Surveys on Patient Safety Culture™

Hospital Survey 1.0:
2021 User Database
Report

AHRQ
Agency for Healthcare
Research and Quality

PATIENT
SAFETY

Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey 1.0:

2021 User Database Report

Part I

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Surveys on Patient Safety Culture™

Findings from the 2021 Hospital 1.0 Survey Database

This overview of survey findings summarizes how hospital employees perceive 12 areas of patient safety culture based on the 2021 Surveys on Patient Safety Culture Hospital 1.0 Database.

320 participating hospitals

191,977 providers and staff respondents

12 areas of patient safety culture assessed in the survey

average percent positive of all 12 areas **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
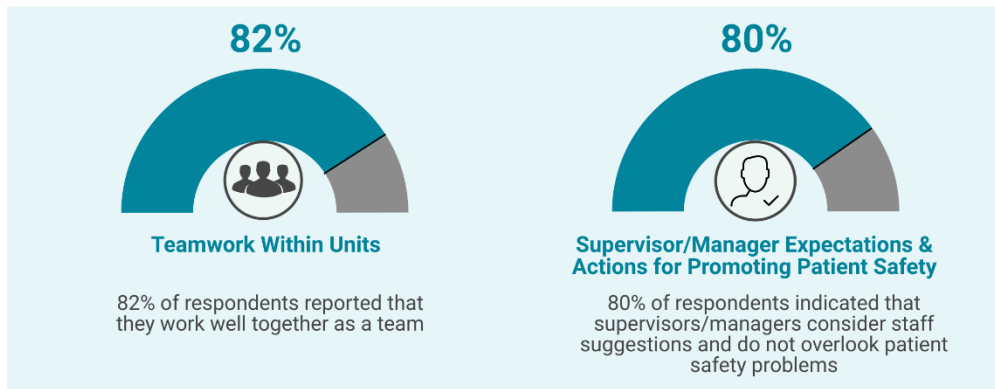
Areas of potential for improvement for most hospitals

48%

Handoffs and Transitions

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

49%

Nonpunitive Response to Error

49% of respondents indicated that event reports are not held against them and that mistakes are not kept in their personnel file
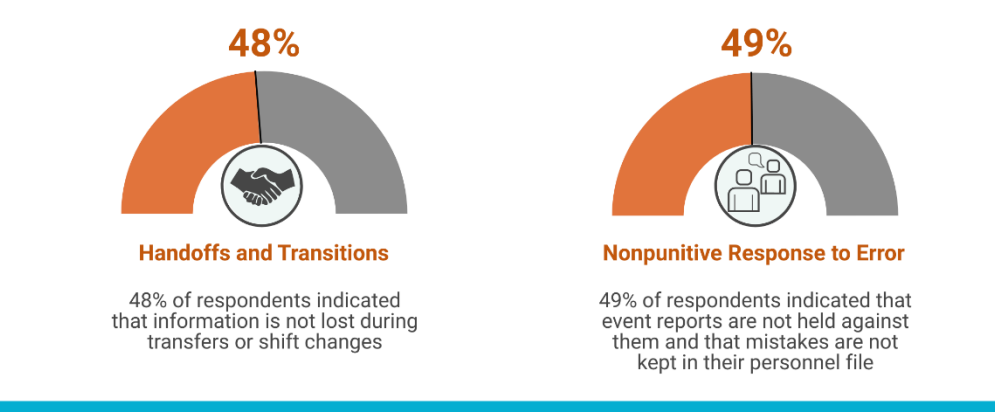
Other findings

>> **Highest and lowest composite measure average score by ownership and geographic region**

66% positive
Not-for-profit hospitals (highest)

61% positive
For-profit hospitals (lowest)

Ownership Type

Mountain/Pacific/ Assoc. Terr. (lowest)
59% positive

69% positive
West South Central (highest)

Geographic Region
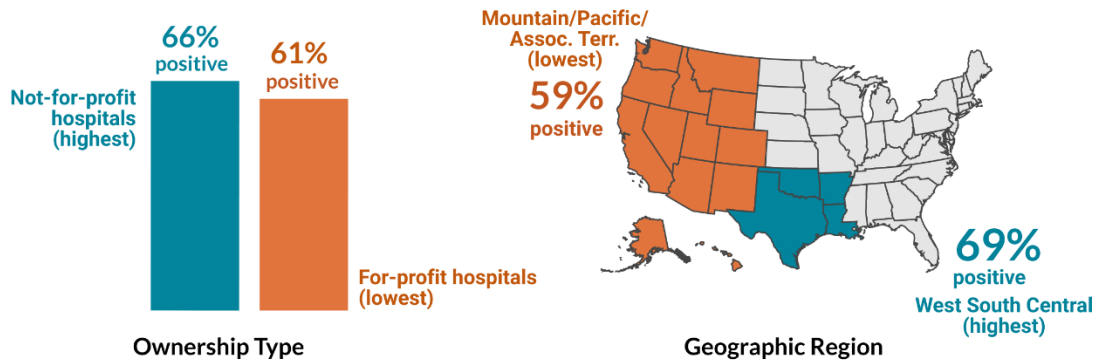
>> **Highest and lowest composite measure average score by work area/unit and staff position**

Rehabilitation department (highest)
72% positive

Emergency department (lowest)
59% positive

Work Area

78% positive
Administration/ Management (highest)

63% positive
Registered nurse/ Lic. vocational nurse/ Lic. practical nurse and Patient care asst./ Hospital aide/Care partner (lowest)

Staff Position
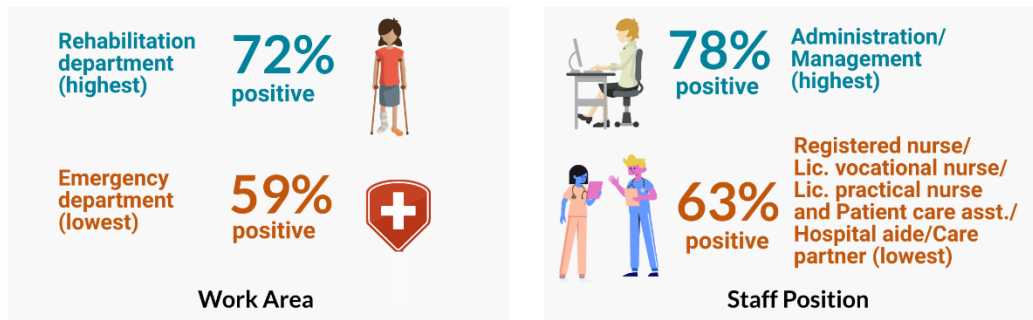
Trending results

>> **Trending results for 161 hospitals that submitted to both the 2018 and 2021 databases**

13%
of hospitals **increased** by 5 percentage points or more on **at least 7 composite measures**

↑**24%**
of hospitals **increased** by 5 percentage points or more on the **Nonpunitive Response to Error** composite measure

↓**40%**
of hospitals **decreased** by 5 percentage points or more on the **Management Support for Patient Safety** composite measure
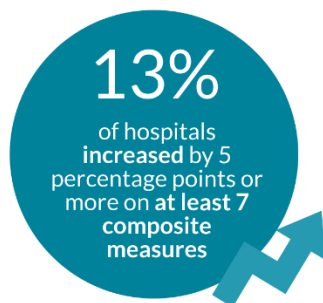
What's next? Action planning for improvement

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 SOPS Hospital Survey Database.

> The 2021 SOPS Hospital 1.0 User Database Report is the first database based on voluntarily submitted 1.0 survey data from 320 hospitals and includes 191,977 provider and staff respondents that administered the 1.0 survey between December 2017 and October 2020.
>
> The prior SOPS Hospital 1.0 Database Report was released in March 2018. Although data submission typically occurs every 2 years, the 2021 SOPS Hospital 1.0 Database Report was delayed for two reasons:
>
> 1. AHRQ released the SOPS Hospital Survey 2.0 in October 2019 and wanted to give hospitals the opportunity to transition to Version 2.0 and submit to the Database;
> 2. The COVID-19 pandemic interfered with some hospitals' capacity to administer the survey and submit to the Database.
>
> Database results from hospitals that submitted SOPS Hospital Survey 2.0 data are available in a separate report titled *Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey 2.0: 2021 User Database Report*, which is available on the AHRQ website at www.ahrq.gov/sops.

This report presents statistics (averages, standard deviations, minimum and maximum scores, and percentiles) on the patient safety culture composite measures and items from Version 1.0 of the SOPS Hospital Survey. This report also includes two trending chapters that describe patient safety culture change over time. One trending chapter describes changes in scores from hospitals that submitted to both the 2018 database and the 2021 database. The second trending chapter describes changes in the database average percent positive scores since the first submission period in 2007. This report also includes a separate volume with 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).

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 (see Figure 1).

Figure 1. Definition of Patient Safety Culture

Patient Safety Culture
The beliefs, values, and norms shared by healthcare staff

Determines behaviors that are:
Rewarded Supported Expected Accepted

Exists at multiple levels:
System Hospital Department Unit
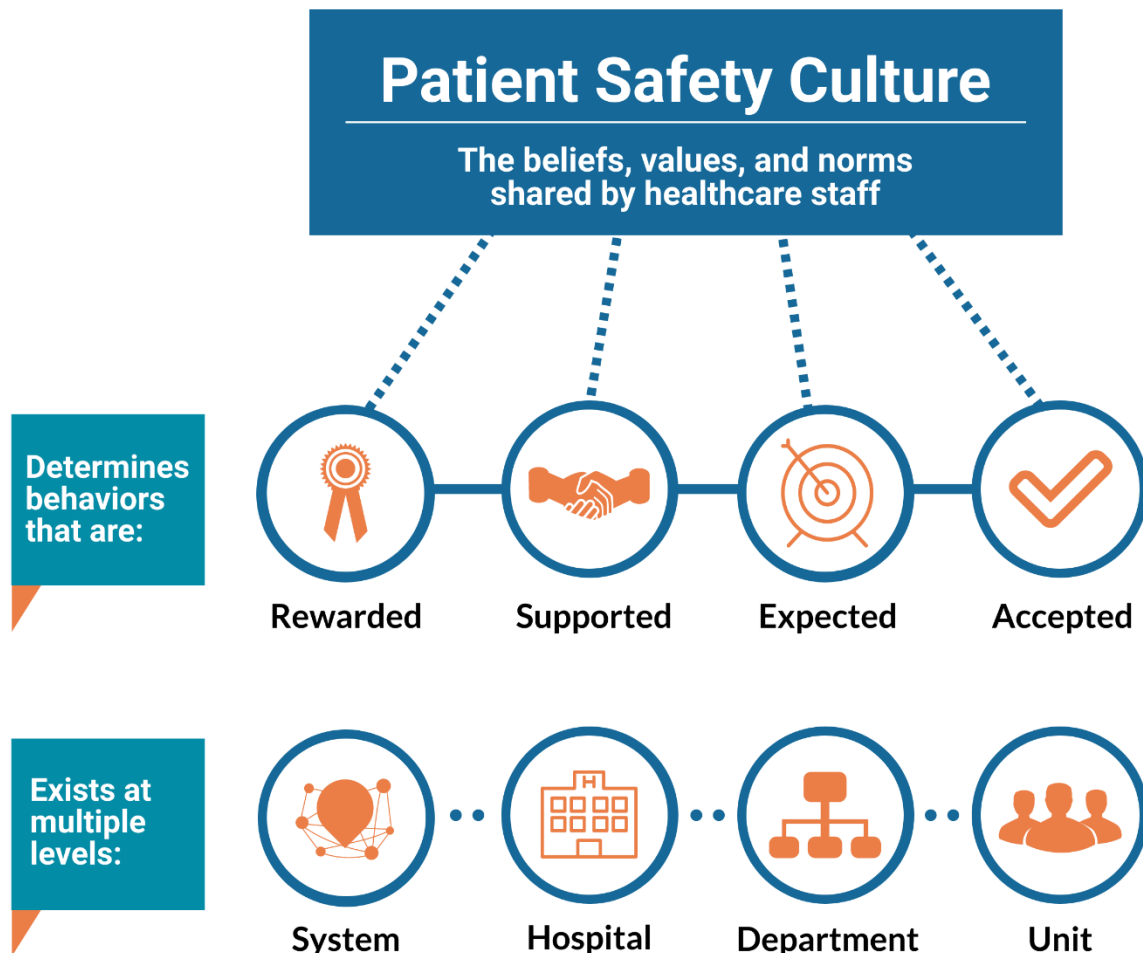
Survey Content

AHRQ funded the development of the SOPS Hospital Survey 1.0, which includes 42 items that make up 12 composite measures of patient safety culture. Table 1-1 defines each of the 12 SOPS Hospital Survey 1.0 composite measures.

Table 1-1. SOPS Hospital Survey 1.0 Composite Measures and Definitions

SOPS Hospital Survey 1.0 Composite Measures	Definition: The extent to which…
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.
Feedback and communication about error	Staff are informed about errors that happen, are given feedback about changes implemented, and discuss ways to prevent errors.
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.
Handoffs and transitions	Important patient care information is transferred across hospital units and during shift changes.
Management support for patient safety	Hospital management provides a work climate that promotes patient safety and shows that patient safety is a top priority.
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.
Organizational learning—Continuous improvement	Mistakes have led to positive changes and changes are evaluated for effectiveness.
Overall perceptions of patient safety	Procedures and systems are good at preventing errors and there is a lack of patient safety problems.
Staffing	There are enough staff to handle the workload and work hours are appropriate to provide the best care for patients.
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.
Teamwork across units	Hospital units cooperate and coordinate with one another to provide the best care for patients.
Teamwork within units	Staff support each other, treat each other with respect, and work together as a team.

In addition to items that make up these composite measures, the survey 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. Respondents are also asked to provide limited background demographic information.

2 Survey Administration Statistics

This chapter presents descriptive information on the number of hospitals and survey respondents included in the 2021 SOPS Hospital 1.0 Database, as well as information about response rates (Table 2-1) and how hospitals administered the survey (Table 2-2).

Highlights

320

Participating Hospitals

191,977

Respondents

60%

Average Hospital Response Rate

Table 2-1. Nontrending and Trending Overall Response Statistics—2021 SOPS Hospital 1.0 Database[i]

| Overall Statistic | Nontrending Hospitals | | Trending Hospitals | Database Total |
	2021 First-Time Submitters	2021 Hospitals Submitting 2007-2016[ii]	Submitting 2018-2021	
Number of hospitals	103	56	161	320
Number of survey respondents	45,123	39,463	107,391	191,977

Table 2-2. Average Survey Administration Statistics—2021 SOPS Hospital 1.0 Database

Average Response Information	Statistic
Average number of respondents per hospital (range: 25 to 3,517)	600
Average number of surveys administered per hospital (range: 41 to 8,685)	1,108
Average hospital response rate (range: 11% to 100%)	60%

Table 2-3. Survey Administration Mode Statistics—2021 SOPS Hospital 1.0 Database

| Survey Administration Mode | Hospitals | | Respondents | | Average Response Rate |
	Number	Percent	Number	Percent	Percent
Paper only	4	1%	842	<1%	46%
Web only	279	87%	167,885	87%	59%
Both paper and web	37	12%	23,250	12%	68%
Total	320	100%	191,977	99%	--

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[i] The hospitals and respondents shown as trending in Table 2-1 represent hospitals that participated in both the 2018 and 2021 databases consecutively.

[ii] Hospitals submitted at least one time to the 2007 to 2016 SOPS Hospital 1.0 Database.

3 Hospital Characteristics

This chapter presents information about the characteristics of the 320 hospitals included in the 2021 SOPS Hospital 1.0 Database by bed size, teaching status, ownership, and geographic region (Table 3-1).

To provide some context, the characteristics of database hospitals by bed size, teaching status, ownership, and geographic region are compared with the distribution of AHA-registered hospitals included in the 2019 American Hospital Association Annual Survey of Hospitals.[iii]

Highlights

57%

of participating hospitals have
25 to 199 beds

63%

of participating hospitals are
nonteaching

73%

of participating hospitals are
nongovernment not for profit
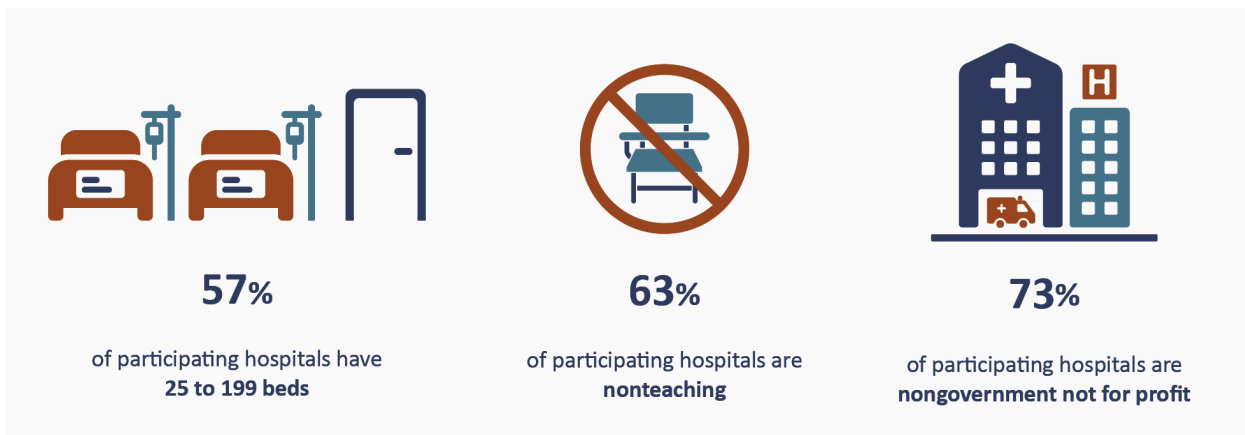
[iii] Data for U.S. and U.S. territory AHA-registered hospitals were obtained from the 2019 AHA Annual Survey of Hospitals Database, © 2019 Health Forum, LLC, an affiliate of the American Hospital Association. Hospitals not registered with AHA were asked to provide information on their hospital's characteristics, such as bed size, teaching status, and ownership.

Table 3-1. Distribution of 2021 SOPS Hospital 1.0 Database by Hospital Characteristics Compared With AHA-Registered Hospitals

Hospital Characteristics	AHA-Registered Hospitals (n = 6,162)		Database Hospitals (n = 320)		Database Respondents (n = 191,977)	
Bed Size	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
6-24 beds	845	14%	17	5%	1,657	1%
25-49 beds	1,407	23%	61	19%	8,797	5%
50-99 beds	1,170	19%	52	16%	14,213	7%
100-199 beds	1,228	20%	69	22%	31,581	16%
200-299 beds	630	10%	59	18%	40,246	21%
300-399 beds	372	6%	24	8%	23,606	12%
400-499 beds	183	3%	12	4%	14,289	7%
500 or more beds	327	5%	26	8%	57,588	30%
Teaching Status	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Teaching	2,589	42%	119	37%	108,863	57%
Nonteaching	3,573	58%	201	63%	83,114	43%
Ownership	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Government (Federal and non-Federal)	1,435	23%	48	15%	28,926	15%
Nongovernment not for profit	3,122	51%	232	73%	152,381	79%
Investor owned (for profit)	1,605	26%	40	13%	10,670	6%
Geographic Region	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
New England/Mid-Atlantic	790	13%	36	11%	20,028	10%
South Atlantic/Associated Territories	987	16%	106	33%	80,912	42%
East North Central	908	15%	68	21%	31,672	16%
East South Central	480	8%	19	6%	14,290	7%
West North Central	772	13%	25	8%	15,100	8%
West South Central	1,036	17%	49	15%	23,851	12%
Mountain/Pacific/Associated Territories	1,189	19%	17	5%	6,124	3%

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

- New England/Mid-Atlantic: CT, MA, ME, NH, NJ, NY, PA, RI, VT
- 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/Pacific/Associated Territories: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, American Samoa, Guam, Marshall Islands, Northern Mariana Islands

4 Respondent Characteristics

This chapter describes respondent characteristics of the 191,977 respondents within the 2021 SOPS Hospital 1.0 Database (Table 4-1).

Highlights

Most prevalent hospital work areas/units

27% Other

12% Medicine (Non surgical)

11% Surgery

Most prevalent hospital staff position

37% Registered nurse (RN) or licensed vocational nurse (LVN)/licensed practical nurse (LPN)

22% Other staff position

11% Technician (EKG, Lab, Radiology)

Table 4-1. Distribution of 2021 SOPS Hospital 1.0 Database by Respondent Characteristics

Respondent Characteristics	Respondents	
Work Area	**Number**	**Percent**
Other	48,836	27%
Medicine (nonsurgical)	22,254	12%
Surgery	19,398	11%
Many different hospital units/No specific unit	15,905	9%
Emergency department	12,749	7%
Intensive care unit (any type)	12,187	7%
Radiology	10,846	6%
Rehabilitation	8,505	5%
Laboratory	7,786	4%
Obstetrics	7,528	4%
Pharmacy	6,659	4%
Psychiatry/Mental health	4,393	2%
Pediatrics	4,115	2%
Anesthesiology	1,280	1%
Total	182,441	100%
Missing	9,536	
Overall	191,977	
Staff Position	**Number**	**Percent**
Registered nurse (RN) or licensed vocational nurse (LVN)/licensed practical nurse (LPN)	65,193	37%
Other staff position	38,772	22%
Technician (EKG, Lab, Radiology)	19,612	11%
Administration/management	12,592	7%
Patient care assistant/hospital aide/care partner	12,452	7%
Therapist (respiratory, physical, occupational, or speech)	9,956	6%
Attending/staff physician, resident physician/physician in training, or physician assistant (PA)/nurse practitioner (NP)	7,264	4%
Unit assistant/clerk/secretary	6,878	4%
Pharmacist	3,731	2%
Dietitian	887	1%
Total	177,337	100%
Missing	14,640	
Overall	191,977	
Interaction With Patients	**Number**	**Percent**
YES, have direct patient interaction	127,839	78%
NO, do NOT have direct patient interaction	37,102	22%
Total	164,941	100%
Missing	27,036	
Overall	191,977	

Respondent Characteristics	Respondents	
Tenure With Current Hospital	**Number**	**Percent**
Less than 1 year	22,580	13%
1 to 5 years	66,845	38%
6 to 10 years	29,174	17%
11 to 15 years	21,709	12%
16 to 20 years	15,341	9%
21 years or more	21,115	12%
Total	176,764	100%
Missing	15,213	
Overall	191,977	
Tenure in Current Work Area	**Number**	**Percent**
Less than 1 year	29,130	17%
1 to 5 years	77,008	44%
6 to 10 years	27,751	16%
11 to 15 years	18,127	10%
16 to 20 years	11,529	7%
21 years or more	12,313	7%
Total	175,858	100%
Missing	16,119	
Overall	191,977	
Tenure in Current Specialty or Profession	**Number**	**Percent**
Less than 1 year	13,105	8%
1 to 5 years	46,943	29%
6 to 10 years	26,843	17%
11 to 15 years	20,820	13%
16 to 20 years	17,365	11%
21 years or more	36,095	22%
Total	161,171	100%
Missing	30,806	
Overall	191,977	
Hours Worked Per Week	**Number**	**Percent**
Less than 20 hours per week	8,021	5%
20 to 39 hours per week	74,039	42%
40 to 59 hours per week	85,678	48%
60 to 79 hours per week	6,357	4%
80 to 99 hours per week	2,825	2%
100 hours per week or more	175	<1%
Total	177,095	100%
Missing	14,882	
Overall	191,977	

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

5 Overall Results

This chapter presents the overall findings for the 2021 SOPS Hospital 1.0 Database. We present the average percentage of positive responses for each of the survey's composite measures and items, summarized for all hospitals.

Reporting the average of all hospitals ensures that each hospital's scores receive equal weight, regardless of the hospital's size. An alternative method would be to report the percentage of positive responses for all respondents, but this method would give greater weight to larger hospitals (i.e., 300 beds or more) with more respondents. Reporting the data at the hospital level in this way is important because culture is considered to be a group characteristic, not an individual characteristic.

Highlights

HIGHEST Scoring Composite Measures

Teamwork Within Units

82%
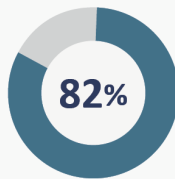
of respondents "strongly agreed" or "agreed" that staff support each other, treat each other with respect, and work together as a team

Supervisor/Manager Expectations & Actions Promoting Patient Safety

80%
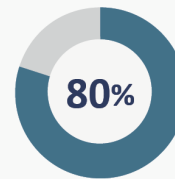
of respondents "strongly agreed" or "agreed" that their supvs/mgrs consider staff suggestions, praise staff for following patient safety procedures, and do not overlook patient safety problems

LOWEST Scoring Composite Measures

Handoffs and Transitions

48%
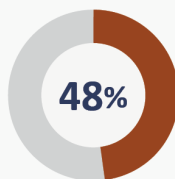
of respondents "strongly agreed" or "agreed" that important patient care information is transferred across hospital units and during shift changes

Nonpunitive Response to Error

49%
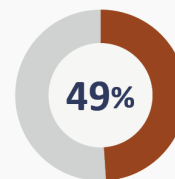
of respondents "strongly agreed" or "agreed" that staff feel that their mistakes and event reports are not held against them and mistakes are not kept in their personnel file

Composite Measure and Item Charts

This section provides the overall composite measure and item results. The methods for calculating the percent positive scores at the composite measure and item levels are described in the Notes section of this report.

Composite Measure Results

Chart 5-1 shows the average percent positive response for each of the 12 SOPS Hospital 1.0 composite measures, summarized for all hospitals in the database. The SOPS Hospital 1.0 composite measures are shown in order from the highest average percent positive response to the lowest.

Item Results

Chart 5-2 shows the average percent positive response for each of the 42 survey items. Items are listed in their respective composite measure, grouped by positively and negatively worded items and then 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.

Patient Safety Culture Composite Measures

Average % Positive Response

Measure	
Teamwork Within Units	82
Supervisor/Manager Expectations & Actions Promoting Patient Safety	80
Organizational Learning—Continuous Improvement	71
Management Support for Patient Safety	69
Feeedback & Communication About Error	69
Frequency of Events Reported	68
Communication Openness	66
Overall Perceptions of Patient Safety	66
Teamwork Across Units	61
Staffing	53
Nonpunitive Response to Error	49
Handoffs & Transitions	48
Composite Measure Average	**65**

1. Teamwork Within Units

Average % Positive Response

People support one another in this unit. (Item A1)
87

When a lot of work needs to be done quickly, we work together as a team to get the work done. (Item A3)
87

In this unit, people treat each other with respect. (Item A4)
82

When one area in this unit gets really busy, others help out. (Item A11)
73

2. Supervisor/Manager Expectations & Actions Promoting Patient Safety

My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures. (Item B1)
80

My supv/mgr seriously considers staff suggestions for improving patient safety.(Item B2)
80

Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts. (Item B3*)
80

My supv/mgr overlooks patient safety problems that happen over and over. (Item B4*)
80

3. Organizational Learning – Continuous Improvement

We are actively doing things to improve patient safety. (Item A6)
82

Mistakes have led to positive changes here. (Item A9)
62

After we make changes to improve patient safety, we evaluate their effectiveness. (Item A13)
70

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

4. Management Support for Patient Safety

Average % Positive Response

Hospital management provides a work climate that promotes patient safety. (Item F1)
78

The actions of hospital management show that patient safety is a top priority. (Item F8)
73

Hospital management seems interested in patient safety only after an adverse event happens. (Item F9*)
57

5. Feedback & Communication About Error

We are given feedback about changes put into place based on event reports. (Item C1)
61

We are informed about errors that happen in this unit. (Item C3)
70

In this unit, we discuss ways to prevent errors from happening again. (Item C5)
76

6. Frequency of Events Reported

When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported? (Item D1)
63

When a mistake is made, but has no potential to harm the patient, how often is this reported? (Item D2)
64

When a mistake is made that could harm the patient, but does not, how often is this reported? (Item D3)
77

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

7. Communication Openness

Average % Positive Response

Staff will freely speak up if they see something that may negatively affect patient care. (Item C2)

79

Staff feel free to question the decisions or actions of those with more authority. (Item C4)

50

Staff are afraid to ask questions when something does not seem right. (Item C6*)

69

8. Overall Perceptions of Patient Safety

Patient safety is never sacrificed to get more work done. (Item A15)

64

Our procedures and systems are good at preventing errors from happening. (Item A18)

74

It is just by chance that more serious mistakes don't happen around here. (Item A10*)

61

We have patient safety problems in this unit. (Item A17*)

65

9. Teamwork Across Units

There is good cooperation among hospital units that need to work together. (Item F4)

61

Hospital units work well together to provide the best care for patients. (Item F10)

71

Hospital units do not coordinate well with each other. (Item F2*)

48

It is often unpleasant to work with staff from other hospital units. (Item F6*)

63

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

10. Staffing

Average % Positive Response

We have enough staff to handle the workload. (Item A2)

50

Staff in this unit work longer hours than is best for patient care. (Item A5*)

49

We use more agency/temporary staff than is best for patient care. (Item A7*)

64

We work in "crisis mode" trying to do too much, too quickly. (Item A14*)

50

11. Nonpunitive Response to Error

Staff feel like their mistakes are held against them. (Item A8*)

55

When an event is reported, it feels like the person is being written up, not the problem. (Item A12*)

51

Staff worry that mistakes they make are kept in their personnel file. (Item A16*)

41

12. Handoffs & Transitions

Things "fall between the cracks" when transferring patients from one unit to another. (Item F3*)

42

Important patient care information is often lost during shift changes. (Item F5*)

53

Problems often occur in the exchange of information across hospital units. (Item F7*)

46

Shift changes are problematic for patients in this hospital. (Item F11*)

49

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Chart 5-3. Item Results
Average Percentage Response on Patient Safety Grade—2021 SOPS Hospital 1.0 Database

E1. Patient Safety Grade

Please give your work area/unit in this hospital an overall grade on patient safety.
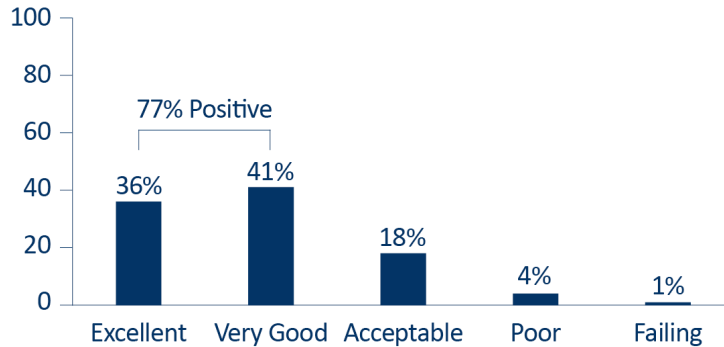
77% Positive

Excellent	36%
Very Good	41%
Acceptable	18%
Poor	4%
Failing	1%

Note: Percentages indicate the database average percent response for each item response category. The percent positive displayed might not equal the sum of the response option percentages due to rounding. All five percentages might not add to 100 percent due to rounding.

Chart 5-4. Item Results
Average Percentage Response on the Number of Events Reported in the Past 12 Months—2021 SOPS Hospital 1.0 Database

G1. Number of Events Reported

In the past 12 months, how many event reports have you filled out and submitted?

47% Positive

None	53%
1 to 2	27%
3 to 5	13%
6 to 10	5%
11 to 20	2%
21 or more	1%
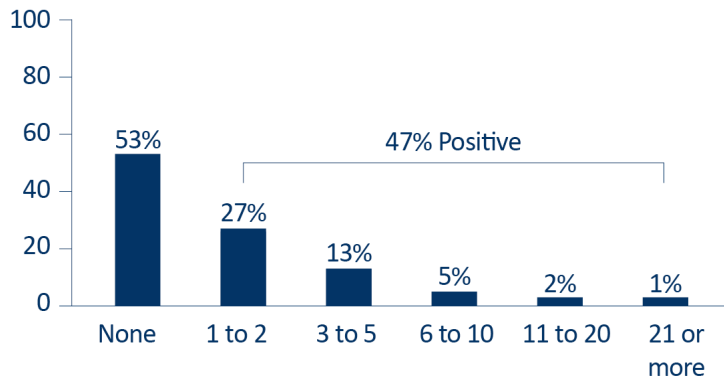
Note: Percentages indicate the database average percent response for each item response category. The percent positive displayed might not equal the sum of the response option percentages due to rounding. All six percentages might not add to 100 percent due to rounding.

6 Comparing Hospital Results

The data in this report are meant to supplement your hospital's efforts to identify areas of strength and areas on which to focus efforts to improve patient safety culture.

To compare your hospital's survey results with the aggregated findings from the database, first calculate your hospital's percent positive response on the survey's 12 composite measures and the patient safety grade and number of events reported items. The Notes section at the end of this report describes how to calculate percent positive scores and other statistics. Individual hospital results can then be compared with the database averages and percentile scores for all hospitals in the database.

When comparing your hospital's results with results from the database, keep in mind that the database only provides *relative* comparisons. Although your hospital may have higher percent positive results than the database statistics, there may still be room for improvement in a particular area within your hospital in an *absolute* sense.

Composite Measure and Item Tables

Table 6-1 presents statistics (average percent positive, standard deviation [s.d.], minimum and maximum scores, and percentiles) for each of the 12 SOPS Hospital 1.0 composite measures.

Table 6-2 presents statistics for each of the 42 survey items. Items are listed by their respective composite measure, with positively worded items listed before negatively worded items.

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

Table 6-4 presents statistics for the number of events reported. Results presented in the table represent average percent positive scores for hospital respondents who answered "1 to 2 event reports," "3 to 5 event reports," "6 to 10 event reports," "11 to 20 event reports," or "21 event reports or more."

Table 6-1. Composite Measure Results—2021 SOPS Hospital 1.0 Database

| SOPS Composite Measures | Average % Positive | s.d. | Composite Measure % Positive Response Percentiles | | | | | | |
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Teamwork Within Units	82%	4.90%	67%	76%	79%	83%	85%	88%	98%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety	80%	5.53%	59%	74%	77%	80%	83%	87%	98%
3. Organizational Learning—Continuous Improvement	71%	7.78%	46%	61%	67%	72%	77%	81%	88%
4. Management Support for Patient Safety	69%	10.16%	36%	55%	63%	71%	77%	82%	94%
5. Feedback & Communication About Error	69%	8.04%	44%	59%	65%	69%	75%	79%	88%
6. Frequency of Events Reported	68%	7.21%	44%	59%	63%	68%	73%	78%	86%
7. Communication Openness	66%	6.18%	41%	59%	62%	66%	70%	73%	82%
8. Overall Perceptions of Patient Safety	66%	8.97%	38%	55%	60%	66%	71%	77%	93%
9. Teamwork Across Units	61%	10.19%	37%	48%	54%	60%	68%	75%	95%
10. Staffing	53%	9.41%	27%	42%	47%	53%	59%	67%	83%
11. Nonpunitive Response to Error	49%	7.86%	26%	39%	44%	49%	54%	58%	86%
12. Handoffs & Transitions	48%	11.19%	23%	34%	39%	45%	54%	63%	92%

Table 6-2. Item Results—2021 SOPS Hospital 1.0 Database (Page 1 of 5)

Survey Items by SOPS Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Teamwork Within Units			% Agree/Strongly Agree						
People support one another in this unit. (Item A1)	87%	4.64%	72%	81%	84%	88%	90%	92%	100%
When a lot of work needs to be done quickly, we work together as a team to get the work done. (Item A3)	87%	4.57%	70%	81%	85%	87%	90%	92%	100%
In this unit, people treat each other with respect. (Item A4)	82%	5.90%	63%	75%	78%	82%	85%	89%	98%
When one area in this unit gets really busy, others help out. (Item A11)	73%	6.81%	50%	64%	68%	73%	77%	81%	100%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety			% Agree/Strongly Agree						
My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures. (Item B1)	80%	5.87%	58%	72%	76%	80%	84%	87%	97%
My supv/mgr seriously considers staff suggestions for improving patient safety.(Item B2)	80%	6.20%	56%	73%	77%	81%	84%	88%	100%
			% Disagree/Strongly Disagree						
Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts. (Item B3*)	80%	6.25%	61%	72%	76%	81%	84%	89%	100%
My supv/mgr overlooks patient safety problems that happen over and over. (Item B4*)	80%	6.21%	56%	73%	77%	80%	84%	88%	100%
3. Organizational Learning—Continuous Improvement			% Agree/Strongly Agree						
We are actively doing things to improve patient safety. (Item A6)	82%	6.86%	61%	72%	79%	83%	86%	90%	100%
Mistakes have led to positive changes here. (Item A9)	62%	8.72%	30%	50%	57%	63%	68%	72%	78%
After we make changes to improve patient safety, we evaluate their effectiveness. (Item A13)	70%	9.10%	41%	58%	65%	71%	76%	82%	92%

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 6-2. Item Results—2021 SOPS Hospital 1.0 Database (Page 2 of 5)

Survey Items by SOPS Composite Measure	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
4. Management Support for Patient Safety	% Agree/Strongly Agree								
Hospital management provides a work climate that promotes patient safety. (Item F1)	78%	10.39%	43%	64%	72%	80%	86%	91%	98%
The actions of hospital management show that patient safety is a top priority. (Item F8)	73%	10.59%	40%	58%	66%	74%	81%	86%	96%
	% Disagree/Strongly Disagree								
Hospital management seems interested in patient safety only after an adverse event happens. (Item F9*)	57%	10.38%	24%	44%	49%	57%	64%	70%	89%
5. Feedback & Communication About Error	% Most of the time/Always								
We are given feedback about changes put into place based on event reports. (Item C1)	61%	9.74%	32%	48%	55%	61%	69%	74%	84%
We are informed about errors that happen in this unit. (Item C3)	70%	8.75%	34%	60%	65%	71%	76%	81%	91%
In this unit, we discuss ways to prevent errors from happening again. (Item C5)	76%	7.26%	50%	68%	72%	77%	81%	85%	97%
6. Frequency of Events Reported	% Most of the time/Always								
When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported? (Item D1)	63%	8.31%	35%	52%	58%	63%	68%	74%	85%
When a mistake is made, but has no potential to harm the patient, how often is this reported? (Item D2)	64%	8.16%	40%	53%	59%	64%	69%	76%	85%
When a mistake is made that could harm the patient, but does not, how often is this reported? (Item D3)	77%	6.10%	57%	69%	73%	77%	81%	85%	95%

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 6-2. Item Results—2021 SOPS Hospital 1.0 Database (Page 3 of 5)

Survey Items by SOPS Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
7. Communication Openness			% Most of the time/Always						
Staff will freely speak up if they see something that may negatively affect patient care. (Item C2)	79%	6.10%	51%	72%	76%	80%	83%	87%	93%
Staff feel free to question the decisions or actions of those with more authority. (Item C4)	50%	7.44%	25%	41%	46%	50%	55%	59%	71%
			% Rarely/Never						
Staff are afraid to ask questions when something does not seem right. (Item C6*)	69%	6.82%	43%	61%	65%	69%	73%	77%	86%
8. Overall Perceptions of Patient Safety			% Agree/Strongly Agree						
Patient safety is never sacrificed to get more work done. (Item A15)	64%	9.80%	42%	51%	56%	64%	71%	77%	95%
Our procedures and systems are good at preventing errors from happening. (Item A18)	74%	9.03%	44%	62%	69%	75%	80%	85%	100%
			% Disagree/Strongly Disagree						
It is just by chance that more serious mistakes don't happen around here. (Item A10*)	61%	9.38%	31%	49%	54%	61%	67%	73%	87%
We have patient safety problems in this unit. (Item A17*)	65%	10.52%	33%	52%	58%	66%	73%	78%	97%

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 6-2. Item Results—2021 SOPS Hospital 1.0 Database (Page 4 of 5)

Survey Items by SOPS Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response Percentiles						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
9. Teamwork Across Units			% Agree/Strongly Agree						
There is good cooperation among hospital units that need to work together. (Item F4)	61%	10.98%	35%	46%	53%	60%	69%	76%	93%
Hospital units work well together to provide the best care for patients. (Item F10)	71%	10.14%	39%	58%	64%	71%	79%	85%	98%
			% Disagree/Strongly Disagree						
Hospital units do not coordinate well with each other. (Item F2*)	48%	11.85%	23%	34%	39%	47%	56%	64%	93%
It is often unpleasant to work with staff from other hospital units. (Item F6*)	63%	9.39%	37%	51%	57%	62%	69%	75%	95%
10. Staffing			% Agree/Strongly Agree						
We have enough staff to handle the workload. (Item A2)	50%	12.83%	22%	35%	41%	50%	58%	68%	91%
			% Disagree/Strongly Disagree						
Staff in this unit work longer hours than is best for patient care. (Item A5*)	49%	9.36%	19%	38%	43%	49%	55%	62%	73%
We use more agency/temporary staff than is best for patient care. (Item A7*)	64%	10.00%	34%	51%	58%	64%	71%	77%	93%
We work in "crisis mode" trying to do too much, too quickly. (Item A14*)	50%	11.47%	23%	37%	42%	49%	57%	66%	92%

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 6-2. Item Results—2021 SOPS Hospital 1.0 Database (Page 5 of 5)

| Survey Items by SOPS Composite Measure | Average % Positive | s.d. | Survey Item % Positive Response Percentiles | | | | | | |
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
11. Nonpunitive Response to Error	% Disagree/Strongly Disagree								
Staff feel like their mistakes are held against them. (Item A8*)	55%	8.32%	32%	45%	49%	55%	60%	65%	95%
When an event is reported, it feels like the person is being written up, not the problem. (Item A12*)	51%	8.08%	27%	40%	45%	51%	56%	60%	81%
Staff worry that mistakes they make are kept in their personnel file. (Item A16*)	41%	8.45%	17%	31%	36%	41%	46%	51%	81%
12. Handoffs & Transitions	% Disagree/Strongly Disagree								
Things "fall between the cracks" when transferring patients from one unit to another. (Item F3*)	42%	12.57%	17%	28%	33%	39%	49%	60%	98%
Important patient care information is often lost during shift changes. (Item F5*)	53%	10.31%	29%	40%	46%	52%	59%	66%	88%
Problems often occur in the exchange of information across hospital units. (Item F7*)	46%	11.41%	24%	33%	38%	44%	54%	62%	89%
Shift changes are problematic for patients in this hospital. (Item F11*)	49%	12.05%	14%	35%	41%	47%	56%	65%	93%

Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 6-3. Item Results for Work Area/Unit Patient Safety Grade of Excellent or Very Good—2021 SOPS Hospital 1.0 Database

Work Area/Unit Patient Safety Grade (Item E1)	Average % Positive	s.d.	Survey Item % Response Percentiles						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Excellent or Very Good	77%	9.50%	43%	64%	71%	78%	84%	88%	100%

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

Table 6-4. Item Results for Reporting One or More Events in the Past 12 Months—2021 SOPS Hospital 1.0 Database

Events Reported in the Past 12 Months (Item G1)of	Average % Positive	s.d.	Survey Item % Response Percentiles						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1 or more events	47%	9.86%	20%	35%	40%	48%	54%	59%	75%

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

7 Results for Trending Hospitals: 2018 and 2021

In this section, we provide results from the 161 hospitals that submitted their data to both the 2021 database and the previous 2018 database. Hospitals that submitted to both databases are considered "trending hospitals." With trending hospitals, we can examine differences in scores within hospitals by comparing their most recent scores with their previous scores. In doing so, we can summarize the extent of change within these hospitals over time.

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

Survey methodology may also affect changes in scores over time. 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 make it difficult to interpret changes in scores over time.

Highlights

161 Trending Hospitals

Frequency of Events Reported

Org Learning/ Continuous Improvement

Teamwork Across Units

Nonpunitive Response to Error

Management Support for Patient Safety

Handoffs & Transitions

There were six composite measures that had an average increase of 5 percentage points or more, when only looking at hospitals that increased on composite measures.

Table 7-1. Trending Hospitals: Response Rate Statistics—2021 SOPS Hospital 1.0 Database

Summary Statistic	Most Recent Submission (2021)	Previous Submission (2018)
Total number of respondents	107,391	106,071
Number of completed surveys per hospital	Average: 667 Range: 25 – 3,409	Average: 659 Range: 36 – 4,292
Hospital response rate	Average: 62% Range: 13% – 100%	Average: 63% Range: 12% – 100%

Note: Trending hospitals include hospitals that submitted to both the 2018 and 2021 SOPS Hospital Databases.

Table 7-2. Distribution of 2021 SOPS Hospital 1.0 Database Trending Hospitals

	Trending Hospitals 2018-2021 (n=161)		AHA-Registered U.S. Hospitals (n=6,162)	
Bed Size	**Number**	**Percent**	**Number**	**Percent**
6-49 beds	36	22%	2,252	37%
50-99 beds	26	16%	1,170	19%
100-199 beds	32	20%	1,228	20%
200-299 beds	28	17%	630	10%
300-399 beds	17	11%	372	6%
400 or more beds	22	14%	510	8%
Teaching Status	**Number**	**Percent**	**Number**	**Percent**
Teaching	59	37%	2,589	42%
Nonteaching	102	63%	3,573	58%

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

Table 7-2. Distribution of 2021 SOPS Hospital 1.0 Database Trending Hospitals (continued)

	Trending Hospitals 2018-2021 (n=161)		AHA-Registered U.S. Hospitals (n=6,162)	
Ownership	**Number**	**Percent**	**Number**	**Percent**
Government (Federal or non-Federal)	16	10%	1,435	23%
Nongovernment (voluntary/nonprofit or proprietary/investor owned)	145	90%	4,727	77%
Geographic Region	**Number**	**Percent**	**Number**	**Percent**
New England/Mid-Atlantic	12	7%	790	13%
South Atlantic/Associated Territories	60	37%	987	16%
East North Central	41	25%	908	15%
East South Central	10	6%	480	8%
West North Central	16	10%	772	13%
West South Central	18	11%	1,036	17%
Mountain/Pacific/Associated Territories	4	2%	1,189	19%

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

- New England/ Mid-Atlantic: CT, MA, ME, NH, NJ, NY, PA, RI, VT
- 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/Pacific/Associated Territories: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY, American Samoa, Guam, Marshall Islands, Northern Mariana Islands

Trending Hospital Composite Measure and Item Results

Table 7-3. Trending Hospitals: Composite Measure Results—2021 SOPS Hospital 1.0 Database

SOPS Composite Measures	Composite Measure % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
1. Teamwork Within Units	83%	83%	0%	10%	-14%	3%	-3%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety	81%	82%	-1%	17%	-14%	3%	-4%
3. Organizational Learning—Continuous Improvement	73%	73%	0%	14%	-27%	5%	-5%
4. Management Support for Patient Safety	70%	73%	-3%	19%	-24%	5%	-7%
5. Feedback & Communication About Error	70%	71%	-1%	16%	-15%	4%	-4%
6. Frequency of Events Reported	68%	68%	0%	21%	-15%	5%	-4%
7. Communication Openness	67%	67%	0%	16%	-18%	4%	-4%
8. Overall Perceptions of Patient Safety	67%	68%	-1%	16%	-16%	4%	-5%
9. Teamwork Across Units	62%	62%	0%	15%	-21%	5%	-5%
10. Staffing	55%	55%	0%	15%	-21%	4%	-5%
11. Nonpunitive Response to Error	50%	49%	1%	14%	-16%	5%	-4%
12. Handoffs & Transitions	48%	49%	-1%	27%	-18%	5%	-5%

Note: Based on data from 161 trending hospitals that had composite measure scores; the number of respondents was 107,391 for the most recent results and 106,071 for the previous results.

Survey Items by SOPS Composite Measure	Survey Item % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
1. Teamwork Within Units	% Agree/Strongly Agree						
People support one another in this unit. (Item A1)	88%	88%	0%	10%	-16%	3%	-4%
When a lot of work needs to be done quickly, we work together as a team to get the work done. (Item A3)	88%	88%	0%	11%	-13%	3%	-3%
In this unit, people treat each other with respect. (Item A4)	83%	83%	0%	11%	-18%	4%	-4%
When one area in this unit gets really busy, others help out. (Item A11)	74%	73%	1%	19%	-16%	5%	-4%
2. Supervisor/Manager Expectations & Actions Promoting Patient Safety	% Agree/Strongly Agree						
My supv/mgr says a good word when he/she sees a job done according to established patient safety procedures. (Item B1)	81%	81%	0%	20%	-25%	4%	-4%
My supv/mgr seriously considers staff suggestions for improving patient safety. (Item B2)	81%	82%	-1%	17%	-18%	5%	-5%
	% Disagree/Strongly Disagree						
Whenever pressure builds up, my supv/mgr wants us to work faster, even if it means taking shortcuts. (Item B3*)	80%	81%	-1%	14%	-15%	4%	-4%
My supv/mgr overlooks patient safety problems that happen over and over. (Item B4*)	81%	82%	-1%	17%	-15%	4%	-4%
3. Organizational Learning—Continuous Improvement	% Agree/Strongly Agree						
We are actively doing things to improve patient safety. (Item A6)	83%	84%	-1%	19%	-24%	5%	-6%
Mistakes have led to positive changes here. (Item A9)	63%	64%	-1%	14%	-33%	4%	-7%
After we make changes to improve patient safety, we evaluate their effectiveness. (Item A13)	72%	72%	0%	22%	-32%	6%	-6%

Note: Based on data from 161 trending hospitals. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Survey Items by SOPS Composite Measure	Survey Item % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
4. Management Support for Patient Safety	% Agree/Strongly Agree						
Hospital mgmt provides a work climate that promotes patient safety. (Item F1)	79%	82%	-3%	26%	-30%	5%	-8%
The actions of hospital mgmt show that patient safety is a top priority. (Item F8)	74%	77%	-3%	19%	-26%	6%	-8%
	% Disagree/Strongly Disagree						
Hospital mgmt seems interested in patient safety only after an adverse event happens. (Item F9*)	58%	61%	-3%	19%	-21%	5%	-7%
5. Feedback & Communication About Error	% Most of the time/Always						
We are given feedback about changes put into place based on event reports. (Item C1)	62%	63%	-1%	20%	-19%	5%	-6%
We are informed about errors that happen in this unit. (Item C3)	71%	71%	0%	17%	-16%	4%	-5%
In this unit, we discuss ways to prevent errors from happening again. (Item C5)	78%	78%	0%	16%	-20%	5%	-5%
6. Frequency of Events Reported	% Most of the time/Always						
When a mistake is made, but is caught and corrected before affecting the patient, how often is this reported? (Item D1)	63%	64%	-1%	32%	-17%	6%	-5%
When a mistake is made, but has no potential to harm the patient, how often is this reported? (Item D2)	64%	64%	0%	23%	-21%	5%	-5%
When a mistake is made that could harm the patient, but does not, how often is this reported? (Item D3)	78%	77%	1%	17%	-12%	5%	-3%

Note: Based on data from 161 trending hospitals. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Survey Items by SOPS Composite Measure	Survey Item % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
7. Communication Openness	% Most of the time/Always						
Staff will freely speak up if they see something that may negatively affect patient care. (Item C2)	80%	80%	0%	16%	-23%	4%	-4%
Staff feel free to question the decisions or actions of those with more authority. (Item C4)	50%	52%	-2%	23%	-25%	5%	-6%
	% Rarely/Never						
Staff are afraid to ask questions when something does not seem right. (Item C6*)	70%	70%	0%	18%	-22%	5%	-5%
8. Overall Perceptions of Patient Safety	% Agree/Strongly Agree						
Patient safety is never sacrificed to get more work done. (Item A15)	65%	66%	-1%	16%	-18%	5%	-6%
Our procedures and systems are good at preventing errors from happening. (Item A18)	75%	75%	0%	17%	-20%	6%	-6%
	% Disagree/Strongly Disagree						
It is just by chance that more serious mistakes don't happen around here. (Item A10*)	62%	64%	-2%	16%	-25%	5%	-5%
We have patient safety problems in this unit. (Item A17*)	67%	67%	0%	23%	-27%	6%	-6%

Note: Based on data from 161 trending hospitals. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Survey Items by SOPS Composite Measure	Survey Item % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
9. Teamwork Across Units	% Agree/Strongly Agree						
There is good cooperation among hospital units that need to work together. (Item F4)	62%	63%	-1%	16%	-23%	6%	-6%
Hospital units work well together to provide the best care for patients. (Item F10)	72%	73%	-1%	21%	-28%	5%	-6%
	% Disagree/Strongly Disagree						
Hospital units do not coordinate well with each other. (Item F2*)	49%	50%	-1%	18%	-29%	6%	-6%
It is often unpleasant to work with staff from other hospital units. (Item F6*)	64%	63%	1%	22%	-25%	5%	-5%
10. Staffing	% Agree/Strongly Agree						
We have enough staff to handle the workload. (Item A2)	51%	53%	-2%	32%	-43%	9%	-10%
	% Disagree/Strongly Disagree						
Staff in this unit work longer hours than is best for patient care. (Item A5*)	50%	50%	0%	18%	-17%	5%	-5%
We use more agency/temporary staff than is best for patient care. (Item A7*)	66%	65%	1%	27%	-21%	6%	-6%
We work in "crisis mode" trying to do too much, too quickly. (Item A14*)	51%	52%	-1%	22%	-23%	6%	-6%

Note: Based on data from 161 trending hospitals. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Survey Items by SOPS Composite Measure	Survey Item % Positive Response						
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
11. Nonpunitive Response to Error	% Disagree/Strongly Disagree						
Staff feel like their mistakes are held against them. (Item A8*)	56%	55%	1%	14%	-21%	5%	-5%
When an event is reported, it feels like the person is being written up, not the problem. (Item A12*)	52%	51%	1%	17%	-17%	5%	-5%
Staff worry that mistakes they make are kept in their personnel file. (Item A16*)	42%	41%	1%	20%	-13%	6%	-4%
12. Handoffs & Transitions	% Disagree/Strongly Disagree						
Things "fall between the cracks" when transferring patients from one unit to another. (Item F3*)	43%	44%	-1%	24%	-23%	5%	-6%
Important patient care information is often lost during shift changes. (Item F5*)	53%	54%	-1%	26%	-25%	5%	-5%
Problems often occur in the exchange of information across hospital units. (Item F7*)	47%	48%	-1%	25%	-19%	5%	-5%
Shift changes are problematic for patients in this hospital. (Item F11*)	50%	49%	1%	32%	-18%	6%	-5%

Note: Based on data from 161 trending hospitals. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results, but the exact number of respondents will vary from item to item. The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Table 7-5. Trending Hospitals: Average Percentage of Respondents Giving Their Work Area/Unit a Patient Safety Grade of Excellent or Very Good—2021 SOPS Hospital 1.0 Database

| Work Area/Unit Patient Safety Grade (E1) | Percentage of Respondents Within Hospitals | | | | | | |
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
Excellent or Very Good	78%	79%	-1%	26%	-27%	6%	-6%

Note: Based on data from 161 trending hospitals that had data for this item. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results. Most recent, previous, and change columns display average percent positive scores for the trending hospitals.

Table 7-6. Trending Hospitals: Average Percentage of Respondents Reporting One or More Events in the Past 12 Months—2021 SOPS Hospital 1.0 Database

| Events Reported in the Past 12 Months (G1) | Percentage of Respondents Within Hospitals | | | | | | |
	Most Recent	Previous	Change	Maximum Increase	Maximum Decrease	Average Increase	Average Decrease
1 or more events	47%	44%	3%	27%	-16%	7%	-4%

Note: Based on data from 161 trending hospitals that had data for this item. The number of respondents was 107,391 for the most recent results and 106,071 for the previous results. Most recent, previous, and change columns display average percent positive scores for the trending hospitals.

Bar Charts of Trending Hospital 1.0 Database 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 composite measures.

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.

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

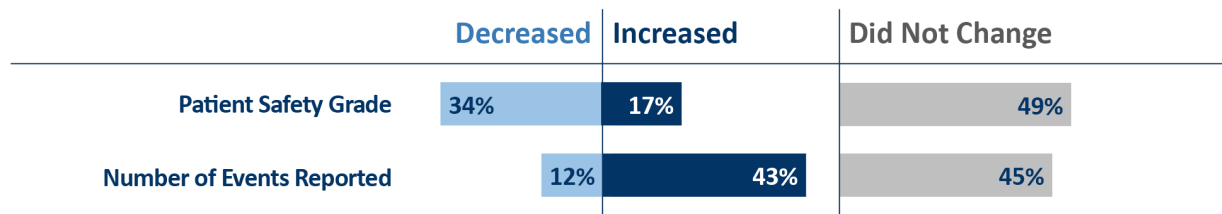**Chart 7-1. Trending Hospitals: Percentage of 2021 Hospital 1.0 Database Hospitals That Increased, Decreased, or Did Not Change on Each Composite Measure by 5 Percentage Points or More**

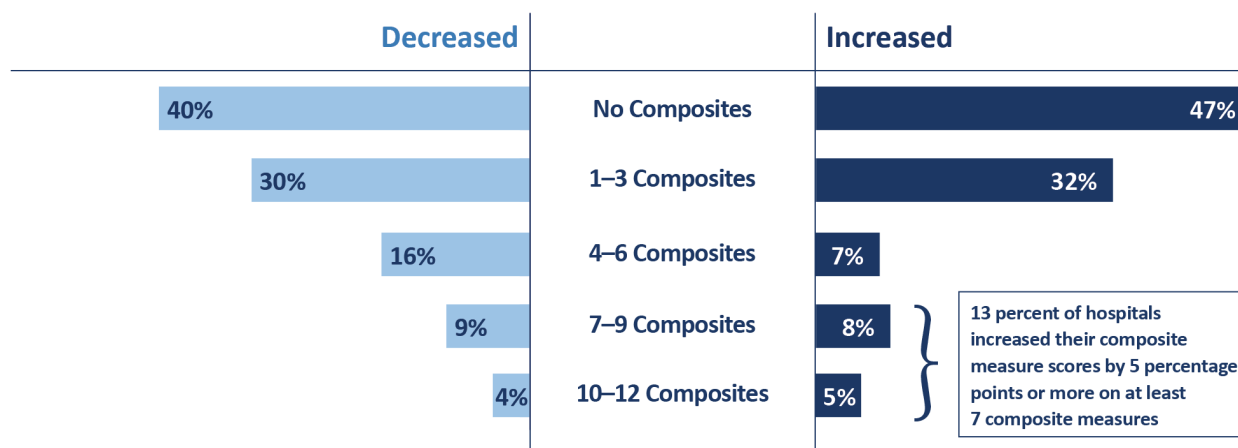| Patient Safety Culture Composite Measure	Decreased	Increased	Did Not Change
Nonpunitive Response to Error	16%	24%	60%
Handoffs & Transitions	23%	21%	56%
Staffing	24%	20%	55%
Organizational Learning— Continuous Improvement	22%	19%	58%
Teamwork Across Units	23%	19%	59%
Frequency of Events Reported	20%	18%	62%
Management Support for Patient Safety	40%	18%	42%
Overall Perceptions of Patient Safety	25%	16%	59%
Communication Openness	19%	14%	67%
Feedback & Communication About Error	20%	14%	66%
Teamwork Within Units	14%	14%	73%
Supervisor/Manager Expectations & Actions Promoting Patient Safety	16%	12%	72%

Note: Based on data from 161 trending hospitals. Percentages may not add to 100% due to rounding.

Chart 7-2. Trending Hospitals: Percentage of 2021 Hospital 1.0 Database Hospitals That Increased, Decreased, or Did Not Change by 5 Percentage Points or More on Work Area/Unit Patient Safety Grade (E1) and Number of Events Reported (G1)

	Decreased	Increased	Did Not Change
Patient Safety Grade	34%	17%	49%
Number of Events Reported	12%	43%	45%

Note: Based on data from 161 trending hospitals that responded to these items. Average Percent Positive for Patient Safety Grade is based on those respondents that answered "Excellent" or "Very Good" and Number of Events Reported who answered "1 or more events"

Chart 7-3. Trending Hospitals: Distribution of 2021 Hospital 1.0 Database Hospitals by Number of Composite Measures That Increased or Decreased by 5 Percentage Points or More

Decreased		Increased
40%	No Composites	47%
30%	1–3 Composites	32%
16%	4–6 Composites	7%
9%	7–9 Composites	8%
4%	10–12 Composites	5%

13 percent of hospitals increased their composite measure scores by 5 percentage points or more on at least 7 composite measures

Note: Composite measures that increased or decreased and had a change score of 5 percentage points or more. Percentages may not add to 100 percent due to rounding.

8 Database Results Over Time: 2007 to 2021

In this chapter, we present trends in average composite measure percent positive scores for the SOPS Hospital 1.0 Database from 2007 to 2021. Scores are based on the hospitals that submitted to the database for any of these given years. From 2007 to 2012, the SOPS Hospital 1.0 Database accepted data yearly, but beginning in 2014 data were typically accepted every 2 years.

The number of hospitals in the SOPS Hospital 1.0 Database varies by year, ranging from 320 to 1,128 hospitals.

Overall, from 2007 to 2021, SOPS Hospital 1.0 Database results have shown improvement for all composite measures, except for the Staffing and Management Support for Patient Safety composite measures.

The data presented in the charts are arranged from highest to lowest average percent positive based on results from the 2021 SOPS Hospital 1.0 Database composite measure rank order.

Highlights

From 2007 to 2021, *Teamwork Within Units and Supervisor/Manager Expectations & Actions Promoting Patient Safety* remained the two most positive composite measures

From 2007 to 2021, *Frequency of Events Reported* showed the highest increase in average percent positive response (9 percent) of all composite measures

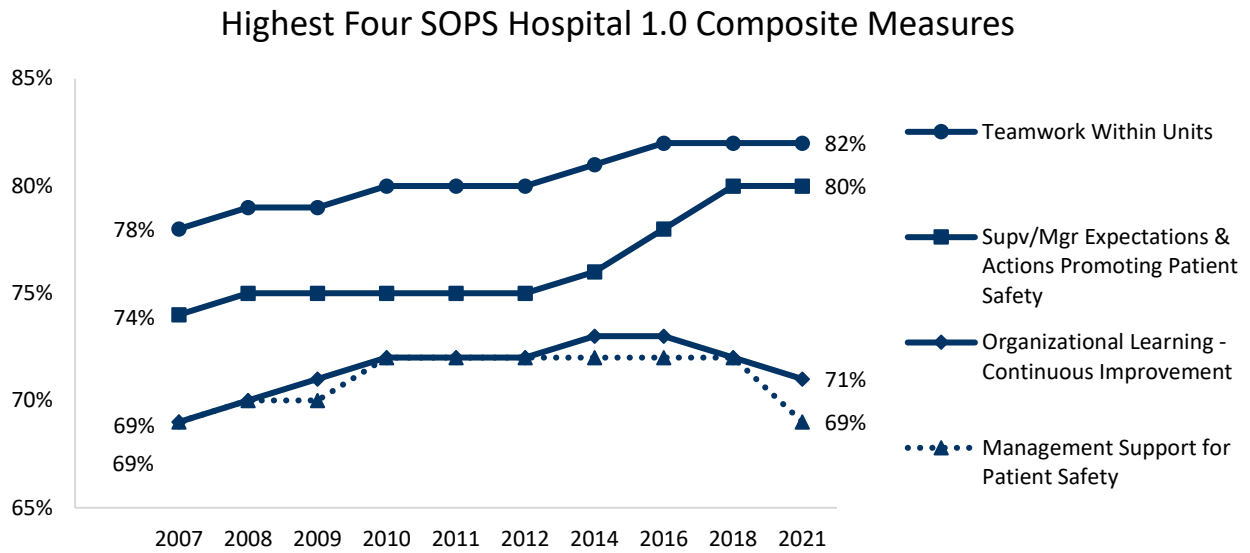## Chart 8-1. Highest SOPS Hospital Composite Measure Results Over Time—2007 to 2021 SOPS Hospital 1.0 Database

Highest Four SOPS Hospital 1.0 Composite Measures

Legend:
- Teamwork Within Units
- Supv/Mgr Expectations & Actions Promoting Patient Safety
- Organizational Learning - Continuous Improvement
- Management Support for Patient Safety

Chart 8-2. Middle SOPS Hospital Composite Measure Results Over Time—2007 to 2021 SOPS Hospital 1.0 Database
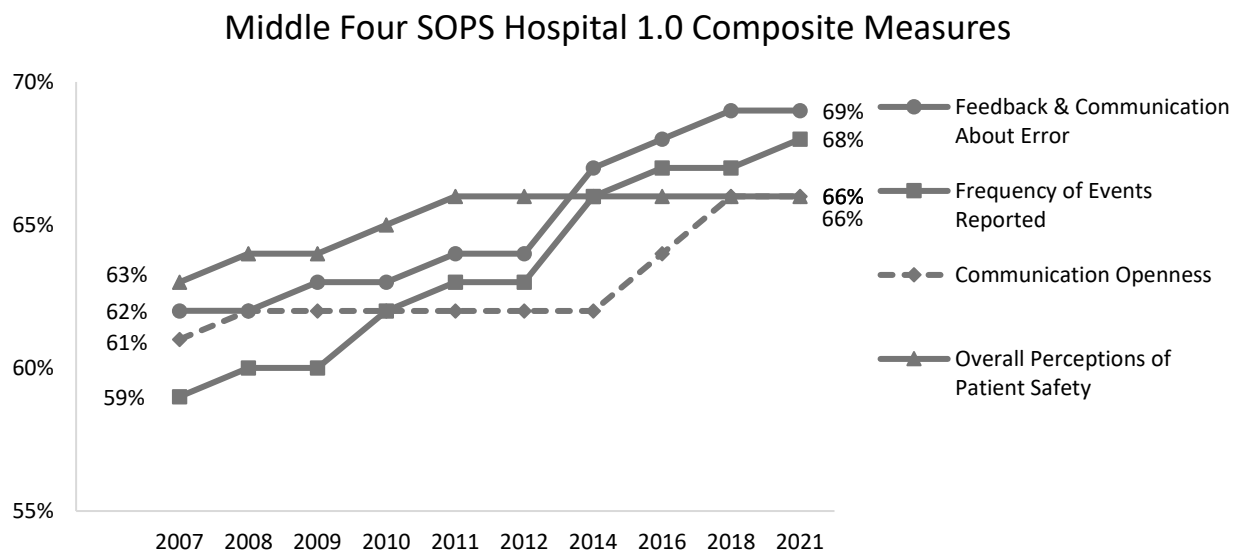
Middle Four SOPS Hospital 1.0 Composite Measures

Legend:
- Feedback & Communication About Error
- Frequency of Events Reported
- Communication Openness
- Overall Perceptions of Patient Safety

Lowest Four SOPS Hospital 1.0 Composite Measures

Legend:
- Teamwork Across Units
- Staffing
- Nonpunitive Response to Error
- Handoffs & Transitions

Data labels: 57%, 55%, 45%, 43%, 61%, 53%, 49%, 48%

X-axis: 2007, 2008, 2009, 2010, 2011, 2012, 2014, 2016, 2018, 2021

Y-axis: 40%, 45%, 50%, 55%, 60%, 65%
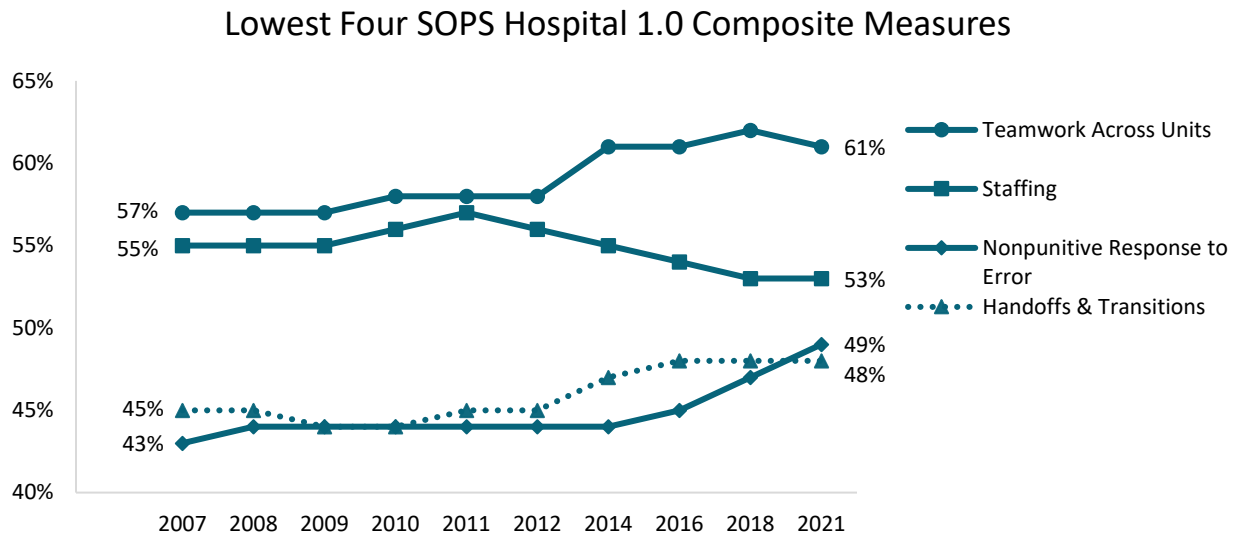
9 What's Next? Action Planning for Improvement

The AHRQ Surveys on Patient Safety Culture are important sources of information for healthcare organizations striving to improve patient safety and can be used as an effective starting point for action planning to make 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 the form 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:

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

Communicate your action plan:

10. 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.

Improvement Resources for Users of the AHRQ Hospital Survey

The AHRQ *Improving Patient Safety in Hospitals: A Resource List for Users of the AHRQ Hospital Survey on Patient Safety Culture* contains references to websites and other practical resources hospitals can use to implement changes to improve patient safety culture and patient safety. It includes information on resources such as the Framework for Safe, Reliable, and Effective Care and TeamSTEPPS®. The resource list is not a complete list of all available resources but provides initial guidance to hospitals looking for information about patient safety initiatives.

References

Agency for Healthcare Research and Quality. Hospital Survey on Patient Safety Culture. https://www.ahrq.gov/sops/surveys/hospital/index.html. Accessed February 23, 2021.

American Hospital Association. 2019 AHA Annual Survey Database. www.ahadata.com/aha-annual-survey-database. Accessed February 23, 2021.

Sorra J, Gray L, Franklin M, Streagle S, Tesler R, Vithidkul A. Action Planning Tool for the AHRQ Surveys on Patient Safety Culture. (Prepared by Westat, Rockville, MD, under Contract No. HHSA290201300003C). Rockville, MD: Agency for Healthcare Research and Quality; January 2016. AHRQ Publication No. 16-0008-EF. https://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/planningtool.html. Accessed February 23, 2021.

Notes: Description of Data Cleaning, Calculations, and Data Limitations

This section provides additional detail regarding how various statistics presented in this report were calculated, as well as data limitations.

Data Cleaning

Each participating hospital submitted individual-level survey data. Once the data were submitted, response frequencies were tabulated for each hospital to find out-of-range and missing values or other data anomalies. When data outliers or other inconsistencies were identified, we contacted the hospitals and asked them to make corrections and resubmit their data. In addition, when uploading their data, each participating hospital received a copy of its data frequencies to verify that the dataset submitted was correct.

The data were also cleaned for response biases (e.g., when respondents provide the same answer for all positively worded items and negatively worded items within the same section of the survey). An example of a positively worded item is A2—*We have enough staff to handle the workload*, and an example of a negatively worded item is A17—We have patient safety problems in this unit.

Both positively and negatively worded items are in sections A, B, C, and F. When respondents supplied the same answer for every item in sections A, B, C, and F, the items in those sections were considered "missing" because those sections have both positively and negatively worded items. After this initial review, respondents with missing answers for all items in sections A, B, C, D, E, F, and G were deleted before analysis.

In addition, if respondents marked the same answer for all items within section A, B, C, or F, those items were also considered missing. 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, we asked hospitals to provide the number of completed, returned surveys and the total number of providers and staff who received a survey. Incomplete surveys are those surveys with missing answers for all questions in sections A, B, C, D, E, F, and G. We then calculated response rates using the formula below:

$$\text{Response Rate} = \frac{\text{Number of complete, returned surveys} - \text{Incompletes}}{\text{Number of eligible providers and staff who received a survey}}$$

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 SOPS Hospital 1.0 composite measures use the frequency response option (*Communication Openness, Feedback and Communication About Error*, and *Frequency of Events Reported*) while the other nine composite measures use the agreement response option.

The Overall Patient Safety Grade Item uses a 5-point response scale ranging from "Poor" to "Excellent" (Poor, Fair, Good, Very good, Excellent).

The Number of Events Reported iten uses a 6-point response scale ranging from "No event reports" to "21 event reports or more" (No event reports, 1 to 2 event reports, 3 to 5 event reports, 6 to 10 event reports, 11 to 20 event reports, 21 event reports or more).

Item Percent Positive Response

The survey includes 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"). Calculating the percent positive response for positively worded items is different from calculating the percent positive response for 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*, then the item percent positive response for that hospital would 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 to 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*, then the item percent positive response will be 80 percent positive (i.e., 80 percent of respondents *do not* believe they have patient safety problems in their unit).

Composite Measure Percent Positive Response

The 12 SOPS Hospital composite measures are each composed of three or four survey items. We calculate composite measure scores for each hospital by averaging the percent positive response on all of the items within a composite measure. For example, for a three-item composite measure, if the percent positive responses for the items were 50 percent, 50 percent, and 65 percent, the hospital's composite measure percent positive response would be the average of these three percentages, or 55 percent positive.

Item and Composite Measure Percent Positive Scores

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

Table N1 shows an example of computing a composite measure percent positive score for a single hospital for the Supervisor/Manager Expectations & Actions Promoting Patient Safety composite measure. The composite measure 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.

Table N1. Example of Computing Item and Composite Measure 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 Measure % Positive Score = (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 four item percent positive scores results in a composite measure percent positive score of 50 percent on the *Supervisor/Manager Expectations & Actions Promoting Patient Safety* composite measure.

Table N2 shows examples of computing the percent positive response for Overall Patient Safety Grade (Item E1) and Number of Events Reported (Item G1).

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

Survey 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 (item E1) percent positive response is calculated by adding together the percentage of respondents who answered "Excellent" or "Very Good" and then dividing that sum by the total number of responses to item E1. The Number of Events Reported (item G1) percent positive response is calculated by adding together the percentage of respondents who answered that they reported one or more events in the past 12 months and then dividing that sum by the total number of responses to item G1.

Statistically "Significant" Differences Between Scores

You may be interested in determining the statistical significance of differences between your scores and the database scores, or between scores in various breakout categories (e.g., hospital bed size, teaching status). 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 one percentage point 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. The standard deviations presented in the 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), then about 68 percent of all the database hospitals would have scores between 60 percent and 80 percent positive.

Minimum and Maximum Scores

The minimum (lowest) and maximum (highest) percent positive scores are presented for each composite measure and item. These scores provide information about the range of percent positive scores obtained by database hospitals and are actual scores from the lowest and highest scoring hospitals.

When comparing your data 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 provide 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 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 320 (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. In this case, j = 32 and g = .0, because 320 x .10 = 32.0.

If "g" equals 0, the 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 [($X_{(j)}$ + $X_{(j+1)}$)/2]. If "g" is *not* equal to 0, the percentile score is equal to the percent positive value of the hospital in the jth + 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 in Table N3). First, the percent positive scores are sorted from low to high on Composite Measure "A."

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

Hospital	Composite Measure "A" % Positive Score	
1	33%	
2	48%	←10th percentile score = 48%
3	52%	
4	60%	
5	63%	
6	64%	
7	66%	←50th percentile score = 65%
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 .10:
   (n x p = 12 x.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:
   1. "j" equals 1.
   2. 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. Because "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:

    1. "j equals 6.
    2. 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 measure and item. See examples below in Table N5.

Table N5. Sample Percentile Statistics

Survey Item	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Item 1	36%	11.26%	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

Overall Results Over Time: 2007 to 2021

The overall SOPS Hospital 1.0 Database results presented in Chapter 7 show changes in SOPS Hospital 1.0 Database Composite Measure average percent positive scores from 2007 to 2021. Because different hospitals and respondents participated at each data collection point, each data point represents a cross-sectional (i.e., point-in-time) analysis of the database over time. The composite measures are ordered from highest to lowest percent positive based on their respective 2021 SOPS Hospital 1.0 Database average percent positive scores.

Trending Hospitals: 2018 and 2021

Table N6 shows examples of the statistics provided in Chapter 8 of this report. 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 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 score from the most recent administration shows a decline and a positive number if the score from the most recent administration shows 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 examples of additional 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 measure or item. Similarly, the maximum decrease shows the score from the hospital or hospitals with the largest percent positive score decrease.

We calculated the average increase by including only hospitals that had any increase in their most recent score; hospitals that had 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 had 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 publicly available patient safety culture data for hospitals (SOPS Hospital 1.0 Survey data), 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, the database only includes those hospitals that have administered the SOPS Hospital Survey 1.0 and were willing to submit their data to the database. As such, only a small percentage of hospitals in the United States (only about 5 percent) are represented (see Table 3-1 above).

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 relatively consistent with the distribution of hospitals registered with the American Hospital Association (AHA) (see Table 3-1 above).

Second, hospitals that administered the survey were not required to undergo any training and administered the survey in different ways. Some hospitals only administered paper surveys, others used only web-based surveys, and others used a combination of these two methods. It is possible that these different survey 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 of their staff and providers, while others administered the survey to a sample of only some staff and providers. Survey administration statistics for database hospitals, such as survey administration modes and response rates, are provided in Chapter 2.

Finally, the data that hospitals submitted have been cleaned for out-of-range values (e.g., invalid response values due to data entry errors), straight-lining (where responses to all survey items in sections A, B, C, and F were the same), and blank records (where responses to all survey items were missing, except for demographic items). 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 SOPS Hospital 1.0 Database hospitals presented, Part II of the report presents data tables showing average percent positive scores on the survey composite measures 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 due to the large number of them. The appendixes are available online at ahrq.gov/sops/databases/hospital.

Highlights From Appendix A: Overall Results by Hospital Characteristics

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

- Hospitals with the smallest bed size *(6–24 beds)* had the highest Composite Measure Average score (74 percent positive); larger hospitals *(200-299, 300-399, and 400-499 beds)* had the lowest (62 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" (86 percent); hospitals with *400–499 beds* had the lowest (71 percent).

- Hospitals with *200-299 beds* had the highest percentage of respondents reporting one or more events in the past year (50 percent); hospitals with *400-499 beds* had the lowest (45 percent).

Teaching Status and Ownership (Table A-5, A-7, A-8)

- *Nonteaching* hospitals and *Teaching* hospitals had less than a 5 percentage point difference on the Composite Measure Average.

- *Not-for-profit* hospitals had the highest Composite Measure Average score (66 percent positive); *For-profit* hospitals had the lowest (61 percent positive).

- *Not-for-profit* hospitals had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (78 percent); *For profit* hospitals had the lowest (70 percent).

- *For-profit* hospitals had the highest percentage of respondents reporting one or more events in the past year (51 percent); *Government hospitals* had the lowest (44 percent).

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

- *West South Central* hospitals had the highest Composite Measure Average score (69 percent positive); *Mountain/Pacific/Associated Territories* hospitals had the lowest (59 percent positive).

- *West South Central* hospitals had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (81 percent); *Mountain/Pacific/Associated Territories* hospitals had the lowest (69 percent).

- *Mountain/Pacific/Associated Territories* and *East North Central* hospitals had the highest percentage of respondents who reported one or more events in the past year (51 percent); *East South Central* hospitals had the lowest (42 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 Composite Measure Average score (72 percent positive); *Emergency* had the lowest (59 percent positive).

- *Rehabilitation* had the highest percentage of respondents who gave their work area/unit a patient safety grade of "Excellent" or "Very Good" (89 percent); *Emergency* had the lowest (63 percent).

- *ICU (Any Type)* had the highest percentage of respondents reporting one or more events in the past year (65 percent); *Anesthesiology* had the lowest (35 percent).

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

- *Administration/Management* had the highest Composite Measure Average score (78 percent positive); *Patient Care Asst./Hospital Aide/Care Partner* and *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" (90 percent); *RN/LVN/LPN* had the lowest (70 percent).

- *Pharmacists* had the highest percentage of respondents reporting one or more events in the past year (80 percent); *Unit Assistants/Clerks/Secretaries* had the lowest (18 percent).

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

- Respondents *without direct patient interaction* had a higher Composite Measure Average score (69 percent positive); Respondents *with direct patient interaction* had a lower score (64 percent positive)

- 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" (84 percent) than respondents *with direct patient interaction* (74 percent).

- Respondents *with direct patient interaction* had a higher percentage of respondents reporting one or more events in the past year (51 percent) than respondents *without* direct patient interaction (33 percent).

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

- Respondents who have worked *21 years or more* in their current work area/unit had the highest Composite Measure Average score (70 percent positive); respondents who have worked *1 to 5 years* had the lowest (64 percent positive).

- Respondents who have worked *less than 1 year* and *21 years or more* 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" (81 percent); respondents who have worked *1 to 5 years* had the lowest (74 percent).

- Respondents who have worked *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 (52 percent); respondents with *less than 1 year* had the lowest (34 percent).

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

Part III of the report contains Appendixes C and D, which presents trends over time for the 161 hospitals that administered the survey and submitted data to both the 2018 and 2021 database. 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 Hospital Results by Hospital Characteristics

- Bed size
- Teaching status
- Ownership
- Geographic region

Appendix D: Trending Hospital Results by Respondent Characteristics

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

The breakout tables are included in Appendixes C and D due to the 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 ahrq.gov/sops/databases/hospital.

Highlights From Appendix C: Trending Hospital Results by Hospital Characteristics

Bed Size (Table C-4)

- Hospitals with *6-49 beds* and those with *100-199 beds* increased by 5 percentage points for respondents who reported 1 or more events in the past year.

Teaching Status and Ownership (Tables C-5 to C-8)

- There were no increases in average percent positive scores of 5 percentage points or more by teaching status and ownership.

Geographic Region (Tables C-9, C-12)

- *West North Central* hospitals had the greatest increase (5 percentage points) on the *Handoffs & Transitions* composite measure.

- *New England/Mid Atlantic* hospitals had the largest increase (9 percentage points) for respondents who reported 1 or more events in the past year.

Highlights From Appendix D: Trending Hospital Results by Respondent Characteristics

Work Area/Unit (Tables D-1, D-4)

- *Psychiatry/Mental Health* increased by 5 percentage points on the *Nonpunitive Response to Error* composite measure.

- *Anesthesiology* increased by 5 percentage points on *Supervisor/Manager Expectations Promoting Patient Safety* and *Organizational Learning – Continuous Improvement*.

- *Obstetrics, Pharmacy,* and *Psychiatry/Mental Health* had the largest increase (6 percentage points) for respondents who reported 1 or more events in the past year.

Staff Position (Tables D-5, D-8)

- *Respiratory, Physical, Occupational, or Speech Therapists* increased 5 percentage points (61 percent to 66 percent) on the *Frequency of Events Reported* composite measure.

- *Technician (e.g., EKG, Lab, Radiology) and Unit Assistant/Clerk/Secretary* had the largest increase (6 percentage points) for respondents who reported 1 or more events in the past year.

Interaction With Patients (Tables D-9 to D-12)

- There were no increases in average percent positive scores of 5 percentage points or more by interaction with patients.

Tenure in Current Work Area/Unit (Table D-16)

- Respondents who have worked *less than 1 year* in their work area/unit had the largest increase (5 percentage points) for respondents who reported 1 or more events in the past year.