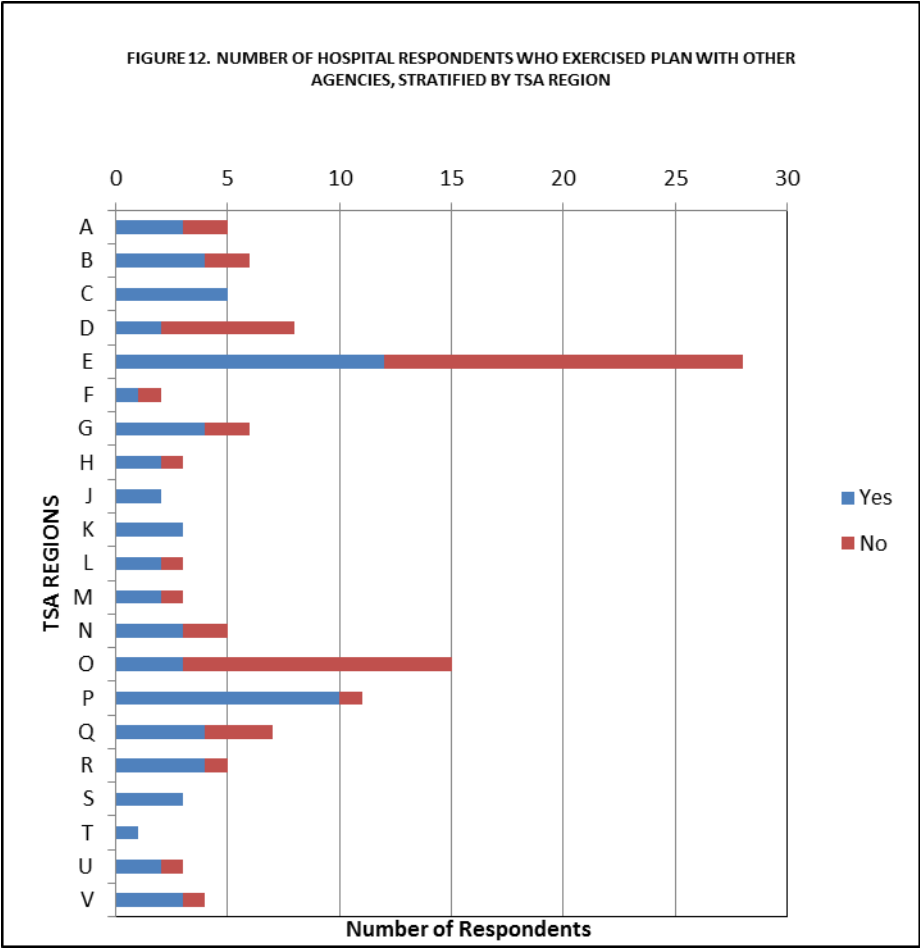
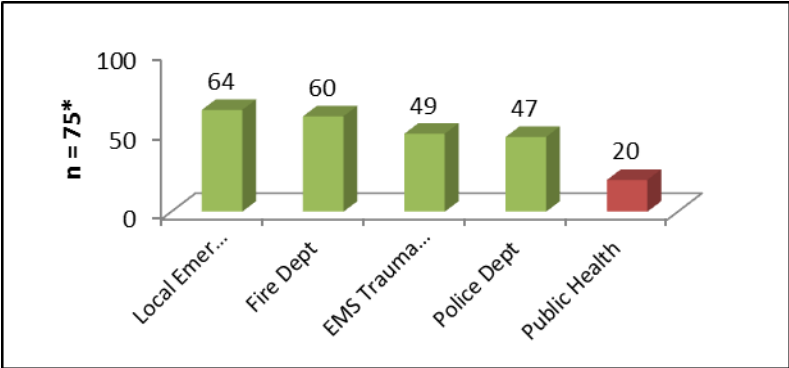


Table 16 shows the type of partners with whom hospitals exercised their plan stratified by DSHS Region. Table 17 shows the type of partners with whom hospitals exercised their plan stratified by TSA Region. Other agencies and partners included Ham Radio Communications, Air Force Base, other local hospitals, local Mental Health Authority, local Transit Buses, and Medical Reserve Corp.



**FIGURE 13. NUMBER OF HOSPITAL RESPONDENTS WHO EXERCISE PLAN WITH PARTNER AGENCIES, BY PARTNER TYPE**



\*Facilities were allowed to select more than one answer.

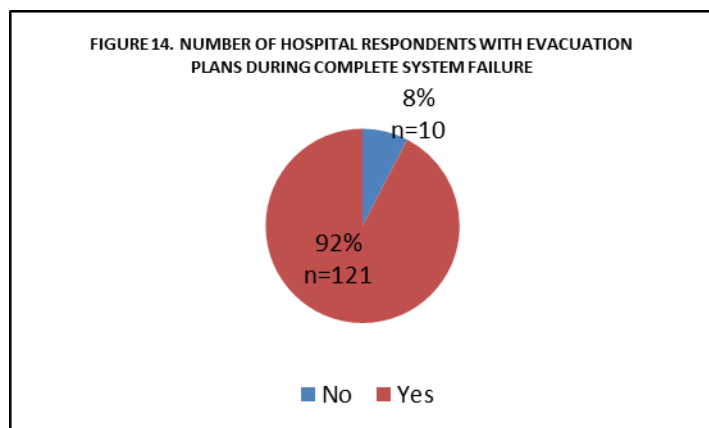
TABLE 16. NUMBER OF HOSPITAL RESPONDENTS BY TYPE OF PARTNERS/AGENCIES WITH WHOM PLANS WERE EXERCISED, STRATIFIED BY HEALTH SERVICE REGION

Partner Discipline	DSHS Region								Total
	1	2/3	4/5N	6/5S	7	8	9/10	11	
<b>Local Emergency Management</b>	7	16	7	8	8	10	4	4	<b>64</b>
<b>EMS</b>	6	17	8	7	9	9	2	6	<b>64</b>
<b>Fire</b>	7	15	6	5	9	9	3	6	<b>60</b>
<b>Police</b>	6	13	5	5	6	7	2	3	<b>47</b>
<b>EMS TSA RAC</b>	4	9	7	7	5	9	3	5	<b>49</b>
<b>Public Health</b>	2	3	2	1	3	5	0	4	<b>20</b>
<b>Other</b>	1	2	0	1	0	3	2	1	<b>10</b>
<b>Total</b>	<b>33</b>	<b>75</b>	<b>35</b>	<b>34</b>	<b>40</b>	<b>52</b>	<b>16</b>	<b>29</b>	<b>314</b>

TABLE 17. NUMBER OF HOSPITAL RESPONDENTS BY TYPE OF PARTNERS/AGENCIES WITH WHOM PLANS WERE EXERCISED, STRATIFIED BY TSA REGION

Partner Discipline	TSA Region																			Total		
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T		U	V
<b>Local EM</b>	3	3	5	1	10	1	4	2	1	2	2	1	3	3	7	3	4	3	1	2	3	<b>64</b>
<b>EMS</b>	3	3	5	1	10	1	4	2	1	2	2	1	3	3	7	3	4	3	1	2	3	<b>64</b>
<b>Fire</b>	3	4	3	1	10	1	1	2	1	3	2	1	3	3	7	2	4	3	1	2	3	<b>60</b>
<b>Police</b>	3	3	4	1	7	1	0	2	0	3	2	1	1	2	7	2	4	1	0	1	2	<b>47</b>
<b>EMS TSA RAC</b>	2	2	0	0	8	1	4	2	1	3	0	2	2	1	8	4	2	2	1	2	2	<b>49</b>
<b>Public Health</b>	1	1	1	0	2	0	1	1	0	0	0	0	2	1	5	1	0	0	1	2	1	<b>20</b>
<b>Other</b>	0	1	1	1	0	0	0	0	1	1	0	0	0	0	2	0	1	1	0	0	1	<b>10</b>
<b>Total</b>	<b>15</b>	<b>17</b>	<b>19</b>	<b>5</b>	<b>47</b>	<b>5</b>	<b>14</b>	<b>11</b>	<b>5</b>	<b>14</b>	<b>8</b>	<b>6</b>	<b>14</b>	<b>13</b>	<b>43</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>5</b>	<b>11</b>	<b>15</b>	<b>314</b>

If the hospital has to be evacuated, over half (51.1%) indicated their facility evacuates using support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets. Nineteen percent indicated their facility evacuates without support from outside their hospital system (the facility and the hospital system can evacuate without any assistance from the local or State government). Eighteen percent indicated their facility evacuates using support from the local first

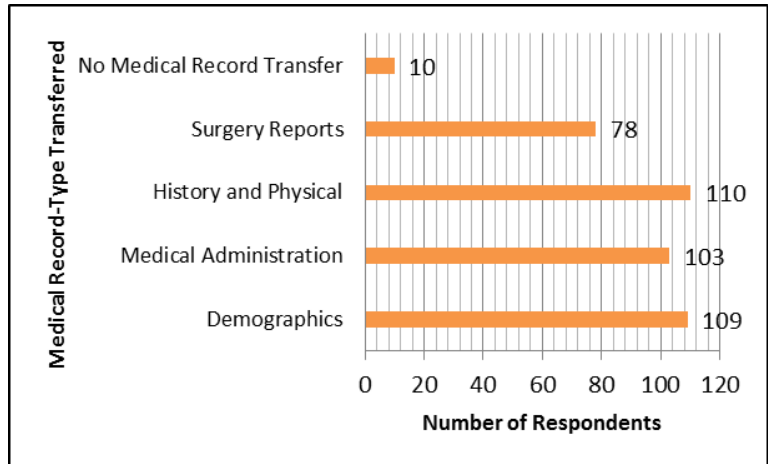


responders (i.e. Fire/EMS etc.) but provides their own medical transportation assets. Only 11 percent indicated their facility evacuates using support from local government AND State government for both support staff AND medical transportation assets. Over 92 percent indicated their evacuation plan covers evacuation of patients in complete system failure (i.e., loss of power and back-up systems that create a complete “black out” environment). Figure 14 shows the number and percentage of hospitals whose evacuation plans cover evacuation of patients in complete system failure.

If a facility needed to evacuate and transfer patients, facilities indicate that medical records, when a patient is transferred, include the following information:

- 109 indicated records would include demographic information
- 103 indicated records would include medical administration information
- 110 indicated records would include history and physical information
- 78 indicated records would include surgery reports
- 10 facilities indicated medical records would not be transferred with patients

FIGURE 15. NUMBER OF RESPONDENTS BY MEDICAL RECORD TYPE



Respondents were able to choose more than one portion of the medical record that is transferred. Figure 15 indicates the medical record information that is transferred with a patient. Fifty-three (38.4%) respondents indicated their facility has an emergency/disaster plan to send patient care response teams to provide care at the scene of a biological incident. Eighty (58.0%) respondents indicated their facility does not have such a plan. Sixty-four (48.1%) of the facilities are designated to receive patients from the National Disaster Medical System (NDMS). Almost one-quarter (24.1%,

FIGURE 16. NUMBER OF HOSPITAL RESPONDENTS THAT RECEIVE PATIENTS FROM THE NATIONAL DISASTER MEDICAL SYSTEM

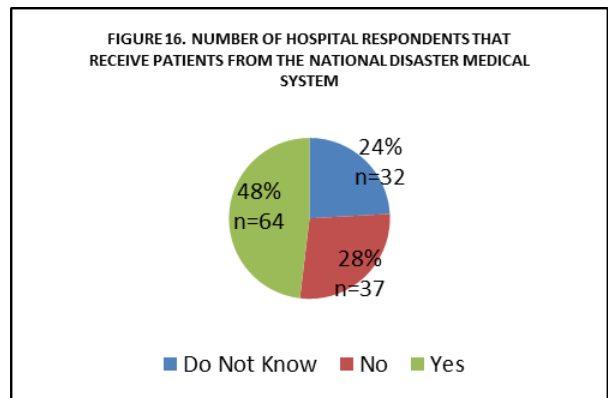
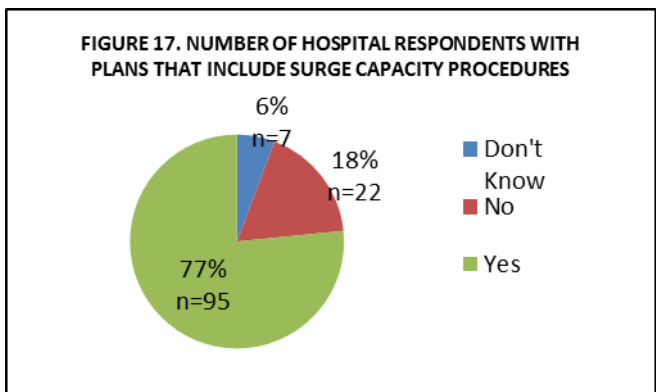


FIGURE 17. NUMBER OF HOSPITAL RESPONDENTS WITH PLANS THAT INCLUDE SURGE CAPACITY PROCEDURES



n=32) did not know whether they are a facility designated to receive patients from the NDMS.

Figure 16 indicates those with this NDMS status.

Over three-quarters (76.6%) indicate their plan includes surge capacity procedures to be implemented during a bioterrorism, pandemic, mass causality incident, as indicated in Figure 17, and statewide and by DSHS and TSA Regions, as shown in Figures 18 and 19.

FIGURE 18. NUMBER OF HOSPITAL RESPONDENTS WITH PLANS THAT INCLUDE SURGE CAPACITY PROCEDURES, STRATIFIED BY TSA REGION

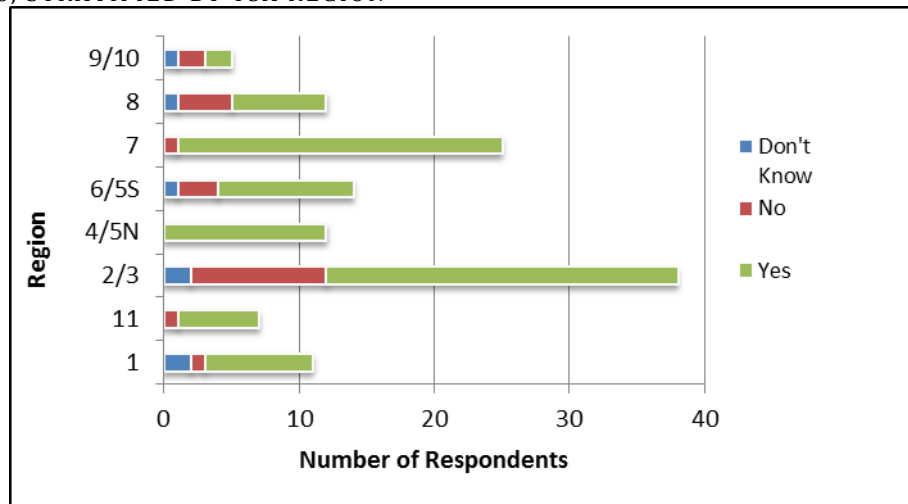


FIGURE 19. NUMBER OF HOSPITAL RESPONDENTS WITH PLANS THAT INCLUDE SURGE CAPACITY PROCEDURES, STRATIFIED BY TSA REGION

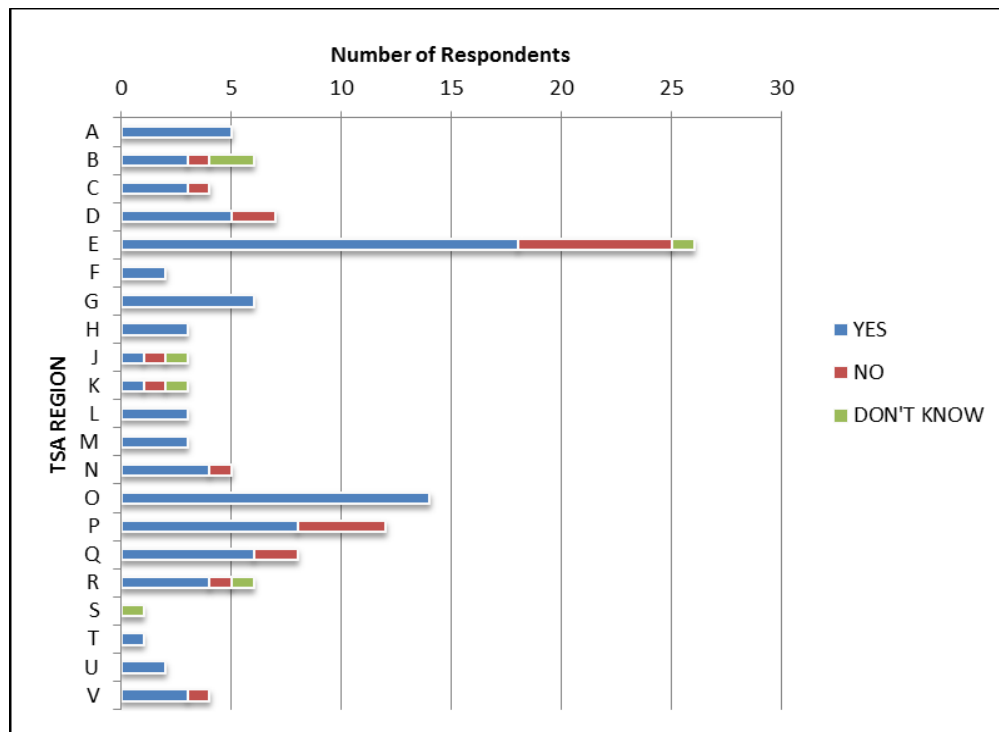




FIGURE 20. NUMBER OF RESPONDENTS BY TYPE OF HOSPITAL CONTRACT

Of the 127 respondents that indicated their facility has an evacuation plan, the following indicate transportation provider-type with whom they have contracts:

- Seventy-six have contracts with ambulances
- Seventeen have contract with buses
- Thirty-five have other contract types
- Forty-five have no contracts in place

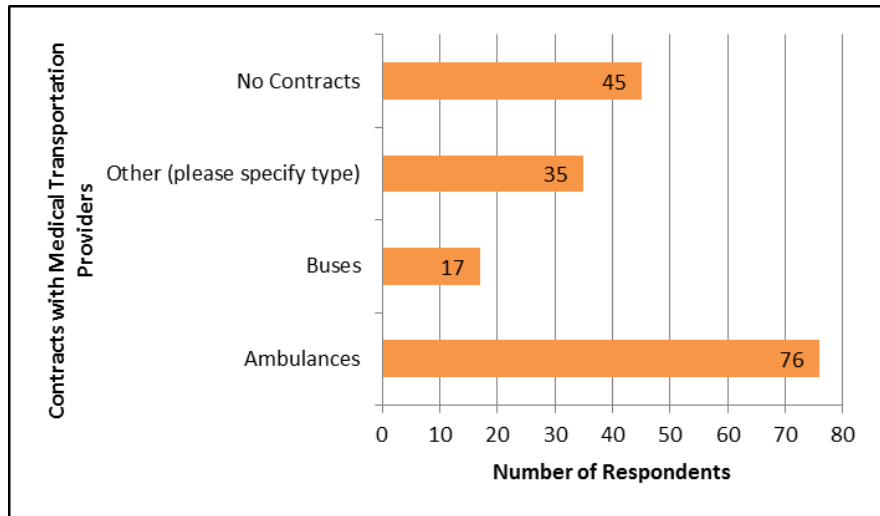
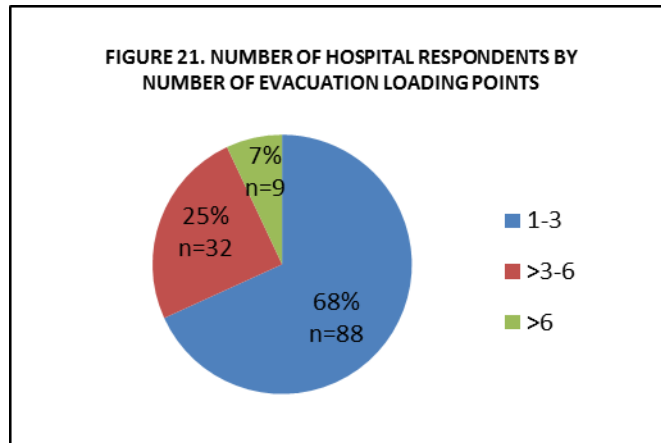


Figure20 shows the type of hospital transportation contracts.

In response to the “number of loading points” question (access locations for entry and departure of traffic, including ambulances and buses), if a hospital were required to evacuate:

- 68 percent (n=88) have 1-3 loading points
- 25 percent (n=32) have >3-6 loading points
- 7 percent (n=9) have >6 loading points

See Figure 21.



**GENERATORS.** One-hundred thirty-six (98.6.7%) of hospital respondents indicated their facility has a back-up power generator, while only 1.4% percent (n=2) do not have a back-up power generator. Almost half (47.1%) indicated their facility could sustain operations using the back-up generator for two to four days. The remaining respondents ranged from no days to 30 days.

When asked how often back-up generators and systems are fully load tested, respondents indicated:

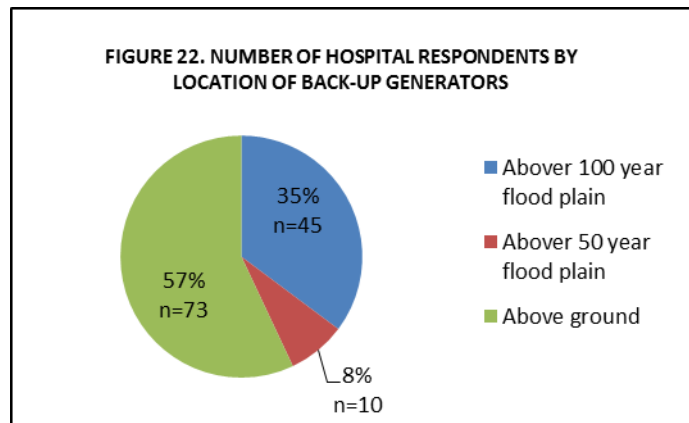
- 11.0% - weekly

- 47.1% - monthly
- 6.6% - quarterly
- 22.1% - annually
- 2.2% - every two years
- 6.6% - other

When asked when the facility’s generator(s) was/were last tested:

- 63.2% of respondents indicated less than 6 months ago (Feb 2013 - Aug 2013)
- 5.9% of respondents indicated greater than 6 months but less than 1 year ago (Aug 2012 - Jan 2013)
- 8.1% of respondents indicated greater than 1 year but less than 2 years ago (Aug 2011 - Jul 2012)
- 2.9% of respondents indicated greater than 2 years ago (July 2008 - July 2011)
- 2.2% of respondents indicated the generator was not fully load tested
- 2.2% of respondents were unsure or did not know with it was last fully load tested

Of those with back-up power generators, 57.0 percent indicated their generators are above ground. Over one-third (n=45) have generators located above the 100 year flood plain and 7.8 percent (n=10) have generators located above the 50 year flood plain. Of those with back-up power generators, 55.8 percent (n=72) indicated the back-up generators' main essential



emergency electrical systems are located above ground. Over one-third (n=47) have emergency electrical systems located above the 100 year flood plain and 7.8 percent (n=10) have emergency electrical systems located above the 50 year flood plain. Figures 22 and 25 show the location of back-up generators and electrical systems. Figures 23 and 24 show generator location by DSHS and TSA Region.

FIGURE 23. NUMBER OF HOSPITAL RESPONDENTS BY LOCATION OF BACK-UP GENERATORS, STRATIFIED BY TSA REGION

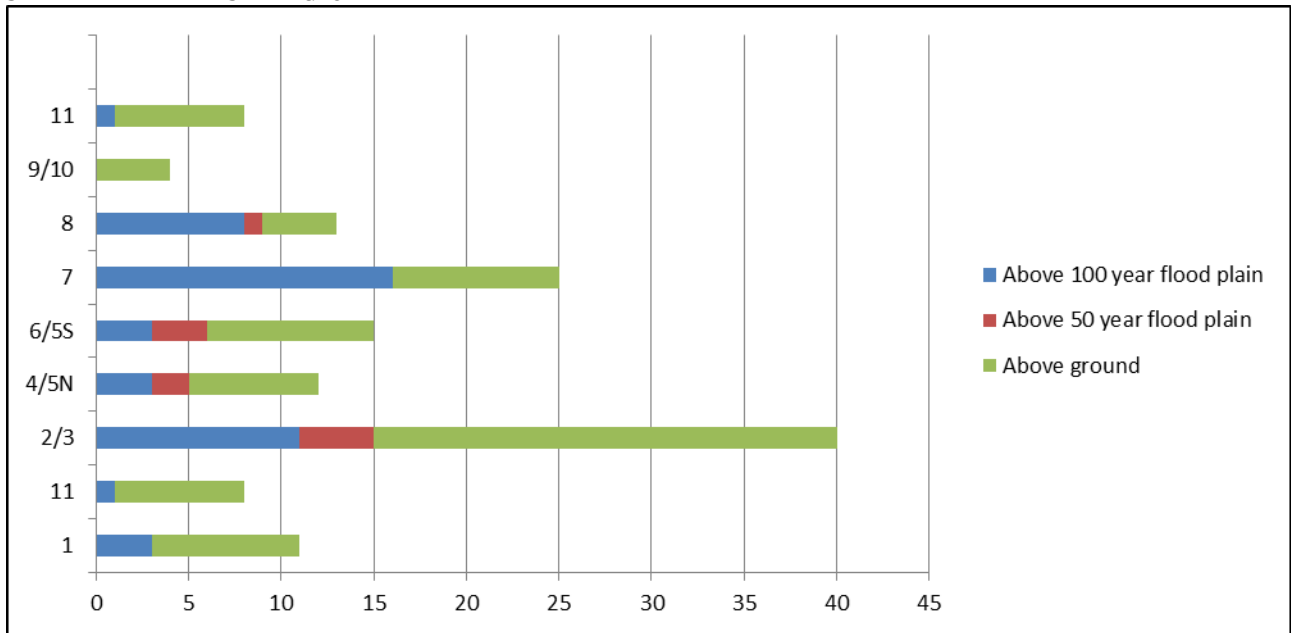
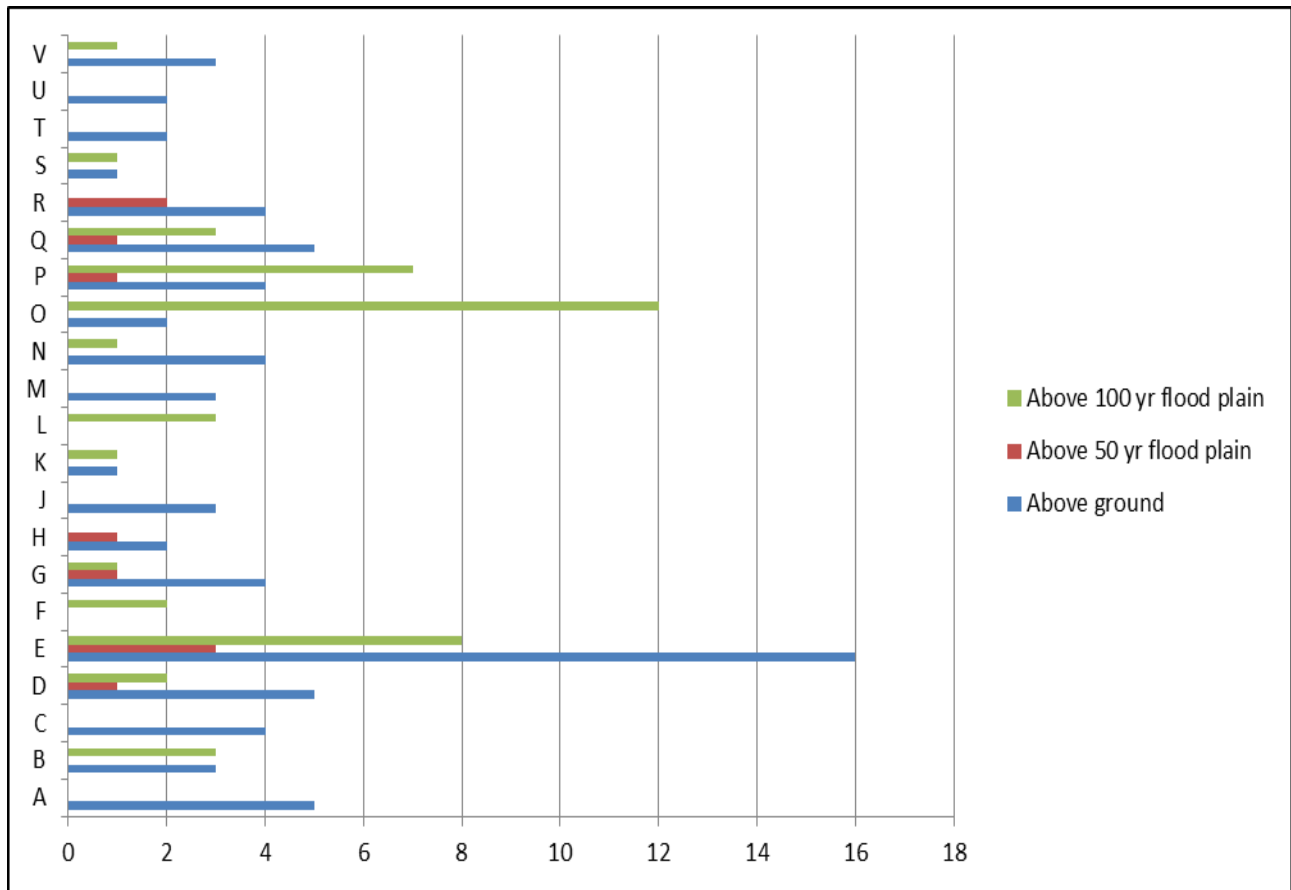
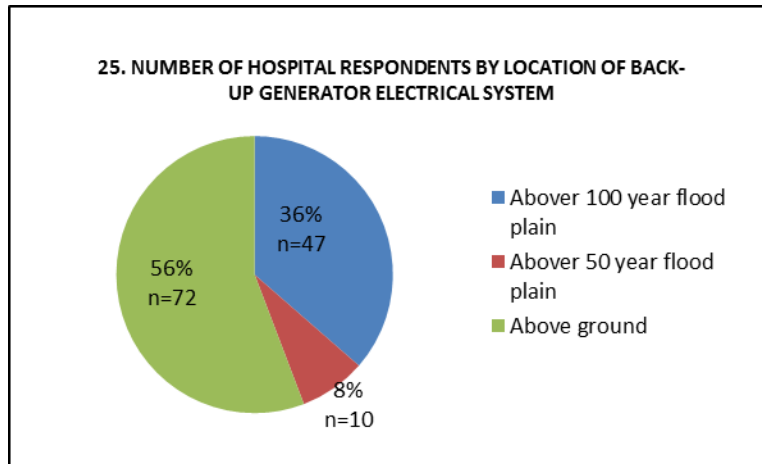


FIGURE 24. NUMBER OF HOSPITAL RESPONDENTS BY LOCATION OF BACK-UP GENERATORS, STRATIFIED BY TSA REGION





Respondents indicated that back-up generators are needed to sustain a wide range of systems, including emergency systems (fire alarm, security, etc.), life support (oxygen delivery), pharmacy and materials refrigeration, surgical capabilities & lab services, emergency room, elevators, HVAC, water pump stations, laundry, kitchen/restaurant, security lock down, MRI and CT scans, and sterilization. Over half of the respondents indicated their facility is dependent on back-up generators for all of the above except laundry. Ninety (n=90) respondents indicated their facility has back-up support capabilities for potable water. Fifty-six (n=56) indicated they have on-site emergency water supply connections for outside supplemental water support and forty-seven (n=47) indicated they have support capabilities for sewer water supply. Only 11 indicated they have back-up natural gas supply. For the responses above, respondents were able to choose more than one response.

**SHELTER-IN-PLACE CAPACITY.** Over three-quarters of respondents (76.1%) indicated their facility can provide food for key personnel and patients without resupply for at least three days up to one week. Below are food supply responses:

- 0 to 2 days – 6.5%
- 3 to 4 days – 48.6%
- 5 days to 1 week – 27.5%
- Greater than 1 week – 6.5%

Over two-thirds of respondents (67.4%) indicated their facility can provide housing for key personnel and patients for at least three days up to one week. Below are housing capacity responses:

- 0 to 2 days – 8.0%
- 3 to 4 days – 45.7%
- 5 days to 1 week – 21.0%
- Greater than 1 week – 9.4%

Supplies of potable water for key personnel and patients were slightly less available for long periods of time than food and housing, with the following responses for potable water supply:

- 0 to 2 days – 16.7%
- 3 to 4 days – 49.3%
- 5 days to 1 week – 13.8%
- Greater than 1 week – 5.8%

Two-thirds of respondents (66.7%) indicated their facility has disposable medical re-supply capabilities for at least three days up to one week. Below are disposable medical re-supply capability responses:

- 0 to 2 days – 5.1%
- 3 to 4 days – 41.3%
- 5 days to 1 week – 25.4%
- Greater than 1 week – 10.9%

Over one-quarter of respondents (27.5%) indicated their facility has medical gas supply (oxygen) on-hand for more than a week and over half (52.2%) have medical gas for at least three days up to one week. Below are medical gas supply responses:

- 0 to 2 days – 2.9%
- 3 to 4 days – 29.7%
- 5 days to 1 week – 22.5%
- Greater than 1 week – 27.5%

**SURGE CAPACITY.** Seventy-seven percent (n=95) of the respondents indicated their facility emergency/disaster plan includes bed surge capacity procedures to be implemented during a bioterrorism, pandemic, or mass casualty incident. Almost 17.7 percent (n=22) indicated it does not and 5.6% (n=7) did not know if their facility emergency/disaster plan includes bed surge capacity procedures.

**BODY CAPACITY.** Eighty-two (64.6%) of respondents indicated their facility has a deceased body holding area. The average number of bodies that can be held is 21 and the median is 14.5. Of those that responded, forty-one (53.2%) facilities can hold from one to five bodies; thirteen (16.9%) can hold from six to ten bodies; and twenty (26.0%) can hold more than ten. Thirty-eight (46.3%) of the facility holding areas have refrigeration capabilities. Figures 26, 27, and 28 show the number of hospitals with a deceased body holding area statewide, as well as by DSHS and TSA Regions, respectively. Figure 29 shows the number of bodies these areas can hold. Figure 30, 31A, 31B, and 32 show refrigeration capabilities, statewide and by DSHS and TSA Regions, respectively.

FIGURE 26. NUMBER OF HOSPITALS RESPONDENTS WITH A DECEASED BODY HOLDING AREA

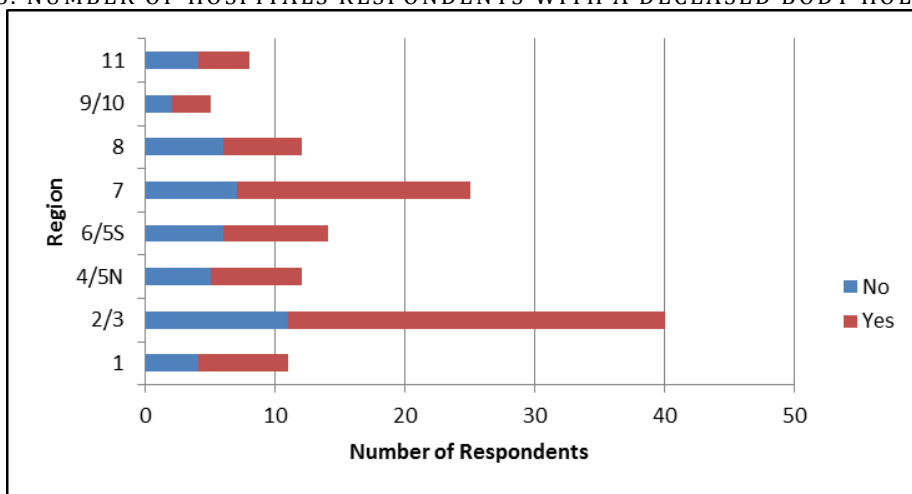


FIGURE 27. NUMBER OF HOSPITAL RESPONDENTS WITH A DECEASED BODY HOLDING AREA, STRATIFIED BY TSA REGION

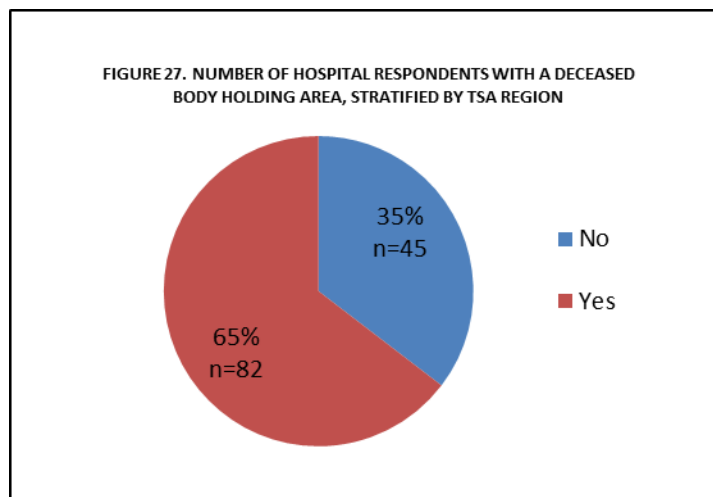


FIGURE 28. NUMBER OF HOSPITAL RESPONDENTS WITH A DECEASED BODY HOLDING AREA, STRATIFIED BY TSA REGION

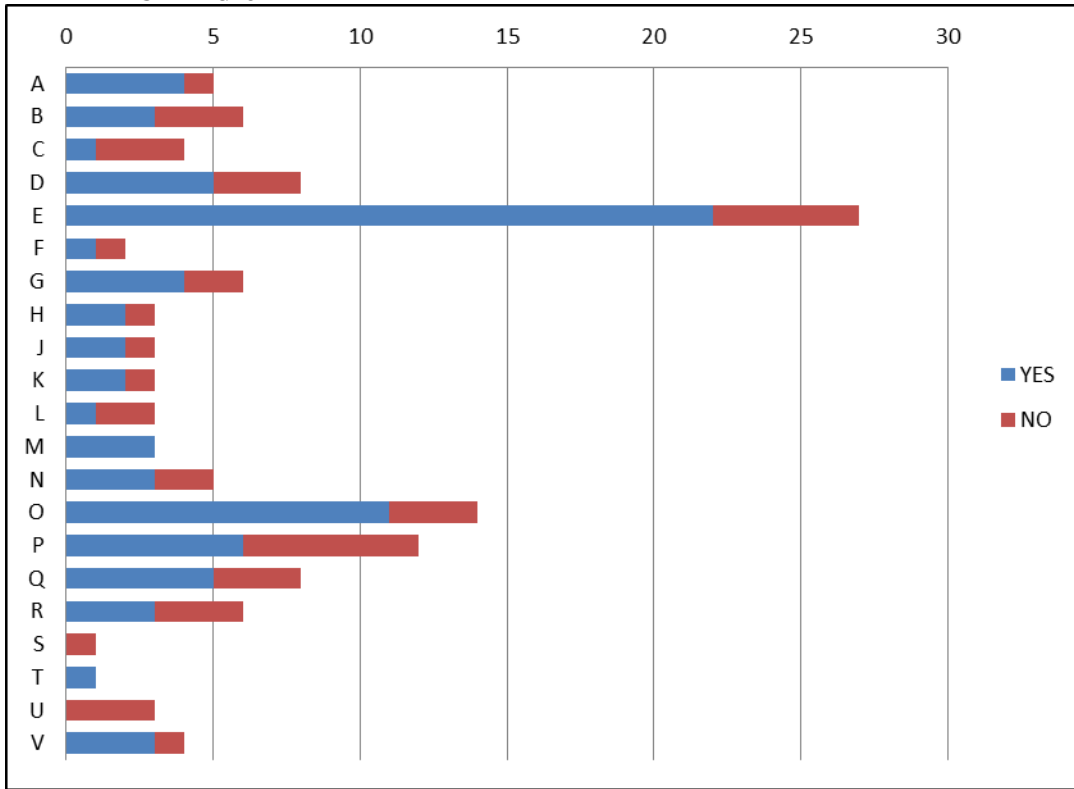


FIGURE 29. NUMBER OF HOSPITAL RESPONDENTS BY NUMBER OF BODIES HELD IN HOLDING AREA

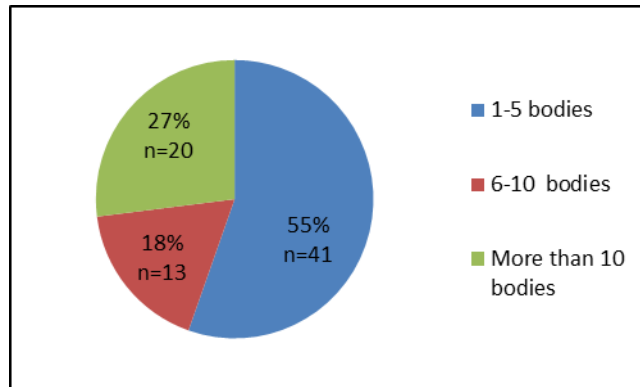


FIGURE 30. NUMBER OF HOSPITAL RESPONDENTS BY REFRIGERATION CAPABILITIES OF HOLDING AREA

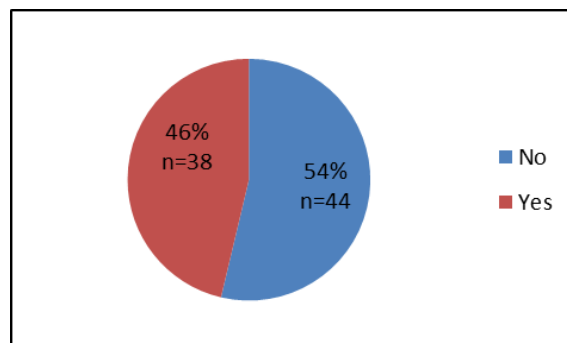


FIGURE 31A. NUMBER OF RESPONDENTS BY REFRIGERATION CAPABILITIES OF HOLDING AREA, STRATIFIED BY HSR REGION

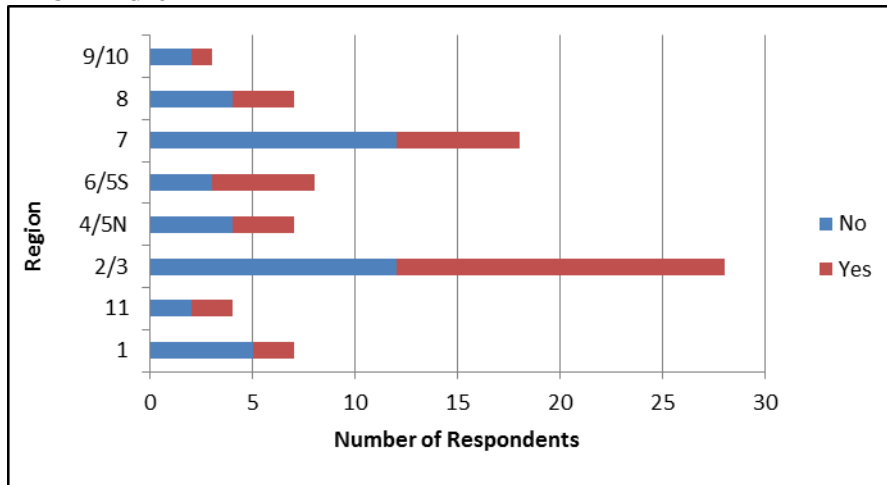
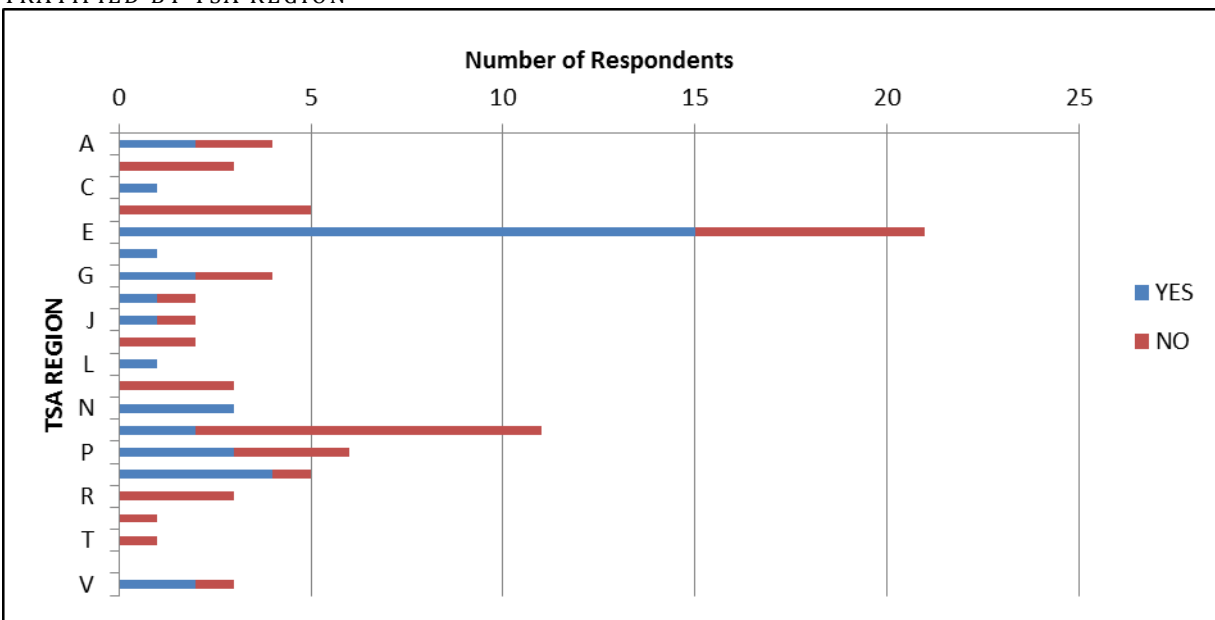
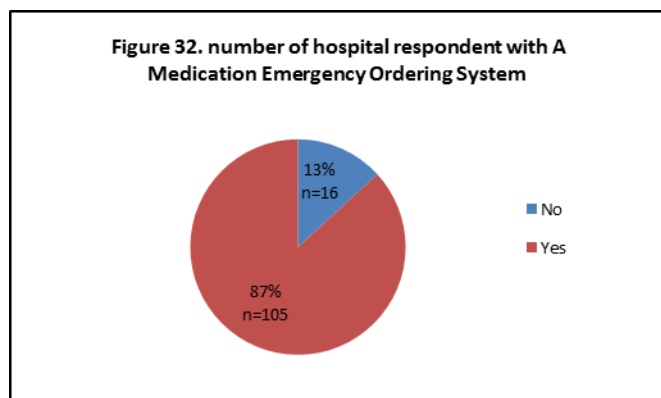


FIGURE 31B. NUMBER OF RESPONDENTS BY REFRIGERATION CAPABILITIES OF HOLDING AREA, STRATIFIED BY TSA REGION



**PHARMACEUTICAL.** One-hundred five (86.8%) of the respondents indicated that their facilities have an emergency ordering system in place with pharmaceutical vendors. Figures 32, 33, and 34 indicate the number of hospitals with the ability to order medications in an emergency, statewide and by DSHS and TSA regions, respectively.



Seventy-seven (63.3%) of facility respondents have medication (prophylaxis and treatment)



distribution protocols for a bioterrorism or other public health emergency for essential staff. Twenty-six (21.3%) do not have protocols and fourteen (11.5%) did not know. Figure 35 shows medication (prophylaxis and treatment) distribution protocols for essential staff. Sixty-eight of the facility plans/protocols include distribution to all staff. Forty-nine of the facility plans/protocols include distribution to patients. Thirty-nine of the facility plans/protocols include distribution to family members of staff. Sixty-six did not respond to this question (see Figure 36).

FIGURE 33. NUMBER OF HOSPITAL RESPONDENTS WITH A MEDICATION EMERGENCY ORDERING SYSTEM, STRATIFIED BY TSA REGION

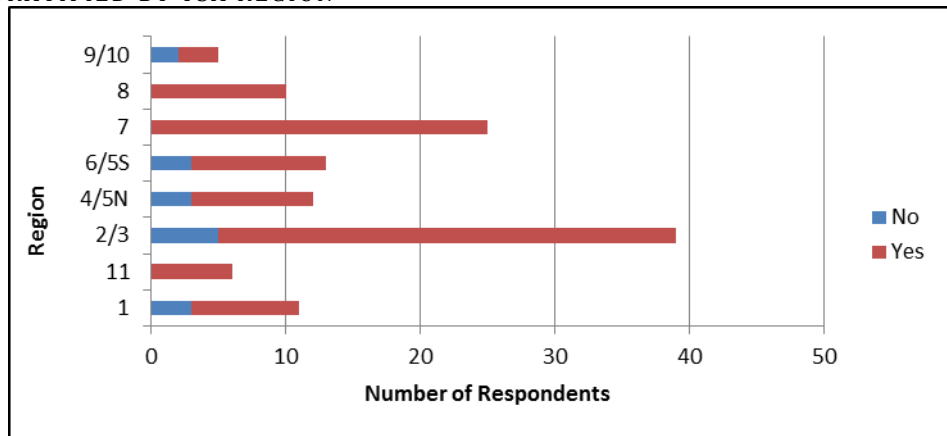


FIGURE 34. NUMBER OF RESPONDENTS WITH A MEDICATION EMERGENCY ORDERING SYSTEM, STRATIFIED BY TSA REGION

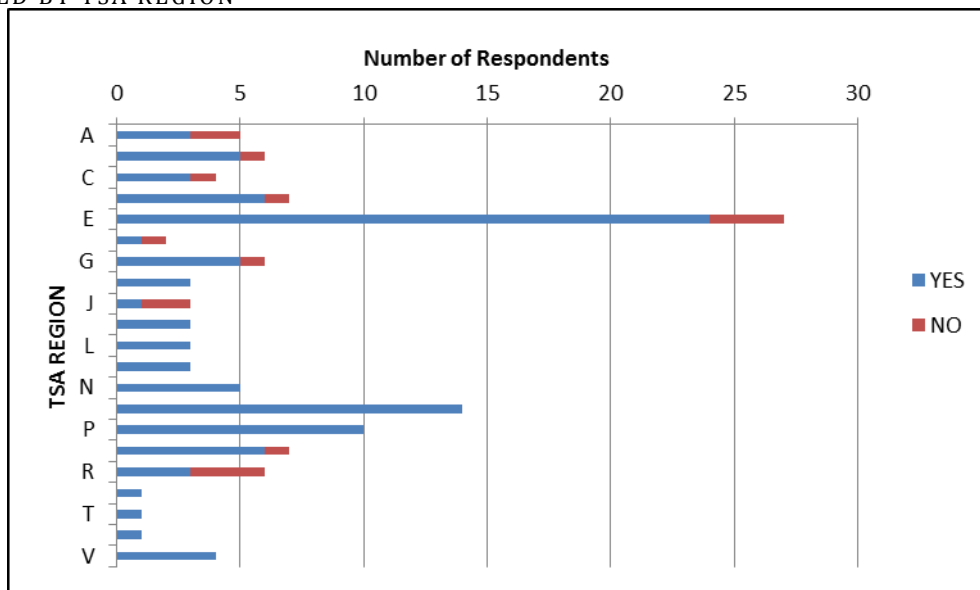


FIGURE 35. NUMBER OF HOSPITAL RESPONDENTS WITH MEDICATION DISTRIBUTION PROTOCOLS FOR ESSENTIAL STAFF

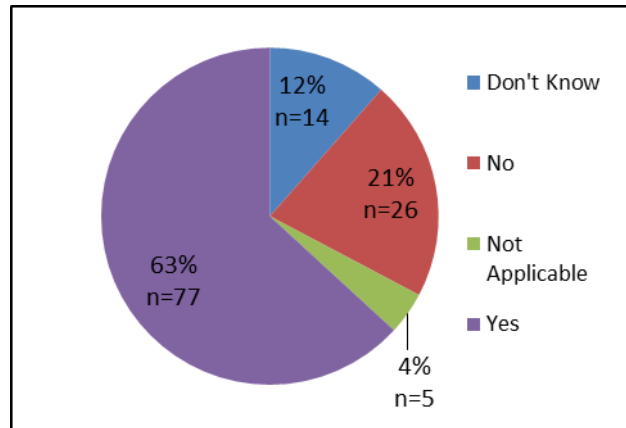
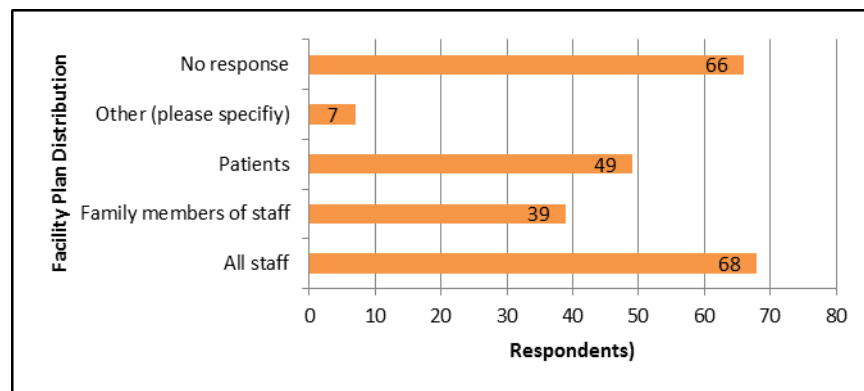


FIGURE 36. NUMBER OF HOSPITAL RESPONDENTS WITH MEDICATION DISTRIBUTION PROTOCOLS BY RECIPIENT TYPE



**STAFF SUPPORT AND TRAINING.** One-hundred fifteen of the survey respondents indicated they have dedicated staff to help sustain the operations in an emergency. Eighty-six have additional staff to help sustain operations. Thirty-one have employees contracted from outside the facility to assist in emergency/disaster response roles. Respondents were able to choose more than one type of staff.

Facility respondents indicated the following type of staff receive emergency/disaster training:

- 111 respondents indicated nurses receive training
- 106 respondents indicated health administrators/managers receive training
- 97 respondents indicated support staff receive training
- 80 respondents indicated pharmacists receive training

- 80 respondents indicated respiratory therapists receive training
- 79 respondents indicated laboratory staff receive training
- 70 respondents indicated physicians receive training
- 54 respondents indicated mental health/social workers receive training
- 20 respondents indicated epidemiologists receive training

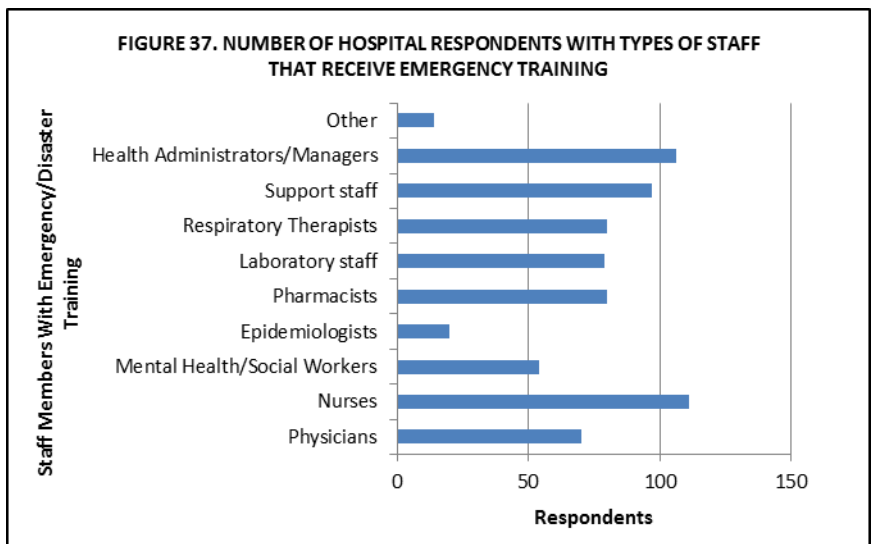
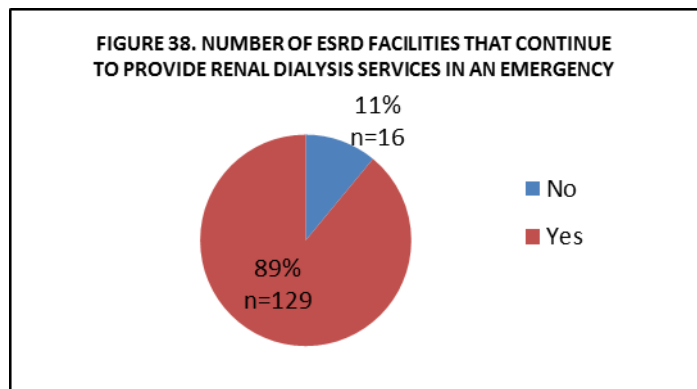


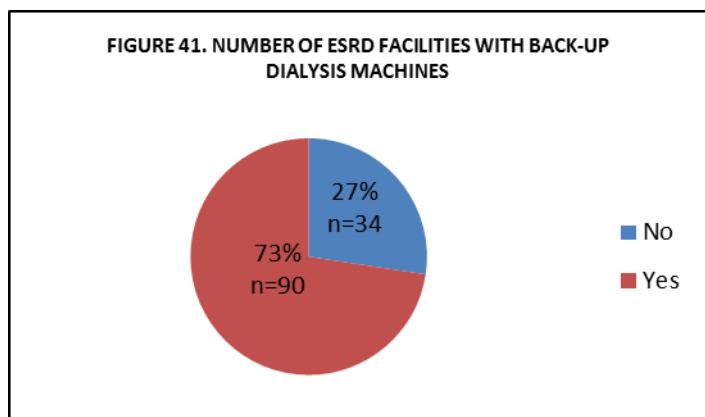
Figure 37 shows the types of hospital staff that receive training.

## END STAGE RENAL DISEASE FACILITIES

**EMERGENCY PLANS.** One-hundred twenty-nine (88.9%) End Stage Renal Disease (ESRD) respondents indicated their facility would continue to provide renal dialysis services during an emergency. Only sixteen (11.0%) respondent facilities would not (see Figure 38).

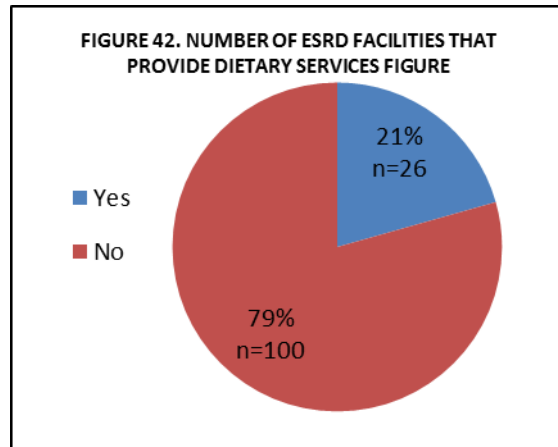


Of the 146 who responded to this question, 127 (n=100.0%) indicated their facility has staff trained in dialysis that could report to work during an emergency (13.0% did not respond to this question). One-hundred twenty-nine (n=100.0%) ESRD respondents indicated their facility has all the necessary supplies available to dialyze patients during an emergency (11.6% did not respond to this question). Of the 124 who



responded to this question, 90 (72.6%) ESRD respondents indicated their facility has back-up dialysis machines that could be used to treat an influx of patients during an emergency. Thirty-four (27.4%) indicated their facility does not have back-up dialysis machines. See Figure 41 below.

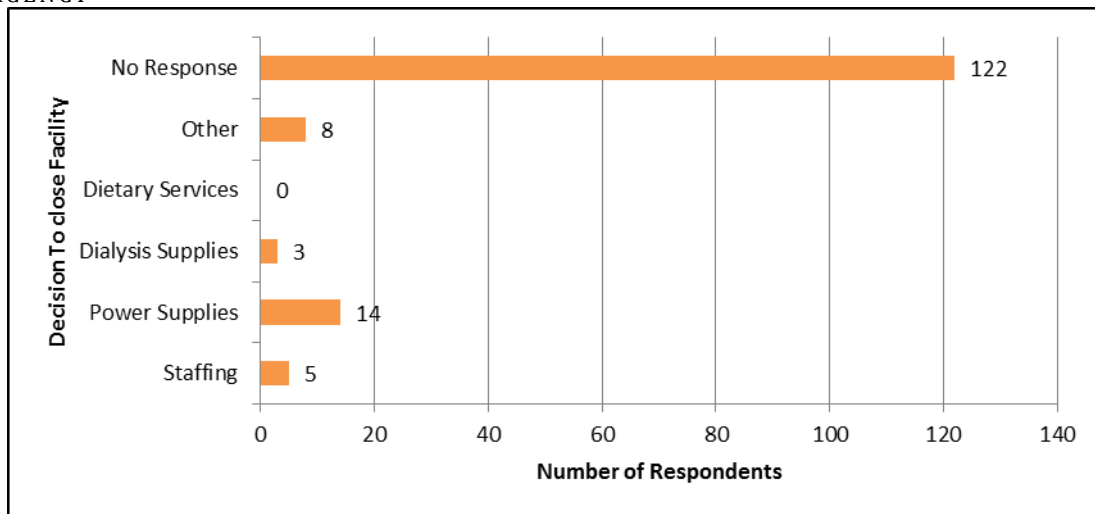
Twenty-six (20.6%) respondents, who responded to their facility's ability to provide dietary services, indicated their ESRD facility provides dietary services. The majority (n=100, 79.4%) do not provide these services. See Figure 42.



When asked the elements that would contribute to a decision to close their facility during an emergency, respondents indicated the following:

- Fourteen indicated power supplies would contribute to a decision to close
- Five indicated staff would contribute to a decision to close
- Three indicated dialysis supplies would contribute to a decision to close
- Other reasons included facility capacity, availability of water supply, immediate threats to patient safety, and instructions from the company emergency team or medical director to close. (See Figure 43.)

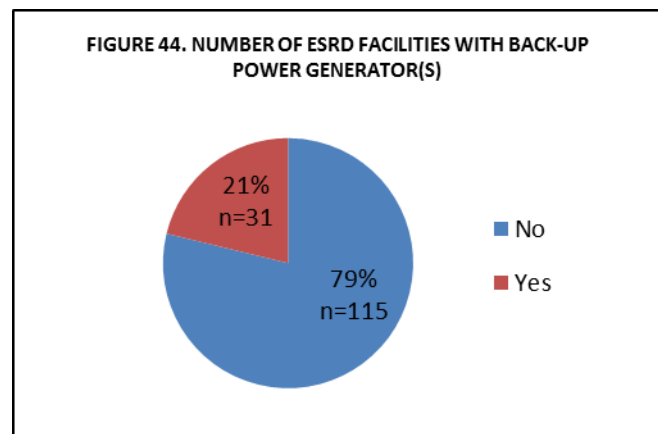
**FIGURE 43. NUMBER OF ESRD FACILITIES BY REASONS FOR FACILITY CLOSURE IN AN EMERGENCY**



**DISASTER PROBABILITY.** Flood probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). Almost three-quarters (n=108) of ESRD facility respondents had a possible or likely probability of flooding.

Hurricane and tropical storm probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). As with hospital respondents, the probability of hurricanes or tropical storms for areas in which ESRD respondents are located is less likely with only one facility in a “likely” probability area.

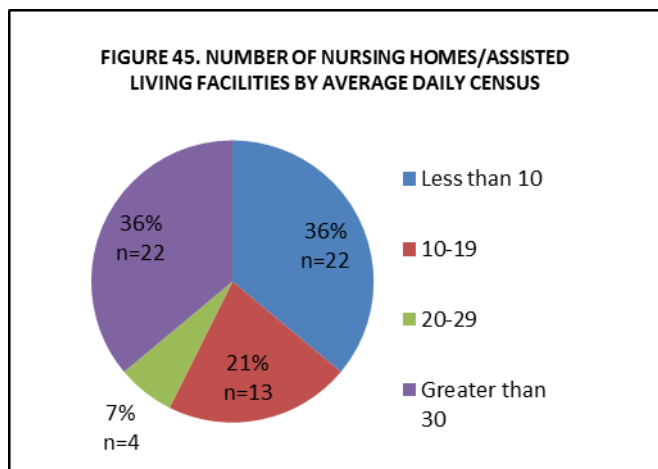
**GENERATORS.** Eighty-nine percent (n=129) of ESRD respondents indicated their facility continues to provide renal dialysis services during an emergency. However, only 21.2% (n=31) indicated they have back-up power generators. See Figure 44. Of those that indicated their facility has back-up power generators, 67.7 percent are above ground, 3.2 percent are above a 50 year flood plain, and 0.6% (n=1) is above a 100 year flood plain. Of those with back-up power generators, 71.0 percent (n=22) indicated the back-up generators' main essential emergency electrical systems are located above ground. Sixteen percent (n=5) have emergency electrical systems located above the 100 year flood plain and 37.2 percent (n=1) have emergency electrical systems located above the 50 year flood plain. However, 118 survey respondents did not answer these questions, which may indicate a lack of knowledge to respond.



## NURSING HOME/ASSISTED LIVING FACILITIES

**FACILITY DESCRIPTION.** For nursing homes and assisted living facilities (NH/AL), the mean average daily census (ADC) for respondent facilities was 50.2 and the median was 64. The low ADC was 3 and the high was 125.

- Less than 10 ADC: 22 facilities (36.1%)
- 10-19 ADC: 10 facilities (16.4%)
- 20-29 ADC: 4 facilities (6.6%)
- Greater than 30 ADC: 22 facilities (36.1%)



See Figure 45.

**DISASTER PROBABILITY.** Flood probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3-Possible; 4- Likely; and 5- Almost Certain). Almost two-thirds (n=47) of NH/AL facility respondents are in likely or almost certain probability of flooding areas.

Hurricane and tropical storm probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3-Possible; 4- Likely; and 5- Almost Certain). As with the other facility types, the probability of hurricanes or tropical storms is less likely than flooding with 41.7 percent (n=30) of NH/AL facility survey respondents at no risk for hurricanes or tropical storms and 55.6 percent (n=40) with rare or not possible risk.

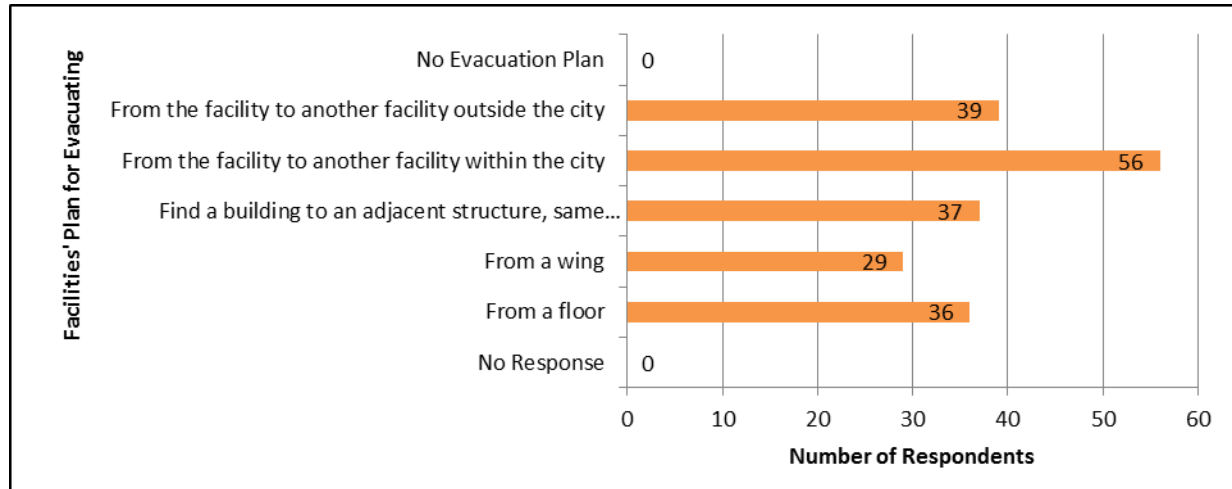
**EMERGENCY PLANS.** One-hundred percent (n=72) indicated their facility has an emergency preparedness and response plan and an evacuation plan. When asked about a facility evacuation plan:

- 39 have a plan to evacuate from the facility to another facility/structure outside the city
- 56 have a plan to evacuate from the facility to another facility within the city

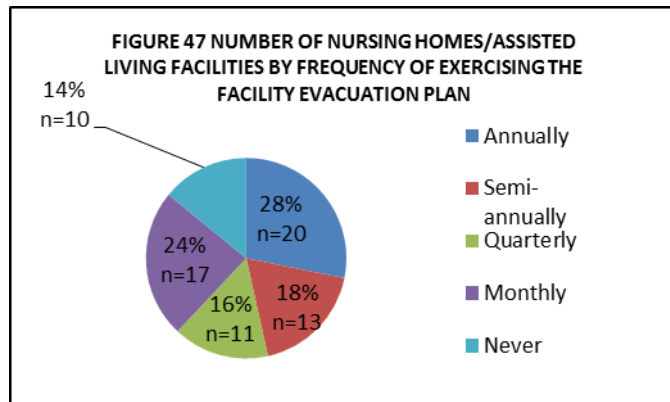
- 37 have a plan to evacuate from the building to an adjacent structure on the same property/in the vicinity
- 29 have a plan to evacuate from a wing

Respondents were able to choose more than one evacuation plan type. See Figure 46.

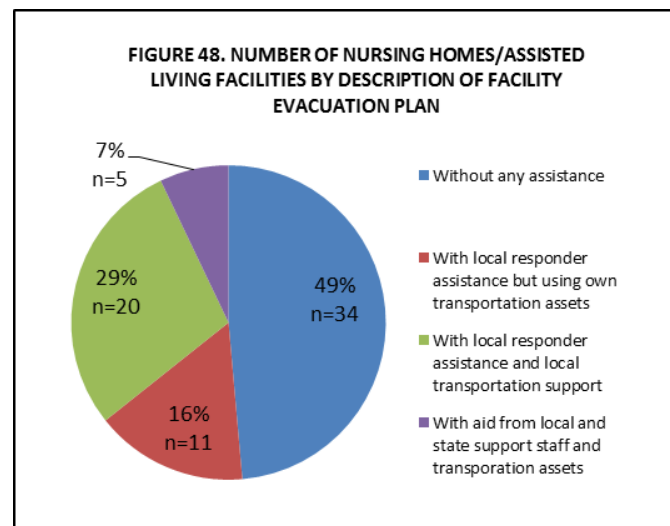
FIGURE 46. NUMBER OF NURSING HOMES/ASSISTED LIVING FACILITIES BY EVACUATION PLAN TYPE



Twenty (27.8%) nursing home/assisted living facility respondents indicated they exercise their plan annually, thirteen (18.1%) exercise their plan semi-annually, eleven (15.3%) exercise their plan quarterly, and seventeen (23.6%) exercise it monthly. Ten (13.9%) never practice their evacuation plan. See Figure 47.

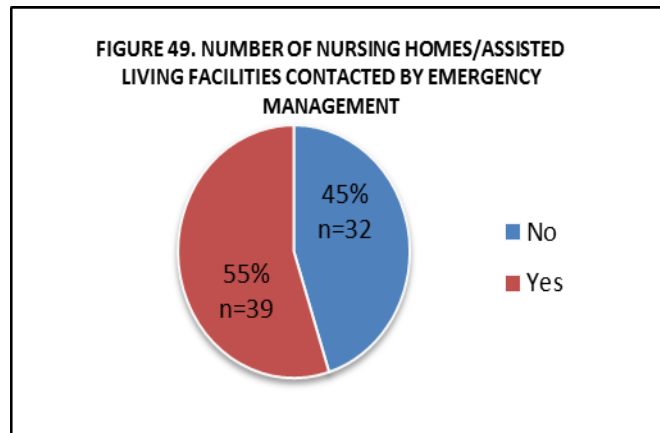


If the NH/AL facility has to be evacuated, almost half (48.6%; n=34) indicated that their facility evacuates without support from outside their hospital system (the facility and the hospital system can evacuate without any assistance from the local or State government). Over one-quarter (28.6%, n=20) indicated their facility evacuates using support from local

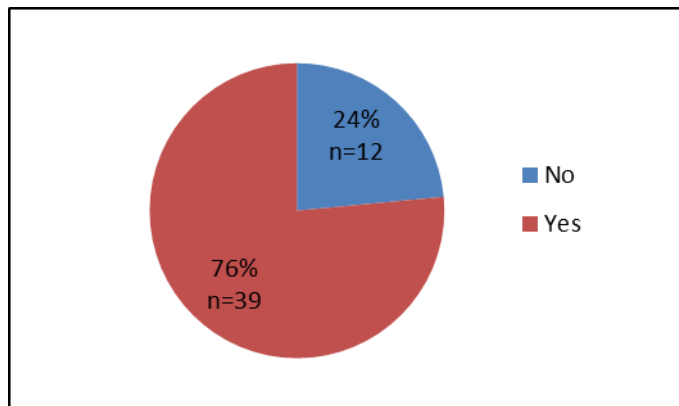


responders (i.e. Fire/EMS) and local (government provided) medical transportation assets. Fifteen percent (n=11) indicated their facility evacuates using support from the local first responders (i.e. Fire/EMS etc.) but provides their own medical transportation assets. Almost 7 percent (n=5) indicated their facility evacuates using support from local government AND State government for both support staff AND medical transportation assets. See Figure 48.

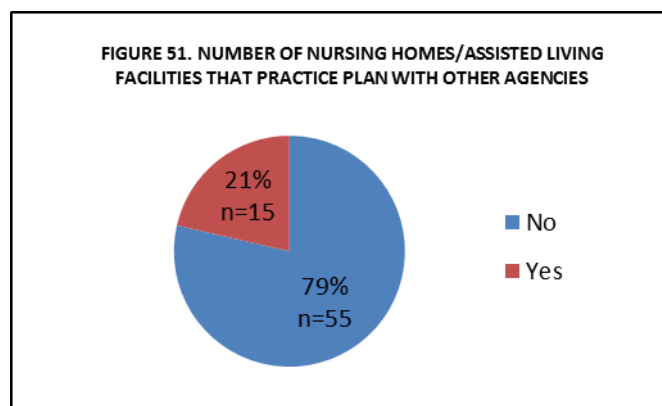
Thirty-nine (54.9%) respondents indicated their facility has been contacted by the local emergency management office about inclusion in community preparedness planning. Thirty-two (45.0%) of respondents have not been contacted. Of the 51 that responded, thirty-nine (76.5%) respondents indicated their facility has coordinated planning and response activities. See Figures 49 and 50.



**FIGURE 50. NUMBER OF NURSING HOMES/ASSISTED LIVING FACILITIES THAT PLAN WITH LOCAL EMERGENCY MANAGEMENT**



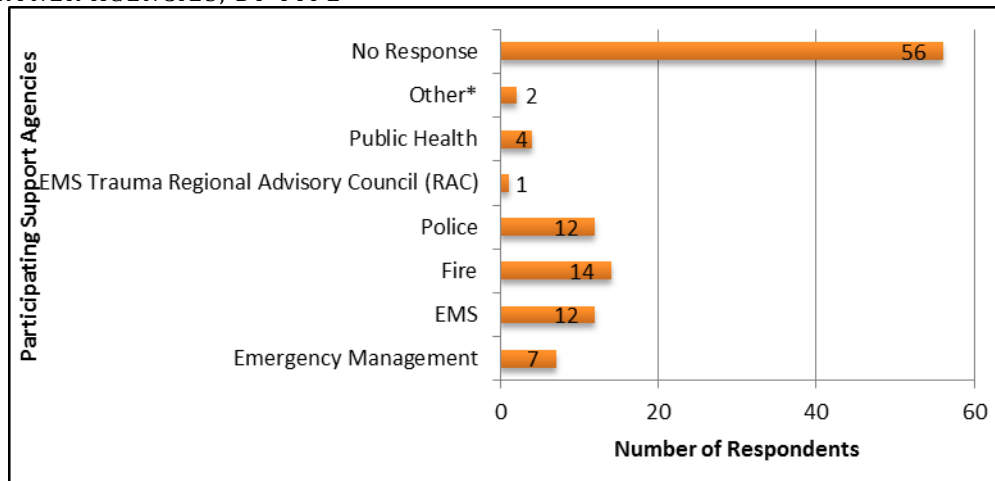
Fifty-five (78.6%) respondents indicated their facility does not practice evacuation procedures with other supporting response agencies in the community. Of the fifty-five facilities that practice evaluation procedures with other agencies, fourteen practice with the fire department, twelve practice with the





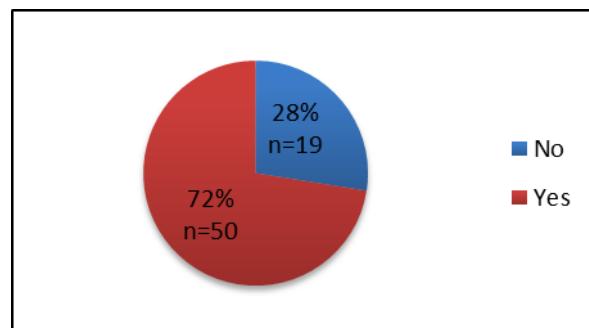
police department, twelve practice with EMS, seven practice with local emergency management, four practice with public health, one practices with their EMS Trauma RAC. See Figures 51 and 52. Almost three-quarters indicated their facility plan includes evacuation of residents in a complete system failure. See Figure 53.

FIGURE 52. NUMBER OF NURSING HOMES/ASSISTED LIVING FACILITIES THAT EXERCISE PLAN WITH PARTNER AGENCIES, BY TYPE

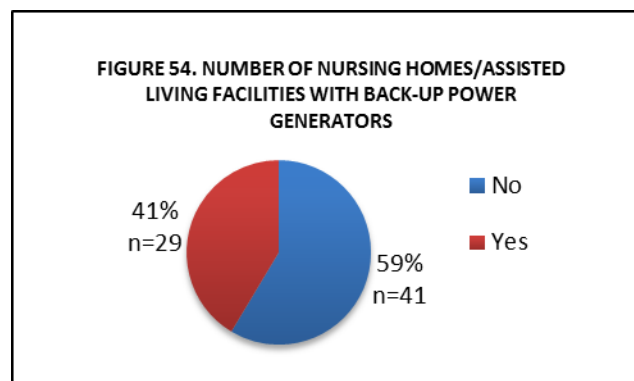


\*Other are local fire department and EMS and volunteers.

FIGURE 53. NUMBER OF NURSING HOMES/ASSISTED LIVING FACILITIES WITH EVACUATION PLANS DURING COMPLETE SYSTEM FAILURE

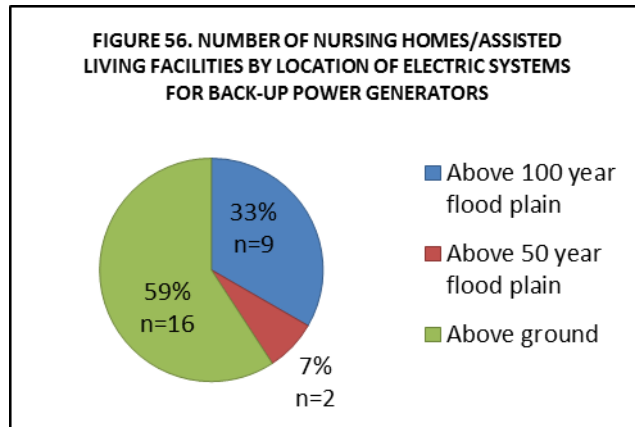
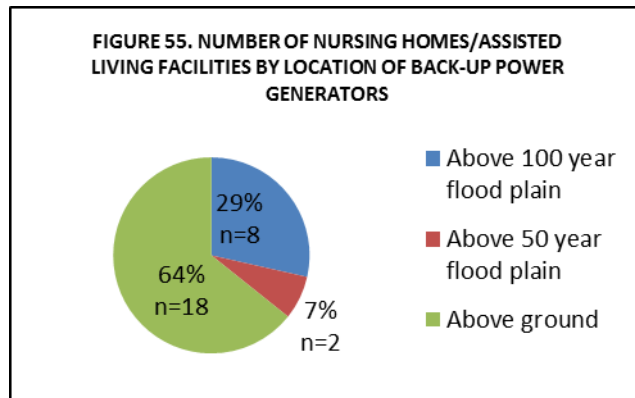


**GENERATORS.** Forty percent of NH/AL facility respondents indicated their facility has a back-up power generator, while 58.6 percent (n=41) do not have a back-up power generator. See Figure 54.



Of those with back-up power generators, 64.3 percent (n=18) indicated their generators are above ground. Over one-quarter (28.6%; n=8) have generators located above the

100 year flood plain and 7.1 percent (n=2) have generators located above the 50 year flood plain. Of those with back-up power generators, 59.3 percent (n=16) indicated the back-up generators' main essential emergency electrical systems are located above ground. One-third (33.3%; n=9) have emergency electrical systems located above the 100 year flood plain and 7.4 percent (n=2) have emergency electrical systems located above the 50 year flood plain. However, a large proportion of survey respondents (n=44 and n=45) did not answer these two questions, which were excluded from the analysis, and may indicate they do not know the answer to this question. See Figures 55 and 56, excluding non-respondents.



**STAFF.** Of those responding to a staff training question (n=60), 56 (93.3%) indicate their staff receive training. Of facility staff that receive training, 26 (50.0%) facilities receive training annually, 6 facilities (11.5%) receive training quarterly, and 13 (25.0%) receive training monthly. See Figure 57 and 58. Twenty survey respondents did not respond to the question about frequency of training.

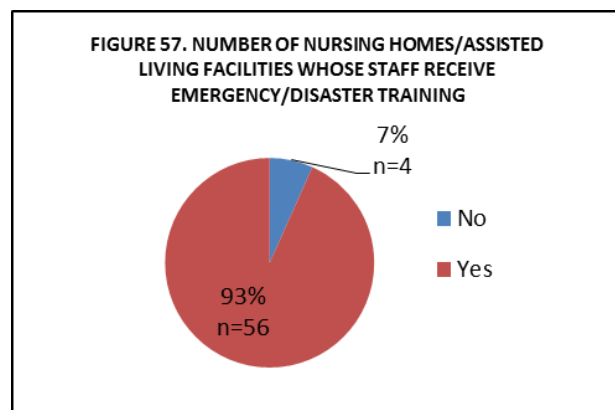
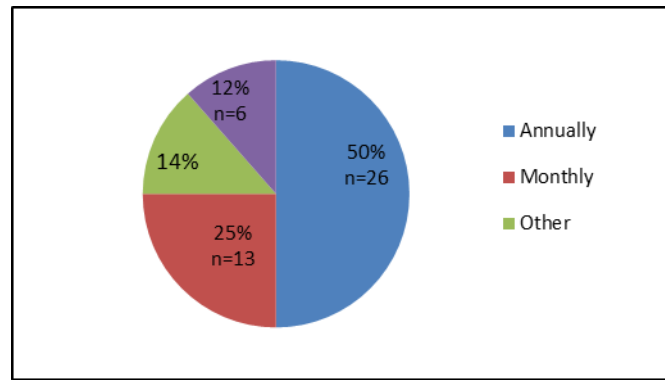


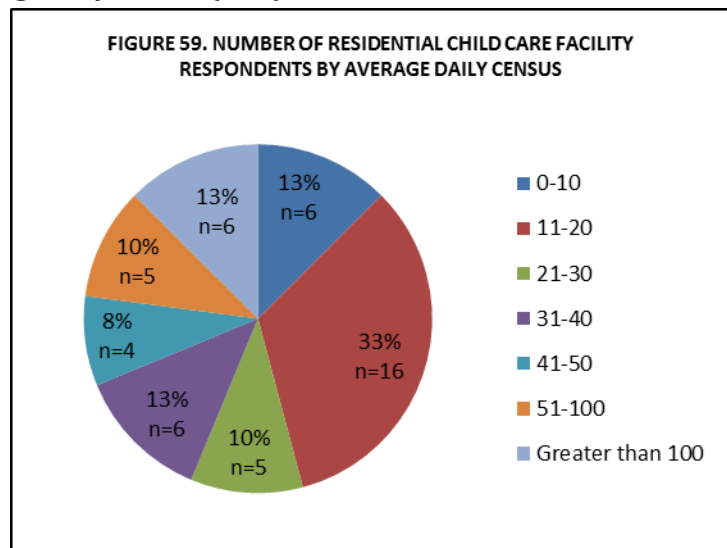
FIGURE 58. NUMBER OF NURSING HOMES/ASSISTED LIVING FACILITIES BY FREQUENCY OF STAFF TRAINING



## RESIDENTIAL CHILD CARE FACILITIES

**FACILITY DESCRIPTION.** The mean average daily census (ADC) for Residential Child Care Facilities (RCCF) respondents was 60.9 and the median was 137.5. The low ADC was 5 and the high ADC was 270.

- 0-10 ADC: 6 facilities (12.5%)
- 11-20 ADC: 16 facilities (33.3%)
- 21-30 ADC: 5 facilities (10.4%)
- 31-40 ADC: 6 facilities (12.5%)
- 41-50 ADC: 4 facilities (8.3%)
- 51-100 ADC: 5 facilities (10.4%)
- Greater than 100 ADC: 6 facilities (12.5%)

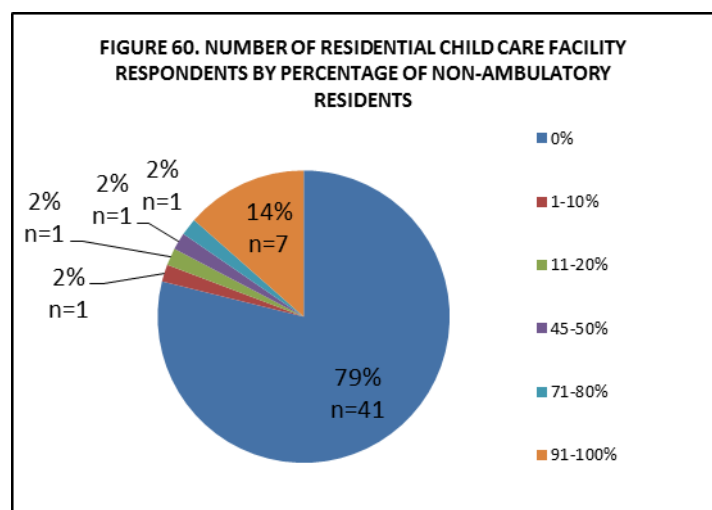


See Figure 59 for statewide average daily census.

The majority of RCCF (78.8%, n=41) do not have non-ambulatory residents. Other RCCFs are as follows:

- 1-10%: 1 facility (1.9%)
- 11-20%: 1 facility (1.9%)
- 41-50%: 1 facility (1.9%)
- 71-80%: 1 facility (1.9%)
- 91-100%: 7 facilities (13.5%)

See Figure 60 for non-ambulatory residents.



**DISASTER PROBABILITY.** Flood probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). Residential child care facility survey respondents had a possible (40.4%), likely 34.6%, or almost certain (21.2%) probability of flooding.

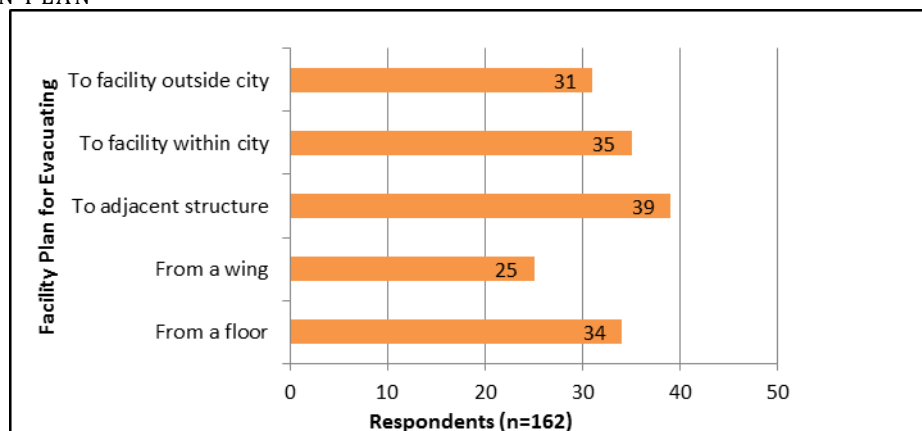
Hurricane and tropical storm probability scores were calculated using the Texas Public Health Risk Assessment Tool v1.1 and scored at the county level. Frequency data for the event is converted to a Likert scale (0-5) based on likelihood of occurrence (0- Not Possible; 1- Rare; 2-Unlikely; 3- Possible; 4- Likely; and 5- Almost Certain). Probability of hurricanes or tropical storms is less likely than flooding with 36.5 percent (n=19) of residential child care facility respondents experiencing a possible risk. The hurricane or tropical storm probability for the majority of the remaining respondents (61.6%; n=32) is not possible or rare.

**EMERGENCY PLANS.** Ninety-eight percent (n=51) indicated their facility has an emergency preparedness and response plan (there was one non-respondent). When asked about facility evacuation plan:

- 31 have a plan to evacuate from the facility to another facility/structure outside the city
- 35 have a plan to evacuate from the facility to another facility within the city
- 39 have a plan to evacuate from the building to an adjacent structure on the same property/in the vicinity
- 25 have a plan to evacuate from a wing
- 34 have a plan to evacuate from a floor

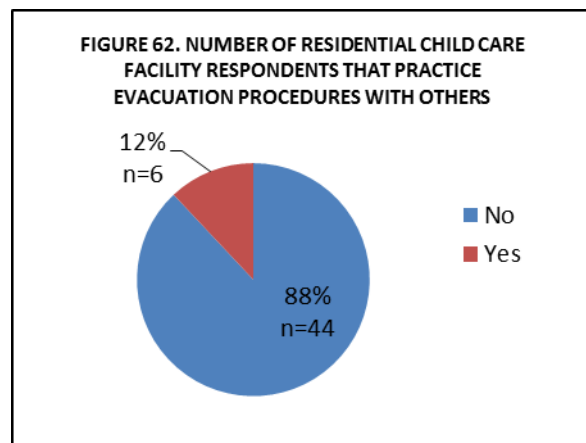
Respondents were able to choose more than one evacuation plan type. See Figure 61.

FIGURE 61. NUMBER OF RESIDENTIAL CHILD CARE FACILITY RESPONDENTS BY TYPE OF EVACUATION PLAN

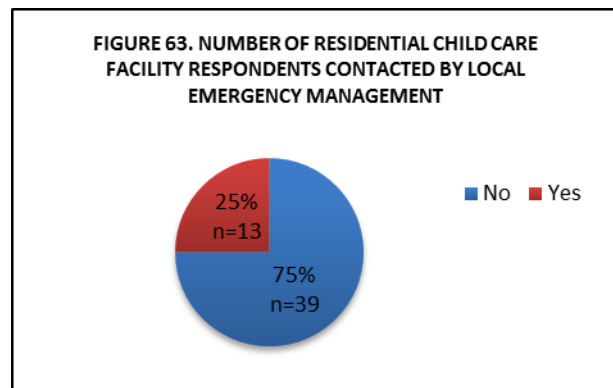


If the residential child care facility has to be evacuated, over three-quarters (78.0%; n=39) indicated that their facility could evacuate without support from outside their hospital system (the facility and the hospital system can evacuate without any assistance from the local or State government). Of the remaining respondents, three indicated their facility would evacuate using support from the local first responders (i.e. Fire/EMS etc.) but provides their own medical transportation assets; three indicated that their facility would evacuate using support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets; and three indicated their facility evacuates would use support from local government AND State government for both support staff AND medical transportation assets.

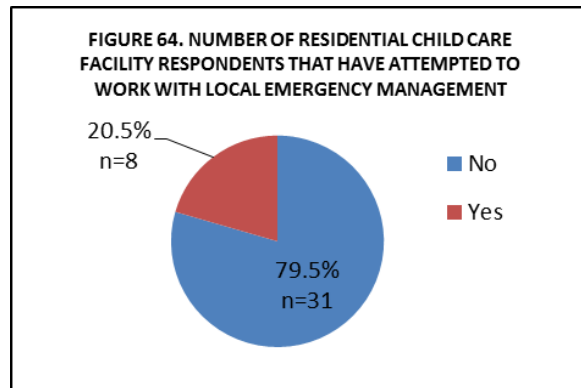
Forty-five respondents indicated their facility plan is evaluated annually, twenty-seven indicated it is revised annually, and twenty-three indicated it is exercised annually. Of the 50 facilities that responded, 6 (12.0 %) practice evacuation procedures with other supporting response agencies within the community, while 44 (88.0%) do not. See Figure 62. Four indicated they practice evacuation procedures with the police department, three indicated they practice with EMS and the fire department, two indicated they practice with emergency management, and one practices with EMS Trauma Regional Advisory Council (RAC). No RCCF practice evacuation procedures with public health. For this question, Respondents were able to choose more than one group.



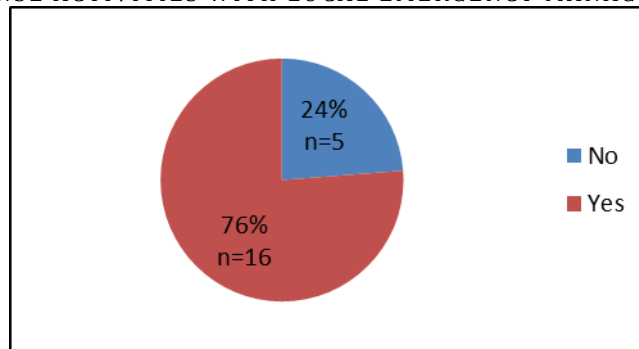
Thirty-nine (75.0%) respondents indicated their RCCF facility has been contacted by the local emergency management office about inclusion in community preparedness planning. Of those that have not been contacted by local emergency management, eighty percent (n=31) have not attempted to work with the local emergency management office. Of the twenty-one respondents that answered a question about collaborative planning, sixteen (76.2%) facilities indicated their facility has coordinated planning and response activities with the local emergency



management office. However, the majority did not respond to this question. See Figures 63, 64, and 65. Thirty-seven (74.0%) respondent facilities have verified agreements with host sites/alternate locations if forced to evacuate.



**FIGURE 65. NUMBER OF RESIDENTIAL CHILD CARE FACILITY RESPONDENTS THAT COORDINATE PLANNING AND RESPONSE ACTIVITIES WITH LOCAL EMERGENCY MANAGEMENT**



If the residential child care facility has to be evacuated, three-quarters (78.0%; n=39) indicated that their facility evacuates without support from the outside (the facility can evacuate without any assistance from the local or State government). Ten percent (n=5) indicated their facility evacuates using support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets. Six percent (n=3) indicated their facility evacuates using support from the local first responders (i.e. Fire/EMS etc.) but provides their own medical transportation assets. Six percent (n=3) indicated their facility evacuates using support from local government AND State government for both support staff AND medical transportation assets.

**GENERATORS.** Over one-half (53.0%) indicated their facility does not have a back-up power generator. Forty-seven percent (n=24) indicated they do have a back-up power generator. Over 70 percent indicated their evacuation plan covers evacuation of residents in complete system failure (i.e., loss of power and back-up systems that create a complete “black out” environment). See Figures 66 and 67.

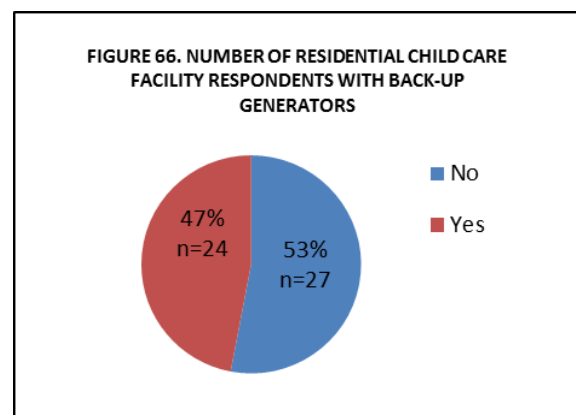
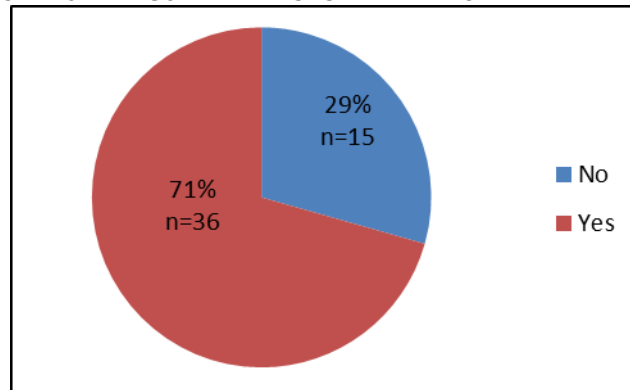


FIGURE 67. NUMBER OF RESIDENTIAL CHILD CARE FACILITY RESPONDENTS WITH EVACUATION PLANS COVERING EVACUATION IN COMPLETE SYSTEM FAILURE



Of those with back-up power generators, 75.0 percent (n=18) indicated their generators are above ground. Almost 13 percent (n=3) have generators located above the 100 year flood plain and 4.2 percent (n=1) have generators located above the 50 year flood plain.

Of those with back-up power generators, 70.8 percent (n=17) indicated the back-up generators' main essential emergency electrical systems are located above ground. Almost 17 percent (n=4) have emergency electrical systems located above the 100 year flood plain.

**SHELTER-IN-PLACE CAPACITY.** Over two-thirds of respondents (68.1%) indicated their facility can provide food for key personnel and patients without resupply for up to ten days. Below are food supply responses:

- Up to 5 days – 15 facilities (31.9%)
- 6 to 10 days – 17 facilities (36.2%)
- 11 to 20 days – 8 facilities (17.0%)
- 21 to 30 days – 7 facilities (14.9%)

Two-thirds of respondents (66.7%) indicated their facility has disposable medical re-supply capabilities for at least three days and up to one week. Below are disposable medical re-supply capability responses:

- None: 4 facilities (10.3%)
- 2 to 7 days: 12 facilities (30.9%)
- 10 to 14 days: 11 facilities (28.3%)
- 20 to 30 days: 11 facilities (28.3%)

Twenty-four (92.3%) respondents indicated their facility does not have any medical gas re-supply (oxygen) to function. One facility indicated they can function for one day and one facility indicated they can function for 30 days without medical gas re-supply.

**STAFF:** Of those responding to a staff training question (N=49), 44 (89.8%) indicated their staff receive training. Of facility staff that receive training, 29 (69.0%) facilities receive training annually, 5 facilities (12.0%) receive training quarterly, and 5 (12.0%) receive training monthly. Other responses included during orientation at time of hire (n=1) and every 6 months (n=2).

## QUALITATIVE FINDINGS

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Findings included in this section are based on broad, common themes that emerged from the 72 interview transcripts. Quotes are also included that reflect the qualitative findings.

**QUESTION 1.** Does this facility have a written emergency/disaster plan?

1a. Please explain how the facility emergency/disaster plan was developed. 1b. Please explain how the facility emergency/disaster plan is maintained.

1c. Please explain how staff was educated on components of the facility emergency/disaster plan.

All hospital facilities interviewed indicate they have a facility emergency/disaster plan. Overall, plans were largely developed among multidisciplinary committees composed of hospital staff using Joint Commission guidelines. These multidisciplinary teams represented the various hospital departments and were often referred to as Emergency Management Committees or Environment of Care Committees. External partners cited included Trauma Service Area Regional Advisory Councils, emergency management, police department, sheriff's department, local EMS, other entities within the county, schools, and nursing homes. Other resources included standardized, but adaptable templates provided by the broader health system for which the hospital belongs, subject matter experts within the Trauma Service Area Regional Advisory Council, online resources, and findings from Hazard Vulnerability Assessments.

Plans are maintained primarily through three mechanisms: periodic evaluation and updates using emergency drills and exercises; periodic meetings with internal hospital staff and external stakeholders; and actual events. Technological resources are also used, such as CommandAware and PolicyTech, to aid maintenance and management of hospital emergency policies and plans. In addition to involvement in the development of plans, multidisciplinary teams of internal staff are involved in the evaluation, update, and maintenance processes. Hospital boards are also involved to



varying extents. Staff education occurs primarily through new employee orientation and annual refresher courses. Several hospitals use online programs, such as HealthStream, to train staff. In addition to periodic staff training, the education process also involves staff participation in drills and exercises, department-specific trainings, actual emergencies, and receipt of written educational materials.

**QUESTION 2.** Does the facility conduct exercises or drills using the facility emergency/disaster plan?

2a. How frequently is the facility emergency/disaster plan practiced? (once a year, quarter?)

2b. Which shifts involved?

2c. Which departments involved?

2d. Is the facility emergency/disaster plan modified based on exercise or drill outcomes?

All hospitals' interviewees indicated their facilities use their facility emergency/disaster plan in exercises or drills. Drills occur bi-annually at a minimum, with some hospitals exercising their plan, or aspects of their plan, annually, quarterly, or even monthly. This mirrors the survey data that indicate the majority of hospital staff (61.4%) exercise the facility evacuation plan annually. Overall, interviewees indicated that all departments are involved in exercises and drills. Emergency rooms were often mentioned as the primary department involved in drills/exercises, but few other specific departments were mentioned. While several hospitals indicated all shifts are involved in exercises and/or drills, day shift drills occur much more frequently than night shift drills. Some hospitals may not have a separate drill for the night shift, but they require night shift staff to participate in a day shift drill (see quote #1).

*Quote #1: "I did an evening shift drill a couple, three or four months ago, and it was real eye opening. A lot of the people at night had not been drilled. So I want to say that we do, we have drilled at night, but we certainly need to do more of it."*

As mentioned previously, lessons learned during drills/exercises aid plan revisions. This process involves an evaluation of strengths and weaknesses and creation of action plans through hot washes immediately following exercises and more in-depth After Action Reviews among key staff (the multidisciplinary committees that develop and maintain the plan). Once plans are revised, they are often shared and reviewed by other hospital departments, hospital boards, as well as TSA Regional Advisory Committee members and other external partners.

**QUESTION 3.** Please describe the command structure of the emergency/disaster plan.

3a. What plans are in place if the designated person in command is not available or injured?

3b. Please explain how front line staff identify who they report to during an emergency/disaster.

Hospital interviewees primarily indicated the use of Hospital Incident Command System (HICS) or National Incident Management System (NIMS) command structure. Interviewees appear to see the command structure as one that is internal to the hospital in the case of an emergency. The extent to which this command structure integrates with external agencies' and facilities' plans is not clear. One interviewee mentioned the importance and use of a unified command structure in which there was a clear understanding of a multi-agency/multi-organizational response (see quote #2).

*Quote #2: "...both hospitals operate under HICS.... I came from a coast guard background, and we operate using traditional ICS so I have pushed the company beyond just HICS because HICS is really only designed for single facility failures... So it just depends on whether something strikes a single facility or whether it's multiple facilities. If it involves an outside agency like a police department, fire department, public health then we can take it on to what we call or what ICS calls a unified command where we're sharing command of the incident with the outside partnerships."*

Many hospital representatives indicated the incident commander would be the hospital CEO or administrator. If the CEO or administrator was injured or not available in an emergency situation, the next highest-level staff person available would serve as incident commander. Others acknowledged that the incident commander would be the first person on the scene or that this would vary depending on the circumstances of the emergency.

Most hospitals have redundant communication methods for internal communication with staff. However, much of it is largely dependent on operational technology and includes telephones, walkie-talkies, radios, speakers, emails, or, in the event of no technological capabilities in an emergency, white boards or runners.

Some hospital interviewees indicated they have systems in place to identify staff by their role in emergencies. Many hospitals mentioned that roles and associated responsibilities, from incident commander to command staff to section chiefs to lower level staff, are assigned in advance. This is also the structure most hospitals use for reporting lines. Other interviewees discussed identification systems in terms of multicolored vests to easily recognize different staff and sections in emergencies, who have different roles than in their day-to-day jobs. One rural hospital indicated there wasn't a need for any identification system, since everybody knows each other (see quote #3).

*Quote #3: "We do not have vests...One of the paramedics headed up the city wide emergency management, and I think they do. We do not have them on site here at the hospital, but I mean we're in a town of about thirty-five hundred, and so basically we all know each other, but there could be some involved that didn't. So we would just go with our name badges."*

**QUESTION 4.** Is this facility a safety net facility for the area?

Twenty-nine (29) hospitals said they are a safety net facility. Twenty-seven (27) indicated they are not a safety net facility. Even after hearing the definition, fifteen facilities were not sure if their facility is a safety net facility. A small number of facilities that said they were not a safety net facility indicated they serve a large lower-income and/or older population.

**QUESTION 5.** Is this facility a host site for other facilities?

Twenty-nine (29) of the interview respondents indicated their hospitals are a host site facility. Twenty-nine (29) also indicated they are not a host site facility. Thirteen hospitals were not sure if their facility is a host site facility.

**QUESTION 6.** How are arrangements for safety nets and host sites documented?

Types of arrangements for safety net and host sites range from written agreements (26 hospitals) to verbal agreements (8 hospitals) to no agreements (9 hospitals). Agreements included Memorandums of Understanding (MOUs), Memorandums of Agreement (MOAs), Mutual Aid Agreements (MAAs), and Memorandums of Transfer (MOTs), primarily with other facilities within the RAC. While the majority of agreements are written, slightly less than half of agreements are verbal. Others indicated that there is simply mutual understanding of such arrangements.

**QUESTION 7.** In the event that evacuation of this facility proves necessary, please describe how continuity of care will be maintained for patients during transfer to other facilities.

Hospitals mentioned various resources to maintain continuity of care for patients during their transfer to other facilities. Many hospitals indicated they will rely on EMS for transportation and evacuation of patients. Most hospital respondents indicated that medical records are electronic, but a written copy of medical records with vital information would go with the patient if electronic transfer of

*Quote #4: "...our evacuation plan you know, calls for [the patients] to be pooled in certain locations around the campus, and then that's when we'd be working with local emergency management to coordinate transportation. As they're being transported our goal is to also either provide a patient record in paper form if we have that available or have access, or to provide the electronic record to the corresponding hospital that they're going to."*

records was not possible (see quote #4). Many rural hospitals are in the process of transitioning to electronic medical records and are much more likely to rely on paper-based medical records. Staff resources are often available to ride along with patient(s) during the transfer process, but, more often than not, they would not stay with the patient at the receiving facility. Among the hospital representatives interviewed, it is estimated that more than half indicated written transfer agreements are in place. However, the remainder are relying more on verbal agreements or mutual understanding. There are regional agreements through the RACs if one hospital does not have the resources to accept a patient, the patient will be transferred to another hospital within the region.

**QUESTION 8.** In the event that patient(s) require bagging for ventilation or other care over protracted periods of time, please describe the plans for ensuring continuity of care.

Hospital responses were somewhat mixed to this question. Some answered in terms of availability of medical equipment and resources for bagging, while others focused more on the personnel resources that would be available to perform bagging. Hospitals appear to be fairly dependent on EMS and clinical staff. Registered and licensed staff (e.g., respiratory therapists, nurses) were specifically mentioned. However, several other hospitals said they would do what needed to be done given the situation, such as providing just-in-time training to non-clinical staff or bystanders to assist with bagging (see quote #5).

*Quote #5: "If we lose generator power [for ventilators], the patients would be manually bagged until we could get them to a facility where they could be placed on a ventilator... We would rotate personnel, and we would continue to do that until we got the patient transferred."*

**QUESTION 9.** Please describe this facility's involvement with local emergency management.

Hospitals were widely involved in local emergency management activities, including meetings, collaborative planning, and local exercises and drills. Partners commonly mentioned included the local emergency management coordinator or office, first responders (EMS, law enforcement, fire, DPS), border patrol, local health departments, and radio stations (see quotes #6 and #7).

*Quote #6: "...we talk with our local police, fire, and EMS weekly if not daily. EMS are bringing us patients...they've got a great relationship with our emergency staff. I, the COO and our CEO meet, and our ER director meet with our EMS director [name] at least monthly if not more frequent. And then again we coordinate with local emergency services at least twice a year to do these large regional disaster drills."*

*Quote #7: "We're participating in a bio watch exercise in conjunction with our local public health department. So that goes above and beyond the requirements. That's because we're maintaining that relationship with the health department. They wanted to do it so we're participating even though we don't have to."*

**QUESTION 10.** How is this facility part of the overall plan for your community?

At the community level, many hospitals are involved in public education. This seems to occur primarily through health fairs and other similar types of community events. Many hospitals, particularly in rural areas, indicated they serve as the "hub" for many community services, so community members look to them for information. Partnerships in communities included many of the local partnerships mentioned in question 9. Hospitals did not mention that community members are involved in emergency planning and exercising. This does not mean that it does not occur, but the omission of this information may denote their lack of involvement and/or inclusion in planning and exercise activities.

**QUESTION 11.** How is this facility part of the overall plan for your region?

All hospitals mentioned the partnerships with the Trauma Service Area Regional Advisory Council. Other regional partners included Disaster District Committees (DDC) and the Regional Hospital Preparedness Council (RHPC) for those in the southeast Texas. Regional planning primarily includes periodic meetings and collaborative planning. Regional cooperative agreements were also mentioned in which medical supplies, services, staff, and other resources can be shared throughout the region (see quote #8). Another resource was a medical mobile unit with 22 beds that could be deployed when needed.

*Quote #8: "HCMH has a cooperative agreement with our RAC. We could be called upon to support other facilities by sending personnel or equipment. HCMH will also be prepared to receive patients from other facilities in the region in the event of a disaster. Several HCMH employees are in the incident management structure for the RAC and would be call to help with coordination of patient movements and incidents command of a disaster in the region. HCMH EMS is also important response partner in the region."*

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## KEY FINDINGS

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### HOSPITALS

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- Twenty-two percent of hospital respondents never exercise their facility evacuation plan.
- Over 40% do not exercise their evacuation plan with other supporting response agencies within their community.
- A large number of hospital respondents report that they exercise their plan with local emergency management, EMS, and the fire department; however, only one-quarter of respondents indicated they exercise their evacuation plan with public health.
- In case of an emergency, over half indicated their facility would evacuate using support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets.
- Over 92 percent indicated their evacuation plan covers evacuation of patients in complete system failure.
- Almost 60 percent of hospitals do not have an emergency/disaster plan to send patient care response teams to provide care at the scene of a biological incident.

- Over three-quarters (76.6%) have a plan that includes surge capacity procedures to be implemented during a bioterrorism, pandemic, mass casualty incident; however, the remaining 23 percent do not or do not know.
- Over one-third (35.4%) of hospital survey respondents with an evacuation plan indicated they have no contract with a transportation provider, in case of evacuation.
- Almost 90 percent indicated their facilities have an emergency ordering system in place with pharmaceutical vendors and 63 percent have medication distribution protocols for essential staff.
- Almost 99 percent of hospitals have a back-up power generator and almost one-third have been tested in the past six months.

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## END STAGE RENAL DISEASE FACILITIES

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- Almost 90 percent of ESRD facilities would continue to provide renal dialysis services during an emergency
- All have staff trained in dialysis that could report to work during an emergency
- Almost three-quarters have back-up dialysis machines
- Almost 80% do not provide dietary services
- Only twenty percent of ESRD facilities have back-up power generators

ESRD facilities had the highest response rate at almost 40 percent. This high response rate, survey findings, and information gathered from hospital telephone interviews may have implications for emergency preparedness planning and response. ESRD facilities appear to have an interest in and concern for emergency preparedness planning and response and anecdotally, in some cases, have initiated collaborations with hospitals. Directors of dialysis centers might provide an as-yet, rarely used conduit for emergency and disaster planning initiatives.

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## NURSING HOME AND ASSISTED LIVING FACILITIES

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- All NH/EL facilities have an emergency preparedness and response and evacuation plan
- If the NH/AL facility has to be evacuated, almost half indicated their facility could evacuate without any outside assistance or support from their facility/system
- Almost half have not been contact by the local emergency management office about inclusion in community preparedness planning

- Over three-quarters of those that have been in touch with local emergency management coordinate planning and response activities with them
- However, over three-quarters of respondents indicated their facility does not practice evacuation procedures with other supporting response agencies in the community
- Almost 60 percent of NH/AL facilities do not have a back-up power generator
- Over 90 percent of NH/AL staff receive emergency/disaster training

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## RESIDENTIAL CHILD CARE FACILITIES

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- Almost 80 percent have do not have non-ambulatory residents
- Over three-quarters (78.0%) indicated their facility could evacuate without support from outside their facility/system
- Eighty-eight percent do not practice evacuation procedures with other supporting response agencies within the community
- Over one-half indicated their facility does not have a back-up power generator
- Over 90 percent of staff receive training

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## DISCUSSION

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### RESPONSE RATE LIMITATIONS

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The response rate for some facility-types could be a limitation. While survey response rates were lower than initially anticipated by DSHS, the rates were comparable with reports in the literature and those reported by the Texas Hospital Association for surveys with similar populations (Arshad, Rothberg, Rastegar, Spooner, & Skiest, 2009; Gosselin, Crane-Okada, Irwin, Tringali, & Wenzel, 2011; Hsu, Mas, Jacobson, Papenfuss, Nkhoma, & Zoretic, 2005; Rebmann, Wilson, LaPointe, Russell, & Moroz, 2009; Texas Hospital Association, personal communication, July 3, 2013). However, there was wide geographic dispersion for all facility-types across the state, so that most areas/regions were represented.

A factor that may have contributed to the low response rate was the lack of anonymity, as the project scope of work required that identifiable data, by facility, be provided to the project funder, the Texas DSHS Division of Regulatory Services. Once the online survey was released, several facility representatives emailed and called the OSP office expressing concerns about the survey. Concerns included asking whether the survey was mandatory, expressing frustration that they had



completed similar surveys previously, and inquiring how the data would be used. Each of these concerns was addressed in concert with DSHS input and the requirements of IRB application approval; however, these concerns appear to have had implications for the low response rates, as several people declined to participate.

## DATA SHARING LIMITATIONS

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All respondents were notified via the survey information sheets that identifiable results would be provided to the project funder, the Texas DSHS Division of Regulatory Services. Per the approved IRB protocol, OSP is only permitted to transmit identifiable results to the Texas DSHS project officer.

## NATURE OF QUALITATIVE DATA: STRENGTHS AND LIMITATIONS

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One of the great strengths of qualitative data is the ability to gain insight, depth, understanding, and meaning within a particular context. While qualitative data is occasionally quantifiable, its power is in the details and the perspectives it provides from those one is attempting to understand. The process of qualitative data analysis is also very different from quantitative data analysis. In this project, each interviewee brought a different perspective, a different knowledge-base, and served in different roles, which is likely reflected in their responses. Hospital interviewee roles ranged from and included CEO, COO, CNO, Facilities Manager, Quality Control, Infection Prevention, Emergency Manager, Support Services, Engineering Director, and Safety Director, to name a few.

The PPRI staff interviewers are skilled and trained in conducting surveys and interviews, but each interviewer's personality, rapport established with the interviewee, skill in probing, and other factors will affect the data collected. Not only are the perspectives of those participating in and conducting the interview infinite, the perspectives of those coding and analyzing the data vary widely as well. Each coder involved in the analysis process has different experiences, perspectives, and knowledge-types and levels. The constant comparative analysis method is structured to provide an analysis framework, but through the iterative process, is modifiable as new information emerges from the interview transcripts. These data are representative of 72 interviews representing 85 hospitals throughout the state. While common themes will emerge, the information is not meant to be generalizable across all hospitals. Some of the variations in the summary report reflect these differences. While skilled PPRI staff conducted the telephone

interviews and collected the qualitative data, OSP analyzed the data. Subtle characteristics of qualitative data, such as tone of voice on the telephone, may emerge during the data collection process that are not as transparent in the transcripts alone.

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## APPENDIX A

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Items highlighted in yellow are part of the programming of the online survey and not visible to designee completing survey.

## Welcome- Hospital Facility Survey

Welcome!

You have been identified by the Texas Department of State Health Services Division of Regulatory Services as the designee to respond on behalf of your facility to a facilities preparedness survey and interview being led by Drs. Barbara Quiram and Jennifer Griffith at the School of Rural Public Health at the Texas A&M Health Science Center. This survey is funded by the Department of State Health Services.

The next screen contains important details about the survey and interview you have been asked to complete as the designee for your facility. Completing the survey will take approximately 20 minutes. However, you will be able to login to the survey multiple times before completing your submission if you need to seek additional information from others in your facility.

Following the survey you will be contacted via phone to schedule an interview that will last no more than an hour. The questions for the interview will be emailed to you prior to the interview so you may review them and seek information from others in your facility if necessary.

We appreciate your time and assistance.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co-Investigator

## Information Sheet

### Why Is This Survey and Interview Being Done?

The purpose of the survey is to collect information for the Texas Department of State Health Services, Division of Regulatory Services from each hospital, end stage renal disease center, nursing home, assisted living center, and residential child care center in the state of Texas. In addition, hospitals will participate in an interview to gather additional detailed information. All responses, including identification of which facility provided the response will be provided to the Texas Department of State Health Services, Division of Regulatory Services to help them understand current levels of preparedness and assist in planning for disasters.

### Why Is Your Facility Being Asked To Be In This Survey?

Your facility is being asked to participate in this survey and interview because it was identified by the survey funder, the Texas Department of State Health Services, Division of Regulatory Services.

### How Many Facilities Will Be Asked To Be In This Survey and Interview?

650 Hospitals (Survey and Interview)  
600 End Stage Renal Disease Facilities (Survey)  
1200 Nursing Homes (Survey)  
1750 Assisted Living Facilities (Survey)  
157 Residential Child Care Facilities (Survey)

*The goal is to have as many facilities in each category respond.*

### What Are Alternatives to Completing the Survey?

The only alternative is to not complete the survey and/or interview.

### What Will I Be Asked To Do In This Survey?

You will be asked to complete an online survey that will take approximately 20 minutes to complete. It is possible that you will need to seek information from others in your facility so you will be able to access the online survey multiple times prior to submitting a final response. Also, it is possible that you will receive more than one online

survey if you are the designee for more than one facility. Please respond to each survey request as they represent each facility.

In addition, after completing the online survey you will be asked to participate in a phone survey that will take no more than an hour on a date and time convenient to your schedule during the time frame of this survey. The interview questions will be sent in advance via email to allow you to review them and seek information from others in the facility prior to the interview.

**Are There Any Risks To My Facility?**

This risks associated with this survey and interview are not more than the facility would encounter in their everyday relationship with the Texas Department of State Health Services, Division of Regulatory Services.

**Are There Any Benefits To My Facility?**

Facilities will benefit by providing their information to inform and improve preparedness related efforts by the Texas Department of State Health Services, Division of Regulatory Services.

**Will There Be Any Costs To My Facility?**

Aside from your time, there are no costs for taking part in the survey and interview.

**Will My Facility Be Paid To Complete the Survey?**

Your facility will not receive compensation, monetary or otherwise, for completing the survey or interview.

**Will Information From This Survey Be Kept Private?**

All information collected via this survey and interview will only be accessible to the Principal Investigator, survey personnel and Texas Department of State Health Services, Division of Regulatory Services. Responses specific to your facility will be identifiable to Texas Department of State Health Services, Division of Regulatory Services.

Information about you will be kept confidential to the extent permitted or required by law. People who have access to your information include the Principal Investigator and research study personnel. Representatives of regulatory agencies such as the Office of Human Research Protections (OHRP) and entities such as the Texas A&M University Human Subjects Protection Program may access your records to make sure the study is being run correctly and that information is collected properly.

**Who May I Contact for More Information?**

You may contact the Principal Investigator , Barbara J. Quiram, PhD, to tell her about a concern or complaint about this survey at 979.845.2387 or quiram@srph.tamhsc.edu. You may also contact Co-Investigator, Jennifer M. Griffith, DrPH, MPH at 979.845.2387 or jgriffith@srph.tamhsc.edu.

For questions about your rights as a survey and/or interview participant; or if you have questions, complaints, or concerns about the survey, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or irb@tam.u.edu.

**What if I Change My Mind About Participating?**

This survey and interview is voluntary and your facility has a choice whether or not to complete this survey. Your facility may decide to not begin or to stop participating at any time. If you choose not to complete this survey or interview or stop the survey or interview, there will be no effect on your relationship with Texas A&M University.

Thank you.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co- Investigator

- I have read and understood the information above.

**A. General Facility Questions:**

## General Facility Questions

Please review the contact details below. If you represent multiple facilities please respond based on the location shown. Updates can be made in the boxes below each entry.

On the location shown. Updates can be made in the boxes below each entry.

**1. Name of Facility:**

Pre-filled Editable Field

**2. Facility Street Address:**

Pre-filled Editable Field

**3. City:**

Pre-filled Editable Field

**4. County:**

Pre-filled Editable Field

**5. Zip code:**

Pre-filled Editable Field

**A. General Facility Questions:**

Please provide the following information for the designated person completing this survey.

**6. Name of person completing survey**

**7. Title of person completing survey**

**8. Phone number of person completing survey**

**9. Fax number of person completing survey**

**10. Email address of person completing survey**

**A. General Facility Questions:**

**11. Which of the following settings describe this hospital type (Select all that apply)?**

- General hospital (i.e., provides general medical and surgical services for adult and pediatric patients)
- Rehabilitation or long term care hospital
- Psychiatric hospital
- Special Hospital Designation (please specify)
- Other (please specify)

**12. Is this facility a designated trauma center?**

- Yes [If yes, goes to 12a](#)
- No [If no, goes to 13](#)

**12a. What is the Trauma Service Level designation?**

- Level I
- Level II
- Level III
- Level IV

**13. What is the average daily census of this facility? (Please provide number of beds)**

**A. General Facility Questions:**

**14. Does this facility have multiple floors?**

- Yes [If yes, goes to 14a](#)
- No [If no goes to 15](#)



14a. How many stories does this facility have?

15. Does this facility have a emergency/disaster plan to send patient care response teams to provide care at the scene of a biological incident?

- Yes
- No
- Do Not Know

16. Is this facility designated to receive patients from the National Disaster Medical System (NDMS)?

- Yes
- No
- Do Not Know

## B. Evacuation Plan Information

### Evacuation Plan Information

17. Does this facility have an plan for evacuating (Select all that apply):

- From a floor If yes, goes to 18
- From a wing If Yes, goes to 18
- From the entire facility If yes, goes to 19
- No evacuation plan If yes, goes to 23

18. If this facility has to be evacuated, which of the following best describes this facility's evacuation plan:

- Facility evacuates without support from outside your hospital system? (The facility and the hospital system can evacuate without any assistance from the local or State government).
- Facility evacuates utilizing support from the local first responders (i.e. Fire/EMS etc.) but provides their own medical transportation assets.
- Facility evacuates utilizing support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets.
- Facility evacuates utilizing support from local government **AND** State government for both support staff **AND** medical transportation assets.

**19. Does this evacuation plan cover evacuation of patients in complete system failure (loss of power and back-up systems that create a complete “black out” environment)?**

- Yes
- No

**20. If this facility evacuates patients, what portion(s) of the medical records is transferred with the patient? (Select all that apply)**

- Demographics
- Medical administration
- History and physical
- Surgery reports
- No medical record transfer

**21. How often does this facility exercise the evacuation plan? (Select the most applicable response)**

- Weekly
- Monthly
- Quarterly
- Semi annually
- Annually
- Never

**22. Does this facility exercise the evacuation plan with other supporting response agencies within your community?**

- Yes
- No

**22a. Which supporting response agencies participate? (Select all that apply)**

- Local Emergency Management
- EMS
- Fire
- Police
- EMS Trauma Regional Advisory Council (RAC)
- Public Health
- Other (please specify)

**C. Evacuation Capability**

# Evacuation Capability

**23. With which of the following does this facility have contracts with medical transportation providers to facilitate your evacuation?**

- Ambulances If selected, goes to 23a
- Buses If selected, goes to 23b
- Other (please specify type) If selected, goes to 23c
- No contracts If selected, goes to 24

**23a . Please provide the following ambulance information:**

**Name of ambulance provider(s)**

**Number of ambulance units**

**23b. Please provide the following bus information:**

**Name of bus provider(s)**

**Number of bus units**

**23c. Please provide the following information about any other modes of transportation:**

**Name other modes of transportation provider (s)**

**Number of other units**

**C. Evacuation Capability**

**24. If required to evacuate, how many patient loading points does this facility have?**

**D. Shelter in Place Capability**

## Shelter in Place Capability

**25. Does this facility have back-up power generator(s)?**

- Yes If yes, goes to 251-25j
- No If no, goes to 26

**25a. How many?**

**25b. What type of fuel does this back-up generator run on?**

- Diesel Fuel
- Natural Gas
- Other (please specify)
- Don't Know

**25c. How many days can this facility sustain operations using back-up generator(s) without refueling?**

**25d. Does this facility have a contract, MOU/MUA or other agreement to re-supply fuel for your**

**back-up generator(s) during an emergency?**

- Yes
- No
- Don't know

**25e. Are back-up generators located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**25f. Are back-up generators' main essential emergency electrical systems located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**25g. How often are back-up generators and systems fully load tested? (Select the most appropriate choice)**

- Weekly
- Monthly
- Quarterly
- Annually
- Every two years
- Not tested
- Other

**25h. When was the generator last tested under full load? (Please provide month and year)**

**25i. Which systems does the back-up generator support? (Select all that apply):**

- Elevators
- HVAC
- Water pump stations
- Laundry
- Kitchen/restaurant

- Emergency systems (fire alarm, security, etc.)
- Security lock down
- Life Support (O-2 delivery)
- Surgical capabilities and laboratory services
- E/R
- MRI and CT scans
- Pharmacy and materials refrigeration
- Sterilization
- Other (please specify)

**25j. Does this facility have the capability to connect (plug in) additional portable generator(s) to run normal electrical service?**

- Yes
- No

**D. Shelter in Place Capability**

**26. Is this facility's kitchen/restaurant located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**27. How many days can this facility provide food for key personnel and patients without re-supply?**

**28. How many days can this facility provide housing for key personnel and patients without re-supply?**

**29. How many days can this facility provide potable water for key personnel and patients without re-supply?**

**30. This facility has disposable medical re-supply capabilities to function for \_\_\_\_\_ number of days**

31. This facility has medical gas supply (oxygen) on-hand to function for \_\_\_\_\_ number of days

#### D. Shelter in Place Capability

32. Which of the following back-up utility capabilities does this facility have? (Select all that apply)

- Water supply for potable support
- Water supply for sewer support
- On site emergency water supply connections for outside supplemental water support
- Back up natural gas supply [If selected, 32a shows.](#)
- Other (please specify)

32a. What is the back up natural gas supply used for? (Select all that apply):

- Heating
- Cooking
- Other (please specify)

33. Does this facility have the following for sustaining operations? (Select all that apply)

- Dedicated staff - facility employees with emergency /disaster response roles as part of job description
- Contracted staff - employees contracted from outside the facility to assist in emergency /disaster response roles
- Additional staff - facility employees who do not have emergency /disaster response roles in their job description but could assist with minimal training

34. Does this facility's emergency/disaster plan address family needs for essential staff during an emergency/disaster response?

- Yes
- No

#### C. Hospital Body Holding Area Capacity

## Hospital Body Holding Area Capacity

**35. Does this facility have a deceased body holding area?**

- Yes    If yes, goes to 35a-35b
- No    If no, goes to 36

**35a. How many bodies can this area hold?**

**35b. Does this area have refrigeration capability?**

- Yes
- No

#### **D. Surge Capacity**

## **Surge Capacity**

**36. Does this facility emergency/disaster plan include bed surge capacity procedures to be implemented during a bioterrorism, pandemic, mass casualty incident, etc? (For this question bed surge capacity is defined as the number of beds above and beyond the staffed bed capacity that can be utilized during a surge capacity event).**

- Yes
- No
- Don't Know

**37. What is the facility bed capacity, including surge?**

#### **E. Pharmaceutical**

## **Pharmaceutical**

**38. Does this facility have an emergency ordering system in place with pharmaceutical vendors?**

- Yes



No

**39. Does the facility have medication (prophylaxis and treatment) distribution protocols for a bioterrorism or other public health emergency for essential staff?**

- Yes
- No
- Don't Know
- Not Applicable

**39a. Does the facility plan include distribution for any of the following?**

- All staff
- Family members of staff
- Patients
- Other (please specify)

## **F. Training**

# Training

**40. Is the facility emergency/disaster plan: (select all that apply)**

- Evaluated annually
- Revised annually
- Exercised annually

**41. Which of the following staff members have received emergency/disaster training? (select all that apply)**

- Physicians
- Nurses
- Mental Health/Social Workers
- Epidemiologists
- Pharmacists
- Laboratory staff
- Respiratory Therapists
- Support staff
- Health Administrators/Managers
- Other (please specify)

## **Thank You**

**When you are ready to submit your responses select the save and continue button in the lower right hand corner. You will receive a thank you message when your responses have been successfully received. You will receive the interview questions via email in the next week and also receive a phone call to schedule the interview.**

**If you have not completed your responses and would like to return to the survey within the next week to finish your responses please close your browser. You can re-access the survey using the link provided in the email.**

**Should you have any questions please contact the project manager Cara Pennel, MPH at [osp-publichealthproject@srph.tamhsc.edu](mailto:osp-publichealthproject@srph.tamhsc.edu).**

## Welcome- ESRD Facility Survey

Items highlighted in yellow are part of the programming of the online survey and not visible to designee completing survey.

Welcome!

You have been identified by the Texas Department of State Health Services Division of Regulatory Services as the designee to respond on behalf of your facility to a facilities preparedness survey being led by Drs. Barbara Quiram and Jennifer Griffith at the School of Rural Public Health at the Texas A&M Health Science Center. This survey is funded by the Department of State Health Services.

The next screen contains important details about the survey you have been asked to complete as the designee for your facility. Completing the survey will take approximately 20 minutes. However, you will be able to login to the survey multiple times before completing your submission if you need to seek additional information from others in your facility.

We appreciate your time and assistance.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co-Investigator

## Information Sheet

### Why Is This Survey Being Done?

The purpose of this survey is collect information for the Texas Department of State Health Services, Division of Regulatory Services from each hospital, end stage renal disease center, nursing home, assisted living center, and residential child care center in the state of Texas. All responses, including identification of which facility provided the response will be provided to the Texas Department of State Health Services, Division of Regulatory Services to help them understand current levels of preparedness and assist in planning for disasters.

### Why Is Your Facility Being Asked To Be In This Survey?

Your facility is being asked to participate in this survey because it was identified by the survey funder, the Texas Department of State Health Services, Division of Regulatory Services.

### How Many Facilities Will Be Asked To Be In This Survey?

650 Hospitals

600 End Stage Renal Disease Facilities

1200 Nursing Homes

1750 Assisted Living Facilities

157 Residential Child Care Facilities

*The goal is to have as many facilities in each category respond.*

### What Are Alternatives to Completing the Survey?

The only alternative is to not complete the survey.

### What Will I Be Asked To Do In This Survey?

You will be asked to complete an online survey that will take approximately 20 minutes to complete. It is possible that you will need to seek information from others in your facility so you will be able to access the online survey multiple time prior to submitting a final response. Also, it is possible that you will receive more than one online survey if you are the designee for more than one facility. Please respond to each survey request as they represent each facility.

### Are There Any Risks To My Facility?

This risks associated with this survey are not more than the facility would encounter in their everyday relationship with the Texas Department of State Health Services, Division of Regulatory Services.

### Are There Any Benefits To My Facility?

Facilities will benefit by providing their information to inform and improve preparedness related efforts by the Texas Department of State Health Services, Division of Regulatory Services.

**Will There Be Any Costs To My Facility?**

Aside from your time, there are no costs for taking part in the survey.

**Will My Facility Be Paid To Complete the Survey?**

Your facility will not receive compensation, monetary or otherwise, for completing the survey.

**Will Information From This Survey Be Kept Private?**

All information collected via this survey will only be accessible to the Principal Investigator, survey personnel and Texas Department of State Health Services, Division of Regulatory Services. Responses specific to your facility will be identifiable to Texas Department of State Health Services, Division of Regulatory Services.

**Who May I Contact for More Information?**

You may contact the Principal Investigator , Barbara J. Quiram, PhD, to tell her about a concern or complaint about this survey at 979.845.2387 or [quiram@srph.tamhsc.edu](mailto:quiram@srph.tamhsc.edu). You may also contact Co-Investigator, Jennifer M. Griffith, DrPH, MPH at 979.845.2387 or [jgriffith@srph.tamhsc.edu](mailto:jgriffith@srph.tamhsc.edu).

For questions about your rights as a survey participant; or if you have questions, complaints, or concerns about the survey, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or [irb@tamu.edu](mailto:irb@tamu.edu).

**What if I Change My Mind About Participating?**

This survey is voluntary and your facility has a choice whether or not to complete this survey. Your facility may decide to not begin or to stop participating at any time. If you choose not to complete this survey or stop the survey, there will be no effect on your relationship with Texas A&M University.

Thank you.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co- Investigator

- I have read and understood the information above.

**A. General Facility Questions:**

## General Facility Questions

Please review the contact details below. If you represent multiple facilities please respond based on the location shown. Updates can be made in the boxes below each entry.

1. Name of Facility:

Pre-filled edit-able field

2. Facility Street Address:

Pre-filled edit-able field

3. City:

Pre-filled edit-able field

4. County:

Pre-filled edit-able field

5. Zip code:

Pre-filled edit-able field

**A. General Facility Questions:**

Please provide the following information for the designated person completing this survey.

6. Name of person completing survey

7. Title of person completing survey

8. Phone number of person completing survey

9. Fax number of person completing survey

10. Email address of person completing survey

**ESRD- Question 11 and If selected YES for Question 11.**

## Operation During and Emergency

11. During an emergency, does this facility continue to provide renal dialysis services?

- Yes If yes, goes to 13 and skips 20
- No If no, goes to 20

12. During an emergency, does this facility have staff trained in dialysis available to report to work?

- Yes
- No

13. During an emergency, does this facility have all the necessary supplies available to dialyze patients?

- Yes If yes, goes to 13a
- No If no, goes to 14

13a. Approximately how many days could this facility provide dialysis services before restocking those supplies?

14. Does this facility have back-up power generator(s)?

- Yes If yes, goes to 14a-14h
- No If no, goes to 15

14a. How many?

14b. What type of fuel does this back-up generator run on?

- Diesel Fuel
- Natural Gas
- Other (please specify)
- Don't Know

14c. How many days can this facility sustain operations using back-up generator(s) without refueling?

**14d. Does this facility have a contract, MOU/MUA or other agreement to re-supply fuel for your back-up generator(s) during an emergency?**

- Yes
- No
- Don't know

**14e. Are back-up generators located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**14f. Are back-up generators' main essential emergency electrical systems located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**14g. How often are back-up generators and systems fully load tested? (Select the most appropriate choice)**

- Weekly
- Monthly
- Quarterly
- Annually
- Every two years
- Not tested
- Other

**14h. When was the generator last tested under full load? (Please provide month and year)**

**15. During an emergency, does this facility provide dietary services?**

- Yes [If yes, goes to 15a](#)
- No [If no, goes to 16](#)

**15a. Are the meals compatible with a renal diet?**

- Yes
- No

**16. How many patients would this facility be able to dialyze in an emergency situation in a 24 hour period?**

**ESRD- If selected YES for Question 11.**

**17. If this facility were to receive a hepatitis positive patient or other potentially infectious patient requiring dialysis, could the facility provide an isolation environment for their dialysis treatment?**

- Yes
- No

**18. Does this facility have back-up dialysis machines that could be used to treat an influx of patients during an emergency?**

- Yes
- No

**19. During an emergency, does this facility have a plan to coordinate with nearby facilities to share resources (i.e. medicines, staff, equipment, etc.)?**

- Yes
- No

**19a. Does the facility plan only include coordination with sister agencies?**

- Yes
- No

**ESRD- If selected No for Question 11.**

**20. Which of the following elements contribute to the decision to close your facility during an emergency? (Select all that apply)**

- Staffing
- Power Supplies
- Dialysis Supplies
- Dietary Services
- Other (please specify)



**Thank You!**

When you are ready to submit your responses select the save and continue button in the lower right hand corner. You will receive a thank you message when your responses have been successfully received.

If you have not completed your responses and would like to return to the survey within the next week to finish your responses please close your browser. You can re-access the survey using the link provided in the email.

Should you have any questions please contact the project manager Cara Pennel, MPH at [osp-publichealthproject@srph.tamhsc.edu](mailto:osp-publichealthproject@srph.tamhsc.edu).

Items highlighted in yellow are part of the programming of the online survey and not visible to designee completing survey.

## Welcome-Nursing Home and Assisted Living Facility

Welcome!

You have been identified by the Texas Department of State Health Services Division of Regulatory Services as the designee to respond on behalf of your facility to a facilities preparedness survey being led by Drs. Barbara Quiram and Jennifer Griffith at the School of Rural Public Health at the Texas A&M Health Science Center. This survey is funded by the Department of State Health Services.

The next screen contains important details about the survey you have been asked to complete as the designee for your facility. Completing the survey will take approximately 20 minutes. However, you will be able to login to the survey multiple times before completing your submission if you need to seek additional information from others in your facility.

We appreciate your time and assistance.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co-Investigator

## Information Sheet

### Why Is This Survey Being Done?

The purpose of this survey is collect information for the Texas Department of State Health Services, Division of Regulatory Services from each hospital, end stage renal disease center, nursing home, assisted living center, and residential child care center in the state of Texas. All responses, including identification of which facility provided the response will be provided to the Texas Department of State Health Services, Division of Regulatory Services to help them understand current levels of preparedness and assist in planning for disasters.

### Why Is Your Facility Being Asked To Be In This Survey?

Your facility is being asked to participate in this survey because it was identified by the survey funder, the Texas Department of State Health Services, Division of Regulatory Services.

### How Many Facilities Will Be Asked To Be In This Survey?

650 Hospitals

600 End Stage Renal Disease Facilities

1200 Nursing Homes

1750 Assisted Living Facilities

157 Residential Child Care Facilities

*The goal is to have as many facilities in each category respond.*

### What Are Alternatives to Completing the Survey?

The only alternative is to not complete the survey.

### What Will I Be Asked To Do In This Survey?

You will be asked to complete an online survey that will take approximately 20 minutes to complete. It is possible that you will need to seek information from others in your facility so you will be able to access the online survey multiple time prior to submitting a final response. Also, it is possible that you will receive more than one online survey if you are the designee for more than one facility. Please respond to each survey request as they represent each facility.

### Are There Any Risks To My Facility?

This risks associated with this survey are not more than the facility would encounter in their everyday relationship with the Texas Department of State Health Services, Division of Regulatory Services.

### Are There Any Benefits To My Facility?

Facilities will benefit by providing their information to inform and improve preparedness related efforts by the Texas Department of State Health Services, Division of Regulatory Services.

**Will There Be Any Costs To My Facility?**

Aside from your time, there are no costs for taking part in the survey.

**Will My Facility Be Paid To Complete the Survey?**

Your facility will not receive compensation, monetary or otherwise, for completing the survey.

**Will Information From This Survey Be Kept Private?**

All information collected via this survey will only be accessible to the Principal Investigator, survey personnel and Texas Department of State Health Services, Division of Regulatory Services. Responses specific to your facility will be identifiable to Texas Department of State Health Services, Division of Regulatory Services.

**Who May I Contact for More Information?**

You may contact the Principal Investigator , Barbara J. Quiram, PhD, to tell her about a concern or complaint about this survey at 979.845.2387 or [quiram@srph.tamhsc.edu](mailto:quiram@srph.tamhsc.edu). You may also contact Co-Investigator, Jennifer M. Griffith, DrPH, MPH at 979.845.2387 or [jgriffith@srph.tamhsc.edu](mailto:jgriffith@srph.tamhsc.edu).

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**What if I Change My Mind About Participating?**

This survey is voluntary and your facility has a choice whether or not to complete this survey. Your facility may decide to not begin or to stop participating at any time. If you choose not to complete this survey or stop the survey, there will be no effect on your relationship with Texas A&M University.

Thank you.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co- Investigator

- I have read and understood the information above.

**A. General Facility Questions:**

## General Facility Questions

Please review the contact details below. If you represent multiple facilities please respond based on the location shown. Updates can be made in the boxes below each entry.

1. Name of Facility:

Pre-filled edit-able field

2. Facility Street Address:

Pre-filled edit-able field

**3. City**

Pre-filled edit-able field

**4. County**

Pre-filled edit-able field

**5. Zip code**

Pre-filled edit-able field

**A. General Facility Questions:**

Please provide the following information for the designated person completing this survey.

**6. Name of person completing survey**

**7. Title of person completing survey**

**8. Phone number of person completing survey**

**9. Fax number of person completing survey**

**10. Email Address of person completing survey**

**A. General Facility Questions:**

**11. What is the average daily census of this facility?**

**12. Does this facility have multiple floors?**

- Yes [If yes, goes to 12a](#)
- No [If no, goes to 13](#)

**12a. How many stories?**

**13. Does this facility have an Emergency Preparedness and Response Plan?**

- Yes [If yes, goes to 13a](#)
- No [If no, goes to 14](#)

**13a. Does this facility plan have a section for addressing security issues?**

- Yes
- No

**A. General Facility Questions:**

**14. Has this facility been contacted by the local emergency management office about inclusion in community preparedness planning?**

- Yes [If yes, goes to 15](#)
- No [If no, goes to 14a](#)

**14a. Has there been an attempt by this facility to work with the local emergency management office?**

- Yes
- No

**15. Has this facility worked with the local emergency management office to coordinate planning and response activities?**

- Yes
- No

**B. Evacuation Plan Information**

## Evacuation Plan Information

### 16. Does the facility have a plan for evacuating: (Select all that apply)

- From a floor [If selected goes to 16a1-16f1](#)
- From a wing [If selected goes to 16a1-16f1](#)
- From a building to an adjacent structure, same property/vicinity [If selected goes to 16a1-16f1](#)
- From the facility to another facility within the city [If selected goes to 16a1-16f1](#)
- From the facility to another facility/structure outside the city [If selected goes to 16a1-16f1](#)
- No plan [If selected goes to 16a2](#)

### 16a1. If evacuation was necessary, which of the following best describes the facility emergency plan?

- Facility evacuates without support from outside your facility (The facility can evacuate without any assistance from local or State government)
- Facility evacuates utilizing support from the local first responders (i.e. Fire/EMS etc.) but provides your own medical transportation assets
- Facility evacuates utilizing support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets
- Facility evacuates utilizing support from local government AND State government for both support staff AND medical transportation assets

### 16b1. How often does this facility exercise this evacuation plan? (Select the most applicable response)

- Weekly
- Monthly
- Quarterly
- Semi-annually
- Annually
- Never

### 16c1. If required to evacuate, how many patient loading points does this facility have?

### 16d1. Does the facility evacuation plan include evacuation of residents in complete system failure (loss of power and back-up systems that create a complete “black out” environment)?

- Yes
- No

**16e1. Does the facility plan indicate which staff members are transporting with residents during evacuation?**

- Yes
- No

**16f1. Does the facility evacuation plan account for the transport of necessary medical records?**

- Yes
- No

**16g1. Is a copy of the facility emergency plan posted in a prominent and visible location?**

- Yes
- No

**16a2. If evacuation was necessary, which of the following best describes the evacuation capabilities of the facility?**

- Facility evacuates without support from outside your facility (The facility can evacuate without any assistance from local or State government)
- Facility evacuates utilizing support from the local first responders (i.e. Fire/EMS etc.) but provides your own medical transportation assets
- Facility evacuates utilizing support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets
- Facility evacuates utilizing support from local government AND State government for both support staff AND medical transportation assets

**17. If forced to evacuate, does the facility have verified agreements with host sites/alternate locations?**

- Yes
- No

**18. Is this facility listed as a host site/alternate location for another facility?**

- Yes
- No

**19. Does this facility practice evacuation procedures with other supporting response agencies within the community?**

- Yes
- No

**19a. Which support agencies participate? (Select all that apply)**

- Emergency Management
- EMS
- Fire
- Police
- EMS Trauma Regional Advisory Council (RAC)
- Public Health
- Other (please specify)

**B. Evacuation Plan Information**

**20. With which of the following does this facility have contracts with medical transportation providers to facilitate your evacuation? (Select all that apply)**

- Ambulances *If selected goes to 20a-20b*
- Buses *If selected goes to 20c-20d*
- Other (please specify type) *If selected goes to 20e-20f*

- No contracts *If selected goes to 21*

**20a. Name of ambulance provider(s):**

**20b. Number of ambulance units:**

**20c. Name of bus provider(s):**

**20d. Number of bus units:**

**20e. Name other modes of transportation provider(s):**



20f. Number of other units:

**C. Shelter in Place Capability**

### Shelter in Place Capability

21. Does this facility have back-up power generator(s)?

- Yes *If yes, goes to 22*
- No *If no, goes to 29*

22. What type of fuel does the back-up generator(s) run on?

- Diesel Fuel
- Natural Gas
- Other (please specify)
- Don't know

23. During an emergency, how many days can this facility sustain operations using back-up generator(s) without refueling?

24. During an emergency, does this facility have a contract, MOU/MUA, or other agreement to re-supply fuel for your back-up generator(s)?

- Yes
- No
- Don't know

25. Are back-up generators located: (Select all that apply)

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**26. Are main electrical switch gear and transfer switches for back-up generators located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**27. How often are back-up generators and systems fully load tested? (Select the most appropriate response)**

- Weekly
- Monthly
- Quarterly
- Annually
- Every 2 years
- Not tested
- Other (please specify)

**28. Which systems does your back-up generator support? (Select all that apply)**

- Elevators
- HVAC (air conditioning and heating)
- Water pump stations
- Laundry
- Kitchen/restaurant
- Emergency systems (fire alarm, security, etc.)
- Security lock down
- Life Support (O-2 delivery)
- Materials refrigeration
- Sterilization
- Other (please specify)

**C. Shelter in Place Capability**

**29. During an emergency, how many days can this facility provide food for key personnel and patients without re-supply?**

**30. This facility has disposable medical re-supply capabilities to function for \_\_\_\_\_ number of days.**

31. This facility has medical gas supply (oxygen) capabilities to function for \_\_\_\_\_ number of days.

**C. Shelter in Place Capability**

32. Does this facility have the following back-up utility capabilities? (Select all that apply)

- Water supply for potable support
- Water supply for sewer support
- Back up natural gas supply
- On site oxygen storage capability
- Back-up oxygen support off-site (contracted oxygen delivery)
- Other (please specify)

32a. What is the facility's back-up natural gas supply used for? (Select all that apply)

- Heating
- Cooking
- Other (please specify)

33. Does this facility have the following for sustaining operations? (Select all that apply)

- Dedicated staff - facility employees trained for emergency/disaster roles as part of their job description
- Contracted staff - employees contracted from outside the facility to assist in emergency/disaster response roles
- Additional staff - facility employees who do not have emergency/disaster response roles in their job description but could assist with minimal training

34. Does this facility emergency plan address the family needs of staff?

- Yes
- No

**D. Surge Capacity**

35. Does the plan make provisions for patient overflow?

Yes

No

**36. Does the plan make provisions for patient tracking?**

Yes

No

## E. Pharmaceutical

### Pharmaceutical

**37. Does this facility have an emergency ordering system in place with your pharmaceutical vendors in the event of an evacuation?**

Yes

No

N/A

**38. Does the facility emergency plan designate a staff member to collect/secure: (Select all that apply)**

Medications

Permissions to treat

Emergency contact information prior to an evacuation

## F. Facility Communication Equipment / Procedures

### Facility Communication Equipment / Procedures

**39. Which of the following does the facility disaster/emergency management communication system include: (Select all that apply)**

Regular (landline) Phones

Cellular phones

Fax

Email

Satellite phones

HAM radio

800 MHz radio

UHF radio

VHF radio

- VHF radio
- Fiber optic
- Microwave radio
- Health Alert Network
- Web-based system
- Other (please specify)

**40. Which of the following does the facility disaster/emergency management communication system communicate with: (Select all that apply)**

- Local health department
- State health department
- Local emergency operations center
- Local EMS
- Local law enforcement
- Local emergency management agency
- State emergency management agency
- Other facilities within your network (please specify)
- Other facilities outside your network (please specify)

**41. How does the facility plan address disaster/emergency management communications with DFPS / CPS during a disaster or evacuation?**

**G. Training**

**Training**

**42. Is the facility emergency/disaster plan: (Select all that apply)**

- Evaluated annually
- Revised annually
- Exercised annually

**43. Do facility staff members receive emergency/disaster training?**

Yes

No

**43a. How often do staff receive training?**

Weekly

Monthly

Quarterly

Annually

Every two years

Other (please specify)

**44. Are specific persons or personnel assigned to this facility's disaster response team?**

Yes

No, whoever is on duty

**Thank you!**

When you are ready to submit your responses select the save and continue button in the lower right hand corner. You will receive a thank you message when your responses have been successfully received.

If you have not completed your responses and would like to return to the survey within the next week to finish your responses please close your browser. You can re-access the survey using the link provided in the email.

Should you have any questions please contact the project manager Cara Pennel, MPH at [osp-publichealthproject@srph.tamhsc.edu](mailto:osp-publichealthproject@srph.tamhsc.edu).

## Welcome- Residential Child Care Facility

Items highlighted in yellow are part of the programming of the online survey and not visible to designee completing survey.

Welcome!

You have been identified by the Texas Department of State Health Services Division of Regulatory Services as the designee to respond on behalf of your facility to a facilities preparedness survey being led by Drs. Barbara Quiram and Jennifer Griffith at the School of Rural Public Health at the Texas A&M Health Science Center. This survey is funded by the Department of State Health Services.

The next screen contains important details about the survey you have been asked to complete as the designee for your facility. Completing the survey will take approximately 20 minutes. However, you will be able to login to the survey multiple times before completing your submission if you need to seek additional information from others in your facility.

We appreciate your time and assistance.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co-Investigator

## Information Sheet

### Why Is This Survey Being Done?

The purpose of this survey is collect information for the Texas Department of State Health Services, Division of Regulatory Services from each hospital, end stage renal disease center, nursing home, assisted living center, and residential child care center in the state of Texas. All responses, including identification of which facility provided the response will be provided to the Texas Department of State Health Services, Division of Regulatory Services to help them understand current levels of preparedness and assist in planning for disasters.

### Why Is Your Facility Being Asked To Be In This Survey?

Your facility is being asked to participate in this survey because it was identified by the survey funder, the Texas Department of State Health Services, Division of Regulatory Services.

### How Many Facilities Will Be Asked To Be In This Survey?

650 Hospitals

600 End Stage Renal Disease Facilities

1200 Nursing Homes

1750 Assisted Living Facilities

157 Residential Child Care Facilities

*The goal is to have as many facilities in each category respond.*

### What Are Alternatives to Completing the Survey?

The only alternative is to not complete the survey.

### What Will I Be Asked To Do In This Survey?

You will be asked to complete an online survey that will take approximately 20 minutes to complete. It is possible that you will need to seek information from others in your facility so you will be able to access the online survey multiple time prior to submitting a final response. Also, it is possible that you will receive more than one online survey if you are the designee for more than one facility. Please respond to each survey request as they represent each facility.

### Are There Any Risks To My Facility?

This risks associated with this survey are not more than the facility would encounter in their everyday relationship with the Texas Department of State Health Services, Division of Regulatory Services.

### Are There Any Benefits To My Facility?

Facilities will benefit by providing their information to inform and improve preparedness related efforts by the Texas Department of State Health Services, Division of Regulatory Services.

**Will There Be Any Costs To My Facility?**

Aside from your time, there are no costs for taking part in the survey.

**Will My Facility Be Paid To Complete the Survey?**

Your facility will not receive compensation, monetary or otherwise, for completing the survey.

**Will Information From This Survey Be Kept Private?**

All information collected via this survey will only be accessible to the Principal Investigator, survey personnel and Texas Department of State Health Services, Division of Regulatory Services. Responses specific to your facility will be identifiable to Texas Department of State Health Services, Division of Regulatory Services.

**Who May I Contact for More Information?**

You may contact the Principal Investigator , Barbara J. Quiram, PhD, to tell her about a concern or complaint about this survey at 979.845.2387 or [quiram@srph.tamhsc.edu](mailto:quiram@srph.tamhsc.edu). You may also contact Co-Investigator, Jennifer M. Griffith, DrPH, MPH at 979.845.2387 or [jgriffith@srph.tamhsc.edu](mailto:jgriffith@srph.tamhsc.edu).

For questions about your rights as a survey participant; or if you have questions, complaints, or concerns about the survey, you may call the Texas A&M University Human Subjects Protection Program office at (979) 458-4067 or [irb@tamu.edu](mailto:irb@tamu.edu).

**What if I Change My Mind About Participating?**

This survey is voluntary and your facility has a choice whether or not to complete this survey. Your facility may decide to not begin or to stop participating at any time. If you choose not to complete this survey or stop the survey, there will be no effect on your relationship with Texas A&M University.

Thank you.

Barbara J. Quiram, PhD  
Principal Investigator

Jennifer M. Griffith, DrPH, MPH  
Co- Investigator

- I have read and understood the information above.

**A. General Facilities Questions**

## General Facility Questions

Please review the contact details below. If you represent multiple facilities please respond based on the location shown. Updates can be made in the boxes below each entry.

1. Name of Facility:

Pre-filled edit-able field

2. Facility Street Address:

Pre-filled edit-able field

3. City:



Pre-filled edit-able field

4. County:

Pre-filled edit-able field

5. Zip code:

Pre-filled edit-able field

**A. General Facility Questions:**

Please provide the following information for the designated person completing this survey.

6. Name of person completing survey

7. Title of person completing survey

8. Phone number of person completing survey

9. Fax number of person completing survey

10. Email Address of person completing survey

**A. General Facility Questions:**

11. What percentage, if any, of the facility's residents are non-ambulatory?

0%

- 1-10%
- 11-20%
- 21-30%
- 31-40
- 41-50%
- 51-60%
- 61-70%
- 71-80%
- 81-90%
- 91-100%

**12. What is the age of the youngest resident in this facility?**

**13. What is the age of the oldest resident in this facility?**

**14. What is the average age of residents in this facility?**

**A. General Facility Questions:**

**15. What is the average daily census of this facility?**

**16. Does this facility have multiple floors?**

- Yes *If yes, goes to 16a*
- No *If no, goes to 17*

**16a. How many stories?**

**17. Does this facility have an Emergency Preparedness and Response Plan?**

- Yes *If yes, goes to 17*

No If no, goes to 18

**17a. Does this facility plan have a section for addressing security issues?**

Yes

No

### A. General Facility Questions:

**18. Has this facility been contacted by the local emergency management office about inclusion in community preparedness planning?**

Yes If yes, goes to 19

No If no, goes to 18a

**18a. Has there been an attempt by this facility to work with the local emergency management office?**

Yes

No

**19. Has this facility worked with the local emergency management office to coordinate planning and response activities?**

Yes

No

### B. Evacuation Plan Information

#### Evacuation Plan Information

**20. Does the facility have a plan for evacuating: (Select all that apply)**

From a floor If selected, goes to 20a1-20f1

From a wing If selected, goes to 20a1-20f1

From a building to an adjacent structure, same property/vicinity If selected, goes to 20a1-20f1

From the facility to another facility within the city If selected, goes to 20a1-20f1

From the facility to another facility/structure outside the city If selected, goes to 20a1-20f1

No plan If selected, goes to 20a2

**20a1. If evacuation was necessary, which of the following best describes the facility emergency plan?**

- Facility evacuates without support from outside your facility (The facility can evacuate without any assistance from local or State government)
- Facility evacuates utilizing support from the local first responders (i.e. Fire/EMS etc.) but provides your own medical transportation assets
- Facility evacuates utilizing support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets
- Facility evacuates utilizing support from local government AND State government for both support staff AND medical transportation assets

**20b1. If required to evacuate, what staff-to-resident ratio does the facility plan require?**

**20c1. Does the facility evacuation plan include evacuation of residents in complete system failure (loss of power and back-up systems that create a complete “black out” environment)?**

- Yes
- No

**20d1. Does the facility plan indicate which staff members are transporting with residents during evacuation?**

- Yes
- No

**20e1. Does the facility evacuation plan account for the transport of necessary medical records?**

- Yes
- No

**20f1. Is a copy of the facility emergency plan posted in a prominent and visible location?**

- Yes
- No

**20a2. If evacuation was necessary, which of the following best describes the evacuation capabilities of the facility?**

- Facility evacuates without support from outside your facility (The facility can evacuate without any assistance from local or State government)
- Facility evacuates utilizing support from the local first responders (i.e. Fire/EMS etc.) but provides your own medical transportation assets
- Facility evacuates utilizing support from local responders (i.e. Fire/EMS) and local (government provided) medical transportation assets

- Facility evacuates utilizing support from local government AND State government for both support staff AND medical transportation assets

**21. If forced to evacuate, does the facility have verified agreements with host sites/alternate locations?**

- Yes
- No

**22. Is this facility listed as a host site/alternate location for another facility?**

- Yes
- No

**23. Does this facility practice evacuation procedures with other supporting response agencies within the community?**

- Yes
- No

**23a. Which support agencies participate? (Select all that apply)**

- Emergency Management
- EMS
- Fire
- Police
- EMS Trauma Regional Advisory Council (RAC)
- Public Health
- Other (please specify)

**B. Evacuation Plan Information**

**24. With which of the following does this facility have contracts with medical transportation providers to facilitate your evacuation? (Select all that apply)**

- Ambulances *If selected, goes to 24a-24b*
- Buses *If selected, goes to 24c-24d*
- Other (please specify type) *If selected, goes to 24e-24f*

- No contracts *If selected, goes to 25*

**24a. Name of ambulance provider(s):**

24b. Number of ambulance units:

24c. Name of bus provider(s):

24d. Number of bus units:

24e. Name other modes of transportation provider(s):

24f. Number of other units:

### C. Shelter in Place Capability

#### Shelter in Place Capability

25. Does this facility have back-up power generator(s)?

- Yes [If yes, goes to 25a-25g](#)
- No [If no, goes to 26](#)

25a. What type of fuel does the back-up generator(s) run on?

- Diesel Fuel
- Natural Gas
- Other (please specify)
- Don't know

**25b. During an emergency, how many days can this facility sustain operations using back-up generator(s) without refueling?**

**25c. During an emergency, does this facility have a contract, MOU/MUA, or other agreement to re-supply fuel for your back-up generator(s)?**

- Yes
- No
- Don't know

**25d. Are back-up generators located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**25e. Are main electrical switch gear and transfer switches for back-up generators located: (Select all that apply)**

- Above ground
- Above 50 year flood plain
- Above 100 year flood plain

**25f. How often are back-up generators and systems fully load tested? (Select the most appropriate response)**

- Weekly
- Monthly
- Quarterly
- Annually
- Every 2 years
- Not tested
- Other (please specify)

**25g. Which systems does your back-up generator support? (Select all that apply)**

- Elevators
- HVAC (air conditioning and heating)
- Water pump stations
- Laundry

- Kitchen/restaurant
- Emergency systems (fire alarm, security, etc.)
- Security lock down
- Life Support (O-2 delivery)
- Materials refrigeration
- Sterilization
- Other (please specify)

**C. Shelter in Place Capability**

**26. During an emergency, how many days can this facility provide food for key personnel and patients without re-supply?**

**27. This facility has disposable medical re-supply capabilities to function for \_\_\_\_\_ number of days.**

**28. This facility has medical gas supply (oxygen) capabilities to function for \_\_\_\_\_ number of days.**

**C. Shelter in Place Capability**

**29. Does this facility have the following back-up utility capabilities? (Select all that apply)**

- Water supply for potable support
- Water supply for sewer support
- Back up natural gas supply
- On site oxygen storage capability
- Back-up oxygen support off-site (contracted oxygen delivery)
- Other (please specify)

**29a. What is the facility's back-up natural gas supply used for? (Select all that apply)**

- Heating
- Cooking
- Other (please specify)



**30. Does this facility have the following for sustaining operations? (Select all that apply)**

- Dedicated staff - facility employees trained for emergency/disaster roles as part of their job description
- Contracted staff - employees contracted from outside the facility to assist in emergency/disaster response roles
- Additional staff - facility employees who do not have emergency/disaster response roles in their job description but could assist with minimal training

**31. Does this facility emergency plan address the family needs of staff?**

- Yes
- No

**D. Pharmaceutical**

**Pharmaceutical**

**32. Does this facility have an emergency ordering system in place with your pharmaceutical vendors in the event of an evacuation?**

- Yes
- No
- N/A

**33. Does the facility emergency plan designate a staff member to collect/secure: (Select all that apply)**

- Medications
- Permissions to treat
- Emergency contact information prior to an evacuation

**E. Facility Communication Equipment / Procedures**

**Facility Communication Equipment / Procedures**

**34. Which of the following does the facility disaster/emergency management communication system include: (Select all that apply)**

- Regular (landline) Phones
- Cellular phones
- Fax
- Email

- Satellite phones
- Other (please specify)

**35. Which of the following does the facility disaster/emergency management communication system communicate with: (Select all that apply)**

- Local emergency operations center
- Local EMS
- Local law enforcement
- Local emergency management agency
- State emergency manangement agency
- Other facilities within your network (please specify)
- Other facilities outside your network (please specify)

**36. How does the facility plan address disaster/emergency management communications with DFPS / CPS during a disaster or evacuation?**

**F. Training**

**Training**

**37. Is the facility emergency/disaster plan: (Select all that apply)**

- Evaluated annually
- Revised annually
- Exercised annually

**38. Do facility staff members receive emergency/disaster training?**

- Yes [If yes, goes to 38a](#)
- No [If not goes to 39](#)

**38a. How often do staff receive training?**

- Weekly
- Monthly
- Quarterly
- Annually
- Every two years
- Other (please specify)

**39. Are specific persons or personnel assigned to this facility's disaster response team?**

- Yes
- No, whoever is on duty

**40. Are residents trained on the facility emergency plan?**

- Yes
- No

**Thank you!**

**When you are ready to submit your responses select the save and continue button in the lower right hand corner. You will receive a thank you message when your responses have been successfully received.**

**If you have not completed your responses and would like to return to the survey within the next week to finish your responses please close your browser. You can re-access the survey using the link provided in the email.**

**Should you have any questions please contact the project manager Cara Pennel, MPH at [osp-publichealthproject@srph.tamhsc.edu](mailto:osp-publichealthproject@srph.tamhsc.edu).**

## APPENDIX B

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# Interview Questions

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Below are the interview questions you will be asked during your scheduled interview. These are provided to you in advance so that you may discuss with others at your facility as needed.

1. Does this facility have a written emergency/disaster plan?
  - 1a. Please explain how the facility emergency/disaster plan was developed.
  - 1b. Please explain how the facility emergency/disaster plan is maintained.
  - 1c. Please explain how staff was educated on components of the facility emergency/disaster plan.
2. Does the facility conduct exercises or drills using the facility emergency/disaster plan?
  - 2a. How frequently is the facility emergency/disaster plan practiced? (once a year, quarter?)
  - 2b. Which shifts involved?
  - 2c. Which departments involved?
  - 2d. Is the facility emergency/disaster plan modified based on exercise or drill outcomes?
3. Please describe the command structure of the emergency/disaster plan.
  - 3a. What plans are in place if the designated person in command is not available or injured?
  - 3b. Please explain how front line staff identify who they report to during an emergency/disaster.
4. Is this facility a safety net facility for the area?
5. Is this facility a host site for other facilities?
6. How are arrangements for safety nets and host sites documented?
7. In the event that evacuation of this facility proves necessary, please describe how continuity of care will be maintained for patients during transfer to other facilities.
8. In the event that patient(s) require bagging for ventilation or other care over protracted periods of time, please describe the plans for ensuring continuity of care.
9. Please describe this facility's involvement with local emergency management.
10. How is this facility part of the overall plan for your community?
11. How is this facility part of the overall plan for your region?

## APPENDIX C

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# Scheduler Guide

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Scheduler: Hello, My name is XXXXXX and I am calling for DESIGNEE NAME to schedule the telephone interview for the Facilities Preparedness Survey. You were sent an email by the Office of Special Programs at the Texas A&M School of Rural Public Health notifying of our call and providing you with a list of the questions that will be asked about the hospital's preparedness plan. Did you receive this email?

If no: Could I verify your email address? We will have those questions re-sent to you. May I go ahead and schedule a time for the interview- it will take no more than an hour to complete.

If yes: May I go ahead and schedule a time for the interview- it will take no more than an hour to complete.

# Interviewer Guide

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Interviewer: Hello, my name is XXXXXX and I am calling for DESIGNEE NAME regarding a scheduled interview.

Hello DESIGNEE NAME, my name is XXXXXX and I will be conducting our interview today. This should take no more than an hour to complete. Before we begin I would like to share some information about this interview.

This interview is being conducted on behalf of the Texas Department of State Health Services, Division of Regulatory Services. You have been identified as the designee to respond on the behalf of your facility. Information collected in this interview is focused on the preparedness of your facility and does not ask any questions about you personally. We are recording today's interview so that we can accurately capture the responses provided. Responses to these questions will be shared with the Texas Department of State Health Services, Division of Regulatory Services and will be linked to the name of your facility. Results of the interview will be used to improve preparedness planning for facilities in the state of Texas.

Do you have any questions before we begin?

If yes, interviewer will respond to designee's questions.

If no, interviewer will begin interview questions.

**START AUDIO RECORDER**

# Interview Questions

---

First I would like to start with questions related to your facility's emergency/disaster plan.

## **Basic Concept of Question 1: Does the facility have a plan?**

1. Does this facility have a written emergency/disaster plan?

*Probe for clarity if needed.*

*See acronym list for other names or acronyms that could be used such as EOP or emergency operations plan.*

*Ask the following additional questions:*

1a. Please explain how the facility emergency/disaster plan was developed.

*Probe for clarity if needed.*

*Additional Probe: Who was involved in developing the plan?*

1b. Please explain how the facility emergency/disaster plan is maintained.

*Probe for clarity if needed.*

1c. Please explain how staff was educated on components of the facility emergency/disaster plan.

*Probe for clarity if needed.*

## **Basic Concept of Question 2-8: Does the facility exercise the plan regularly? What are specifics related to the plan?**

2. Does the facility conduct exercises or drills using the facility emergency/disaster plan?

*Probe for clarity if needed.*

*See document sent on 6/18/2013 that includes common types of exercises and drills and their definitions.*

*If the response from the facility includes conducting drills or exercises then ask the following questions:*

2a. How frequently is the facility emergency/disaster plan practiced? (once a year, quarter?)

*Probe for clarity if needed.*

*This would be one or more of the types of exercises or drills.*

2b. Which shifts involved?

*Probe for clarity if needed.*

2c. Which departments involved?



*Probe for clarity if needed.*

2d. Is the facility emergency/disaster plan modified based on exercise or drill outcomes?

*Probe for clarity if needed.*

*Additional Probe: If yes, how?*

3. Please describe the command structure of the emergency/disaster plan.

*Looking to understand the hierarchy/organization of who is in charge. Some frameworks that you may hear used include ICS- Incident Command Structure.*

*Probe for clarity if needed.*

Additional probes include:

Does this facility implement an Incident Command Structure?

Who reports to whom?

Who is the primary decision maker?

How does information flow up and down the chain of command?

How does information get disbursed to lower level staff?

*Ask the following additional questions:*

3a. What plans are in place if the designated person in command is not available or injured?

*Here we are trying to find out if there are back-ups or contingency plans if the primary person in charge is unavailable, for any reason.*

*Probe for clarity if needed.*

3b. Please explain how front line staff identify who they report to during an emergency/disaster.

*Here we are trying to get at communication and how those who are on the front-line of a response in the facility know who to go to or how to identify who to go to in an emergency.*

*Probe for clarity if needed.*

4. Is this facility a safety net facility for the area?

*Probe for clarity if needed.*

Safety Net Hospital: A safety net hospital or health system provides a significant level of care to low-income, uninsured, and vulnerable populations.

5. Is this facility a host site for other facilities?

*Probe for clarity if needed.*

Host Facility: A facility that is receiving patients from another facility. This could be through an agreement or it may be spontaneous depending on the situation.

6. How are arrangements for safety nets and host sites documented?

*There are many ways these can be documented from verbal informal agreements to formal contacts and written agreements. Here we want to know what is in place, it is possible that there are variations in these documents based on type of situation/emergency.*

*Probe for clarity if needed.*

7. In the event that evacuation of this facility proves necessary, please describe how continuity of care will be maintained for patients during transfer to other facilities.

*Think about patient care and safety, we are trying to understand how the facility assures this in the case of an evacuation- it could be staff traveling with patients, sending medical records with patients or transferring information electronically.*

*Probe for clarity if needed.*

8. In the event that patient(s) require bagging for ventilation or other care over protracted periods of time, please describe the plans for ensuring continuity of care.

*This is where we gave the example from a Gray's Anatomy episode where there was power loss, generator failure, and batteries ran out on ventilator in the NICU (neo-natal intensive care unit) and parents were trained to bag their infants. So with this question we want to know what the facility has in place if they are required to manually ventilate by hand or bag patients. Who will do it? How long can they do it? Do they have the staff needed?*

*Probe for clarity if needed.*

**Basic Concept of Questions 9-10: Does the facility plan extend beyond the “four walls” of the facility and integrate or become part of the broader community response?**

9. Please describe this facility’s involvement with local emergency management.

*Probe for clarity if needed.*

*Additional Probes:* How often does the facility meet with/talk with locals?  
Are there cross functional meetings?  
 Is the facility part of the local plan?  
 Does the facility exercise or drill with other locals?  
Is emergency contact information shared? If yes, what types (e.g. phone, email)  
 Is this facility part of the regional planning committee?

10. How is this facility part of the overall plan for your community?

*Probe for clarity if needed.*

11. How is this facility part of the overall plan for your region?

*Probe for clarity if needed.*

*Other sample probes that may be used:*

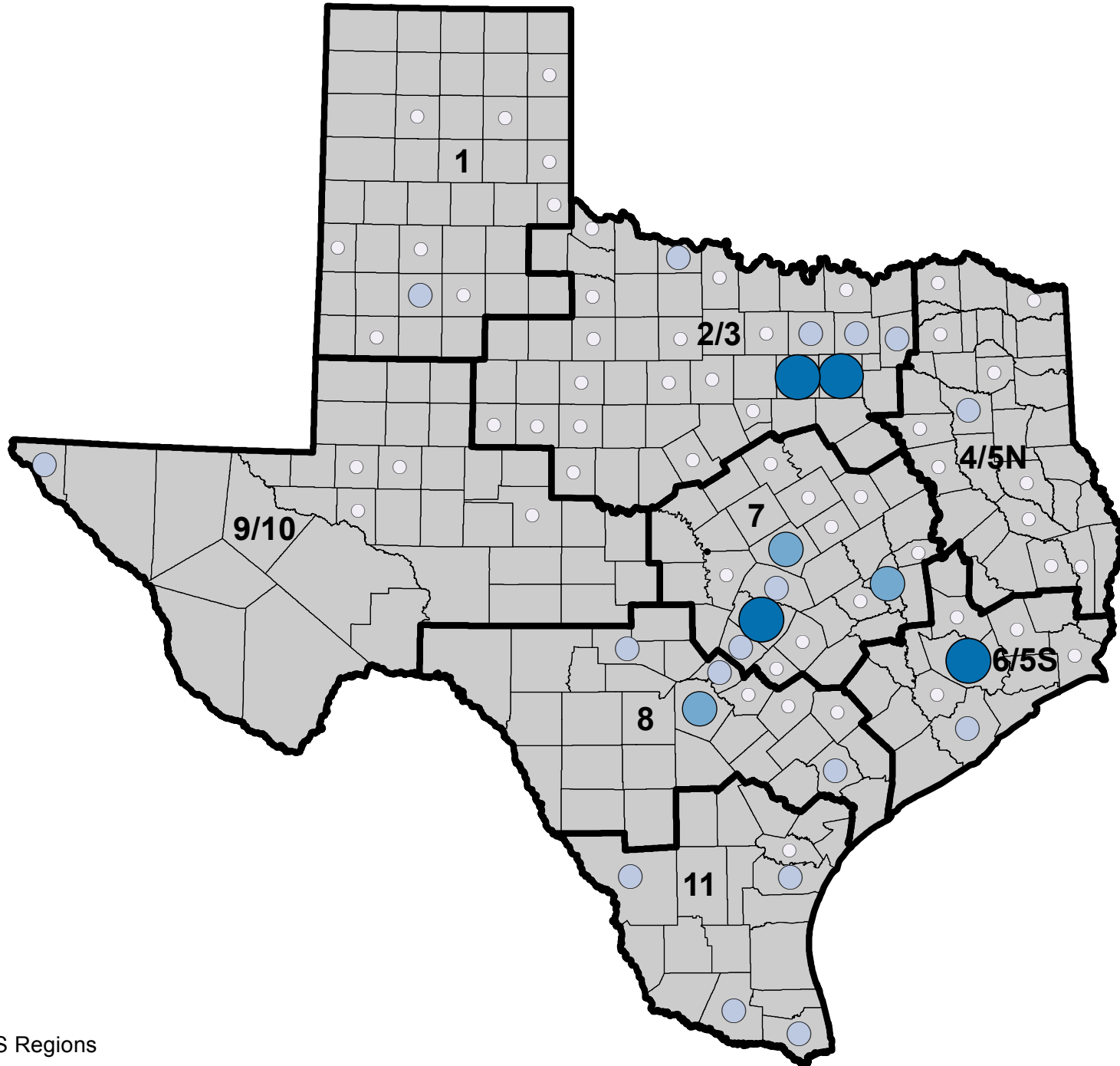
*-Can you explain what you mean by XXXXX?*

*-Can I repeat that statement back to you to make sure I have it correctly?*

## APPENDIX D

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# Hospital Responses by Health Services Regions

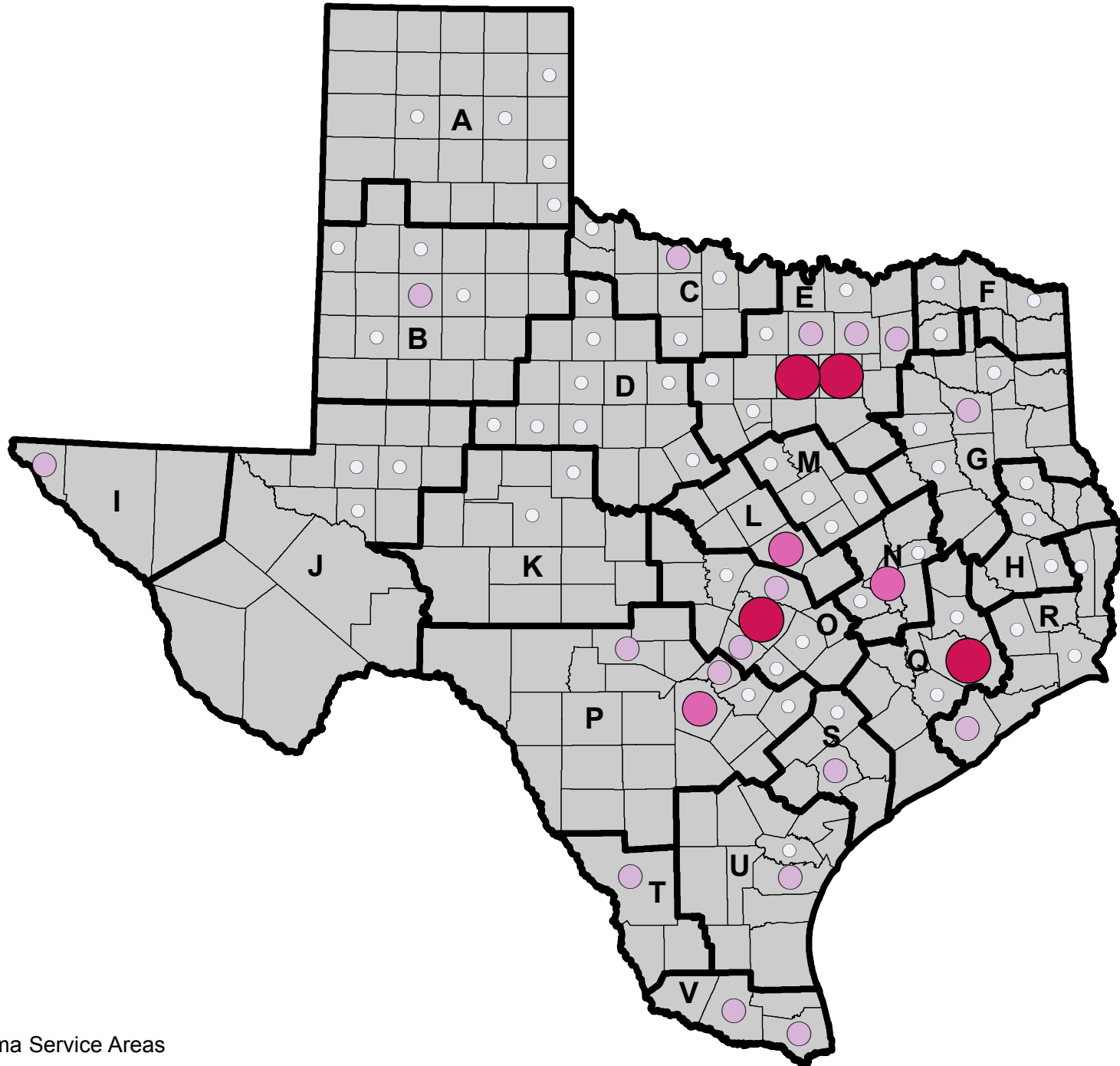


## Hospitals

- 1
- 2 - 3
- 4 - 5
- 7 - 8

▭ DSHS Regions

# Hospital Responses by Trauma Service Area Region

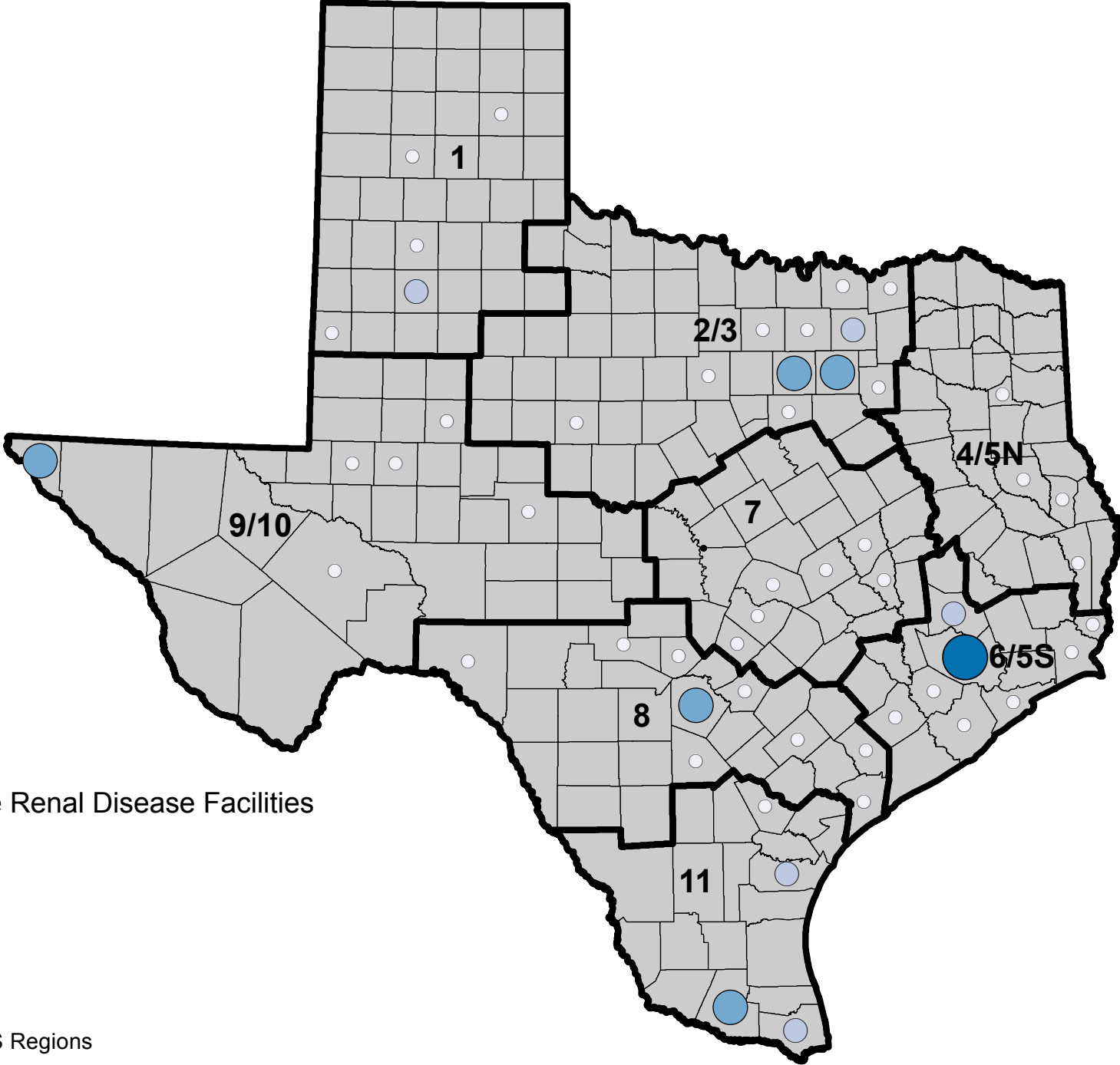


## Hospitals

- 1
- 2 - 3
- 4 - 5
- 7 - 8

▭ Trauma Service Areas

# End Stage Renal Disease Responses by Health Service Region

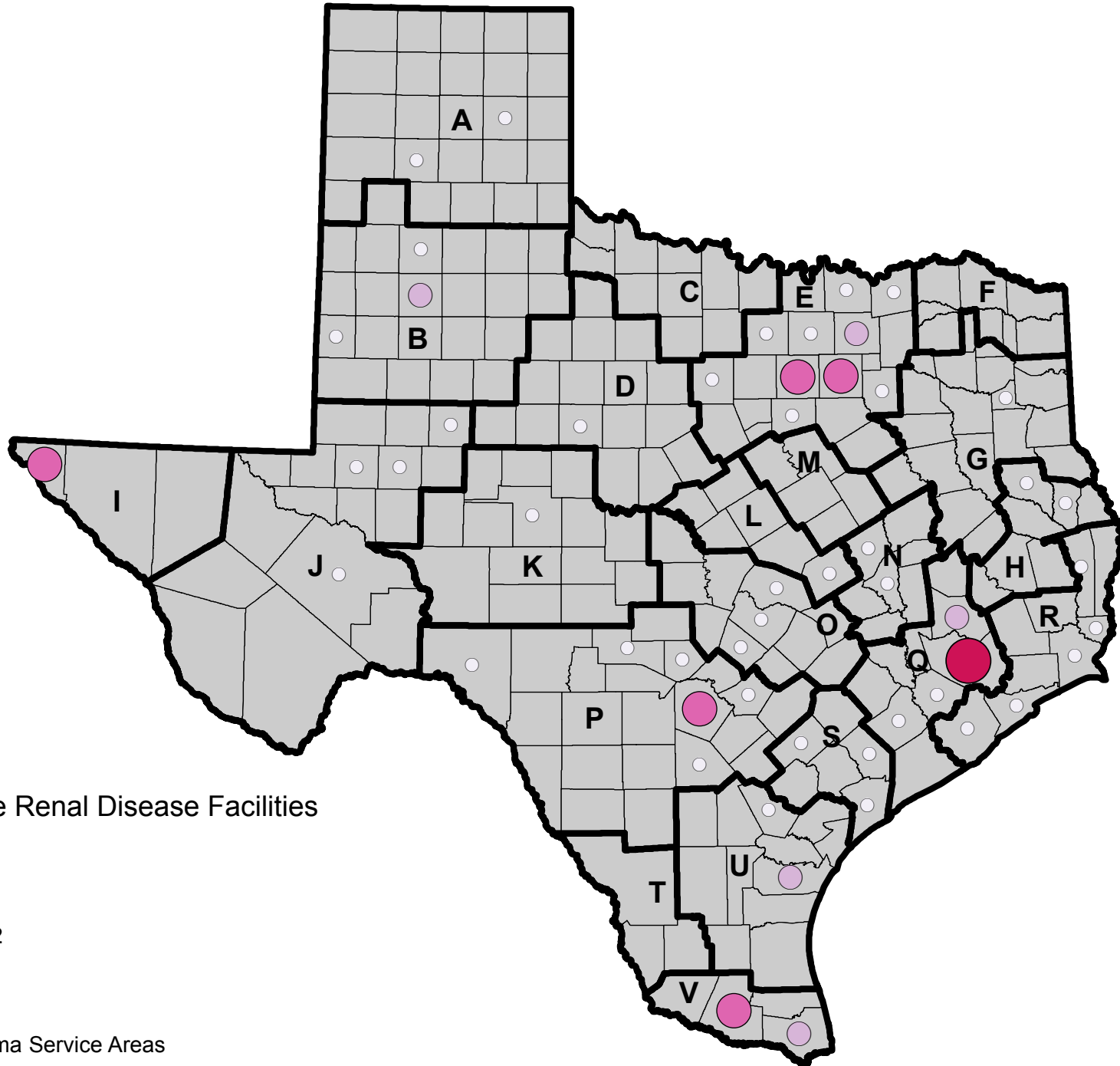


## End Stage Renal Disease Facilities

- 1 - 2
- 3 - 6
- 7 - 12
- 28

▭ DSHS Regions

# End Stage Renal Disease Responses by Trauma Service Area Region



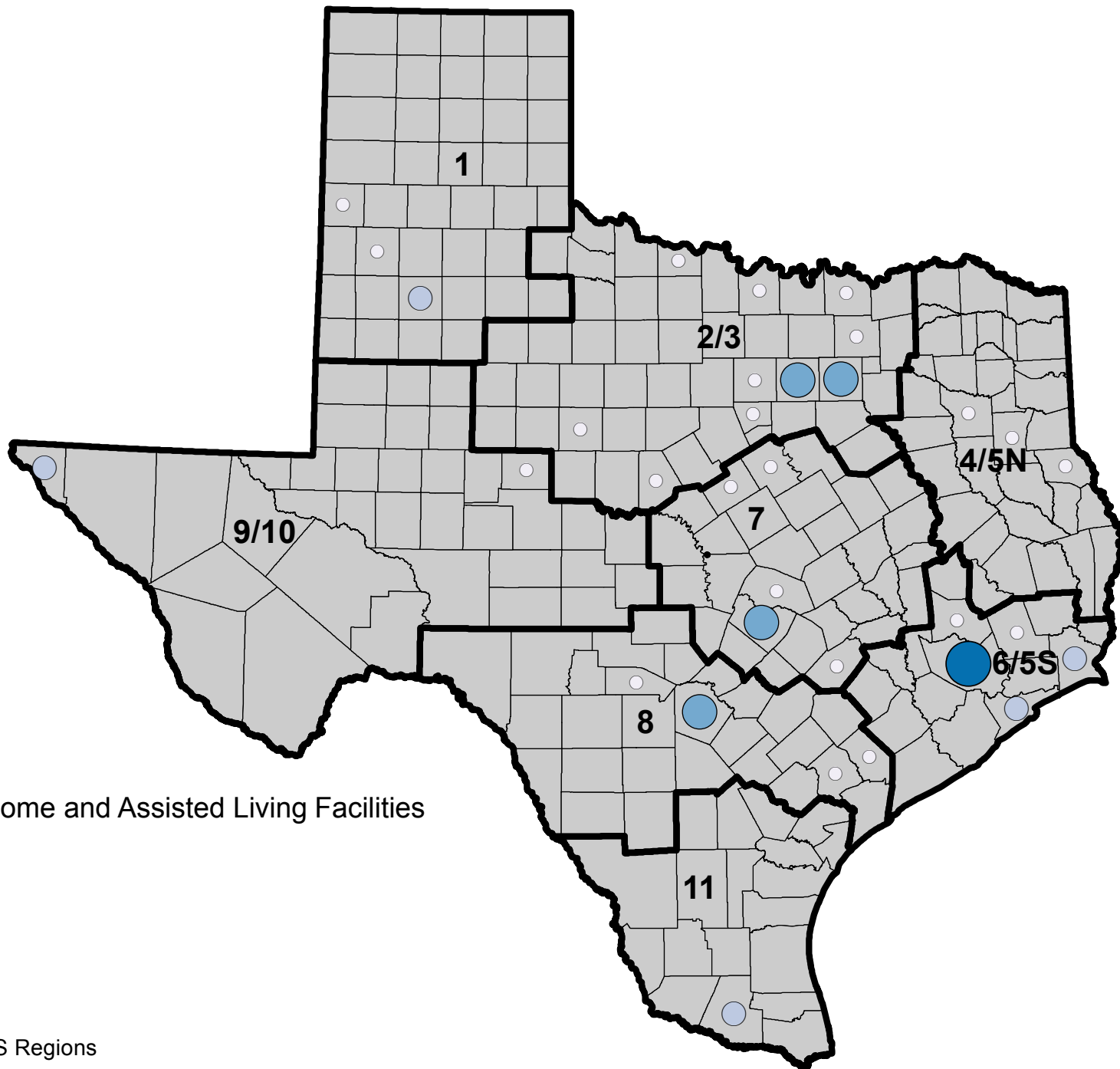
## End Stage Renal Disease Facilities

- 1 - 2
- 3 - 6
- 7 - 12
- 28

□ Trauma Service Areas



# Nursing Home and Assisted Living Facility Responses by Health Service Region

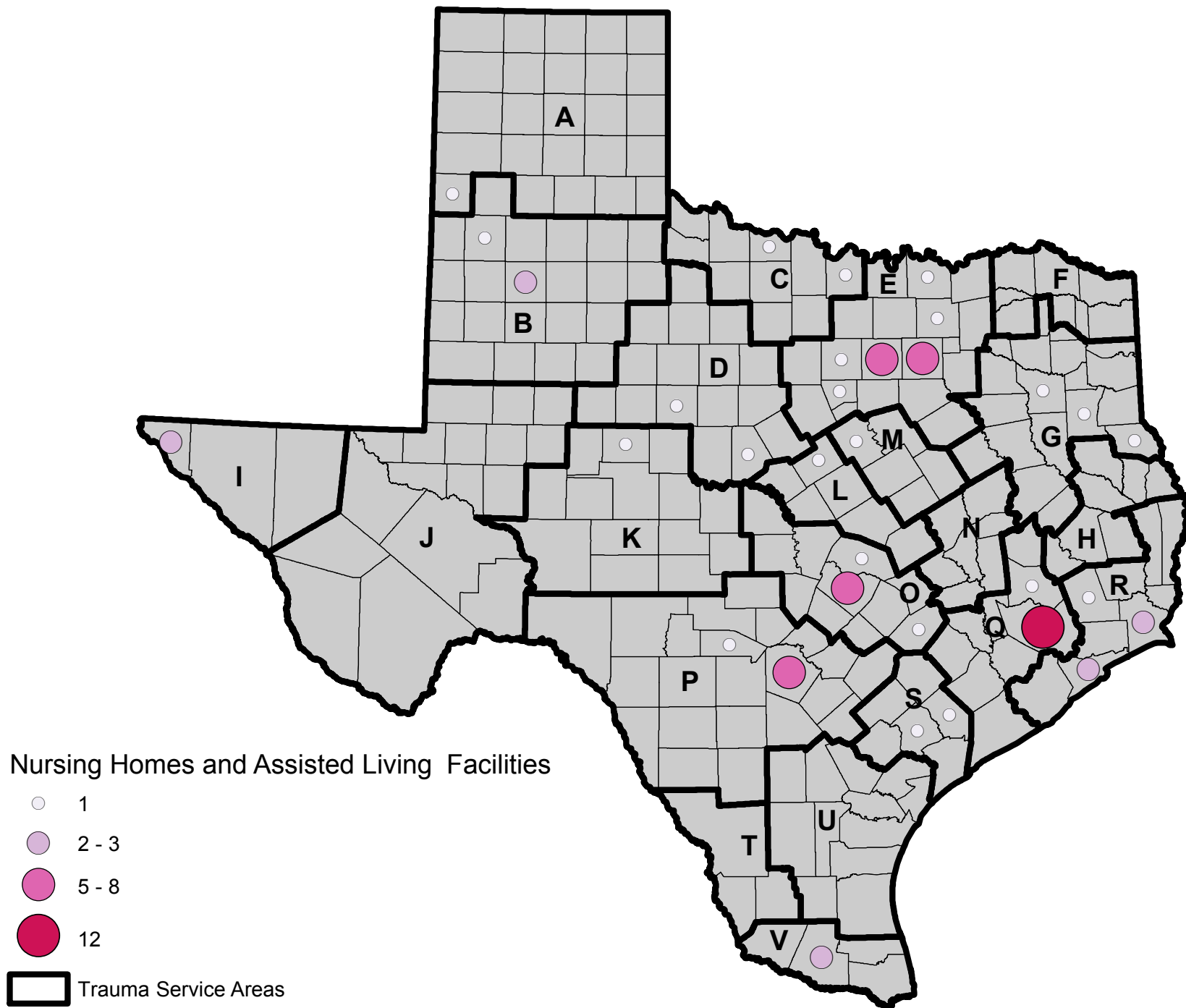


## Nursing Home and Assisted Living Facilities

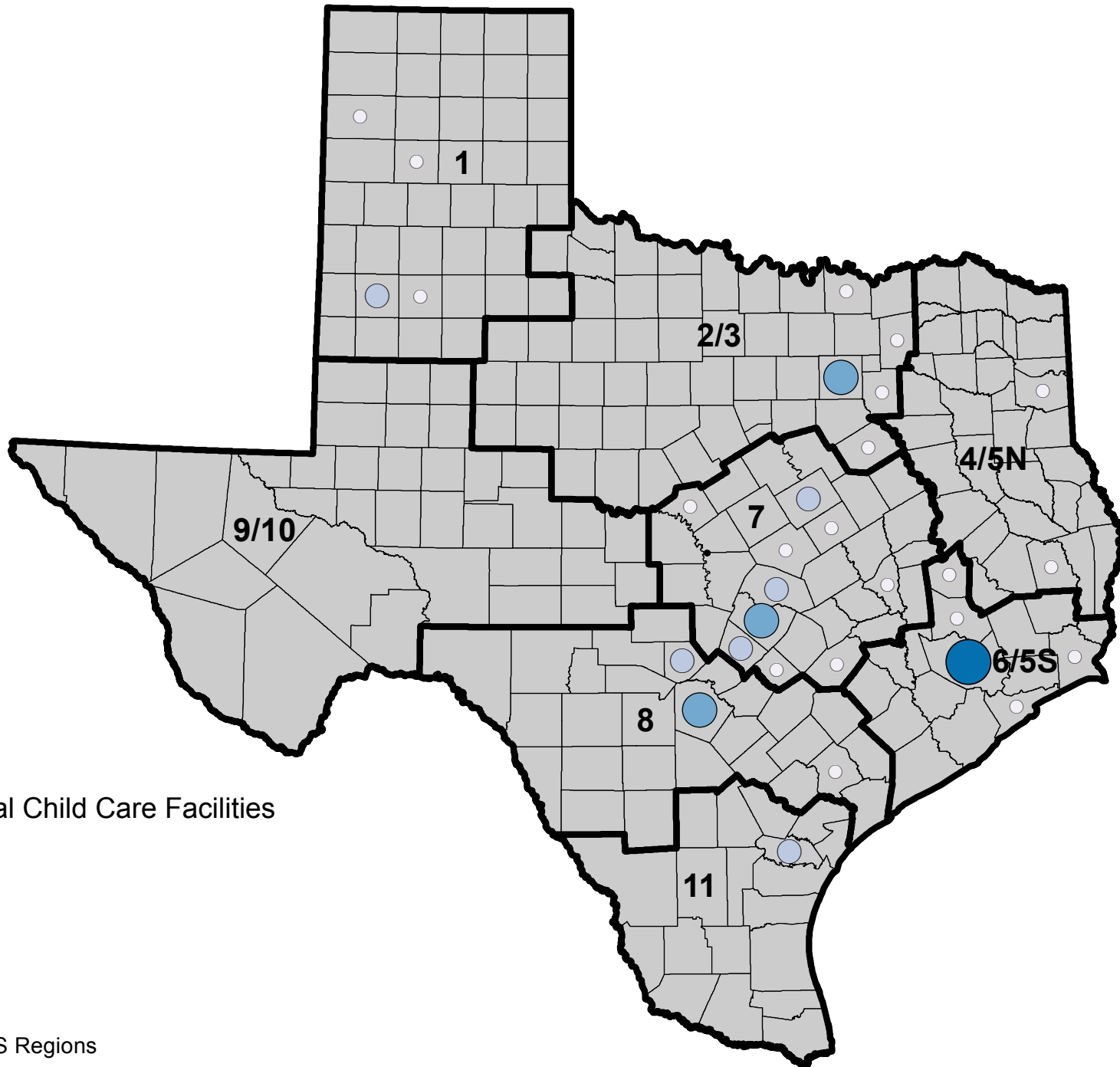
- 1
- 2 - 3
- 5 - 8
- 12

▭ DSHS Regions

# Nursing Home and Assisted Living Facility Responses by Trauma Service Area Region



# Residential Child Care Facility Responses by Health Service Region



## Residential Child Care Facilities

○ 1

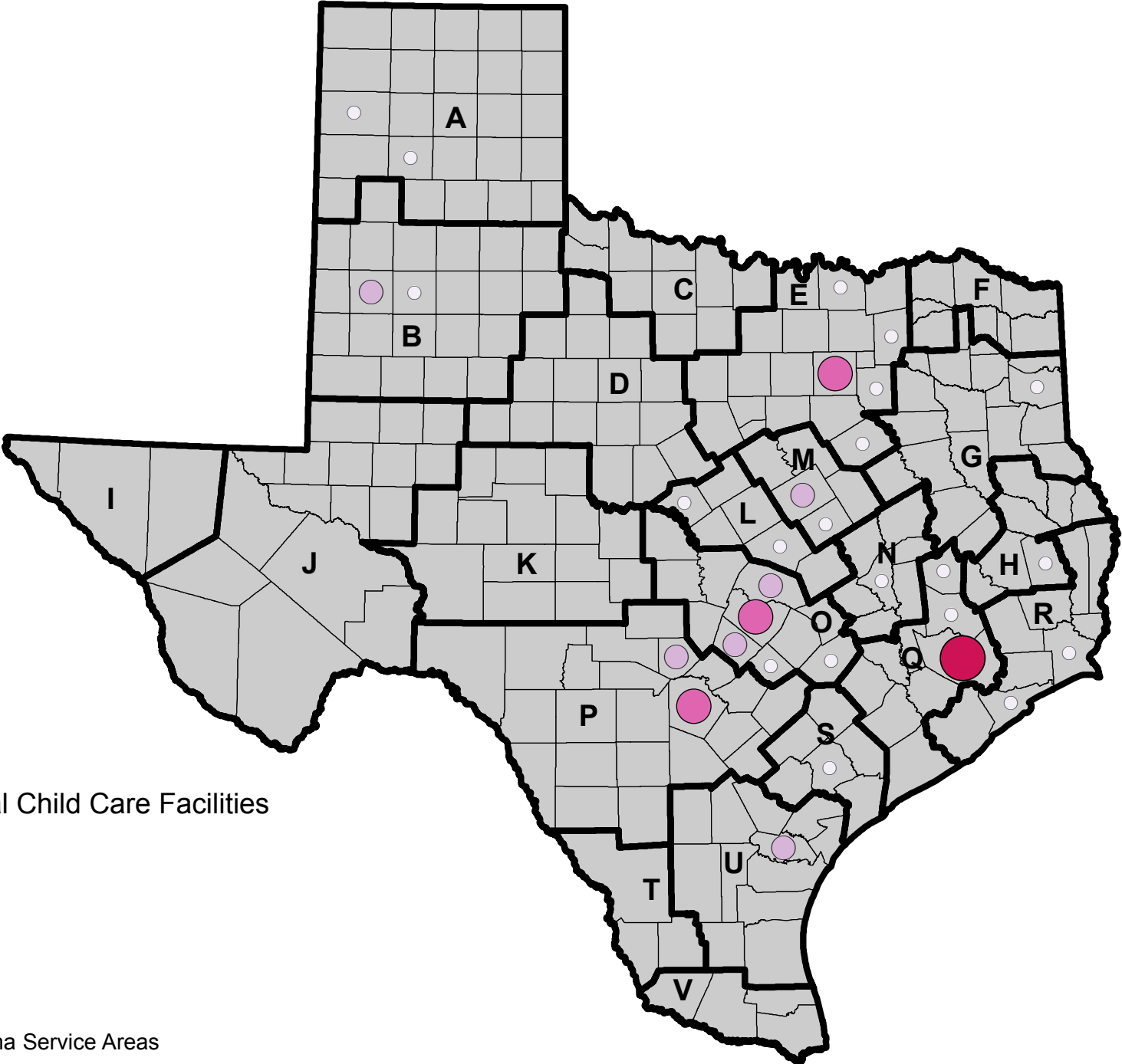
○ 2

○ 4

○ 8

□ DSHS Regions

# Residential Child Care Facility Responses by Trauma Service Area Region



## Residential Child Care Facilities

- 1
- 2
- 4
- 8

□ Trauma Service Areas