HOSPITAL SURVEY ON PATIENT SAFETY CULTURE

2018 User Database Report

Surveys on Patient Safety Culture™

AHRQ Agency for Healthcare Research and Quality

PATIENT SAFETY

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Hospital Survey on Patient Safety Culture: 2018 User Database Report

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Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
5600 Fishers Lane
Rockville, MD 20857
www.ahrq.gov

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Managed and prepared by:

Westat, Rockville, MD

Theresa Famolaro, M.P.S., M.S., M.B.A.
Naomi Dyer Yount, Ph.D.
Ryan Hare
Shakia Thornton
Kristi Meadows
Lei Fan M.D., Ph.D.
Rebecca Birch M.P.H
Joann Sorra, Ph.D.

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Appendixes cited in this refport are provided electronically at https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/hospital/hosp-reports.html.

Executive Summary

Surveys on Patient Safety Culture™

EXECUTIVE SUMMARY

2018 HOSPITAL SURVEY DATABASE

This overview of survey findings summarizes how hospital employees perceive 12 areas of patient safety culture based on the 2018 Hospital Survey on Patient Safety Culture Database.

630 hospitals administered the survey

382,834 providers and staff respondents

12 areas of patient safety culture were assessed in the survey

average percent positive across all 12 areas was **65%**

Areas of strength for most hospitals

82%

Teamwork Within Units

82% of respondents reported that they work well together as a team

80%

Supervisor/Manager Expectations & Actions for Promoting Patient Safety

80% of respondents indicated that supervisors/managers consider staff suggestions and do not overlook patient safety problems

72%

Organizational Learning

72% of respondents reported that mistakes lead to positive change

Areas of potential for improvement for most hospitals

47%

Nonpunitive Response to Error

47% of respondents indicated that event reports are not held against them and that mistakes are not kept in their personnel file

48%

Handoffs and Transitions

48% of respondents indicated that information is not lost during transfers or shift changes

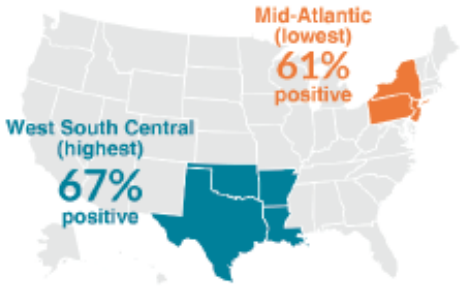
53%

Staffing

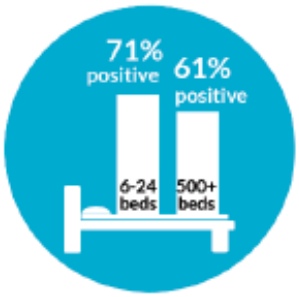
53% of respondents reported that there is sufficient staff to handle the workload

Other key findings

Highest and lowest average percent positive across all composites by geographic region and bed size



Geographic Region



Smaller hospitals (6-24 beds) reported the highest percent positive

Larger hospitals (500+ beds) reported the lowest percent positive

Bed Size

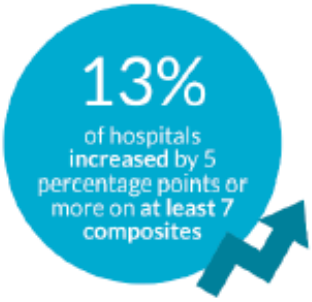
Highest and lowest average percent positive across all composites by work area and staff position

Work Area

Staff Position

Comparing results over time

Trending results for 306 hospitals that submitted to the 2016 and 2018 database



↑35% of hospitals **increased** by 5 percentage points or more on **Nonpunitive Response to Error**

↓21% of hospitals **decreased** by 5 percentage points or more on **Staffing**

What's next? Action planning for improvement

1. Define your goals
2. Plan your initiatives
3. Communicate your action plan

The *Action Planning Tool for the AHRQ Surveys on Patient Safety Culture* provides step-by-step guidance on how to develop an action plan to improve patient safety culture, available at www.ahrq.gov/sops.

Purpose and Use of This Report

In response to requests from hospitals interested in comparing their results with those of other hospitals on the *Surveys on Patient Safety Culture™ (SOPS™) Hospital Survey,* the Agency for Healthcare Research and Quality (AHRQ) established the *Hospital Survey on Patient Safety Culture* database. The submission period for the hospital database occurs every 2 years.

The report presents statistics (averages, standard deviations, minimum and maximum scores, and percentiles) on the patient safety culture composites and items from the survey. This report also includes a trending chapter that describes patient safety culture change over time.

This report has four appendixes:

- Appendix A presents results by *hospital characteristics* (bed size, teaching status, ownership, and geographic region).
- Appendix B presents results by *respondent characteristics* (hospital work area/unit, staff position, interaction with patients, and tenure in work area/unit).
- Appendix C presents trend results by *hospital characteristics* (bed size, teaching status, ownership, and geographic region).
- Appendix D presents trend results by *respondent characteristics* (hospital work area/unit, staff position, interaction with patients, and tenure in work area/unit).

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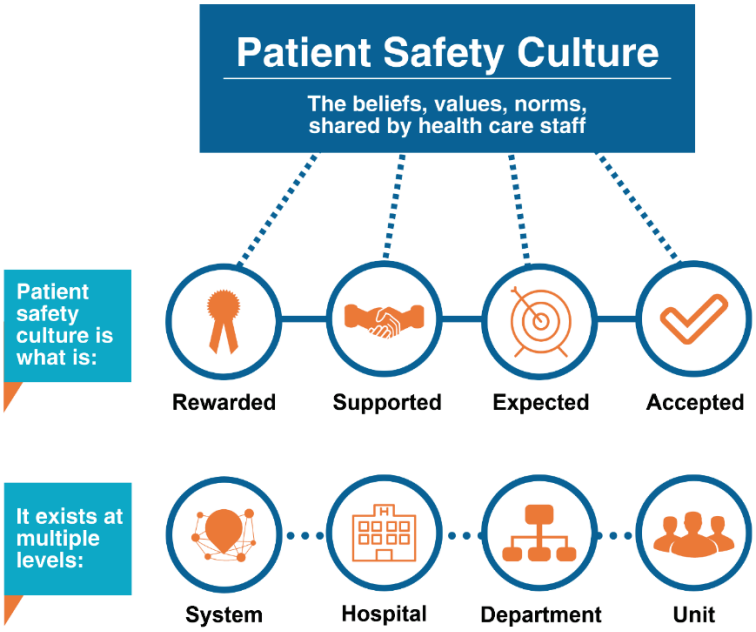
Chapter 1. Introduction

Organizational culture refers to the beliefs, values, and norms shared by staff throughout the organization that influence their actions and behaviors. Patient safety culture is the extent to which these beliefs, values, and norms support and promote patient safety. Patient safety culture can be measured by determining what is rewarded, supported, expected, and accepted in an organization as it relates to patient safety.

Figure 1. Definition of Patient Safety Culture



Survey Content

The Agency for Healthcare Research and Quality (AHRQ) funded the development of the *Hospital Survey on Patient Safety Culture*. The survey includes 42 items that measure 12 composites of patient safety culture. The 12 patient safety culture composites are listed and defined in Table 1-1.

Table 1-1. Patient Safety Culture Composites and Definitions

Patient Safety Culture Composite	Definition: *The extent to which…*
1. Communication openness	Staff freely speak up if they see something that may negatively affect a patient and feel free to question those with more authority.
2. Feedback and communication about error	Staff are informed about errors that happen, are given feedback about changes implemented, and discuss ways to prevent errors.
3. Frequency of events reported	Mistakes of the following types are reported: (1) mistakes caught and corrected before affecting the patient, (2) mistakes with no potential to harm the patient, and (3) mistakes that could harm the patient but do not.
4. Handoffs and transitions	Important patient care information is transferred across hospital units and during shift changes.
5. Management support for patient safety	Hospital management provides a work climate that promotes patient safety and shows that patient safety is a top priority.
6. Nonpunitive response to error	Staff feel that their mistakes and event reports are not held against them and that mistakes are not kept in their personnel file.
7. Organizational learning—Continuous improvement	Mistakes have led to positive changes and changes are evaluated for effectiveness.
8. Overall perceptions of patient safety	Procedures and systems are good at preventing errors and there is a lack of patient safety problems.
9. Staffing	There are enough staff to handle the workload and work hours are appropriate to provide the best care for patients.
10. Supervisor/manager expectations and actions promoting patient safety	Supervisors/managers consider staff suggestions for improving patient safety, praise staff for following patient safety procedures, and do not overlook patient safety problems.
11. Teamwork across units	Hospital units cooperate and coordinate with one another to provide the best care for patients.
12. Teamwork within units	Staff support each other, treat each other with respect, and work together as a team.

The survey also includes two questions that ask respondents to provide an overall grade on patient safety for their work area/unit and to indicate the number of events they reported over the past 12 months. In addition, respondents are asked to provide limited background demographic information.

Chapter 2. Survey Administration Statistics

This chapter presents descriptive information on how the 2018 database hospitals administered the survey.

Highlights

- The 2018 database consists of data from 382,834 hospital respondents across 630 hospitals.
- The average hospital response rate was 54 percent, with an average of 608 completed surveys per hospital.
- Most hospitals (83 percent) administered *web surveys*, which resulted in lower response rates compared with response rates from *both paper and web* (61 percent) and *paper only* survey administration (57 percent).

Overall Hospital Statistics

Overall statistics included in the 2018 database are shown in Tables 2-1, 2-2, and 2-3.

Table 2-1. Trending and Nontrending Overall Statistics—2018 Database Hospitals[i]

Overall Statistic	Nontrending Hospitals		Trending Hospitals	Total Database
	2018 1st Time Submitters	2018 Hospitals Submitting 2007-2014	Trending 2016-2018	
Number of hospitals	190	134	306	630
Number of survey respondents	81,647	72,757	228,430	382,834

Table 2-2. Average Survey Administration Statistics—2018 Database Hospitals

Response Rate Information	Rate
Average number of respondents per hospital (range: 16 to 6,139)	608
Average number of surveys administered per hospital (range: 18 to 9,973)	1,337
Overall average hospital response rate (range: 6% to 100%)	54%

[i] The number of trending hospitals and respondents shown as trending in Table 2-1 represent hospitals that participated consecutively in the 2016 and 2018 databases.

Table 2-3. Survey Administration Mode Statistics—2018 Database Hospitals

Survey Administration Mode	Database Hospitals		Database Respondents		Average Mode Response Rate
	Number	Percent	Number	Percent	Percent
Paper only	24	4%	4,514	1%	57%
Web only	525	83%	338,603	88%	53%
Both paper and web	81	13%	39,717	10%	61%
Total	630	100%	382,834	100%	

Note: Percentages may not add to 100 due to rounding.

Chapter 3. Hospital Characteristics

This chapter presents information about the distribution of database hospitals by bed size, teaching status, ownership, and geographic region. Although the hospitals that voluntarily submitted data to the database do not constitute a statistically selected sample, the characteristics of these hospitals are fairly consistent with the distribution of hospitals registered with the American Hospital Association (AHA).

The characteristics of database hospitals by bed size, teaching status, ownership, geographic region, and health care system status are presented in the following tables and are compared with the distribution of AHA-registered hospitals included in the 2015 AHA Annual Survey of Hospitals.[ii]

Highlights

- Most database hospitals ranged from 25-299 beds (72 percent).
- Most database hospitals were nonteaching (64 percent)
- Most database hospitals were nongovernment not for profit (78 percent).
- Database hospitals represented all geographic regions in the United States. The South Atlantic/Associated Territories region had the most hospitals (24 percent).
- Characteristics of database hospitals are fairly consistent with the distribution of hospitals registered with the American Hospital Association.

[ii] Data for U.S. and U.S. territory AHA-registered hospitals were obtained from the 2015 AHA Annual Survey of Hospitals Database, © 2015 Health Forum, LLC, an affiliate of the American Hospital Association. Hospitals not registered with AHA were asked to provide information on their hospital's characteristics, such as bed size, teaching status, and ownership.

Table 3-1. Distribution of 2018 Database Hospitals and Respondents Compared With AHA-Registered Hospitals

Hospital Characteristics	AHA-Registered Hospitals (N = 6,251)		Database Hospitals (N = 630)		Database Respondents (N = 382,834)	
Bed Size	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
6-24 beds	770	12%	34	5%	2,558	1%
25-49 beds	1,445	23%	96	15%	13,360	3%
50-99 beds	1,237	20%	102	16%	23,967	6%
100-199 beds	1,263	20%	156	25%	79,082	21%
200-299 beds	646	10%	102	16%	75,910	20%
300-399 beds	368	6%	57	9%	50,639	13%
400-499 beds	201	3%	34	5%	41,249	11%
500 or more beds	321	5%	49	8%	96,069	25%
Teaching Status	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Teaching	2,087	33%	226	36%	216,301	56%
Nonteaching	4,164	67%	404	64%	166,533	44%
Ownership	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Government (Federal and non-Federal)	1,476	24%	77	12%	31,996	8%
Nongovernment not for profit	3,099	50%	489	78%	318,376	83%
Investor owned (for profit)	1,676	27%	64	10%	32,462	8%
Region	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
New England	251	4%	33	5%	17,378	5%
Mid-Atlantic	552	9%	61	10%	53,492	14%
South Atlantic/Associated Territories	1,009	16%	151	24%	107,584	28%
East North Central	912	15%	144	23%	86,680	23%
East South Central	501	8%	27	4%	15,304	4%
West North Central	789	13%	73	12%	30,230	8%
West South Central	1,066	17%	85	13%	33,861	9%
Mountain	521	8%	20	3%	13,436	4%
Pacific/Associated Territories	650	10%	36	6%	24,869	6%

Note: Percentages may not add to 100 due to rounding. States and territories are categorized into AHA-defined regions as follows:

- New England: CT, MA, ME, NH, RI, VT
- Mid-Atlantic: NJ, NY, PA
- South Atlantic/Associated Territories: DC, DE, FL, GA, MD, NC, SC, VA, WV, Puerto Rico, Virgin Islands
- East North Central: IL, IN, MI, OH, WI
- East South Central: AL, KY, MS, TN
- West North Central: IA, KS, MN, MO, ND, NE, SD
- West South Central: AR, LA, OK, TX
- Mountain: AZ, CO, ID, MT, NM, NV, UT, WY
- Pacific/Associated Territories: AK, CA, HI, OR, WA, American Samoa, Guam, Marshall Islands, Northern Mariana Islands

Chapter 4. Respondent Characteristics

This chapter describes respondent characteristics within the participating hospitals.

Highlights

- The top three respondent work areas were:
  - Other (30 percent).
  - Medicine (13 percent).
  - Surgery (10 percent).
- The top three respondent staff positions were:
  - Registered nurse or licensed vocational nurse/licensed practical nurse (37 percent).
  - Other (21 percent).
  - Technician (e.g., EKG, Lab, Radiology) (11 percent).
- Most respondents (78 percent) indicated they had direct interaction with patients.
- More than half (52 percent) of respondents have worked in their hospital for *6 years or more*.

Table 4-1. Distribution of 2018 Database Hospitals by Respondent Characteristics

Respondent Characteristics	Database Respondents	
Work Area	Number	Percent
Other	113,133	30%
Medicine (non-surgical)	49,105	13%
Surgery	37,946	10%
Intensive care unit (any type)	25,274	7%
Many different hospital units/No specific unit	24,779	7%
Emergency department	23,692	6%
Radiology	20,060	5%
Laboratory	17,241	5%
Rehabilitation	16,037	4%
Obstetrics	15,120	4%
Pharmacy	11,727	3%
Psychiatry/mental health	8,057	2%
Pediatrics	7,307	2%
Anesthesiology	2,607	1%
Total	372,085	100%
Missing	10,749	
Overall	382,834	

Note: Percentages may not add to 100 due to rounding.

Table 4-1. Distribution of 2018 Database Hospitals by Respondent Characteristics (continued)

Respondent Characteristics	Database Respondents	
Staff Position	**Number**	**Percent**
Registered nurse (RN) or licensed vocational nurse (LVN)/licensed practical nurse (LPN)	126,390	37%
Other position	73,598	21%
Technician (EKG, Lab, Radiology)	38,512	11%
Administration/management	23,959	7%
Patient care assistant/hospital aide/care partner	21,964	6%
Attending/staff physician, resident physician/physician in training, or physician assistant (PA)/nurse practitioner (NP)	18,557	5%
Unit assistant/clerk/secretary	16,944	5%
Therapist (respiratory, physical, occupational, or speech)	17,325	5%
Pharmacist	6,750	2%
Dietitian	1,851	1%
Total	345,850	100%
Missing	36,984	
Overall	382,834	
Interaction With Patients	**Number**	**Percent**
YES, have direct patient interaction	277,498	78%
NO, do NOT have direct patient interaction	80,059	22%
Total	357,557	100%
Missing	25,277	
Overall	382,834	
Tenure With Current Hospital	**Number**	**Percent**
Less than 1 year	43,180	14%
1 to 5 years	105,747	34%
6 to 10 years	54,684	18%
11 to 15 years	38,600	12%
16 to 20 years	26,367	8%
21 years or more	43,451	14%
Total	312,029	100%
Missing	70,805	
Overall	382,834	
Tenure in Current Work Area	**Number**	**Percent**
Less than 1 year	56,984	17%
1 to 5 years	135,427	41%
6 to 10 years	57,370	17%
11 to 15 years	35,666	11%
16 to 20 years	22,113	7%
21 years or more	25,314	8%
Total	332,874	100%
Missing	49,960	
Overall	382,834	

Note: Percentages may not add to 100 due to rounding.

Respondent Characteristics	Database Respondents	
Tenure in Current Specialty or Profession	**Number**	**Percent**
Less than 1 year	25,725	8%
1 to 5 years	91,279	28%
6 to 10 years	58,035	18%
11 to 15 years	41,458	13%
16 to 20 years	35,997	11%
21 years or more	76,937	23%
Total	329,431	100%
Missing	53,403	
Overall	382,834	
Hours Worked Per Week	**Number**	**Percent**
Less than 20 hours per week	17,026	5%
20 to 39 hours per week	132,587	40%
40 to 59 hours per week	159,901	48%
60 to 79 hours per week	13,892	4%
80 to 99 hours per week	7,170	2%
100 hours per week or more	1,484	<1%
Total	332,060	100%
Missing	50,774	
Overall	382,834	

Note: Percentages may not add to 100 due to rounding.

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Chapter 5. Overall Results

This chapter presents the overall survey results for the database, showing the average percentage of positive responses across the database hospitals on each of the survey's items and composites. Reporting the average across hospitals ensures that each hospital receives an equal weight that contributes to the overall average. Reporting the data at the hospital level in this way is important because culture is considered to be a group characteristic and is not considered to be a solely individual characteristic.

An alternative method would be to report a straight percentage of positive responses across all respondents, but this method would give greater weight to respondents from larger hospitals (i.e., 300 beds or more). Almost half of respondents (49 percent) are from hospitals with 300 beds or more but these hospitals only make up 22 percent of the database.

Highlights

- The areas of strength or the composites with the highest average percent positive responses were:
  - *Teamwork Within Units* (82 percent positive).
  - *Supervisor/Manager Expectations and Actions Promoting Patient Safety* (80 percent positive).
  - *Organizational Learning—Continuous Improvement* (72 percent positive).
- The areas with potential for improvement or the composites with the lowest average percent positive responses were:
  - *Nonpunitive Response to Error* (47 percent positive).
  - *Handoffs and Transitions* (48 percent positive).
  - *Staffing* (53 percent positive).
- On average, most respondents within hospitals (78 percent) gave their work area or unit a grade of "Excellent" (35 percent) or "Very Good" (43 percent) on patient safety.
- On average, less than half of respondents within hospitals (45 percent) reported at least one event in their hospital over the past 12 months. It is likely that this finding represents underreporting of events.

Composite and Item-Level Charts

This section provides the overall composite-and item-level results. The method for calculating the percent positive scores at the item and composite level is described in the Notes section of this report.

Composite-Level Results

Chart 5-1 shows the average percent positive response for each of the 12 patient safety culture composites across hospitals in the database.[iii] The patient safety culture composites are shown in order from the highest average percent positive response to the lowest.

Item-Level Results

Chart 5-2 shows the average percent positive response for each of the 42 survey items. The survey items are grouped by the patient safety culture composite they are intended to measure. Within each composite, the items are presented in the order in which they appear in the survey.

Overall Patient Safety Grade

Chart 5-3 shows the results from the item that asks respondents to give their hospital work area/unit an overall rating on patient safety.

Number of Events Reported

Chart 5-4 shows the results from the item that asks respondents the number of patient safety reports they personally filled out and submitted in the past year.

[iii] Some hospitals excluded one or more survey items and are therefore excluded from composite-level calculations when the omitted items pertain to a particular composite. For the 2018 report, 11 hospitals were excluded from one or more composite-level calculations for this reason.

Chart 5-1. Composite-Level Average Percent Positive Response – 2018 Database Hospitals

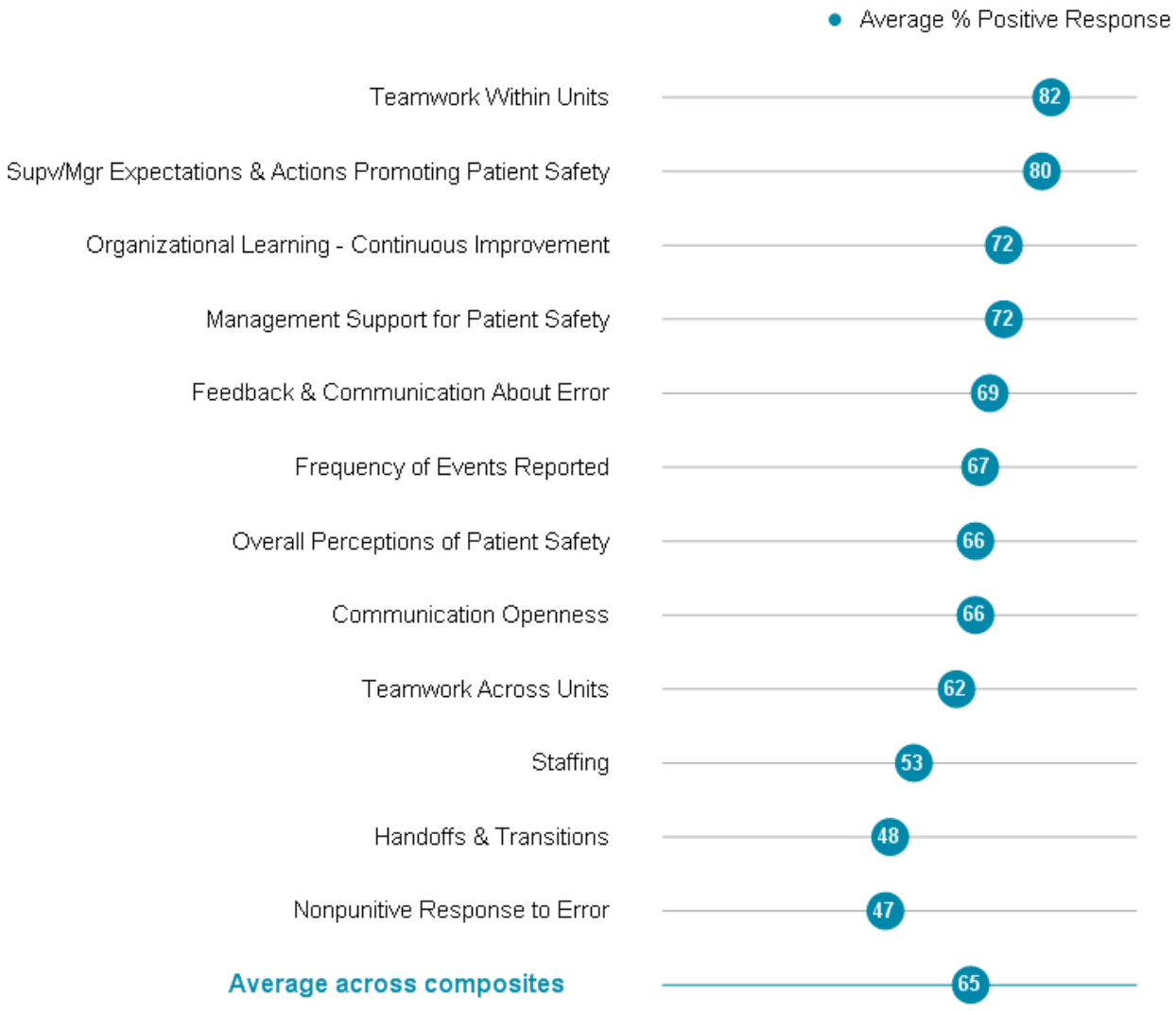
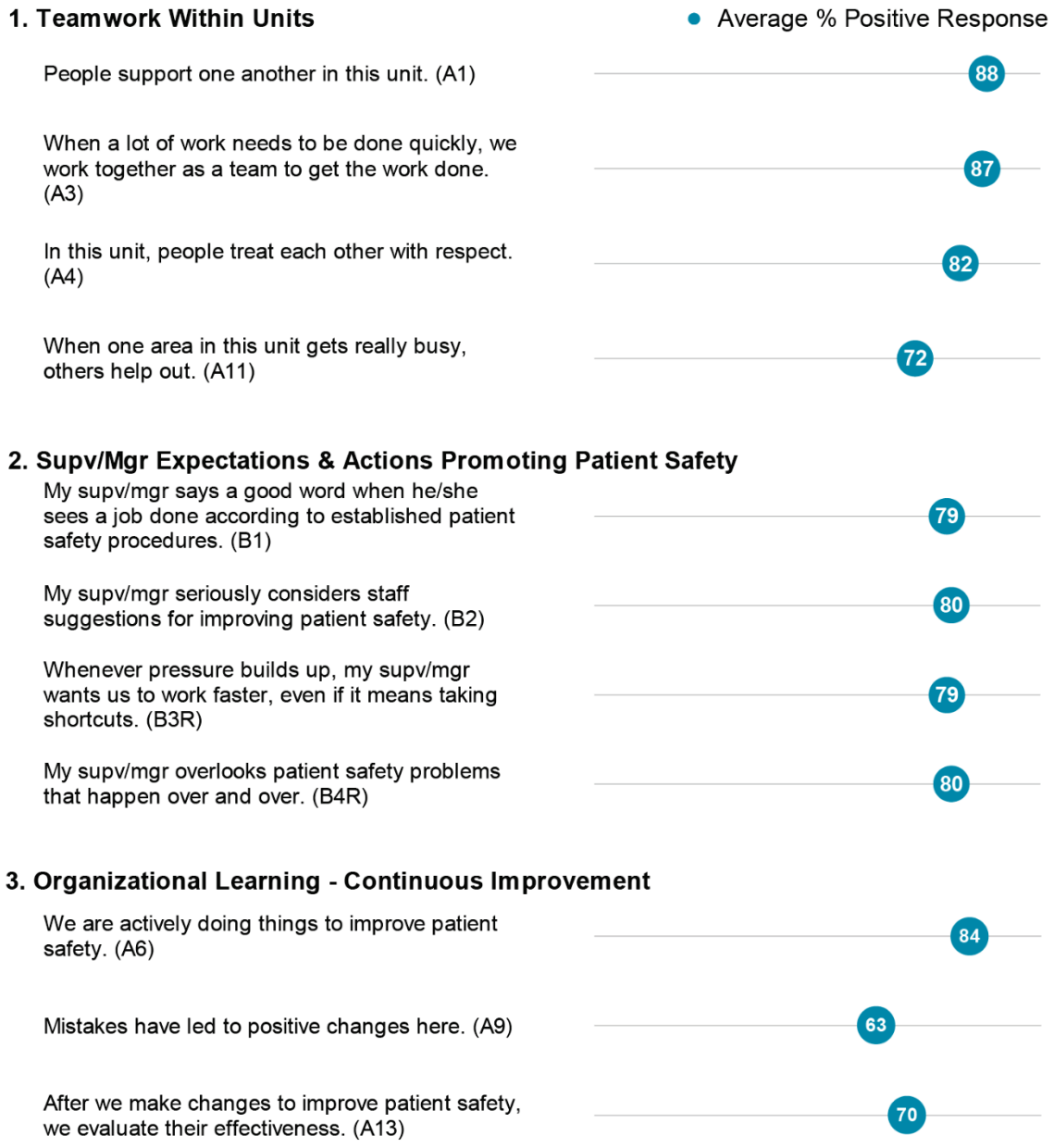


Chart 5-2. Item-Level Average Percent Positive Response – 2018 Database Hospitals (Page 1 of 4)



Note: The item's survey location is shown to the right in parentheses. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

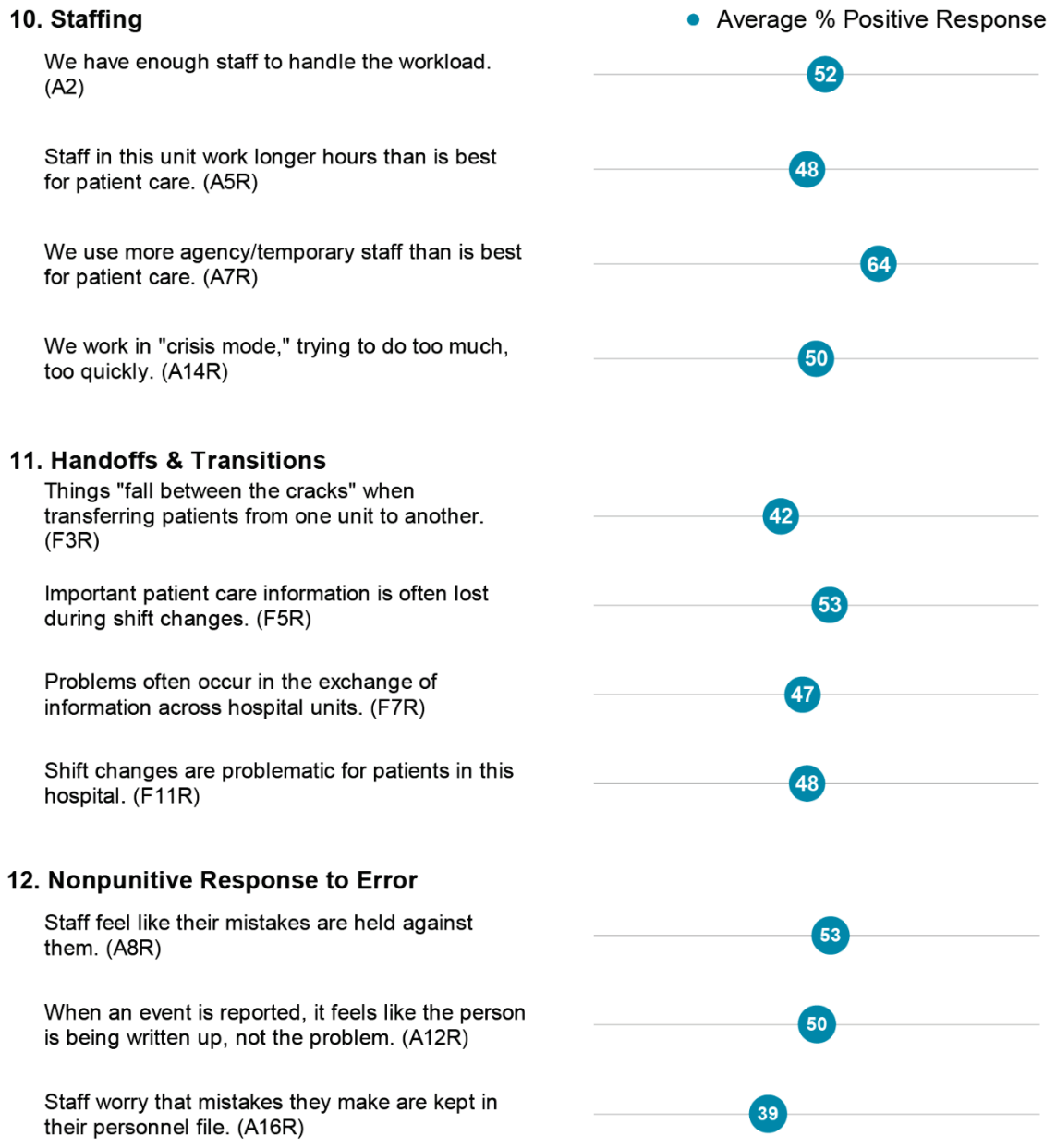
Chart 5-2. Item-Level Average Percent Positive Response – 2018 Database Hospitals (Page 2 of 4)

Note: The item's survey location is shown to the right in parentheses. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Chart 5-2. Item-Level Average Percent Positive Response – 2018 Database Hospitals (Page 3 of 4)

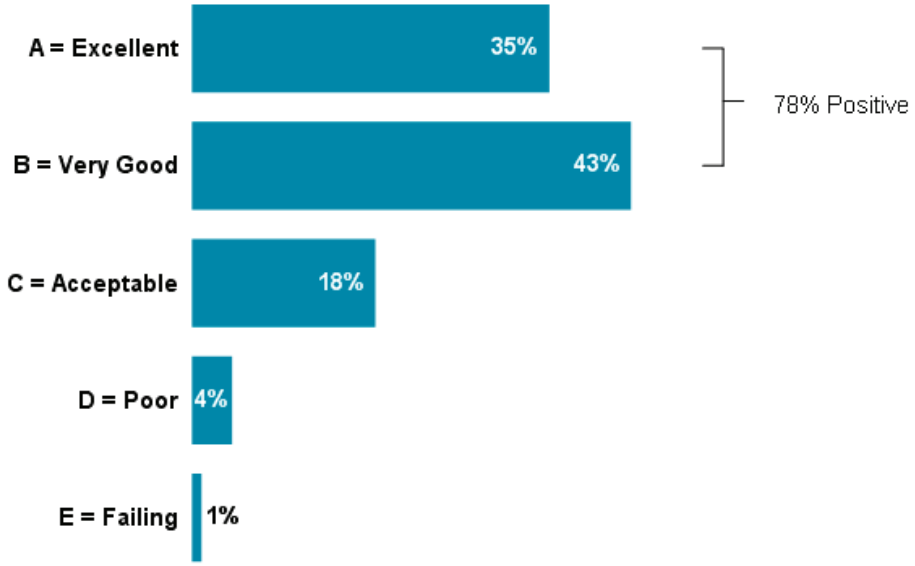
Note: The item's survey location is shown to the right in parentheses. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Chart 5-2. Item-Level Average Percent Positive Response – 2018 Database Hospitals (Page 4 of 4)

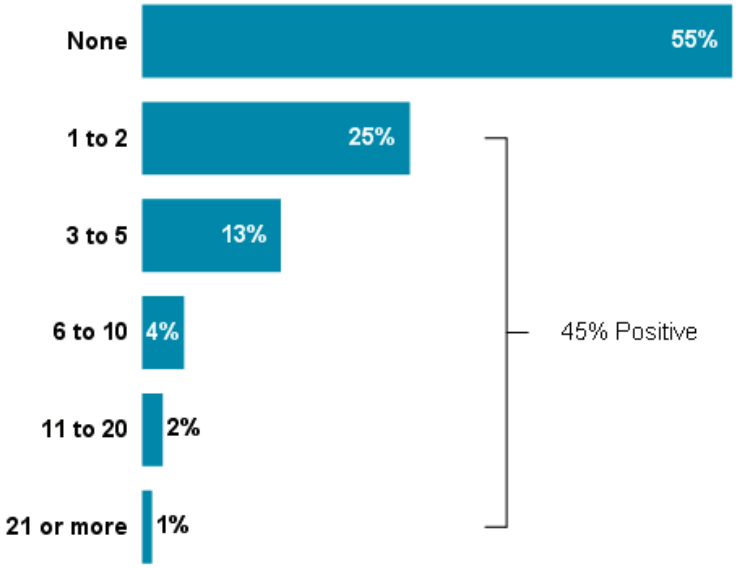


Note: The item's survey location is shown to the right in parentheses. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Chart 5-3. Average Percentage of 2018 Database Respondents Giving Their Work Area/Unit a Patient Safety Grade



AChart 5-4. Average Percentage of 2018 Database Respondents Reporting Events in the Past 12 Months



Note: Percentages may not add to 100 due to rounding.

Chapter 6. Comparing Your Results

To compare your hospital's survey results with the results from the database, you will need to calculate your hospital's percent positive response on the survey's 12 composites and other survey items, including the two questions on patient safety grade and number of events reported. The Notes section at the end of this report describes how to calculate these percent positive scores, as well as a number of other statistics to facilitate comparisons with the hospital database. You can then compare your hospital's results with the database averages and examine the percentile scores to place your hospital's results relative to the distribution of database hospitals.

When comparing your hospital's results with results from the database, keep in mind that the database only provides *relative* comparisons. Even though your hospital's survey results may be better than the database statistics, you may still believe there is room for improvement in a particular area within your hospital in an *absolute* sense.

As you will notice from the database results, there are some patient safety composites that even the highest scoring hospitals could improve on. Therefore, the data provided in this report should be used to supplement your hospital's own efforts to identify areas of strength and areas on which to focus patient safety culture improvement efforts.

Highlights

- The *Nonpunitive Response to Errors* composite showed the largest variability across hospitals, ranging from 20 percent positive to 87 percent positive.
- *Patient safety grade* had a wide range of responses, from 41 percent of the respondents giving their work area/unit a rating of "Excellent" or "Very Good" to 100 percent.
- *Number of events reported* also had a wide range of responses, from 19 percent of respondents who reported at least one event over the past 12 months to 89 percent.

Composite and Item-Level Tables

Table 6-1 presents statistics (average percent positive and standard deviation, minimum and maximum scores, and percentiles) for each of the 12 patient safety culture composites.

Table 6-2 presents statistics for each of the 42 survey items. The survey items are grouped by the patient safety culture composite they are intended to measure. Within each composite, the items are presented in the order in which they appear in the survey.

Table 6-3 presents statistics for respondents' patient safety grade of their work area/unit within the hospital. Results presented in the table represent average percent positive scores for hospital respondents who answered "Excellent" or "Very Good."

Table 6-4 presents statistics for whether respondents reported one or more events. Statistics include average percent positive scores for hospital respondents who answered "1 to 2 events," "3 to 5 events," "6 to 10 events," "11 to 20 events," or "21 or more events."

Table 6-1. Composite-Level Results for the 2018 Database

Patient Safety Culture Composites	Average % Positive	s.d.	Composite % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Teamwork Within Units	82%	5.37%	40%	76%	79%	83%	86%	89%	99%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety	80%	6.25%	39%	73%	76%	80%	84%	87%	96%
3. Organizational Learning—Continuous Improvement	72%	6.92%	39%	64%	68%	73%	77%	80%	91%
4. Management Support for Patient Safety	72%	8.82%	40%	61%	67%	73%	78%	82%	96%
5. Feedback & Communication About Error	69%	7.81%	38%	59%	64%	69%	73%	79%	90%
6. Frequency of Events Reported	67%	6.90%	40%	58%	62%	67%	72%	76%	91%
7. Overall Perceptions of Patient Safety	66%	8.21%	38%	56%	61%	66%	71%	77%	88%
8. Communication Openness	66%	6.77%	38%	57%	61%	66%	70%	74%	87%
9. Teamwork Across Units	62%	9.68%	34%	50%	55%	62%	68%	75%	88%
10. Staffing	53%	8.93%	27%	43%	47%	53%	59%	65%	85%
11. Handoffs & Transitions	48%	10.48%	22%	35%	40%	46%	54%	62%	85%
12. Nonpunitive Response to Error	47%	8.69%	20%	37%	41%	47%	53%	59%	87%

Table 6-2. Item-Level Results for the 2018 Database (Page 1 of 4)

				Survey Item % Positive Response						
Item	Survey Items by Composite	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Teamwork Within Units										
A1	People support one another in this unit.	88%	5.16%	41%	82%	85%	88%	91%	93%	100%
A3	When a lot of work needs to be done quickly, we work together as a team to get the work done.	87%	5.34%	40%	81%	85%	88%	91%	93%	100%
A4	In this unit, people treat each other with respect.	82%	6.28%	36%	74%	79%	83%	86%	89%	100%
A11	When one area in this unit gets really busy, others help out.	72%	6.86%	42%	64%	68%	72%	77%	81%	95%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety										
B1	My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures.	79%	6.70%	40%	71%	76%	80%	83%	87%	100%
B2	My supv/mgr seriously considers staff suggestions for improving patient safety.	80%	6.77%	40%	72%	77%	81%	85%	88%	100%
B3R	Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts.	79%	7.46%	13%	70%	74%	79%	84%	87%	97%
B4R	My supv/mgr overlooks patient safety problems that happen over and over.	80%	7.07%	13%	72%	76%	80%	84%	87%	100%
3. Organizational Learning—Continuous Improvement										
A6	We are actively doing things to improve patient safety.	84%	6.51%	40%	75%	80%	84%	88%	91%	100%
A9	Mistakes have led to positive changes here.	63%	7.81%	27%	53%	58%	64%	68%	72%	85%
A13	After we make changes to improve patient safety, we evaluate their effectiveness.	70%	8.48%	39%	60%	65%	71%	76%	80%	93%

Note: The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 6-2. Item-Level Results—2018 Database Hospitals (Page 2 of 4)

Item	Survey Items by Composite	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
				Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
4. Management Support for Patient Safety										
F1	Hospital mgmt provides a work climate that promotes patient safety.	81%	8.87%	41%	70%	76%	83%	88%	91%	100%
F8	The actions of hospital mgmt show that patient safety is a top priority.	76%	9.04%	42%	64%	71%	77%	82%	85%	98%
F9R	Hospital mgmt seems interested in patient safety only after an adverse event happens.	59%	9.77%	18%	47%	53%	59%	66%	72%	93%
5. Feedback & Communication About Error										
C1	We are given feedback about changes put into place based on event reports.	61%	9.36%	30%	49%	55%	61%	66%	73%	88%
C3	We are informed about errors that happen in this unit.	69%	8.19%	34%	59%	65%	70%	75%	80%	95%
C5	In this unit, we discuss ways to prevent errors from happening again.	76%	7.61%	42%	67%	71%	76%	81%	85%	96%
6. Frequency of Events Reported										
D1	When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?	62%	8.03%	39%	52%	57%	62%	68%	72%	87%
D2	When a mistake is made, but has no potential to harm the patient, how often is this reported?	63%	7.78%	34%	53%	58%	63%	68%	73%	93%
D3	When a mistake is made that could harm the patient, but does not, how often is this reported?	76%	6.11%	38%	68%	72%	76%	80%	83%	94%

Note: The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 6-2. Item-Level Results—2018 Database Hospitals (Page 3 of 4)

Item	Survey Items by Composite	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
				Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
7. Overall Perceptions of Patient Safety										
A10 R	It is just by chance that more serious mistakes don't happen around here.	62%	9.61%	20%	50%	55%	61%	69%	74%	90%
A15	Patient safety is never sacrificed to get more work done.	64%	8.81%	38%	54%	58%	64%	70%	77%	91%
A17 R	We have patient safety problems in this unit.	65%	9.91%	17%	54%	58%	65%	72%	78%	94%
A18	Our procedures and systems are good at preventing errors from happening.	74%	8.31%	37%	63%	69%	75%	79%	83%	96%
8. Communication Openness										
C2	Staff will freely speak up if they see something that may negatively affect patient care.	79%	6.65%	38%	71%	75%	79%	83%	87%	96%
C4	Staff feel free to question the decisions or actions of those with more authority.	50%	7.72%	21%	40%	45%	50%	55%	60%	75%
C6R	Staff are afraid to ask questions when something does not seem right.	68%	7.98%	13%	59%	63%	68%	73%	77%	93%
9. Teamwork Across Units										
F2R	Hospital units do not coordinate well with each other.	49%	11.60%	19%	35%	41%	49%	56%	65%	85%
F4	There is good cooperation among hospital units that need to work together.	62%	10.35%	33%	49%	55%	62%	69%	76%	94%
F6R	It is often unpleasant to work with staff from other hospital units.	63%	9.19%	16%	52%	57%	63%	69%	75%	88%
F10	Hospital units work well together to provide the best care for patients.	72%	9.50%	41%	61%	66%	73%	78%	85%	100%

Note: The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 6-2. Item-Level Results—2018 Database Hospitals (Page 4 of 4)

Item	Survey Items by Patient Safety Culture Composite	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
				Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
10. Staffing										
A2	We have enough staff to handle the workload.	52%	11.84%	13%	38%	44%	51%	59%	67%	92%
A5R	Staff in this unit work longer hours than is best for patient care.	48%	9.31%	19%	37%	42%	48%	54%	61%	94%
A7R	We use more agency/temporary staff than is best for patient care.	64%	9.73%	10%	52%	58%	64%	70%	76%	93%
A14 R	We work in “crisis mode” trying to do too much, too quickly.	50%	11.11%	19%	36%	41%	49%	56%	65%	90%
11. Handoffs & Transitions										
F3R	Things “fall between the cracks” when transferring patients from one unit to another.	42%	11.71%	10%	29%	34%	41%	49%	59%	86%
F5R	Important patient care information is often lost during shift changes.	53%	9.90%	27%	41%	47%	53%	60%	66%	90%
F7R	Problems often occur in the exchange of information across hospital units.	47%	11.05%	19%	33%	39%	45%	53%	63%	85%
F11R	Shift changes are problematic for patients in this hospital.	48%	11.18%	21%	35%	40%	47%	54%	64%	88%
12. Nonpunitive Response to Error										
A8R	Staff feel like their mistakes are held against them.	53%	9.46%	19%	42%	47%	53%	59%	65%	94%
A12 R	When an event is reported, it feels like the person is being written up, not the problem.	50%	8.70%	26%	39%	44%	50%	55%	61%	86%
A16 R	Staff worry that mistakes they make are kept in their personnel file.	39%	9.19%	16%	28%	33%	38%	45%	51%	81%

Note: The item’s survey location is shown to the left. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Table 6-3. Percentage of Respondents Giving Their Work Area/Unit Patient Safety Grade—2018 Database Hospitals

				Survey Item % Response Percentiles						
Item	Work Area/Unit Patient Safety Grade	Average %	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
E1	**Excellent or Very Good**	78%	8.93%	41%	66%	73%	79%	83%	88%	100%

Note: For the results for all response options, see Chart 5-3.

Table 6-4. Percentage of Respondents Reporting One or More Events in the Past 12 Months—2018 Database Hospitals

				Survey Item % Response Percentiles						
Item	Events Reported in the Past 12 Months	Average %	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
G1	**1 or more events**	45%	10.17%	19%	32%	38%	44%	52%	58%	89%

Note: For results for all response options, see Chart 5-4.

Chapter 7. Trending: Comparing Results Over Time

Many hospitals that administer the hospital survey have indicated that they intend to continue to administer the survey on a regular basis and to track changes in patient safety culture over time. While the overall results presented earlier in this report reflect only the most recent survey data from all 630 participating hospitals, we have data from two administrations of the survey for 306 hospitals. These hospitals submitted to both the 2016 and 2018 databases, so we could examine trends over time for them. We did not include hospitals that submitted to databases before 2016 in the trending database. This chapter presents trending results from these 306 hospitals.

Highlights

- Across the 306 trending hospitals, the *Nonpunitive Response to Error* composite had the largest increase (3 percent) from the previous to the most recent database.
- Of those hospitals that increased on *Patient Safety Grade*, scores for "Excellent" or "Very Good" increased on average 6 percent.
- For hospitals with increases in the number of respondents *who reported at least one event in the past 12 months*, the average increase was 5 percent.

When reviewing the results in this chapter, keep in mind that survey scores might change, or not change, over time for a number of complex reasons. Important factors to consider are whether the hospital implemented patient safety initiatives or took actions between survey administrations and the length of time between administrations.

Survey methodology issues can also play a big role in score changes. Low survey response rates for the previous or most recent administration, changes in the number of staff asked to complete the survey, or changes in the types of staff asked to complete the survey will make it difficult to interpret changes in scores over time.

Table 7-1. Trending: Response Rate Statistics—2018 Database Hospitals

Summary Statistic	Most Recent Submission (2018)	Previous Submission (2016)
Total number of respondents	228,430	212,674
Number of completed surveys per hospital	Average: 747 Range: 22 – 6,139	Average: 695 Range: 27 – 6,262
Hospital response rate	Average: 56% Range: 12% – 100%	Average: 54% Range: 7% – 100%

Note: Trending hospitals include hospitals that submitted to both the 2016 and 2018 databases.

Table 7-2. Distribution of 2018 Trending Hospitals

Bed Size	Trending Hospitals		AHA-Registered U.S. Hospitals	
	Trending 2016-2018			
	Number	Percent	Number	Percent
6-24 beds	11	4%	770	12%
25-49 beds	22	7%	1,445	23%
50-99 beds	55	18%	1,237	20%
100-199 beds	85	28%	1,263	20%
200-299 beds	57	19%	646	10%
300-399 beds	30	10%	368	6%
400-499 beds	17	6%	201	3%
500 or more beds	29	9%	321	5%
Total	306	100%	6,251	100%
Teaching Status	**Number**	**Percent**	**Number**	**Percent**
Teaching	123	40%	2,087	33%
Nonteaching	183	60%	4,164	67%
Total	306	100%	6,251	100%

Note: Percentages may not add to 100 due to rounding.

Table 7-2. Distribution of 2018 Trending Hospitals (continued)

Ownership	Trending Hospitals		AHA-Registered U.S. Hospitals	
	Trending 2016-2018			
	Number	Percent	Number	Percent
Government (Federal or non-Federal)	42	14%	1,476	24%
Nongovernment (voluntary/nonprofit or proprietary/investor owned)	264	86%	4,775	76%
Total	306	100%	6,251	100%
Region	**Number**	**Percent**	**Number**	**Percent**
New England	15	5%	251	4%
Mid-Atlantic	26	8%	552	9%
South Atlantic/Associated Territories	100	33%	943	15%
East North Central	68	22%	912	15%
East South Central	19	6%	501	8%
West North Central	15	5%	789	13%
West South Central	23	8%	1,066	17%
Mountain	18	6%	521	8%
Pacific/Associated Territories	22	7%	647	10%
Total	306	100%	6,182	100%

Note: Percentages may not add to 100 due to rounding. States and territories are categorized into AHA-defined regions as follows:

- New England: CT, MA, ME, NH, RI, VT
- Mid-Atlantic: NJ, NY, PA
- South Atlantic/Associated Territories: DC, DE, FL, GA, MD, NC, SC, VA, WV, Puerto Rico, Virgin Islands
- East North Central: IL, IN, MI, OH, WI
- East South Central: AL, KY, MS, TN
- West North Central: IA, KS, MN, MO, ND, NE, SD
- West South Central AR, LA, OK, TX
- Mountain: AZ, CO, ID, MT, NM, NV, UT, WY
- Pacific/Associated Territories: AK, CA, HI, OR, WA, American Samoa, Guam, Marshall Islands, Northern Mariana Islands

Composite and Item-Level Trending Results

Table 7-3. Trending: Composite-Level Results—2018 Database Hospitals

	Composite % Positive Response						
Patient Safety Culture Composites	**Most Recent**	**Previous**	**Change**	**Maximum Increase**	**Maximum Decrease**	**Average Increase**	**Average Decrease**
1. Teamwork Within Units	82%	82%	0%	20%	-13%	3%	-3%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety	80%	78%	2%	57%	-26%	4%	-3%
3. Organizational Learning—Continuous Improvement	73%	73%	0%	18%	-39%	3%	-4%
4. Management Support for Patient Safety	73%	73%	0%	19%	-24%	5%	-5%
5. Feedback & Communication About Error	69%	68%	1%	16%	-40%	4%	-4%
6. Frequency of Events Reported	67%	66%	1%	23%	-23%	4%	-4%
7. Overall Perceptions of Patient Safety	66%	66%	0%	28%	-20%	4%	-4%
8. Communication Openness	66%	64%	2%	22%	-23%	4%	-3%
9. Teamwork Across Units	62%	61%	1%	24%	-16%	5%	-4%
10. Staffing	54%	54%	0%	23%	-26%	5%	-5%
11. Handoffs & Transitions	48%	47%	1%	20%	-19%	5%	-5%
12. Nonpunitive Response to Error	48%	45%	3%	25%	-15%	5%	-4%

Note: Based on data from 306 trending hospitals that had composite-level scores; the number of respondents was 228,430 for the most recent results and 212,674 for the previous results.

Table 7-4. Trending: Item-Level Results—2018 Database Hospitals (Page 1 of 4)

		Survey Item % Positive Response						
Item	Survey Items by Patient Safety Culture Composite	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
1. Teamwork Within Units								
A1	1. People support one another in this unit.	87%	87%	0%	35%	-16%	3%	-3%
A3	2. When a lot of work needs to be done quickly, we work together as a team to get the work done.	87%	87%	0%	12%	-25%	3%	-3%
A4	3. In this unit, people treat each other with respect.	82%	81%	1%	27%	-16%	4%	-4%
A11	4. When one area in this unit gets really busy, others help out.	72%	72%	0%	21%	-19%	4%	-4%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety								
B1	1. My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures.	80%	78%	2%	61%	-33%	5%	-4%
B2	2. My supv/mgr seriously considers staff suggestions for improving patient safety.	81%	80%	1%	46%	-27%	4%	-4%
B3R	3. Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts.	79%	77%	2%	65%	-18%	5%	-3%
B4R	4. My supv/mgr overlooks patient safety problems that happen over and over.	80%	79%	1%	66%	-26%	4%	-3%
3. Organizational Learning—Continuous Improvement								
A6	1. We are actively doing things to improve patient safety.	84%	84%	0%	20%	-29%	4%	-4%
A9	2. Mistakes have led to positive changes here.	64%	64%	0%	18%	-41%	4%	-5%
A13	3. After we make changes to improve patient safety, we evaluate their effectiveness.	71%	70%	1%	19%	-46%	4%	-5%

Note: Based on data from 306 trending hospitals. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 7-4. Trending: Item-Level Results—2018 Database Hospitals (Page 2 of 4)

		Survey Item % Positive Response						
Item	Survey Items by Patient Safety Culture Composite	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
4. Management Support for Patient Safety								
F1	1. Hospital mgmt provides a work climate that promotes patient safety.	82%	82%	0%	21%	-26%	5%	-5%
F8	2. The actions of hospital mgmt show that patient safety is a top priority.	77%	76%	1%	24%	-27%	5%	-5%
F9R	3. Hospital mgmt seems interested in patient safety only after an adverse event happens.	61%	61%	0%	32%	-20%	5%	-5%
5. Feedback & Communication About Error								
C1	1. We are given feedback about changes put into place based on event reports.	62%	61%	1%	18%	-42%	5%	-5%
C3	2. We are informed about errors that happen in this unit.	70%	69%	1%	28%	-38%	5%	-5%
C5	3. In this unit, we discuss ways to prevent errors from happening again.	76%	75%	1%	20%	-41%	4%	-4%
6. Frequency of Events Reported								
D1	1. When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported?	63%	61%	2%	22%	-23%	5%	-4%
D2	2. When a mistake is made, but has no potential to harm the patient, how often is this reported?	63%	63%	0%	24%	-22%	5%	-4%
D3	3. When a mistake is made that could harm the patient, but does not, how often is this reported?	76%	75%	1%	29%	-27%	4%	-4%

Note: Based on data from 306 trending hospitals. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 7-4. Trending: Item-Level Results—2018 Database Hospitals (Page 3 of 4)

		Survey Item % Positive Response						
Item	Survey Items by Patient Safety Culture Composite	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
7. Overall Perceptions of Patient Safety								
A10 R	It is just by chance that more serious mistakes don't happen around here.	62%	62%	0%	48%	-21%	5%	-4%
A15	Patient safety is never sacrificed to get more work done.	64%	64%	0%	19%	-24%	4%	-5%
A17 R	We have patient safety problems in this unit.	65%	65%	0%	59%	-19%	5%	-5%
A18	Our procedures and systems are good at preventing errors from happening.	74%	74%	0%	17%	-46%	4%	-5%
8. Communication Openness								
C2	Staff will freely speak up if they see something that may negatively affect patient care.	79%	78%	1%	16%	-26%	4%	-3%
C4	Staff feel free to question the decisions or actions of those with more authority.	50%	49%	1%	26%	-36%	5%	-5%
C6R	Staff are afraid to ask questions when something does not seem right.	68%	65%	3%	56%	-29%	5%	-4%
9. Teamwork Across Units								
F2R	Hospital units do not coordinate well with each other.	49%	48%	1%	34%	-23%	5%	-5%
F4	There is good cooperation among hospital units that need to work together.	62%	62%	0%	28%	-31%	5%	-5%
F6R	It is often unpleasant to work with staff from other hospital units.	63%	63%	0%	29%	-19%	4%	-5%
F10	Hospital units work well together to provide the best care for patients.	72%	71%	1%	23%	-24%	5%	-5%

Note: Based on data from 306 trending hospitals. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown to the left. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Table 7-4. Trending: Item-Level Results—2018 Database Hospitals (Page 4 of 4)

		Survey Item % Positive Response						
Item	Survey Items by Patient Safety Culture Composite	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
10. Staffing								
A2	1. We have enough staff to handle the workload.	52%	51%	1%	47%	-40%	8%	-7%
A5R	2. Staff in this unit work longer hours than is best for patient care.	49%	50%	-1%	32%	-33%	4%	-6%
A7R	3. We use more agency/temporary staff than is best for patient care.	65%	66%	-1%	49%	-40%	6%	-7%
A14 R	4. We work in “crisis mode” trying to do too much, too quickly.	50%	49%	1%	37%	-25%	6%	-5%
11. Handoffs & Transitions								
F3R	1. Things “fall between the cracks” when transferring patients from one unit to another.	42%	42%	0%	30%	-25%	5%	-5%
F5R	2. Important patient care information is often lost during shift changes.	54%	53%	1%	23%	-23%	5%	-5%
F7R	3. Problems often occur in the exchange of information across hospital units.	46%	46%	0%	28%	-19%	5%	-5%
F11R	4. Shift changes are problematic for patients in this hospital.	48%	47%	1%	23%	-38%	6%	-6%
12. Nonpunitive Response to Error								
A8R	1. Staff feel like their mistakes are held against them.	53%	51%	2%	30%	-27%	5%	-4%
A12 R	2. When an event is reported, it feels like the person is being written up, not the problem.	51%	48%	3%	34%	-24%	5%	-4%
A16 R	3. Staff worry that mistakes they make are kept in their personnel file.	40%	36%	4%	23%	-17%	6%	-4%

Note: Based on data from 306 trending hospitals. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results, but the exact number of respondents will vary from item to item. The item’s survey location is shown to the left. An “R” indicates a negatively worded item, where the percent positive response is based on those who responded “Strongly disagree” or “Disagree,” or “Never” or “Rarely” (depending on the response category used for the item).

Table 7-5. Trending: Distribution of Work Area/Unit Patient Safety Grades—2018 Database Hospitals

		Percentage of Respondents Within Hospitals						
Item	Work Area/Unit Patient Safety Grade	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
E1	**Excellent or Very Good**	78%	76%	2%	64%	-41%	6%	-4%

Note: Based on data from 306 trending hospitals that had data for this item. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results. Most recent, previous, and change columns display average percent positive scores across the trending hospitals.

Table 7-6. Trending: Distribution of Number of Events Reported in the Past 12 Months—2018 Database Hospitals

		Percentage of Respondents Within Hospitals						
Item	Events Reported in the Past 12 Months	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
G1	**1 or more events**	45%	45%	0%	21%	-47%	5%	-5%

Note: Based on data from 306 trending hospitals that had data for this item. The number of respondents was 228,430 for the most recent results and 212,674 for the previous results. Most recent, previous, and change columns display average percent positive scores across the trending hospitals.

Bar Charts of Trending Results

Chart 7-1 shows the percentages of trending hospitals that increased, decreased, or did not change for each of the 12 patient safety culture composites. The chart shows that:

- 35 percent of hospitals increased by at least 5 percentage points on the *Nonpunitive Response to Error* composite.
- 21 percent of hospitals decreased by at least 5 percentage points on the *Staffing* composite.

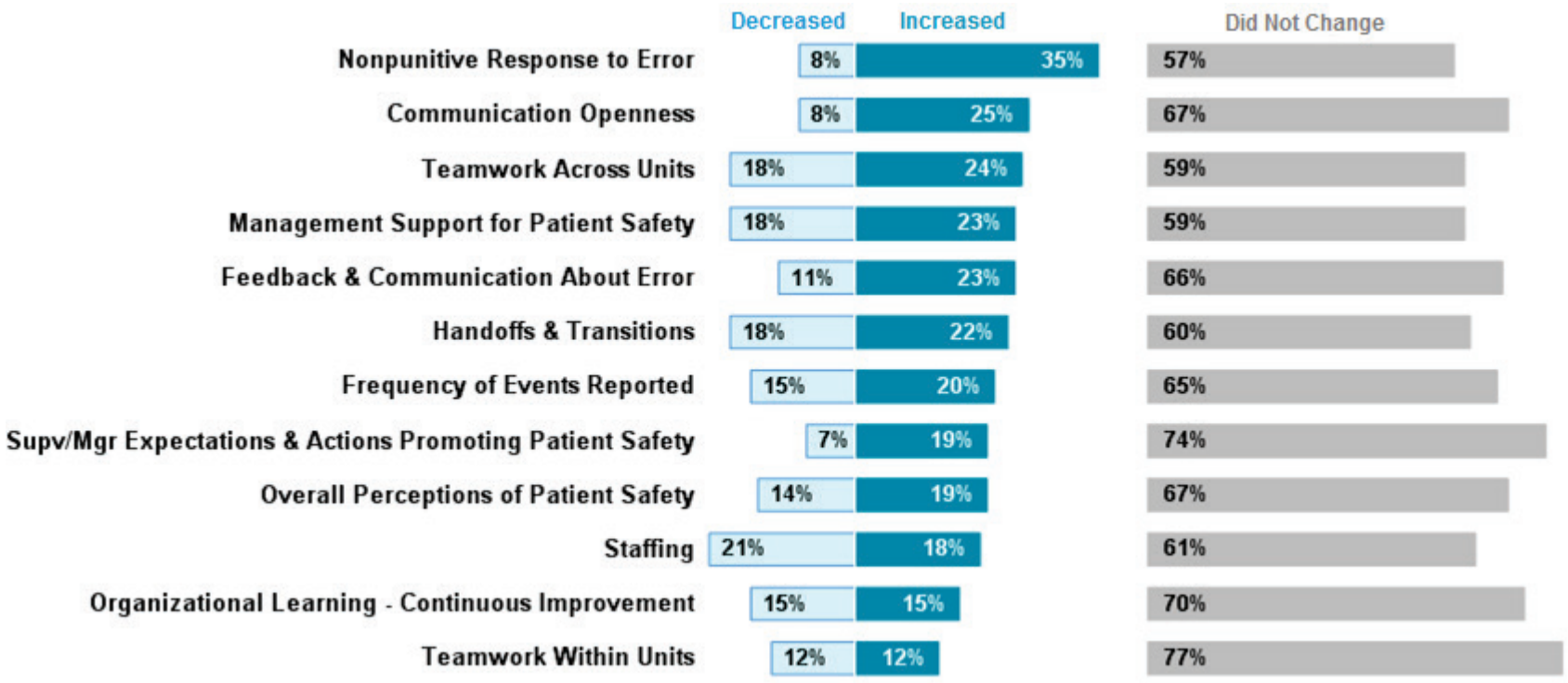
Chart 7-2 displays results for the percentages of trending hospitals that increased, decreased, or did not change on work area/unit patient safety grades (percentage providing grades of "Excellent" or "Very Good") and in the percentage of respondents reporting one or more events in the past year:

- Work area/unit patient safety grades:
    - 31 percent of hospitals *increased* by 5 percentage points or more.
    - 14 percent of hospitals *decreased* by 5 percentage points or more.
- Respondents reporting one or more events:
    - 27 percent of hospitals *increased* by 5 percentage points or more.
    - 20 percent of hospitals *decreased* by 5 percentage points or more.

Charts 7-3 displays the overall number of composites for which trending hospitals increased or decreased by 5 percentage points or more:

- 13 percent of hospitals increased by 5 percentage points or more on at least seven composites.
- 9 percent of hospitals decreased by 5 percentage points or more on at least seven composites.

Chart 7-1. Trending: Percentage of 2018 Hospitals That Either Increased or Decreased by 5 Percentage Points or Did Not Change on Each Composite

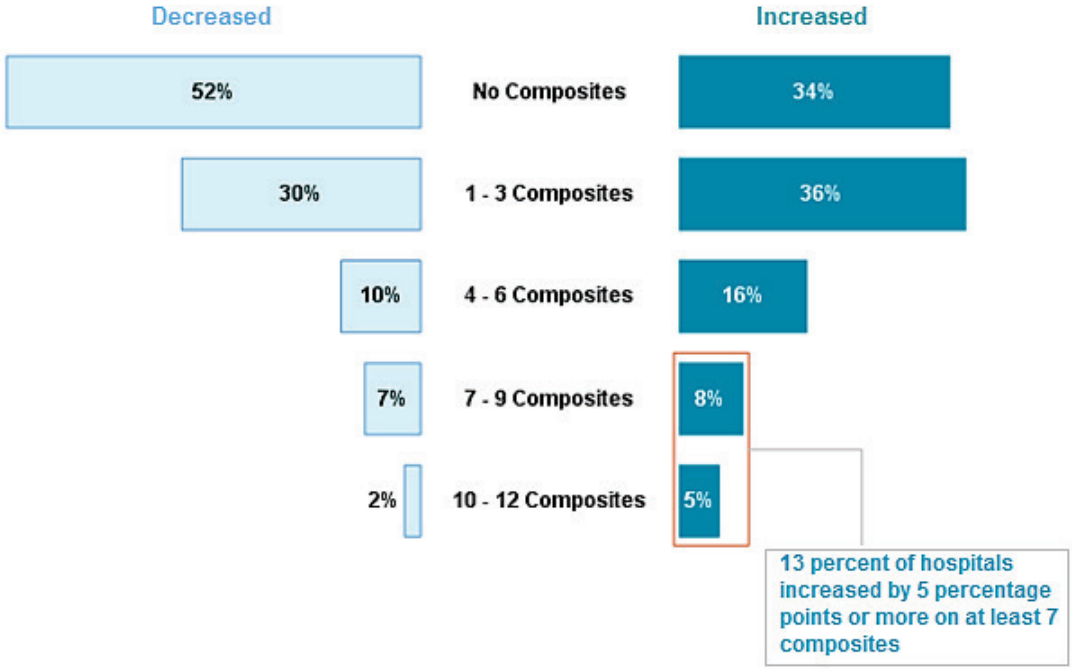


Note: Based on data from 306 trending hospitals. Percentages may not add to 100% due to rounding.

Chart 7-2. Trending: Percentage of 2018 Hospitals That Increased, Decreased, or Did Not Change by 5 Percentage Points or More on Work Area/Unit Patient Safety Grade of "Excellent" or "Very Good" (E1) and Number of Events Reported as 1 or more events (G1)

Note: Based on data from 306 trending hospitals that responded to this item.

Chart 7-3. Trending: Distribution of 2018 Hospitals by Number of Composites That Increased or Decreased by 5 Percentage Points or More



Note: Composites that increased or decreased and had a change score of 5 percentage points or more. Totals may not add to 100% due to rounding.

Chapter 8. What's Next? Action Planning for Improvement

The AHRQ Surveys on Patient Safety Culture are important sources of information for health care organizations striving to improve patient safety and can be used as an effective starting point for action planning to achieve changes in culture. Organizations may find it useful to brainstorm the potential barriers that make it difficult to implement initiatives and strategies to overcome them.

AHRQ Action Planning Tool

The *Action Planning Tool for the AHRQ Surveys on Patient Safety Culture* is intended for use after your organization administers the survey and analyzes the results. The first step toward improving the patient safety culture in your organization, facility, unit, or department is to develop an action plan using the Action Plan Template. You can complete this step by answering 10 key questions to help you record your goals, initiatives, resources needed, process and outcome measures, and timelines.

Define your goals and select your initiatives:

1. What areas do you want to focus on for improvement?
2. What are your goals?
3. What initiatives will you implement?

Plan your initiatives:

1. Who will be affected, and how?
2. Who can lead the initiative?
3. What resources will be needed?
4. What are possible barriers, and how can they be overcome?
5. How will you measure progress and success?
6. What is the timeline?

Communicate your action plan:

1. How will you share your action plan and with whom?

Your action plan should be flexible. The questions do not need to be answered in order. Keep in mind that as you begin to implement your plan, it may change. The complete Action Planning Tool, including the template in Microsoft® Word, can be found here: https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/planningtool.html.

Resource List for Users of the AHRQ Hospital Survey

The AHRQ *Resource List for Users of the AHRQ Hospital Survey on Patient Safety Culture* contains references to websites that provide practical resources hospitals can use to implement changes to improve patient safety culture and patient safety. The resource list is not exhaustive but gives initial guidance to hospitals looking for information about patient safety initiatives. For a list of practical resources your organization can use to improve patient safety culture and patient safety, go to https://www.ahrq.gov/sites/default/files/wysiwyg/sops/quality-patient-safety/patientsafetyculture/hospitalresourcelist-020118.pdf.

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Notes: Description of Data Cleaning and Calculations and Data Limitations

This notes section provides additional detail regarding how various statistics presented in this report were calculated and describes data limitations.

Data Cleaning

Each participating hospital submitted individual-level survey data. Once the data were submitted, response frequencies were run on each hospital's data to look for out-of-range values, missing variables, or other data anomalies. When data problems were found, hospitals were contacted and were asked to make corrections and resubmit their data. In addition, each participating hospital received a copy of its data frequencies to verify that the dataset received was correct.

The data were also cleaned for straight-lined answers, which is when respondents give the same answer for both a positively worded item (e.g., "Hospital units work well together to provide the best care for patients") and a negatively worded item (e.g., "Hospital units do not coordinate well with each other") in the same section of the survey.

Positively worded and negatively worded items are in sections A, B, C, and F. When respondents supplied the same answers for all items in sections A, B, C, and F, the items in those sections were set to missing because the sections had negatively worded items.

After this initial cleaning, respondents who had missing answers to all items across sections A, B, C, D, E, F, and G were deleted before analysis. Hospitals were included in the database only if they had at least 10 survey respondents after all data cleaning steps.

Response Rates

As part of the data submission process, hospitals were asked to provide the number of completed, returned surveys (numerator) as well as the total number of surveys distributed minus the ineligibles (denominator). Ineligibles include deceased individuals or those who were no longer employed at the hospital during data collection. After data cleaning, response rates were then calculated using the formula below:

$$Response\ Rate = \frac{Number\ of\ complete,\ returned\ surveys}{Number\ of\ surveys\ distributed\ -\ Ineligibles}$$

Calculation of Percent Positive Scores

Most of the survey items ask respondents to answer using 5-point response categories in terms of agreement (Strongly agree, Agree, Neither, Disagree, Strongly disagree) or frequency (Always, Most of the time, Sometimes, Rarely, Never). Three of the 12 patient safety culture composites use the frequency response option (*Feedback and Communication About Error*, *Communication Openness*, and *Frequency of Events Reported*) while the other nine composites use the agreement response option.

Item-Level Percent Positive Response

Both positively worded items (e.g., "People support one another in this unit") and negatively worded items (e.g., "We have patient safety problems in this unit") are included in the survey. Calculating the percent positive response on an item is different for positively and negatively worded items:

- **For positively worded items**, percent positive response is the combined percentage of respondents within a hospital who answered "Strongly agree" or "Agree," or "Always" or "Most of the time," depending on the response categories used for the item.

  For example, for the item "People support one another in this unit," if 50 percent of respondents within a hospital *Strongly agree* and 25 percent *Agree*, the item-level percent positive response for that hospital will be 50% + 25% = 75% positive.
- **For negatively worded items**, percent positive response is the combined percentage of respondents within a hospital who answered "Strongly disagree" or "Disagree," or "Never" or "Rarely," because a negative answer on a negatively worded item indicates a *positive* response.

  For example, for the item "We have patient safety problems in this unit," if 60 percent of respondents within a hospital S*trongly disagree* and 20 percent *Disagree*, the item-level percent positive response will be 80 percent positive (i.e., 80 percent of respondents *do not* believe they have patient safety problems in their work area).

Composite-Level Percent Positive Response

The 12 patient safety culture composites are composed of three or four survey items. Composite scores were calculated for each hospital by averaging the percent positive response on the items within a composite. For example, for a three-item composite, if the item-level percent positive responses were 50 percent, 55 percent, and 60 percent, the hospital's composite-level percent positive response would be the average of these three percentages, or 55 percent positive.

Item and Composite Percent Positive Scores

The average percent positive scores for each of the 12 patient safety culture composites and for the 42 survey items were calculated by averaging composite-level percent positive scores across all hospitals in the database, as well as averaging item-level percent positive scores across hospitals. Since the percent positive is displayed as an overall average, scores from each hospital are weighted equally in their contribution to the calculation of the average.

To calculate your hospital's composite score, average the percentage of positive responses to each item in the composite. Table N1 shows an example of computing a composite score for *Supervisor/Manager Expectations & Actions Promoting Patient Safety*:

1. The composite has four items. Two are positively worded (items B1 and B2) and two are negatively worded (items B3 and B4). Keep in mind that DISAGREEING with a negatively worded item indicates a POSITIVE response.
2. Calculate the percentage of positive responses at the item level. (See example in Table N1).

Table N1. Example of Computing Item and Composite Percent Positive Scores

Four Items Measuring "Supervisor/Manager Expectations & Actions Promoting Patient Safety"	For Positively Worded Items, Number of "Strongly Agree" or "Agree" Responses	For Negatively Worded Items, Number of "Strongly Disagree" or "Disagree" Responses	Total Number of Responses to the Item	Percent Positive Response on Item
Item B1 - positively worded "My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures."	120	NA*	260	120/260= **46%**
Item B2 - positively worded "My supv/mgr seriously considers staff suggestions for improving patient safety."	130	NA*	250	130/250= **52%**
Item B3 - negatively worded "Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts."	NA*	110	240	110/240= **46%**
Item B4 - negatively worded "My supv/mgr overlooks patient safety problems that happen over and over."	NA*	140	250	140/250= **56%**
Composite Score % Positive = (46% + 52% + 46% + 56%) / 4 = 50%				

* NA = Not applicable.

This example includes four items, with percent positive response scores of 46 percent, 52 percent, 46 percent, and 56 percent. Averaging these item-level percent positive scores results in a composite score of .50 or 50 percent on the *Supervisor/Manager Expectations & Actions Promoting Patient Safety* composite. In this example, an average of 50 percent of the respondents responded positively to the survey items in this composite.

Table N2 shows how to calculate the percent positive response for Overall Patient Safety Grade (E1) and Number of Events Reported (G1).

Table N2. Example of Computing Patient Safety Grade and Number of Events Reported

Items	Number of "Excellent" or "Very Good" Responses	Number of Responses Showing Reports Above 0	Total Number of Responses to the Item	Percent Positive Response on Item
Item E1: "Please give your work area/unit in this hospital an overall grade on patient safety."	193	NA*	250	193/250=77%
Item G1: "In the past 12 months, how many event reports have you filled out and submitted?"	NA*	106	240	106/240=44%

* NA = Not applicable.

In this example, the Overall Patient Safety Grade (E1) percent positive response is calculated by combining the percentage of respondents who answered "Excellent" and "Very Good" and dividing by the total number of respondents who answered E1. The Number of Events Reported (G1) percent positive response is calculated by combining the percentage of respondents who answered that they reported one or more events in the past 12 months and dividing by the total number of respondents who answered G1.

Once you calculate your hospital's percent positive response for each of the 12 safety culture composites, Overall Patient Safety Grade, and Number of Events Reported, you can compare your results with the composite-level results from the database hospitals.

Statistically "Significant" Differences Between Scores

You may be interested in determining the statistical significance of differences between your scores and the averages in the database, or between scores in various breakout categories (hospital bed size, teaching status, etc.). Statistical significance is greatly influenced by sample size; as the number of observations in comparison groups increases, small differences in scores become statistically significant. While a 1 percent difference between percent positive scores might be "statistically" significant (that is, not due to chance), the difference is not likely to be meaningful or "practically" significant.

Keep in mind that statistically significant differences are not always important, and nonsignificant differences are not always trivial. We provide the average, standard deviation, range, and percentile information so that you can compare your data with the database in different ways.

Standard Deviation

The standard deviation (s.d.) is a measure of the spread or variability of hospital scores around the average. Tables displayed in Chapter 6 tell you the extent to which hospitals' scores differ from the average:

- If scores from all hospitals were exactly the same, then the average would represent all their scores perfectly and the standard deviation would be zero.
- If scores from all hospitals were very close to the average, then the standard deviation would be small and close to zero.
- If scores from many hospitals were very different from the average, then the standard deviation would be a large number.

When the distribution of hospital scores follows a normal, bell-shaped curve (where most of the scores fall in the middle of the distribution, with fewer scores at the lower and higher ends of the distribution), the average, plus or minus the standard deviation, will include about 68 percent of all hospital scores. For example, if an average percent positive score across the database hospitals were 70 percent with a standard deviation of 10 percent (and scores were normally distributed), about 68 percent of all the database hospitals would have scores between 60 percent and 80 percent.

Minimum and Maximum Scores

The minimum (lowest) and maximum (highest) percent positive scores are presented for each composite and item. These scores provide information about the range of percent positive scores obtained by hospitals in the database and are actual scores from the lowest and highest scoring hospitals. When comparing with the minimum and maximum scores, keep in mind that these scores may represent hospitals that are extreme outliers (indicated by large differences between the minimum score and the 10th percentile score, or between the 90th percentile score and the maximum score).

Percentiles

Percentiles provde information about the distribution of hospital scores. A specific percentile score shows the percentage of hospitals that scored at or below a particular score.

Percentiles were computed using the SAS® software default method. The first step in this procedure is to rank order the percent positive scores from all the participating hospitals, from lowest to highest. The next step is to multiply the number of hospitals (n) by the percentile of interest (p), which in our case would be the 10th, 25th, 50th, 75th, or 90th percentile.

For example, to calculate the 10th percentile, one would multiply 630 (the total number of hospitals) by .10 (10th percentile). The product of n x p is equal to j + g, where j is the integer and g is the number after the decimal. If "g" equals 0, the percentile is equal to the percent positive value of the hospital in the jth position plus the percent positive value of the hospital in the $j^{th} + 1$ position, divided by 2 $[(X_{(j)} + X_{(j+1)})/2]$. If g is *not* equal to 0, the percentile is equal to the percent positive value of the hospital in the $j^{th} + 1$ position.

The following examples show how the 10th and 50th percentiles would be computed using a sample of percent positive scores from 12 hospitals (using fake data shown in Table N3). First, the percent positive scores are sorted from low to high on Composite "A."

Table N3. Data Table for Example of How To Compute Percentiles

Hospital	Composite "A" % Positive Score	
1	33%	
2	48%	←10th percentile score = 48%
3	52%	
4	60%	
5	63%	
6	64%	←50th percentile score = 65%
7	66%	
8	70%	
9	72%	
10	75%	
11	75%	
12	78%	

10th percentile

1. For the 10th percentile, we would first multiply the number of hospitals by 0.10: (n x p = 12 x 0.10 = 1.2).
2. The product of n x p = 1.2, where j = 1 and g = 2. Since g is not equal to 0, the 10th percentile score is equal to the percent positive value of the hospital in the jth + 1 position:

   a. j equals 1.
   b. The 10th percentile equals the value for the hospital in the 2nd position = 48%.

50th percentile

1. For the 50th percentile, we would first multiply the number of hospitals by .50: (n x p = 12 x .50 = 6.0).
2. The product of n x p = 6.0, where j = 6 and g = 0. Since g = 0, the 50th percentile score is equal to the percent positive value of the hospital in the jth position plus the percent positive value of the hospital in the jth + 1 position, divided by 2:

   a. j equals 6.
   b. The 50th percentile equals the average of the hospitals in the 6th and 7th positions (64% + 66%)/2 =65%.

When the distribution of hospital scores follows a normal bell-shaped curve (where most of the scores fall in the middle of the distribution with fewer scores at the lower and higher ends of the distribution), the 50th percentile, or median, will be very similar to the average score. Interpret the percentile scores as shown in Table N4.

Table N4. Interpretation of Percentile Scores

Percentile Score	Interpretation
10th percentile Represents the lowest scoring hospitals.	10% of the hospitals scored the same or lower. 90% of the hospitals scored higher.
25th percentile Represents lower scoring hospitals.	25% of the hospitals scored the same or lower. 75% of the hospitals scored higher.
50th percentile (or median) Represents the middle of the distribution of hospitals.	50% of the hospitals scored the same or lower. 50% of the hospitals scored higher.
75th percentile Represents higher scoring hospitals.	75% of the hospitals scored the same or lower. 25% of the hospitals scored higher.
90th percentile Represents the highest scoring hospitals.	90% of the hospitals scored the same or lower. 10% of the hospitals scored higher.

To compare with the database percentiles, compare your hospital's percent positive scores with the percentile scores for each composite and item. See examples below in Table N5.

Table N5. Sample Percentile Statistics

	Survey Item % Positive Response						
Survey Item	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Item 1	8%	10%	25%	35%	49%	62%	96%

If your hospital's score is 55%, your score falls here:

If your hospital's score is 65%, your score falls here:

If your hospital's score is 55 percent positive, it falls above the 75th percentile (but below the 90th), meaning that your hospital scored higher than at least 75 percent of the hospitals in the database.

If your hospital's score is 65 percent positive, it falls above the 90th percentile, meaning your hospital scored higher than at least 90 percent of the hospitals in the database.

Description of Trending Statistics

Table N6 shows examples of the types of statistics provided in the trending chapter. The tables show the average percentage of respondents who answered positively in the most recent survey administration (left column) and the previous administration (middle column) for the trending hospitals only. The change over time (Most Recent score minus Previous score) is shown in the right column. The change is a negative number if the most recent administration showed a decline and a positive number if the most recent administration showed an increase.

Table N6. Example of Trending Statistics

Survey Item	Most Recent	Previous	Change
Item 1	80%	84%	-4%
Item 2	80%	78%	2%

Table N7 shows additional types of trending statistics that are provided. The maximum increase shows the score from the hospital or hospitals with the largest percent positive score increase on a particular composite or item. Similarly, the maximum decrease shows the score from the hospital or hospitals with the largest percent positive score decrease.

The average increase was calculated by including only hospitals that had any increase in their most recent score; hospitals that showed no change or decreased were *not* included when calculating the average increase. Similarly, the average decrease was calculated by including only hospitals that had a decrease in their most recent score; hospitals that showed no change or increased were *not* included when calculating the average decrease.

Table N7. Example of Other Trending Statistics

Survey Item	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
Item 1	18%	-45%	3%	-5%
Item 2	21%	-19%	5%	-6%

Data Limitations

The survey results presented in this report represent the largest known compilation of hospital survey data on patient safety culture publicly available and therefore provide a useful reference. However, several limitations to these data should be kept in mind.

First, hospitals voluntarily submitted their data to the database; therefore, only hospitals that administered the survey and were willing to submit their data for inclusion in the database are represented. Since these voluntary submitters are not a random sample of U.S. hospitals and only about 10 percent of all hospitals (see Table 3-1 above) chose to participate, the submitting hospitals are not representative of all U.S. hospitals. Estimates based on this self-selected group may produce biased estimates of the population and it is not possible to compute estimates of precision from such a self-selected group. However, the characteristics of the database hospitals are fairly consistent with the distribution of hospitals registered with the American Hospital Association (AHA) and are described further in Chapter 3.

Second, hospitals that administered the survey were not required to undergo any training and administered the survey in different ways. Some hospitals used a paper-only survey, others used Web-only surveys, and others used a combination of these two methods to collect the data. It is possible that these different modes could lead to differences in survey responses; further research is needed to determine whether and how different administration modes affect the results.

In addition, some hospitals conducted a census, surveying all hospital staff, while others administered the survey to a sample of staff. When a sample was drawn, no data were obtained to determine the methodology used to draw the sample. Survey administration statistics that were obtained about the database hospitals, such as survey administration modes and response rates, are provided in Chapter 2.

Finally, the data hospitals submitted have been cleaned for out-of-range values (e.g., invalid response values due to data entry errors), straight-lined records in sections A, B, C, and F, and blank records (where responses to all survey items were missing). Otherwise, data are presented as submitted. No additional attempts were made to verify or audit the accuracy of the data submitted.

Appendixes A and B: Overall Results by Hospital and Respondent Characteristics

In addition to the overall results on the database hospitals presented, Part II of the report presents data tables showing average percent positive scores on the survey composites and items across database hospitals, broken down by the following hospital and respondent characteristics:

Appendix A: Results by Hospital Characteristics

- Bed size
- Teaching status
- Ownership
- Geographic region

Appendix B: Results by Respondent Characteristics

- Work area/unit
- Staff position
- Interaction with patients
- Tenure in current work area/unit

The breakout tables are included as appendixes because there are a large number of them. Highlights of the findings from the breakout tables in these appendixes are provided on the following pages. The appendixes are available online at https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/hospital/hosp-reports.html.

Highlights From Appendix A: Overall Results by Hospital Characteristics

Bed Size (Tables A-1, A-3)

- Hospitals with the smallest bed size (*6–24 beds*) had the highest average percent positive across all composites (71 percent positive); hospitals with the largest bed size (*500 or more beds*) had the lowest (61 percent positive).
- Hospitals with the smallest bed size (*6–24 beds*) had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (84 percent); hospitals with the largest bed size (*500 or more beds*) had the lowest (72 percent).

Teaching Status and Ownership (Table A-5)

- *Nonteaching* hospitals, on average, scored 5 percentage points or more than *teaching* hospitals on *Staffing* and *Handoffs and Transitions*.
- *For-profit* hospitals, on average, scored higher than *not-for-profit* and *government* hospitals by 5 percentage points or more on *Teamwork Across Units* and *Handoffs and Transitions*.

Geographic Region (Tables A-9, A-11, A-12)

- *West South Central* hospitals had the highest average percent positive across all composites (67 percent positive); *Mid-Atlantic* hospitals had the lowest (61 percent positive).
- *East North Central* hospitals had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (80 percent); *Mid-Atlantic* and *Pacific/Associated Territories* hospitals had the lowest (73 percent).
- *Mountain* hospitals had the highest percentage of respondents who reported one or more events in the past year (50 percent); *West South Central* hospitals had the lowest (40 percent).

Highlights From Appendix B: Overall Results by Respondent Characteristics

Work Area/Unit (Tables B-1, B-3, B-4)

- Respondents in *Rehabilitation* had the highest average percent positive response across the composites (71 percent positive); *Emergency* had the lowest (60 percent positive).
- *Rehabilitation* had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (87 percent); *Emergency* had the lowest (67 percent).
- *ICU (Any Type)* had the highest percentage of respondents reporting one or more events in the past year (64 percent); *Rehabilitation* had the lowest (40 percent).

Staff Position (Tables B-5, B-7, B-8)

- Respondents in *Administration/Management* had the highest average percent positive across the composites (77 percent positive); *RN/LVN/LPN* had the lowest (63 percent positive).
- *Administration/Management* had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (89 percent); *RN/LVN/LPN* had the lowest (71 percent).
- *Pharmacists* had the highest percentage of respondents reporting one or more events in the past year (76 percent); *Unit Assistants/Clerks/Secretaries* had the lowest (17 percent).

Interaction With Patients (Tables B-9, B-11, B-12)

- Respondents *with* direct patient interaction had a higher percent positive (49 percent) than those *without* direct interaction (44 percent) on *Handoffs and Transitions*.
- Respondents *without* direct patient interaction were overall more positive than those *with* direct interaction by at least 5 percentage points on *Feedback & Communication About Error* (73 percent) and *Management Support for Patient Safety* (79 percent).
- Respondents *without* direct patient interaction had a higher percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (83 percent) than respondents *with* direct patient interaction (76 percent).
- Respondents *with* direct patient interaction had a higher percentage of respondents reporting one or more events in the past year (49 percent) than respondents *without* direct patient interaction (31 percent).

Tenure in Current Work Area/Unit (Tables B-13, B-15, B-16)

- Respondents with *less than 1 year* in their current work area/unit had the highest average percent positive across the composites (70 percent positive); respondents with *6 to 10 years* had the lowest (64 percent positive).
- Respondents with *less than 1 year* in their current work area/unit had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (84 percent); respondents with *1 to 5* and *6 to 10 years* had the lowest (76 percent).
- Respondents with *6 to 10 years* in their current work area/unit had the highest percentage of respondents reporting one or more events in the past year (50 percent); respondents with *less than 1 year* had the lowest (31 percent).

Appendixes C and D: Trending Results by Hospital and Respondent Characteristics

Part III of the report contains Appendixes C and D, which show trends over time for the 306 hospitals that administered the survey and submitted data more than once. Average percent positive scores from the most recent and previous administrations are shown on the survey composites and items, broken down by the following hospital and respondent characteristics:

Appendix C: Trending Results by Hospital Characteristics

- Bed size
- Teaching status
- Ownership
- Geographic region

Appendix D: Trending Results by Respondent Characteristics

- Work area/unit
- Staff position
- Interaction with patients
- Tenure in current work area/unit

Because there are many breakout tables, they are included in Appendixes C and D. Highlights of the findings from the breakout tables in these appendixes are provided on the following pages. The appendixes are available online at https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/hospital/hosp-reports.html.

Highlights From Appendix C: Trending Results by Hospital Characteristics

Bed Size (Tables C-1, C-3, C-4)

- Hospitals with *50-99 beds* showed the largest increase (4 percentage points) on *Nonpunitive Response to Error*.
- Hospitals with *300-399 beds* had the largest increase (6 percentage points, from 69 percent to 75 percent) in the percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good."
- Hospitals with the smallest bed size *(6-24 beds)* increased by 5 percentage points (from 45 percent to 50 percent) for respondents who reported 1 or more events in the past year.

Teaching Status and Ownership (Tables C-5, C-7)

- *Nonteaching* hospitals showed the largest increase (3 percentage points) on *Nonpunitive Response to Error*.
- *For-Profit* hospitals showed the largest increase (4 percentage points) on *Teamwork Across Units* and *Handoffs and Transitions*.

- *For-Profit* hospitals had the largest increase (5 percentage points, from 72 percent to 77 percent) in the percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good."

Geographic Region (Tables C-9, C-11)

- *East North Central* region hospitals had the greatest increase (5 percentage points) on *Nonpunitive Response to Error.*
- *Pacific/Associated Territories* region hospitals had the largest increase (5 percentage points, from 67 percent to 72 percent) of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good."

Highlights From Appendix D: Trending Results by Respondent Characteristics

Work Area/Unit (Tables D-1, D-3)

- *ICU (any type)*, *Medicine*, and *Obstetrics* increased by 4 percentage points on *Nonpunitive Response to Error*.
- *ICU (any type)* and *Psych/Mental Health* had the largest increase (5 percentage points) of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good."

Staff Position (Table D-5)

- *Dietitians* increased 6 percentage points (49 percent to 55 percent) on *Nonpunitive Response to Error.*

Interaction With Patients (Table D-9)

- Respondents *without* direct patient interaction increased 3 percentage points (49 percent to 52 percent) on *Nonpunitive Response to Error*.

Tenure in Current Work Area/Unit (Table D-13)

- Respondents with *1 to 5*, *6 to 10*, and *11 to 15 years* in their work area/unit increased by 3 percentage points on *Nonpunitive Response to Error*.