SURVEYS ON PATIENT SAFETY CULTURE

Surveys on Patient Safety Culture™

Hospital Survey 2.0: 2021 User Database Report

AHRQ Agency for Healthcare Research and Quality
PATIENT SAFETY

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Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey 2.0:

2021 User Database Report

Part I

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Overview

Surveys on Patient Safety Culture™

Findings from the 2021 Hospital 2.0 Survey Database

This overview of survey findings summarizes how hospital employees perceive 10 areas of patient safety culture based on the 2021 Surveys on Patient Safety Culture Hospital 2.0 Database.

172 participating hospitals

87,856 providers and staff respondents

10 areas of patient safety culture assessed in the survey

average percent positive of all 10 areas **71%**

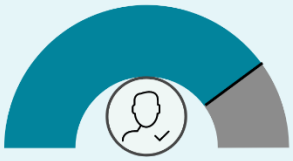
Areas of strength for most hospitals

82%

Teamwork

82% of respondents reported that they work as an effective team, help each other during busy times, and are respectful

80%

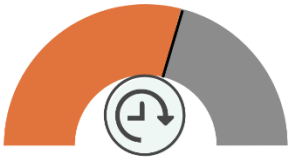


Supervisor, Manager, or Clinical Leader Support for Patient Safety

80% of respondents indicated that supervisors, managers, or clinical leaders consider staff suggestions, do not encourage shortcuts, and address patient safety concerns

Areas of potential for improvement for most hospitals

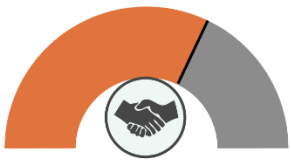
58%



Staffing and Work Pace

58% of respondents indicated there are enough staff to handle the workload, staff work appropriate hours, do not feel rushed, and there is appropriate reliance on temporary, float, or PRN staff.

64%



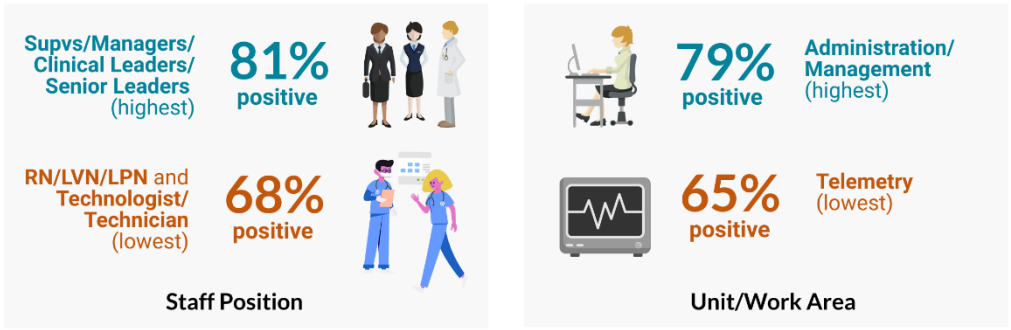
Handoffs and Information Exchange

64% of respondents indicated that important patient care information is transferred across hospital units and during shift changes

Other findings

Highest and lowest composite measure average score by hospital bed size

Highest and lowest composite measure average score by staff position and unit/work area



Overall Patient Safety Rating

Average respondent ratings of their unit/work area on patient safety

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 results with those of other hospitals on the Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey 2.0, the Agency for Healthcare Research and Quality (AHRQ) established the SOPS Hospital Survey 2.0 Database. The SOPS Hospital Survey 2.0, released by AHRQ in 2019, is a different version than the original SOPS Hospital Survey 1.0. The SOPS Hospital Survey 2.0 has fewer items and item wording is different than the 1.0 survey, as well as the names of some composite measures. More information about the 2.0 survey can be found on the AHRQ website at ahrq.gov/sops/surveys/hospital.

The 2021 SOPS Hospital 2.0 User Database Report is the first database based on voluntarily submitted 2.0 survey data from 172 hospitals and includes 87,856 provider and staff respondents. Submitting hospitals, which included some hospitals that participated in the pilot study, administered the 2.0 survey between November 2018 and October 2020. Most of the hospitals (85%) administered the 2.0 survey during the COVID-19 pandemic (March 2020 through October 2020), which may have affected their survey scores.

Database results from hospitals that submitted SOPS Hospital Survey 1.0 data are available in a separate report titled *Surveys on Patient Safety Culture™ (SOPS®) Hospital Survey 1.0: 2021 User Database Report*, which is available on the AHRQ website at www.ahrq.gov/sops.

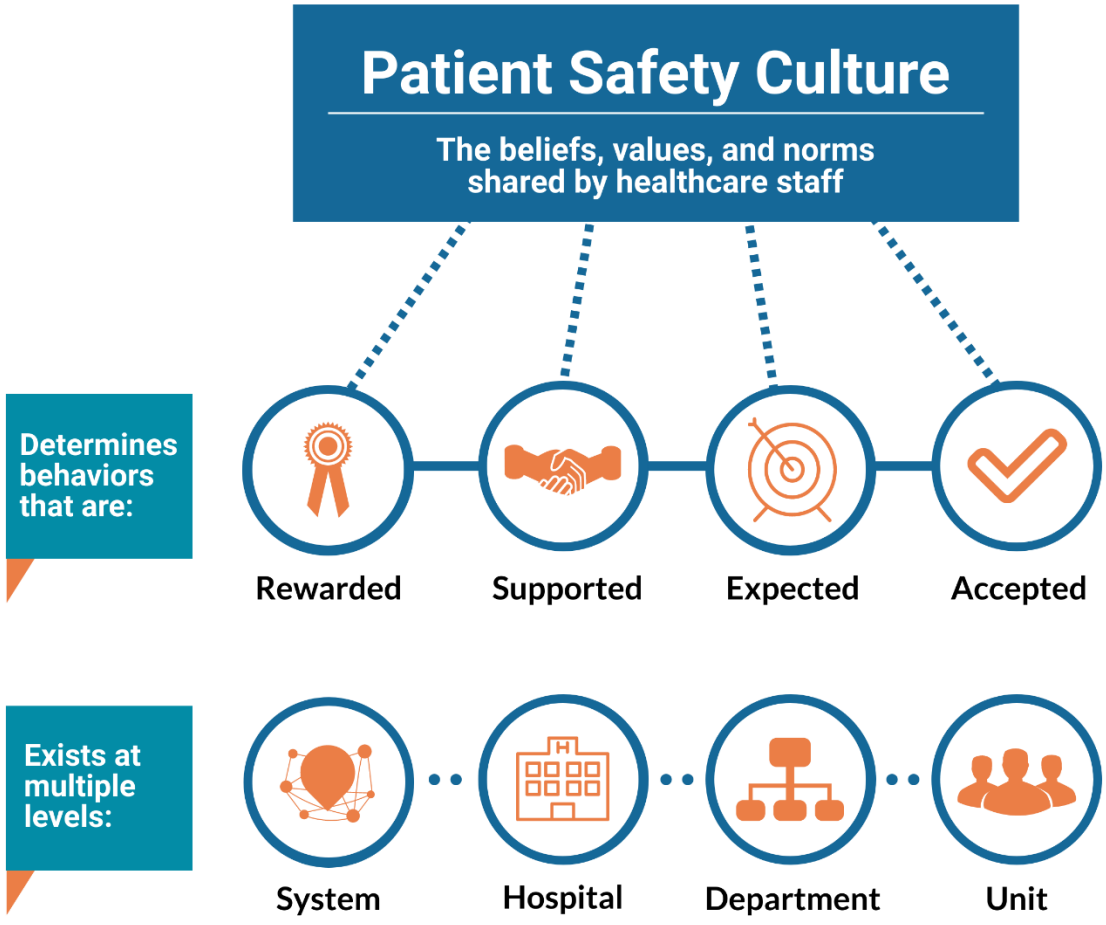
This report presents statistics (averages, standard deviations, minimum and maximum scores, and percentiles) on the patient safety culture composite measures and items from Version 2.0 of the SOPS Hospital Survey. It also includes two appendixes:

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

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



Survey Content

AHRQ funded the development of the SOPS Hospital Survey 2.0, which includes 32 items that make up 10 composite measures of patient safety culture. Table 1-1 defines each of the 10 SOPS Hospital Survey 2.0 composite measures.

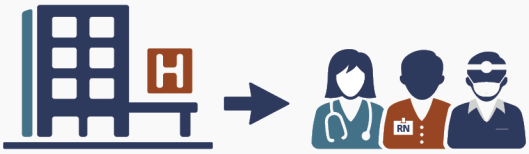
Table 1-1. SOPS Hospital Survey 2.0 Composite Measures and Definitions

SOPS Hospital Survey 2.0 Composite Measures	Definition: The extent to which…
Communication About Error	Staff are informed when errors occur, discuss ways to prevent errors, and are informed when changes are made.
Communication Openness	Staff speak up if they see something unsafe and feel comfortable asking questions.
Handoffs and Information Exchange	Important patient care information is transferred across hospital units and during shift changes.
Hospital Management Support for Patient Safety	Hospital management shows that patient safety is a top priority and provides adequate resources for patient safety.
Organizational Learning—Continuous Improvement	Work processes are regularly reviewed, changes are made to keep mistakes from happening again, and changes are evaluated.
Reporting Patient Safety Events	Mistakes of the following types are reported: (1) mistakes caught and corrected before reaching the patient and (2) mistakes that could have harmed the patient but did not.
Response to Error	Staff are treated fairly when they make mistakes and there is a focus on learning from mistakes and supporting staff involved in errors.
Staffing and Work Pace	There are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary, float, or PRN staff.
Supervisor, Manager, or Clinical Leader Support for Patient Safety	Supervisors, managers, or clinical leaders consider staff suggestions for improving patient safety, do not encourage taking shortcuts, and take action to address patient safety concerns.
Teamwork	Staff work together as an effective team, help each other during busy times, and are respectful.

In addition to items that make up these composite measures, the survey includes two single-item measures asking respondents how many patient safety events they have reported and to provide an overall rating on patient safety for their unit/work area. Respondents are also asked to provide answers to six background demographic questions.

2 Survey Administration Statistics

Highlights



172
Participating Hospitals

87,856
Respondents

47%
Average Hospital Response Rate

Table 2-1. Overall Response Statistics—2021 SOPS Hospital 2.0 Database

Overall Response Information	Statistic
Number of respondents	87,856
Number of surveys administered	220,854
Overall response rate	40%
Average Response Information	**Statistic**
Average number of respondents per hospital (range: 26 to 4,686)	511
Average number of surveys administered per hospital (range: 49 to 15,895)	1,284
Average hospital response rate (range: 6% to 98%)	47%

Table 2-2. Survey Administration Mode Statistics—2021 SOPS Hospital 2.0 Database

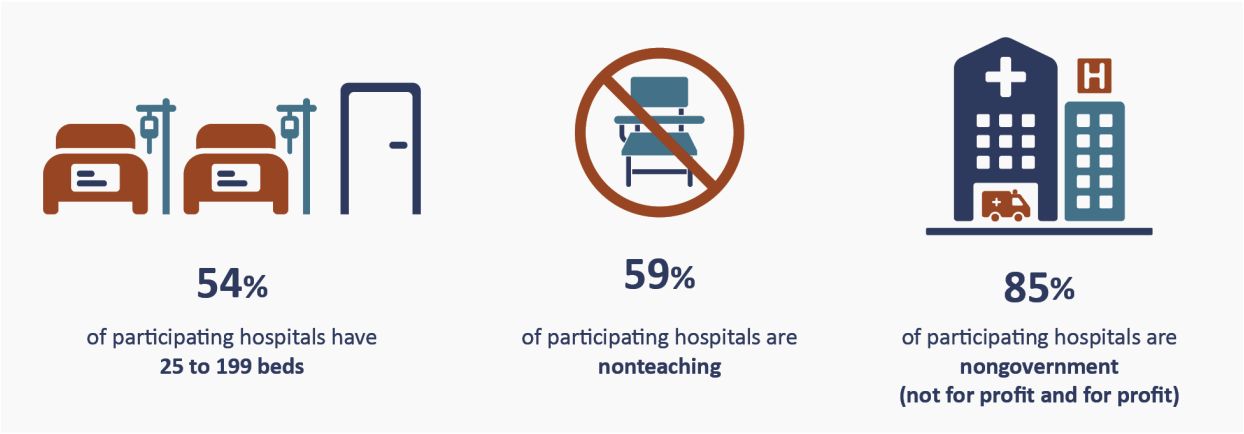
	Hospitals		Respondents		Average Response Rate
Survey Administration Mode	**Number**	**Percent**	**Number**	**Percent**	**Percent**
Paper only	16	9%	2,343	3%	47%
Web only	143	83%	75,407	86%	46%
Both paper and web	13	8%	10,106	12%	52%
Total	172	100%	87,856	100%	--

3 Hospital Characteristics

This chapter presents information about the characteristics of hospitals included in the 2021 SOPS Hospital 2.0 Database, including 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 also compared with the distribution of AHA-registered hospitals included in the 2019 American Hospital Association Annual Survey of Hospitals.[i]

Highlights



[i] 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 2.0 Database by Hospital Characteristics Compared With AHA-Registered Hospitals

Hospital Characteristics	AHA-Registered Hospitals (n = 6,162)		Database Hospitals (n = 172)		Database Respondents (n = 87,856)	
Bed Size	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
6-24 beds	845	14%	14	8%	1,039	1%
25-49 beds	1,407	23%	39	23%	4,322	5%
50-99 beds	1,170	19%	21	12%	5,228	6%
100-199 beds	1,228	20%	32	19%	13,584	15%
200-299 beds	630	10%	23	13%	13,789	16%
300-399 beds	372	6%	18	10%	12,917	15%
400 or more beds	510	8%	25	15%	36,977	42%
Teaching Status	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Teaching	2,589	42%	71	41%	52,384	60%
Nonteaching	3,573	58%	101	59%	35,472	40%
Ownership	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Government (Federal and non-Federal)	1,435	23%	26	15%	8,528	10%
Nongovernment (not for profit and for profit)	4,727	77%	146	85%	79,328	90%
Geographic Region	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
New England/Mid-Atlantic	790	13%	13	8%	9,624	11%
South Atlantic/Associated Territories	987	16%	44	26%	34,351	39%
East Central	1,388	23%	31	18%	15,285	17%
West Central	1,808	29%	34	20%	10,467	12%
Mountain	538	9%	38	22%	11,989	14%
Pacific/Associated Territories	651	11%	12	7%	6,140	7%

Note: Percentages may not add to 100% due to rounding. States are categorized into 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 Central: AL, IL, IN, KY, MI, MS, OH, TN, WI
- West Central: AR, IA, KS, LA, MN, MO, ND, NE, OK, SD, TX
- Mountain: AZ, CO, ID, MT, NM, NV, UT, WY
- Pacific/Associated Territories: AK, CA, HI, OR, WA, American Samoa, Guam, Marshall Islands, Northern Mariana Islands

4 Respondent Characteristics

This chapter describes the characteristics of the 87,856 respondents in the 2021 SOPS Hospital 2.0 Database (Tables 4-1 to 4-3).

Highlights

Largest 2 Staff Positions

33% Registered nurse (RN)
10% Technologist, Technician (EKG, Lab, Radiology)

Largest 2 Unit/Work Areas

7% Combined Medical/Surgical Unit
7% Pre Op, Operating Room/Suite, PACU/Post Op, Peri Op

Table 4-1. Distribution of 2021 SOPS Hospital 2.0 Database by Staff Position

Respondent Characteristics	Respondents	
Hospital Staff Position	**Number**	**Percent**
Nursing		
Advanced Practice Nurse (NP, CRNA, CNS, CNM)	948	1%
Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)	748	1%
Patient Care Aide, Nursing Assistant	6,003	7%
Registered Nurse (RN)	27,950	33%
Nursing Subtotal	35,649	42%
Medical		
Physician Assistant	290	<1%
Resident, Intern	1,324	2%
Physician, Attending, Hospitalist	2,448	3%
Medical Subtotal	4,062	5%
Other Clinical Position		
Dietitian	426	1%
Pharmacist, Pharmacy Technician	2,794	3%
Physical, Occupational, or Speech Therapist	2,602	3%
Psychologist	106	<1%
Respiratory Therapist	1,766	2%
Social Worker	1,144	1%
Technologist, Technician (EKG, Lab, Radiology)	8,354	10%
Other Clinical Position Subtotal	17,192	20%
Supervisor, Manager, Clinical Leader, Senior Leader		
Supervisor, Manager, Department Manager, Clinical Leader,	6,193	7%
Senior Leader, Executive, C-Suite	568	1%
Supervisor, Manager, Clinical Leader, Senior Leader Subtotal	6,761	8%
Support		
Facilities	1,054	1%
Food Services	1,422	2%
Housekeeping, Environmental Services	1,946	2%
Information Technology, Health Information Services, Clinical	1,568	2%
Security	711	1%
Transporter	636	1%
Unit Clerk, Secretary, Receptionist, Office Staff	6,089	7%
Support Subtotal	13,426	16%
Other Staff Position	7,954	9%
Total	85,044	100%
Missing	2,812	
Overall total	87,856	

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

Table 4-2. Distribution of 2021 SOPS Hospital 2.0 Database by Unit/Work Area

Respondent Characteristics	Respondents	
Unit/Work Area	**Number**	**Percent**
Multiple Units, No Specific Unit	5,527	6%
Medical/Surgical Units		
Combined Medical/Surgical Unit	5,721	7%
Medical Unit (Nonsurgical)	2,950	3%
Surgical Unit	2,522	3%
Medical/Surgical Units Subtotal	11,193	13%
Patient Care Units		
Cardiology	2,175	3%
Emergency Department, Observation, Short Stay	5,247	6%
Gastroenterology	341	<1%
ICU (All Adult Types)	4,670	5%
Labor and Delivery, Obstetrics and Gynecology	3,397	4%
Oncology, Hematology	1,407	2%
Pediatrics (including NICU, PICU)	3,262	4%
Psychiatry, Behavioral Health	1,941	2%
Pulmonology	454	1%
Rehabilitation, Physical Medicine	2,880	3%
Telemetry	2,019	2%
Patient Care Units Subtotal	27,793	32%
Surgical Services		
Anesthesiology	522	1%
Endoscopy, Colonoscopy	412	<1%
Pre Op, Operating Room/Suite, PACU/Post Op, Peri Op	5,663	7%
Surgical Services Subtotal	6,597	8%
Clinical Services		
Pathology, Lab	3,302	4%
Pharmacy	2,722	3%
Radiology, Imaging	4,785	6%
Respiratory Therapy	1,109	1%
Social Services, Case Management, Discharge Planning	1,576	2%
Clinical Services Subtotal	13,494	16%
Administration/Management		
Administration, Management	2,377	3%
Financial Services, Billing	1,057	1%
Human Resources, Training	592	1%
Information Technology, Health Information Management, Clinical Informatics	1,642	2%
Quality, Risk Management, Patient Safety	803	1%
Administration/Management Subtotal	6,471	8%

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

Table 4-2. Distribution of 2021 SOPS Hospital 2.0 Database by Unit/Work Area, (continued)

Respondent Characteristics	Respondents	
Unit/Work Area (Continued)	**Number**	**Percent**
Support Services		
Admitting/Registration	1,452	2%
Food Services, Dietary	1,816	2%
Housekeeping, Environmental Services, Facilities	2,666	3%
Security Services	671	1%
Transport	640	1%
Support Services Subtotal	7,245	8%
Other Unit/Work Area	7,663	9%
Total	85,983	100%
Missing	1,873	
Overall total	87,856	

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

Table 4-3. Distribution of 2021 SOPS Hospital 2.0 Database by Other Respondent Characteristics

Respondent Characteristics	Respondents	
Tenure in Hospital	**Number**	**Percent**
Less than 1 year	10,861	13%
1 to 5 years	32,086	38%
6 to 10 years	13,783	16%
11 or more years	26,859	32%
Total	83,589	100%
Missing	4,267	
Overall total	87,856	
Tenure in Unit/Work Area	**Number**	**Percent**
Less than 1 year	14,066	17%
1 to 5 years	36,851	44%
6 to 10 years	13,239	16%
11 or more years	19,059	23%
Total	83,215	100%
Missing	4,641	
Overall total	87,856	
Hours Worked per Week in Hospital	**Number**	**Percent**
Less than 30 hours per week	9,507	11%
30 to 40 hours per week	52,954	63%
More than 40 hours	21,168	25%
Total	83,629	100%
Missing	4,227	
Overall total	87,856	
Interaction With Patients	**Number**	**Percent**
Yes, I typically have direct interaction or contact with patients	62,749	75%
No, I typically do NOT have direct interaction or contact with patients	20,624	25%
Total	83,373	100%
Missing	4,483	
Overall total	87,856	

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

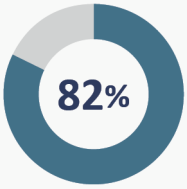
5 Overall Results

This chapter presents overall findings for the 2021 SOPS Hospital 2.0 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 for 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 summarized for all respondents, but this method would give greater weight to larger hospitals. Reporting the data at the hospital, rather than the respondent level, is important because culture is considered to be a group characteristic, not an individual characteristic.

Highlights

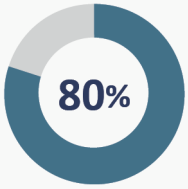
HIGHEST Scoring Composite Measures

Teamwork



of respondents "strongly agreed" or "agreed" that staff work together as an effective team, help each other during busy times, and are respectful

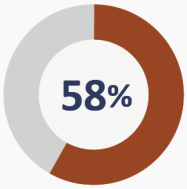
Supervisor, Manager, or Clinical Leader Support for Patient Safety



of respondents "strongly agreed" or "agreed" that supervisors, managers, or clinical leaders consider staff suggestions for improving patient safety, do not encourage shortcuts, and address patient safety concerns

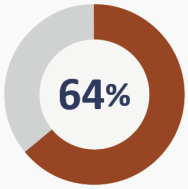
LOWEST Scoring Composite Measures

Staffing and Work Pace



of respondents "strongly agreed" or "agreed" that there are enough staff to handle the workload, staff work appropriate hours and do not feel rushed, and there is appropriate reliance on temporary, float, or PRN staff

Handoffs and Information Exchange



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

Composite Measure and Item Charts

This section provides the overall item and composite measure 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 10 SOPS Hospital 2.0 composite measures, summarized for all hospitals in the database. The SOPS Hospital 2.0 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 32 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.

Number of Events Reported

Chart 5-3 shows results from the item that asks respondents how many patient safety events they reported in the past 12 months.

Overall Rating on Patient Safety

Chart 5-4 shows results from the item that asks respondents to give their unit/work area an overall rating on patient safety.

Chart 5-1. Composite Measure Results
Average Percent Positive Response—2021 SOPS Hospital 2.0 Database

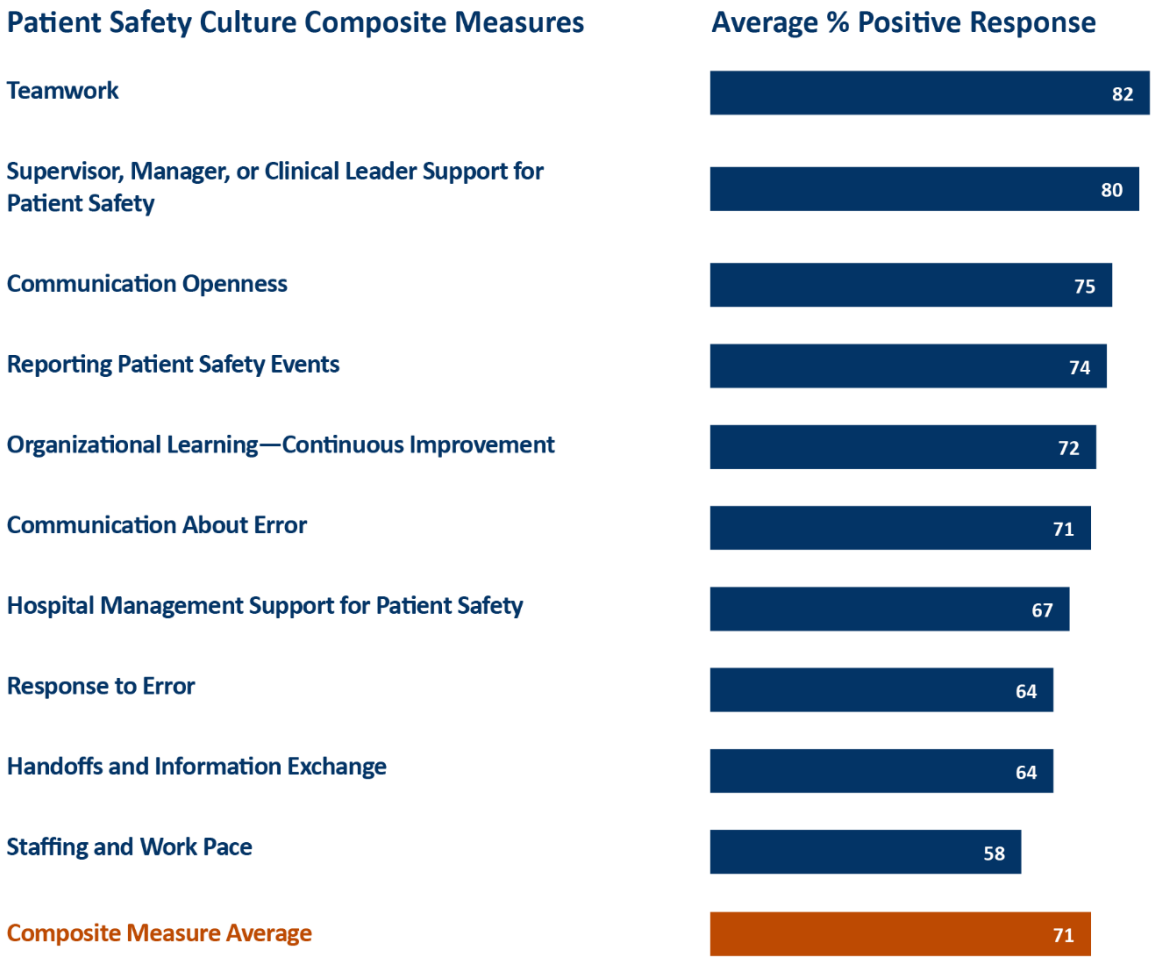
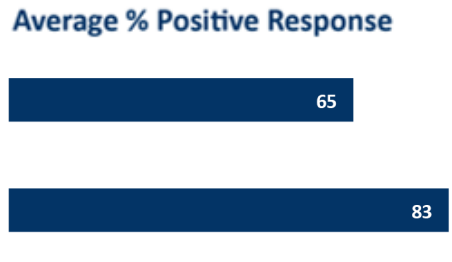


Chart 5-2. Item Results
Average Percent Positive Response—2021 SOPS Hospital 2.0 Database
(Page 1 of 4)

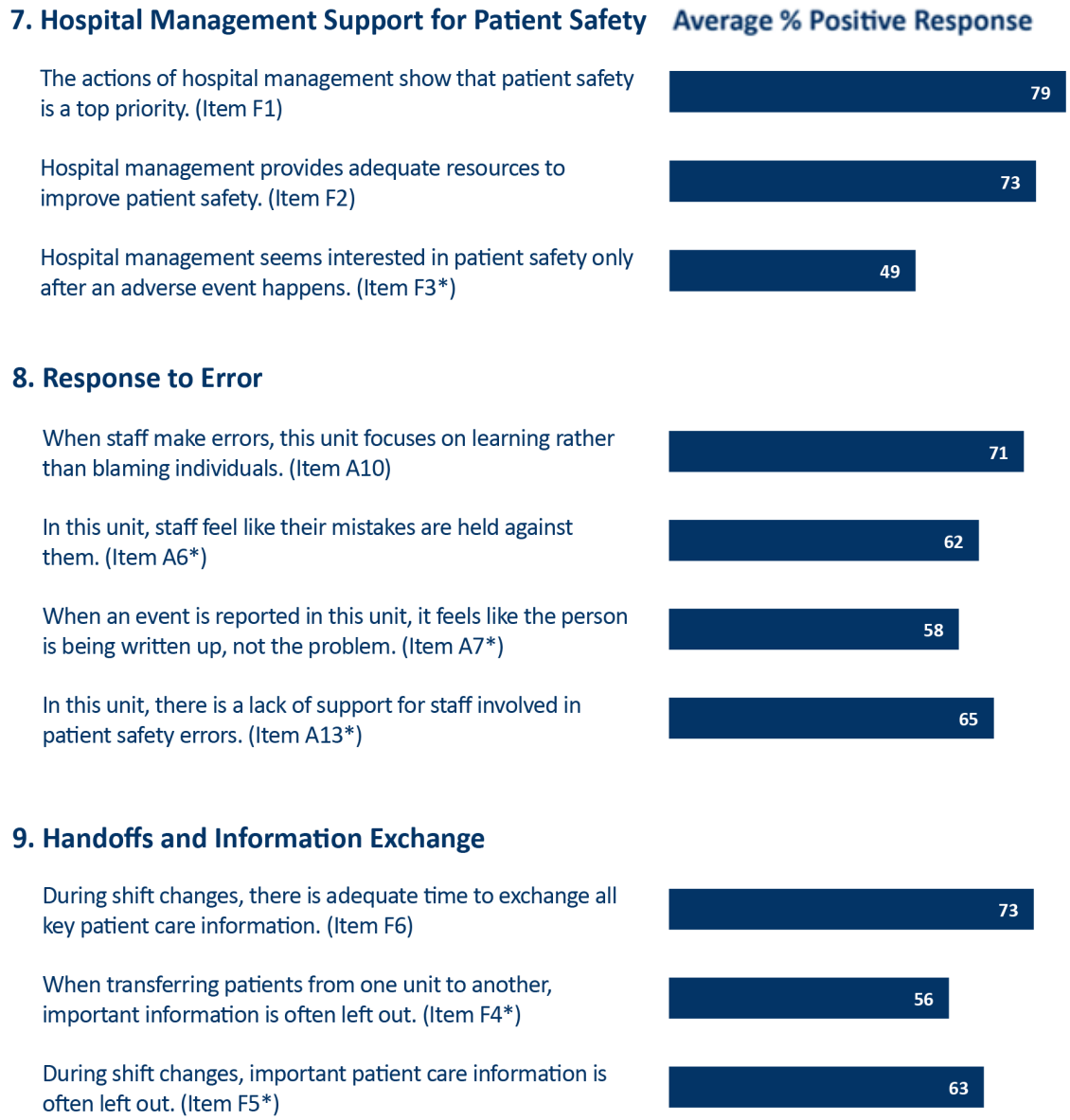
Note: The item's survey location is shown in parentheses after the item text. An * denotes a negatively worded item, where the % Disagree/Strongly Disagree or % Rarely/Never indicates a positive response.

Chart 5-2. Item Results
Average Percent Positive Response—2021 SOPS Hospital 2.0 Database
(Page 2 of 4)



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.

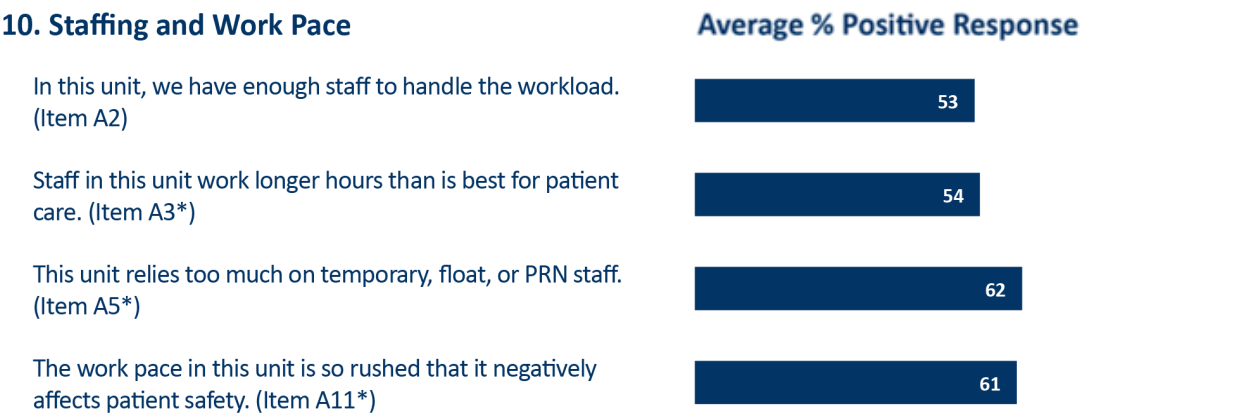
Chart 5-2. Item Results
Average Percent Positive Response—2021 SOPS Hospital 2.0 Database
(Page 3 of 4)



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 5-2. Item Results
Average Percent Positive Response—2021 SOPS Hospital 2.0 Database
(Page 4 of 4)

10. Staffing and Work Pace



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 the Number of Patient Safety Events Reported in the Past 12 Months—2021 SOPS Hospital 2.0 Database

D3. Number of Events Reported

In the past 12 months, how many patient safety events have you reported?

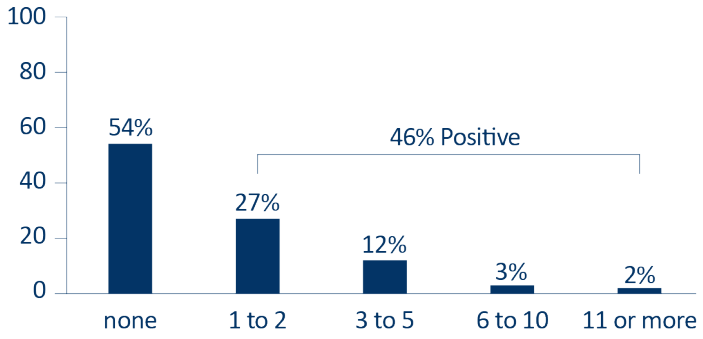
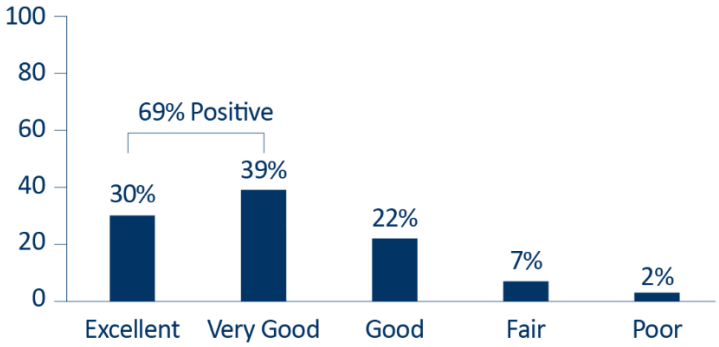


Chart 5-4. Item Results
Average Unit/Work Area Patient Safety Rating—2021 SOPS Hospital 2.0 Database

E1. Patient Safety Rating

How would you rate your unit/work area on patient safety?



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.

6 Comparing Hospital Results

The data in this report should be used 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 a hospital's survey results with the aggregate findings from the database, first calculate your hospital's percent positive response on the survey's items and 10 composite measures as well as the number of events reported and overall rating on patient safety. The Notes section at the end of this report describes how to calculate percent positive scores. Individual hospital results can then be compared with the database averages and the 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 might 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 10 SOPS Hospital 2.0 composite measures.

Table 6-2 presents statistics for each of the 32 survey items. Items are listed in their respective composite measure, with positively worded items listed before negatively worded items.

Table 6-3 presents statistics for the number of patient safety events reported. Statistics include average percent positive scores for hospital respondents who answered "1 to 2", "3 to 5," "6 to 10," and "11 or more."

Table 6-4 presents statistics for respondents' patient safety rating of their unit/work area within their hospital. Results presented in the table represent average percent positive scores for hospital respondents who answered "Excellent" or "Very Good."

Table 6-1. Composite Measure Results—2021 SOPS Hospital 2.0 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	82%	4.77%	70%	76%	79%	81%	85%	88%	95%
2. Supervisor, Manager, or Clinical Leader Support for Patient Safety	80%	6.10%	60%	74%	76%	81%	84%	88%	96%
3. Communication Openness	75%	6.24%	58%	68%	71%	75%	80%	83%	95%
4. Reporting Patient Safety Events	74%	7.69%	50%	65%	69%	74%	79%	85%	93%
5. Organizational Learning-Continuous Improvement	72%	7.91%	49%	62%	66%	72%	78%	82%	90%
6. Communication About Error	71%	8.80%	46%	61%	65%	71%	77%	83%	92%
7. Hospital Management Support for Patient Safety	67%	9.90%	40%	52%	60%	68%	74%	79%	86%
8. Response to Error	64%	8.20%	34%	54%	59%	64%	69%	73%	91%
9. Handoffs and Information Exchange	64%	9.93%	32%	52%	56%	64%	71%	77%	93%
10. Staffing and Work Pace	58%	9.60%	36%	45%	51%	57%	64%	71%	86%

Table 6-2. Item Results – 2021 SOPS Hospital 2.0 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			% Agree/Strongly Agree						
In this unit, we work together as an effective team. (Item A1)	88%	4.51%	76%	83%	85%	88%	92%	94%	100%
During busy times, staff in this unit help each other. (Item A8)	87%	4.58%	70%	82%	85%	87%	90%	93%	98%
			% Disagree/Strongly Disagree						
There is a problem with disrespectful behavior by those working in this unit. (Item A9*)	70%	7.12%	49%	61%	65%	70%	75%	78%	91%
2. Supervisor, Manager, or Clinical Leader Support for Patient Safety			% Agree/Strongly Agree						
My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety. (Item B1)	79%	6.75%	55%	71%	75%	79%	84%	88%	97%
My supervisor, manager, or clinical leader takes action to address patient safety concerns that are brought to their attention. (Item B3)	84%	5.85%	62%	77%	81%	84%	88%	91%	96%
			% Disagree/Strongly Disagree						
My supervisor, manager, or clinical leader wants us to work faster during busy times, even if it means taking shortcuts. (Item B2*)	78%	7.51%	53%	68%	73%	78%	83%	88%	94%

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 2.0 Database (Page 2 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
3. Communication Openness					% Most of the time/Always				
In this unit, staff speak up if they see something that may negatively affect patient care. (Item C4)	83%	5.70%	68%	76%	80%	83%	87%	90%	100%
When staff in this unit see someone with more authority doing something unsafe for patients, they speak up. (Item C5)	72%	7.48%	55%	63%	67%	72%	77%	83%	91%
When staff in this unit speak up, those with more authority are open to their patient safety concerns. (Item C6)	75%	7.63%	58%	66%	69%	74%	80%	85%	95%
					% Rarely/Never				
In this unit, staff are afraid to ask questions when something does not seem right. (Item C7*)	71%	7.23%	45%	63%	67%	71%	75%	81%	97%
4. Reporting Patient Safety Events					% Most of the time/Always				
When a mistake is caught and corrected before reaching the patient, how often is this reported? (Item D1)	65%	10.15%	36%	54%	59%	65%	71%	80%	89%
When a mistake reaches the patient and could have harmed the patient, but did not, how often is this reported? (Item D2)	83%	6.52%	59%	76%	79%	83%	88%	91%	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 2.0 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
5. Organizational Learning – Continuous						% Agree/Strongly Agree			
This unit regularly reviews work processes to determine if changes are needed to improve patient safety. (Item A4)	74%	7.74%	48%	64%	69%	75%	79%	84%	91%
In this unit, changes to improve patient safety are evaluated to see how well they worked. (Item A12)	68%	8.73%	39%	57%	62%	68%	74%	79%	89%
						% Disagree/Strongly Disagree			
This unit lets the same patient safety problems keep happening. (Item A14*)	74%	9.09%	51%	62%	68%	75%	81%	86%	92%
6. Communication About Error						% Most of the time/Always			
We are informed about errors that happen in this unit. (Item C1)	70%	9.62%	40%	57%	64%	70%	76%	82%	91%
When errors happen in this unit, we discuss ways to prevent them from happening again. (Item C2)	74%	8.47%	52%	65%	70%	75%	80%	85%	97%
In this unit, we are informed about changes that are made based on event reports. (Item C3)	69%	9.32%	42%	58%	62%	69%	75%	83%	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 2.0 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
7. Hospital Management Support for Patient						% Agree/Strongly Agree			
The actions of hospital management show that patient safety is a top priority. (Item F1)	79%	9.98%	51%	64%	73%	79%	87%	91%	98%
Hospital management provides adequate resources to improve patient safety. (Item F2)	73%	11.84%	42%	56%	66%	73%	81%	88%	98%
						% Disagree/Strongly Disagree			
Hospital management seems interested in patient safety only after an adverse event happens. (Item F3*)	49%	10.99%	15%	35%	41%	49%	57%	62%	75%
8. Response to Error						% Agree/Strongly Agree			
When staff make errors, this unit focuses on learning rather than blaming individuals. (Item A10)	71%	7.40%	41%	62%	66%	70%	74%	80%	93%
						% Disagree/Strongly Disagree			
In this unit, staff feel like their mistakes are held against them. (Item A6*)	62%	9.02%	37%	50%	56%	61%	67%	73%	91%
When an event is reported in this unit, it feels like the person is being written up, not the problem. (Item A7*)	58%	9.00%	31%	47%	52%	58%	64%	69%	89%
In this unit, there is a lack of support for staff involved in patient safety errors. (Item A13*)	65%	10.14%	28%	53%	59%	66%	72%	76%	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 6-2. Item Results – 2021 SOPS Hospital 2.0 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
9. Handoffs and Information Exchange			% Agree/Strongly Agree						
During shift changes, there is adequate time to exchange all key patient care information. (Item F6)	73%	8.94%	50%	62%	67%	72%	78%	86%	100%
			% Disagree/Strongly Disagree						
When transferring patients from one unit to another, important information is often left out. (Item F4*)	56%	12.34%	24%	41%	47%	55%	63%	74%	91%
During shift changes, important patient care information is often left out. (Item F5*)	63%	11.06%	21%	49%	56%	63%	70%	77%	93%
10. Staffing and Work Pace			% Agree/Strongly Agree						
In this unit, we have enough staff to handle the workload. (Item A2)	53%	11.76%	31%	38%	44%	51%	61%	69%	89%
			% Disagree/Strongly Disagree						
Staff in this unit work longer hours than is best for patient care. (Item A3*)	54%	9.78%	31%	43%	47%	54%	61%	67%	83%
This unit relies too much on temporary, float, or PRN staff. (Item A5*)	62%	10.08%	37%	49%	54%	61%	69%	75%	90%
The work pace in this unit is so rushed that it negatively affects patient safety. (Item A11*)	61%	12.04%	33%	48%	53%	60%	69%	79%	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 6-3. Item Results for Reporting One or More Events in the Past 12 Months—2021 SOPS Hospital 2.0 Database

			Survey Item % Response Percentiles						
Events Reported in the Past 12 Months (Item D3)	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1 or more events	46%	8.90%	19%	34%	40%	45%	52%	57%	69%

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

Table 6-4. Item Results on Overall Rating on Patient Safety for Excellent or Very Good—2021 SOPS Hospital 2.0 Database

			Survey Item % Response Percentiles						
Unit/ Work Area Patient Safety Rating (Item E1)	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Excellent or Very Good	69%	10.35%	45%	55%	61%	69%	77%	83%	94%

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

7 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 culture changes. 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 facility 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 Version 2.0* contains references to websites and other practical resources hospitals can use to improve patient safety culture and patient safety. It includes information on resources such as the Guide to Safety Huddles and the IHI Patient Safety Essentials Toolkit. These resources are not exhaustive but are provided to give initial guidance to hospitals seeking information about patient safety initiatives.

References

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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, we tabulated response frequencies for each hospital to find out-of-range values, missing values, or other data anomalies. When we found data outliers or other inconsistencies, we contacted the hospital and asked them to correct and resubmit their data. In addition, each participating hospital received a copy of its data frequencies upon uploading its survey data, to verify that the dataset received by the online submission system was correct.

The data were also reviewed for response biases (e.g., responding with the same answer for all positively worded items in the same section of the survey). An example of a positively worded item is C4—*In this unit, staff speak up if they see something that may negatively affect patient care*, and an example of a negatively worded item is C7—*In this unit, staff are afraid to ask questions when something does not seem right*.

Sections A, B, C, and F include both positively and negatively worded items. When respondents supplied the same answer for every item in sections A, B, C, and F, responses for those particular respondents were removed from the final dataset because respondents should not have answered the same way across these differently worded items. In addition, respondents who marked the same answer for all items within sections that had more than one negatively worded item (i.e., sections A and F) had those responses set to missing in that particular section. As a final step, respondents who had missing answers or supplied a "Does not apply or Don't know" NA/DK response for all items in sections A, B, C, D, E, and F were removed from the final dataset.

Hospitals were included in the database only if they had at least 10 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 surveys administered. Incomplete surveys are those surveys with missing answers or "Does not apply or Don't know" answers for all questions in sections A, B, C, D, E, and F. 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 Agree nor Disagree, Disagree, Strongly disagree) or frequency (Always, Most of the time, Sometimes, Rarely, Never). Three of the 10 SOPS composite measures use the frequency response option (Communication About Error, Communication Openness, and Reporting Patient Safety Events) while the other 7 composite measures use the agreement response option. The composite measure items also contain a "Does not apply or Don't know" response option that is not included in the calculation of valid responses.

The single item, Number of Events Reported, uses a 5-point scale ranging from "None" to "11 or more" (*None, 1 to 2, 3 to 5, 6 to 10, 11 or more*).

The Overall Rating on Patient Safety uses a 5-point scale ranging from "Poor" to "Excellent" (*Poor, Fair, Good, Very Good, Excellent*).

Item Percent Positive Response

The survey includes both positively worded items (e.g., "When staff in this unit speak up, those with more authority are open to their patient safety concerns") and negatively worded items (e.g., "In this unit, staff are afraid to ask questions when something does not seem right"). Calculating the percent positive response from positively worded items is different from calculating the percent positive response from 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 "When staff make errors, this unit focuses on learning rather than blaming individuals," if 50 percent of respondents within a hospital responded *Strongly agree* and 25 percent responded *Agree*, 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 on a negatively worded item indicates a *positive* response.

  For example, for the item "In this unit, staff are afraid to ask questions when something does not seem right," if 40% percent of respondents within a hospital responded "*Never*" and 20 percent responded "*Rarely*," the item percent positive response would be 60 percent (i.e., 60 percent of respondents are not afraid to ask questions when something does not seem right).

Composite Measure Percent Positive Response

The 10 patient safety culture composite measures have two, three, or four survey items. We calculated composite measure scores for each hospital by averaging the percent positive response on the items within a composite measure. For example, for a three-item composite measure, if the item percent positive responses were 50 percent, 55 percent, and 60 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 Example

We calculated average percent positive scores for each of the 10 patient safety culture composite measures and survey items by averaging the hospital-level percent positive scores of all database hospitals. Since the percent positive is displayed as an overall average, scores from each hospital are weighted equally in their contribution to the calculation of the average.

Table N1 shows an example of computing a composite measure score for *Teamwork*. This composite measure has three items. Two are positively worded (items A1 and A8) and one is negatively worded (item A9). Keep in mind that DISAGREEING with a negatively worded item indicates a POSITIVE response.

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

Three Items Measuring "Teamwork"	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 (Excluding Does Not Apply/Don't Know and Missing Responses)	Percent Positive Response on Item
Item A1 - positively worded "In this unit, we work together as an effective team."	110	NA*	240	110/240= **46%**
Item A8 - positively worded "During busy times, staff in this unit help each other."	140	NA*	250	140/250= **56%**
Item A9 - negatively worded "There is a problem with disrespectful behavior by those working in this unit."	NA*	125	260	125/260= **48%**
			Composite Measures % Positive Score = (46% + 56% + 48%) / 3 = **50%**	

*NA = Not applicable.

This example includes three items, with percent positive response scores of 46 percent, 56 percent, and 48 percent. Averaging these three items' percent positive scores results in a composite measure percent positive score of 50 percent for the *Teamwork* composite measure.

Table N2 shows examples of computing the percent positive response for the Number of Events Reported (Item D3) and the Patient Safety Rating (Item E1).

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

Survey Items	Number of Responses Reporting 1 or More Events	Number of "Excellent" or "Very Good" Responses	Total Number of Responses to the Item	Percent Positive Response on Item
Item D3: "In the past 12 months, how many patient safety events have you reported?"	193	NA*	250	193/250 = **77%**
Item E1: "How would you rate your unit/work area on patient safety?"	NA*	106	240	106/240 = **44%**

* NA = Not applicable.

In this example, the Number of Events Reported (item D3) 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 D3. The Patient Safety Rating (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.

Statistically "Significant" Differences Between Scores

You might be interested in determining the statistical significance of differences between your scores and the database scores, or between database scores in various 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 1 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 Chapter 6 tell you the extent to which hospital's 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 was 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 172 (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 = 17 and g = .2, because 172 x .10 = 17.2.

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 shown 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. Since "g" = 0, the 50th percentile score is equal to the percent positive value of the hospital in the jth position plus the percent positive value of the hospital in the jth +1 position, divided by 2:
    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%	12.26	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.

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 2.0 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 2.0 Survey and were willing to submit their data to the database. As such, only a small percentage of hospitals in the United States (only about 3 percent) are represented (see Table 3-1).

Estimates based on this self-selected group may produce biased estimates of the population and it is not possible to compute estimates of precision from such a self-selected group. However, the characteristics of the database hospitals are fairly consistent with the distribution of hospitals registered with the American Hospital Association (AHA) and are described further in Chapter 3.

Second, hospitals that administered the survey were not required to undergo any training and administered the survey in different ways. Some hospitals only administered paper surveys, others used only web-based surveys, and others used a combination of these two methods. These different survey modes could have led 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 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 Characteristics and Respondent Characteristics

In addition to the overall results on the SOPS Hospital 2.0 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

- Staff Position
- Unit/Work Area
- Tenure in Hospital Unit/Work Area
- Interaction With Patients

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 (76 percent positive); larger hospitals *(400 or more beds)* had the lowest (67 percent positive).
- Hospitals with *100-199* and *400 or more beds* had the highest percentage of respondents who reported one or more events in the past year (48 percent); hospitals with *6-24 beds* had the lowest (40 percent).
- Hospitals with the smallest bed size *(6–24 beds)* had the highest percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (77 percent); hospitals with *400 or more beds* had the lowest (61 percent).

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

- *Nonteaching* hospitals had a higher percent positive score (66 percent positive) than *Teaching* hospitals (61 percent positive) on the *Handoffs and Information Exchange* composite measure.
- *Nongovernment* hospitals had a higher percentage of respondents who reported one or more events in the past year (47 percent); *Government* hospitals had a lower percentage (40 percent).

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

- *West Central* hospitals had the highest average percent positive score (71 percent positive) on the *Hospital Management Support for Patient Safety* composite measure; hospitals in the *Mountain* region had the lowest (61 percent positive).
- *Mountain* hospitals had the highest percentage of respondents who reported one or more events in the past year (50 percent); *West Central* hospitals had the lowest (41 percent).
- *West Central* hospitals had the highest percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (75 percent); *Mountain* hospitals had the lowest (62 percent).

Highlights From Appendix B: Overall Results by Respondent Characteristics

Staff Position (Tables B-1, B-3, B-4)

- *Supervisors/Managers/Clinical Leaders/Senior Leaders* had the highest Composite Measure Average score (81 percent positive); *RN/LVN/LPN* and *Technologist/Technician* had the lowest (68 percent positive).
- *Pharmacists/Pharmacy Technicians* and *RN/LVN/LPN* had the highest percentage of respondents reporting one or more events in the past year (64 percent); *Support Staff* had the lowest (21 percent).
- *Supervisor/Manager/Clinical Leader/Senior Leader* had the highest percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (82 percent); *RN/LVN/LPN* and *Patient Care Aide/Nursing Assistant* had the lowest (63 percent).

Unit/Work Area (Tables B-5, B-7, B-8)

- Respondents in *Administration/Management* had the highest Composite Measure Average score (79 percent positive); *Telemetry* had the lowest (65 percent positive).
- *Telemetry* had the highest percentage of respondents reporting one or more events in the past year (66 percent); *Support Services* had the lowest (30 percent).
- *Administration/Management* and *Rehabilitation/Physical Medicine* had the highest percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (80 percent); *Telemetry* had the lowest (53 percent).

Tenure in Current Unit/Work Area (Tables B-9, B-11, B-12)

- Respondents who have worked *less than 1 year* in their current unit/work area had the highest Composite Measure Average score (75 percent positive); respondents who have worked *1 to 5 years* had the lowest (69 percent positive).
- Respondents who have worked *6 to 10 years* in their current unit/work area had the highest percentage of respondents reporting one or more events in the past year (51 percent); respondents with *less than 1 year* had the lowest (33 percent).
- Respondents who have worked *less than 1 year* in their current unit/work area had the highest percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (73 percent); respondents who have worked *1 to 5 years* had the lowest (67 percent).

Interaction With Patients (Tables B-13, B-15, B-16)

- Respondents *without direct patient interaction* had a higher Composite Measure Average score (76 percent positive); respondents *with direct patient interaction* had a lower score (70 percent positive)
- 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* (31 percent).
- Respondents *without direct patient interaction* had a higher percentage of respondents who gave their unit/work area a patient safety rating of "Excellent" or "Very Good" (76 percent) than respondents *with direct patient interaction* (67 percent).

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