



Surveys on Patient
Safety Culture™
(SOPS™)
Ambulatory
Surgery Center
Survey: 2020
User Database
Report



PATIENT
SAFETY



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Surveys on Patient Safety Culture™ (SOPS™) Ambulatory Surgery Center Survey: 2020 User Database Report

Part I

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Agency for Healthcare Research and Quality
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5600 Fishers Lane
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Managed and prepared by:

Westat, Rockville, MD

Theresa Famolaro, M.P.S., M.S., M.B.A.

Ryan Hare

Shakia Thornton

Naomi Dyer Yount, Ph.D.

Lei Fan, M.D., Ph.D.

Helen Liu

Joann Sorra, Ph.D.

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Overview

Surveys on Patient Safety Culture™

Findings from the 2020 Survey on Patient Safety Culture (SOPS) Ambulatory Surgery Center (ASC) Database

The ASC SOPS Database assesses provider and staff perceptions of their organization's patient safety culture. The ASC SOPS Database includes data from:



282
Participating ambulatory surgery centers



10,527
Respondents

» The survey assesses **8** areas, or composite measures, of patient safety culture.



Communication About Patient Information



Communication Openness



Management Support for Patient Safety



Organizational Learning-Continuous Improvement



Response to Mistakes



Staff Training



Staffing, Work Pressure, and Pace



Teamwork

Highest Scoring Composite Measure



Organizational Learning - Continuous Improvement

92%

of respondents reported that the facility actively looks for ways to improve patient safety and makes changes to ensure that problems do not recur.

Lowest Scoring Composite Measure



Staffing, Work Pressure, and Pace

74%

of respondents indicated that there are enough staff to handle the workload, they **do not** feel rushed, and they have enough time to properly prepare for procedures.

OTHER FINDINGS

Communication in the Surgery/Procedure Room

In the past 6 months, how often were the following actions done in your facility?



93%

of respondents reported that before the start of procedures, team members stopped to discuss the overall plan.



71%

of respondents reported that before the start of procedures, the doctor encouraged team members to speak up at any time.



76%

of respondents reported that immediately after procedures, team members discussed any concerns for patient recovery.

Overall Patient Safety Rating



What's Next? Action planning for improving patient safety culture

- 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 instructions 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 ambulatory surgery centers (ASCs) interested in comparing results on the Surveys on Patient Safety Culture™ (SOPS™) Ambulatory Surgery Center Survey with results from other ASCs, the Agency for Healthcare Research and Quality (AHRQ) established the SOPS Ambulatory Surgery Center Database.

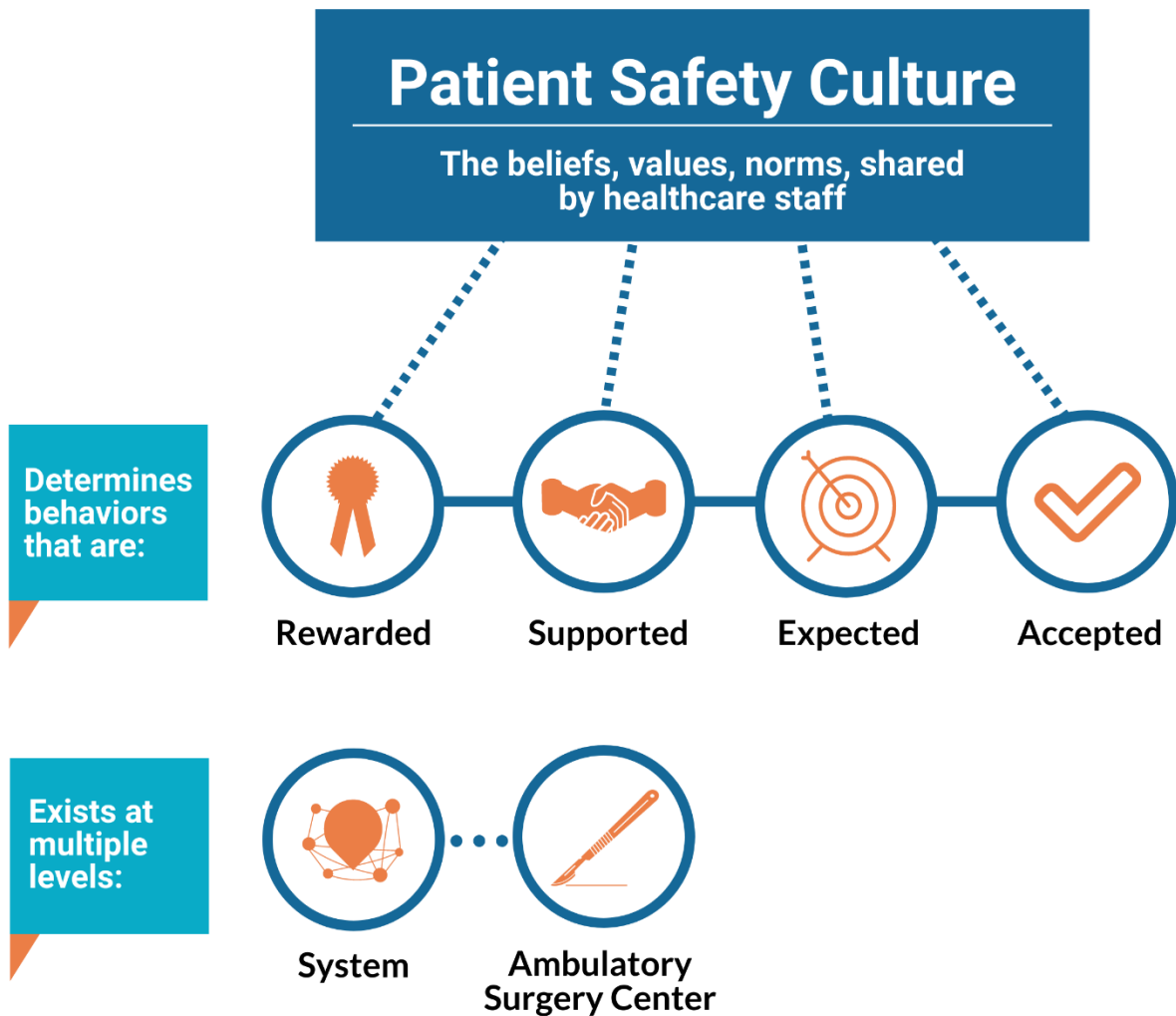
This report presents statistics (averages, standard deviations, minimum and maximum scores, and percentiles) on the patient safety culture composite measures and items from the survey. It also includes two appendixes:

- Appendix A presents results by facility characteristics (number of operating/procedure rooms and geographic region).
- Appendix B presents results by respondent characteristics (staff position and hours worked per week).

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. Patient Safety Culture



Survey Content

AHRQ funded the development of the SOPS Ambulatory Surgery Center Survey. The survey includes 27 items making up 8 composite measures of patient safety culture. Table 1-1 lists and defines each of the 8 patient safety culture composite measures.

Table 1-1. Patient Safety Culture Composite Measures and Definitions

Patient Safety Culture Composite Measures	Definition: The extent to which...
Communication About Patient Information	Key information about patients is available and well communicated within the ASC.
Communication Openness	Staff speak up when they see something unsafe, they feel comfortable asking questions, and their suggestions are valued.
Management Support for Patient Safety	Managers examine near-miss events, provide adequate resources, and encourage everyone to suggest ways to improve patient safety.
Organizational Learning—Continuous Improvement	The facility actively looks for ways to improve patient safety and makes changes to ensure that problems do not recur.
Response to Mistakes	Staff are told about patient safety problems, learning rather than blame is emphasized, and staff are treated fairly when they make mistakes.
Staff Training	Staff receive adequate orientation, get the refresher and on-the-job training they need, and do not feel pressured to do tasks they are not trained to do.
Staffing, Work Pressure, and Pace	Staff <u>do not</u> feel rushed, they have enough time to properly prepare for procedures, and there are enough staff to handle the workload.
Teamwork	Staff are respectful and help each other, work together as an effective team, and understand each other’s roles and responsibilities.

In addition to the composite measure items, the survey includes a question about near-miss documentation, a question that asks respondents to provide an overall rating of patient safety, and three questions about communication in the surgery/procedure room. The survey also includes two background questions.

2 Survey Administration Statistics

This chapter presents descriptive information on the number of ASCs and survey respondents included in the 2020 SOPS ASC Database and information about response rates (Table 2-1) and how ASCs administered the survey (Table 2-2).

Highlights



Table 2-1. Overall Response Statistics – 2020 SOPS ASC Database

Overall Response Rate Information		Statistic
Total number of respondents		10,527
Total number of surveys administered		12,023
Average Response Information		Statistic
Average number of respondents per ASC (range: 5 to 153)		37
Average number of surveys administered per ASC (range: 6 to 154)		44
Average ASC response rate (range: 10% to 100%)		87%

Table 2-2. Survey Administration Mode Statistics – 2020 SOPS ASC Database

Survey Administration Mode	ASCs		Respondents		Average Response Rate
	Number	Percent	Number	Percent	Percent
Paper only	71	25%	2,085	20%	79%
Web only	211	75%	8,442	80%	90%
Total	282	100%	10,527	100%	

3 Facility Characteristics

This chapter presents information about the distribution of ASCs included in the 2020 SOPS ASC Database by facility characteristics, including number of operating/procedure rooms, geographic region, and number of specialties (single vs. multispecialty) (Table 3-1).

Highlights

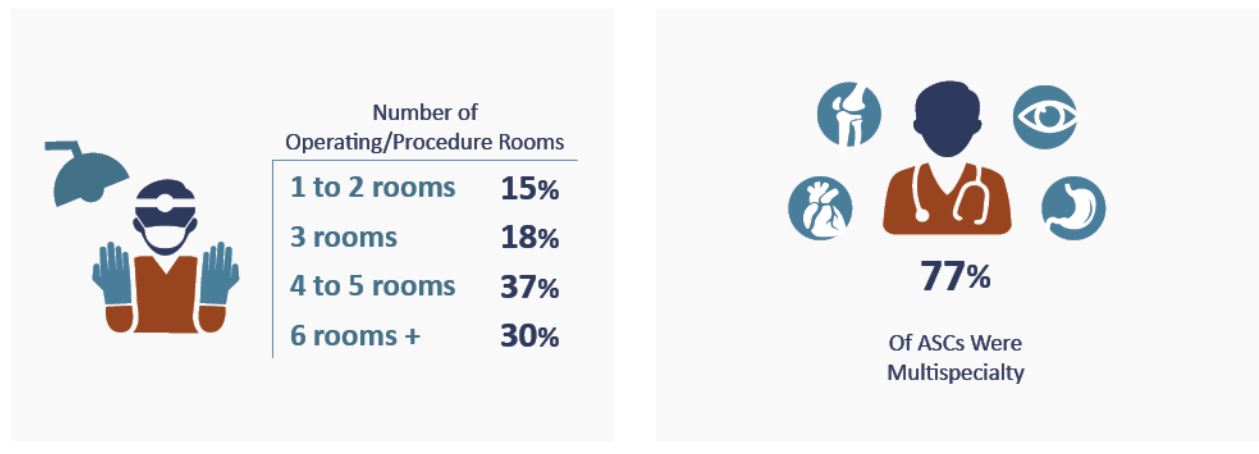


Table 3-1. Distribution of 2020 SOPS ASC Database by Facility Characteristics

Facility Characteristic	ASCs (n=282)		Respondents (n=10,527)	
	Number	Percent	Number	Percent
Number of Operating/Procedure Rooms				
1 to 2 rooms	42	15%	735	7%
3 rooms	51	18%	1,357	13%
4 to 5 rooms	105	37%	3,871	37%
6 rooms or more	84	30%	4,564	43%
Census Region¹	Number	Percent	Number	Percent
Northeast	37	13%	1,335	13%
Midwest	63	22%	2,172	21%
South	104	37%	4,133	39%
West	78	28%	2,887	27%
Single Specialty vs. Multispecialty	Number	Percent	Number	Percent
Single specialty	66	23%	1,825	17%
Multispecialty	216	77%	8,702	83%

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

- Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT
- Midwest: IL, IN, IA, KS, MI, MN, MO, ND, NE, OH, SD, WI
- South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
- West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

¹ Census regions and divisions of the United States. https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf. Accessed October 3, 2019.

4 Respondent Characteristics

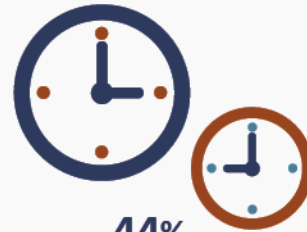
This chapter describes respondent characteristics for 10,527 respondents in the 2020 SOPS ASC Database (Table 4-1).

Highlights



35%

of respondents were nurses, the most prevalent ASC staff position



44%

of respondents worked 32-40 hours per week in their ASC

Table 4-1. Distribution of 2020 SOPS ASC Database by Respondent Characteristics

Respondent Characteristics	Respondents	
Staff Position	Number	Percent
Anesthesiologist	762	7%
Doctor/Physician (excluding Anesthesiologists) or Surgeon	2,076	20%
Certified Registered Nurse Anesthetist (CRNA)	340	3%
Physician Assistant or Nurse Practitioner	129	1%
Management	697	7%
Nurse	3,582	35%
Technician	1,166	11%
Other Clinical Staff or Clinical Support Staff	238	2%
Administrative, Clerical, or Business Staff	1,125	11%
Other	242	2%
Total	10,357	100%
Missing	170	
Overall total	10,527	
Hours Worked per Week in ASC	Number	Percent
1 to 16 hours	3,209	32%
17 to 31 hours	1,468	15%
32 to 40 hours	4,424	44%
More than 40 hours	1,021	10%
Total	10,122	100%
Missing	405	
Overall total	10,527	

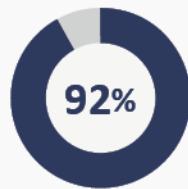
Note: Percentages may not add to 100 percent due to rounding.

5 Overall Results

This chapter presents the overall survey results, which include the average percentage of positive responses across the ASCs on each of the survey’s composite measures and items. Reporting the average across all ASCs ensures that each ASC receives an equal weight. An alternative method would be to report a straight percentage of positive responses across all respondents, but this method would give greater weight to larger ASCs. Reporting the data at the ASC level is important because culture is considered a group characteristic and not an individual characteristic.

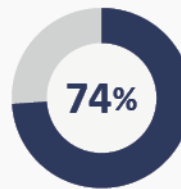
Highlights

Highest Scoring Composite Measure Organizational Learning – Continuous Improvement



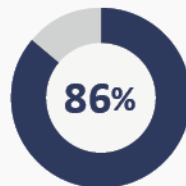
of respondents reported that the facility actively looks for ways to improve patient safety and makes changes to ensure that problems do not recur.

Lowest Scoring Composite Measure Staffing, Work Pressure, and Pace



of respondents indicated that there are enough staff to handle the workload, they do not feel rushed, and they have enough time to properly prepare for procedures.

Overall Rating on Patient Safety



of respondents gave their ASC an overall patient safety rating of excellent or very good.

Composite Measure and Item Charts

This section provides the 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 eight patient safety culture composite measures across ASCs in the database. The patient safety culture 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 27 composite measure items. The items are grouped by the patient safety culture composite measure to which they are contributing. Within each composite measure, the items are presented in the order in which they appear in the survey.

Near-Miss Documentation

Chart 5-3 shows results from the item that asks respondents about near-miss documentation.

Overall Ratings on Patient Safety

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

Communication in the Surgery/Procedure Room

Chart 5-5 shows the results from the three items related to communication in the surgery/procedure room for those respondents who answered that they were typically in the room during surgeries, procedures, or treatments.

Chart 5-1. Composite Measure Results
Average Percent Positive Response - 2020 SOPS ASC Database

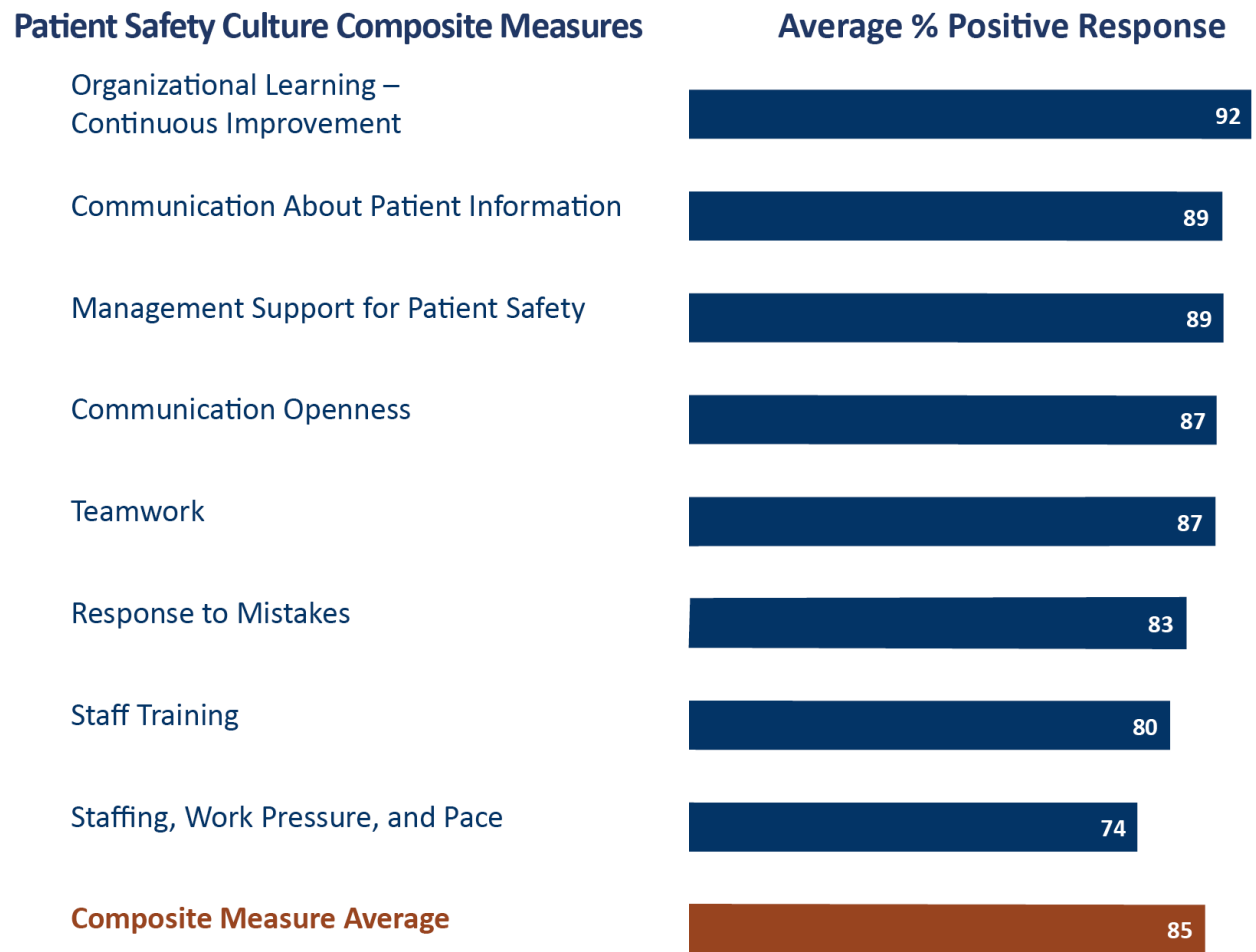


Chart 5-2. Item Results

Average Percent Positive Response - 2020 SOPS ASC Database

1. Organizational Learning - Continuous Improvement

Average % Positive Response

This facility actively looks for ways to improve patient safety. (C1)

93

We make improvements when someone points out patient safety problems. (C3)

93

We are good at changing processes to make sure the same patient safety problems don't happen again. (C6)

90

2. Communication About Patient Information

Important patient care information is clearly communicated across areas in this facility. (A1)

95

Key information about patients is missing when it is needed. (A5R)

74

We share key information about patients as soon as it becomes available. (A7)

94

Within this facility, we do a good job communicating information that affects patient care. (A9)

93

3. Management Support for Patient Safety

Managers encourage everyone to suggest ways to improve patient safety. (E1)

89

Management examines near-miss events that could have harmed patients but did not. (E2)

89

Management provides adequate resources to improve patient safety. (E3)

88

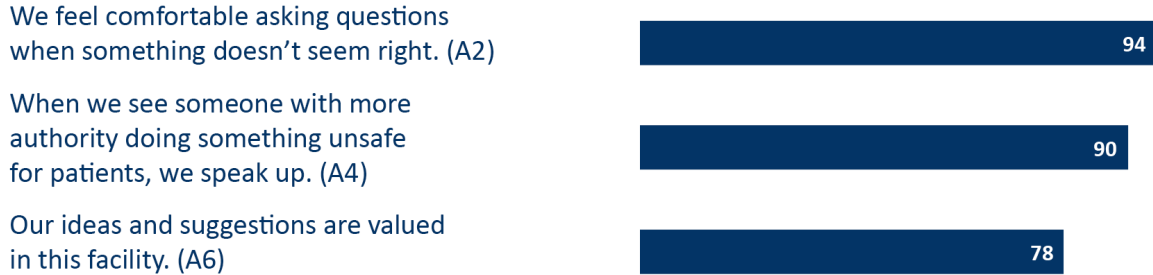
Note: The item's survey location is shown after the item text. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Chart 5-2. Item Results

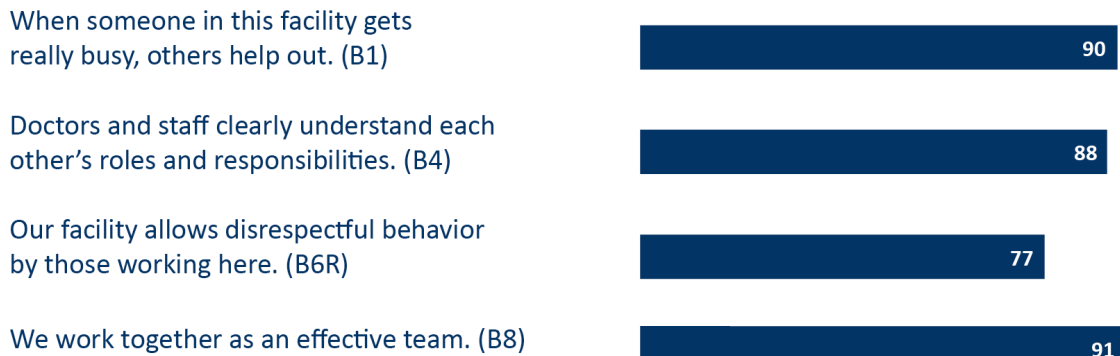
Average Percent Positive Response - 2020 SOPS ASC Database

4. Communication Openness

Average % Positive Response



5. Teamwork



6. Response to Mistakes



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

Chart 5-2. Item Results

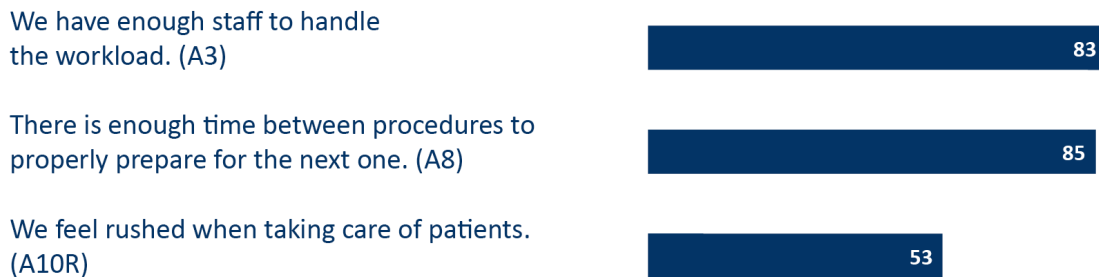
Average Percent Positive Response - 2020 SOPS ASC Database

7. Staff Training

Average % Positive Response



8. Staffing, Work Pressure, and Pace



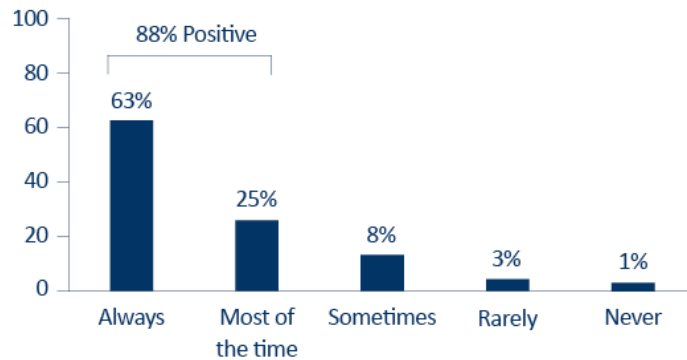
Note: The item's survey location is shown after the item text. An "R" indicates a negatively worded item, where the percent positive response is based on those who responded "Strongly disagree" or "Disagree," or "Never" or "Rarely" (depending on the response category used for the item).

Chart 5-3 Item Results

Average Ratings on Near-Miss Documentation - 2020 SOPS ASC Database

Near-Miss Documentation

When something happens that could harm the patient, but does not, how often is it documented in an incident or occurrence report? (D1)



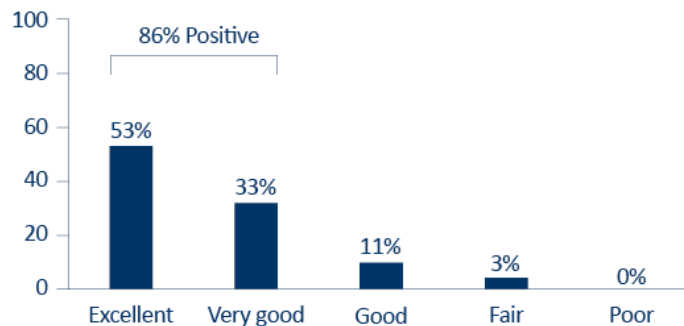
Note: Percentages indicate average percent response for each item response category across the 2020 database ambulatory surgery centers.

Chart 5-4. Item Results

Average Overall Rating on Patient Safety - 2020 SOPS ASC Database

Overall Patient Safety Rating

Please give your facility an overall rating on patient safety. (F1)



Note: Percentages indicate average percent response for each item response category across the 2020 database ambulatory surgery centers.

Chart 5-5. Item Results

Average Percent Positive Response on Communication in the Surgery/Procedure Room - 2020 SOPS ASC Database

Communication in the Surgery/Procedure Room

Average % Positive Response

In the past 6 months, how often were the following actions done in your facility?

Just before the start of procedures, all team members stopped to discuss the overall plan of what was to be done. (G1)

93

Just before the start of procedures, the doctor encouraged all team members to speak up at any time if they had any concerns. (G2)

71

Immediately after procedures, team members discussed any concerns for patient recovery. (G3)

76

Note: (1) The item's survey location is shown after the item text. (2) The percent positive is based on those who responded "Always" or "Most of the time." (3) Results only include those respondents who answered "Yes" to being typically in the surgery/procedure room during surgeries, procedures, or treatments.

6 Comparing Facility Results

To compare a facility's survey results with the aggregated findings from the database, first calculate the ASC's percent positive response on the survey's eight composite measures and other survey items, including an overall rating on patient safety. The survey also has three questions on communication in the surgery/procedure room for those respondents who answered that they were typically in the room during surgeries, procedures, or treatments.

The notes section at the end of this report describes how to calculate percent positive scores. Individual facility results can then be compared with the database averages and the percentile scores for all ASCs.

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

The data in this report should be used to supplement your ASC's efforts to identify areas of strength and areas on which to focus efforts to improve patient safety culture.

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 eight patient safety culture composite measures.

Table 6-2 presents statistics for each of the 27 survey composite measure items. The survey items are grouped by the patient safety culture composite measure to which they contribute and are intended to assess. Within each composite measure, the items are presented in the order in which they appear in the survey.

Table 6-3 presents statistics for near-miss documentation.

Table 6-4 presents statistics for overall rating on patient safety.

Table 6-5 presents statistics for the three items related to communication in the surgery/procedure room.

Table 6-1. Composite Measure Results – 2020 SOPS ASC Database

Patient Safety Culture Composite Measures	Average % Positive	s.d.	Composite Measure % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Organizational Learning—Continuous Improvement	92%	7.38%	43%	83%	89%	93%	97%	99%	100%
2. Communication About Patient Information	89%	6.41%	54%	81%	86%	90%	94%	96%	100%
3. Management Support for Patient Safety	89%	8.96%	25%	78%	85%	90%	95%	98%	100%
4. Communication Openness	87%	8.26%	44%	77%	83%	89%	93%	96%	100%
5. Teamwork	87%	7.75%	38%	77%	83%	87%	92%	95%	99%
6. Response to Mistakes	83%	9.96%	31%	71%	78%	85%	90%	94%	100%
7. Staff Training	80%	11.51%	19%	65%	73%	82%	88%	93%	100%
8. Staffing, Work Pressure, and Pace	74%	13.02%	3%	57%	66%	74%	81%	89%	100%

Table 6-2. Item Results – 2020 SOPS ASC Database (Page 1 of 3)

Survey Items By Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Organizational Learning—Continuous Improvement									
1. This facility actively looks for ways to improve patient safety. (C1)	93%	7.88%	50%	83%	89%	95%	98%	100%	100%
2. We make improvements when someone points out patient safety problems. (C3)	93%	7.99%	36%	83%	89%	94%	100%	100%	100%
3. We are good at changing processes to make sure the same patient safety problems don't happen again. (C6)	90%	9.00%	40%	80%	86%	91%	97%	100%	100%
2. Communication About Patient Information									
1. Important patient care information is clearly communicated across areas in this facility. (A1)	95%	6.50%	50%	87%	92%	96%	100%	100%	100%
2. Key information about patients is missing when it is needed. (A5R)	74%	13.27%	11%	59%	67%	75%	83%	89%	100%
3. We share key information about patients as soon as it becomes available. (A7)	94%	5.70%	68%	86%	90%	95%	98%	100%	100%
4. Within this facility, we do a good job communicating information that affects patient care. (A9)	93%	6.66%	67%	85%	91%	95%	98%	100%	100%
3. Management Support for Patient Safety									
1. Managers encourage everyone to suggest ways to improve patient safety. (E1)	89%	9.89%	17%	77%	84%	91%	96%	100%	100%
2. Management examines near-miss events that could have harmed patients but did not. (E2)	89%	9.71%	22%	77%	85%	91%	95%	100%	100%
3. Management provides adequate resources to improve patient safety. (E3)	88%	10.32%	36%	74%	84%	90%	96%	100%	100%

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

Table 6-2. Item Results – 2020 SOPS ASC Database (Page 2 of 3)

Survey Items By Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
4. Communication Openness									
1. We feel comfortable asking questions when something doesn't seem right. (A2)	94%	6.36%	58%	85%	91%	95%	98%	100%	100%
2. When we see someone with more authority doing something unsafe for patients, we speak up. (A4)	90%	8.07%	61%	78%	85%	92%	96%	100%	100%
3. Our ideas and suggestions are valued in this facility. (A6)	78%	14.66%	0%	62%	71%	80%	89%	94%	100%
5. Teamwork									
1. When someone in this facility gets really busy, others help out. (B1)	90%	8.76%	33%	80%	86%	92%	95%	100%	100%
2. Doctors and staff clearly understand each other's roles and responsibilities. (B4)	88%	8.48%	50%	78%	84%	90%	94%	98%	100%
3. Our facility allows disrespectful behavior by those working here. (B6R)	77%	12.67%	30%	60%	70%	79%	86%	91%	100%
4. We work together as an effective team. (B8)	91%	8.99%	17%	82%	88%	93%	97%	100%	100%
6. Response to Mistakes									
1. Staff are treated fairly when they make mistakes. (C2)	82%	12.14%	25%	67%	76%	84%	90%	94%	100%
2. Learning, rather than blame, is emphasized when mistakes are made. (C4)	80%	12.39%	25%	66%	74%	83%	89%	94%	100%
3. Staff are told about patient safety problems that happen in this facility. (C5)	87%	9.76%	40%	75%	82%	88%	93%	100%	100%

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

Table 6-2. Item Results – 2020 SOPS ASC Database (Page 3 of 3)

Survey Items By Composite Measure	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
7. Staff Training									
1. Staff who are new to this facility receive adequate orientation. (B2)	82%	13.49%	17%	64%	74%	83%	91%	98%	100%
2. Staff feel pressured to do tasks they haven't been trained to do. (B3R)	73%	13.61%	25%	58%	65%	74%	83%	89%	100%
3. We get the on-the-job training we need in this facility. (B5)	85%	11.86%	17%	70%	79%	87%	93%	98%	100%
4. Staff get the refresher training they need. (B7)	81%	13.25%	9%	63%	74%	84%	90%	95%	100%
8. Staffing, Work Pressure, and Pace									
1. We have enough staff to handle the workload. (A3)	83%	14.02%	0%	67%	75%	85%	93%	100%	100%
2. There is enough time between procedures to properly prepare for the next one (A8)	85%	11.87%	0%	71%	79%	86%	92%	100%	100%
3. We feel rushed when taking care of patients. (A10R)	53%	19.72%	0%	29%	40%	53%	67%	78%	100%

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

Table 6-3. Item Results on Near-Miss Documentation – 2020 SOPS ASC Database

Near-Miss Documentation	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
When something happens that could harm the patient, but does not, how often is it documented in an incident or occurrence report? (D1)	88%	10.22%	38%	75%	84%	91%	96%	100%	100%

Note: The item's survey location is shown after the item text. For D1, the percent positive response is based on those who responded "Most of the time" or "Always." For the full distribution of results, see Chart 5-3.

Table 6-4. Item Results on Overall Rating on Patient Safety – 2020 SOPS ASC Database

Overall Patient Safety Rating	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
Excellent/Very good (F1)	86%	11.98%	8%	71%	80%	88%	94%	98%	100%

Note: The item's survey location is shown after the item text. For F1, the percent positive response is based on those who responded "Excellent" or "Very good." For the full distribution of results, see Chart 5-4.

Table 6-5. Item Results on Communication in the Surgery/Procedure Room – 2020 SOPS ASC Database

Communication in the Surgery/Procedure Room	Average % Positive	s.d.	Survey Item % Positive Response						
			Min	10th %ile	25th %ile	Median/ 50th %ile	75th %ile	90th %ile	Max
1. Just before the start of procedures, all team members stopped to discuss the overall plan of what was to be done. (G1)	93%	8.79%	50%	82%	90%	96%	100%	100%	100%
2. Just before the start of procedures, the doctor encouraged all team members to speak up at any time if they had any concerns. (G2)	71%	16.89%	19%	45%	61%	74%	83%	90%	100%
3. Immediately after procedures, team members discussed any concerns for patient recovery. (G3)	76%	14.75%	29%	56%	69%	79%	86%	93%	100%

Note: The item's survey location is shown after the item text. For G1-G3, the percent positive response is based on those who responded “Most of the Time” or “Always.” Results only include those respondents who answered “Yes” to being typically in the surgery/procedure room during surgeries, procedures, or treatments.

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.

Resource List for Users of the AHRQ Ambulatory Surgery Center Survey

The AHRQ [*Improving Patient Safety in Ambulatory Surgery Centers: A Resource List for Users of the AHRQ Ambulatory Surgery Center Survey on Patient Safety Culture*](#) contains references to websites that provide practical resources ASCs can use to implement changes to improve patient safety culture and patient safety. These resources are not a complete list but are provided to give initial guidance to ASCs looking for information about patient safety initiatives.

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 ASC submitted individual-level survey data. Once the data were submitted, we ran response frequencies on each ASC's data to find out-of-range values, missing values, or other data anomalies. When we found data problems, we contacted the ambulatory surgery centers and asked them to make corrections and resubmit their data. In addition, we sent each participating ASC a copy of its data frequencies to verify that the dataset received was correct.

The data were also cleaned for straight-lined answers, which is when respondents give the same answer for all positively worded items (e.g., B1. "When someone in this facility gets really busy, others help out.") and negatively worded items (e.g., B3R. "Staff feel pressured to do tasks they haven't been trained to do.") in the same section of the survey. Positively worded and negatively worded items are in sections A and B of the survey. When respondents supplied the same answers for all items in sections A or B, the items in those sections were set to missing because the sections have negatively worded items.

After this initial cleaning, respondents with missing answers across sections A, B, C, D, E, F, and G were deleted before analysis. Respondents who supplied either "Does not apply or Don't know" answers or had missing answers to all items across sections A, B, C, D, E, and G were also deleted before analysis. ASCs were included in the database only if they had at least three respondents after all data cleaning steps.

Response Rates

As part of the data submission process, we asked ASCs to provide the number of completed, returned surveys and the total number of surveys administered. Incomplete surveys are those surveys with missing answers and/or "Does not apply or Don't know" 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's 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 eight patient safety culture composite measures, consisting of 10 items, use the frequency response option (Communication About Patient Information; Communication Openness; and Staffing, Work Pressure, and Pace), while the other five composite measures, consisting of 17 items, use the agreement response option.

The non-composite measure items on Near-Miss Documentation and Communication in the Surgery/Procedure Room also use the frequency response option.

The Overall Patient Safety Rating 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 someone in this facility gets really busy, others help out") and negatively worded items (e.g., "We feel rushed when taking care of patients"). Calculating the percent positive response on positively worded items is different from calculating the percent positive response on negatively worded items:

- **For positively worded items**, percent positive response is the combined percentage of respondents within an ASC 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 someone in this facility gets really busy, others help out," if 50 percent of respondents within an ASC responded *Strongly agree* and 25 percent responded *Agree*, the item percent positive response for that ASC would be 75%.

- **For negatively worded items**, percent positive response is the combined percentage of respondents within an ASC who answered "Strongly disagree" or "Disagree," or "Never" or "Rarely," because a *negative* answer on a negatively worded item indicates a *positive* response.

For example, for the item "We feel rushed when taking care of patients," if 60 percent of respondents within an ASC responded *Never* and 20 percent responded *Rarely*, the item percent positive response would be 80 percent (i.e., 80 percent of respondents *do not* feel rushed when taking care of patients.)

Composite Measure Percent Positive Response

The eight patient safety culture composite measures are each composed of three or four survey items. We calculated composite measure scores for each ASC 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 ASC'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 the average percent positive scores for each of the 8 patient safety culture composite measures and for the 27 survey composite measure items by averaging the ASC-level percent positive scores across all ASCs in the database. Since the percent positive is displayed as an overall average, scores from each ASC are weighted equally in their contribution to the calculation of the average.

Table N1 shows an example of computing a composite measure score for *Staffing, Work Pressure, and Pace*. This composite measure has three items. Two are positively worded (items A3 and A8) and one is negatively worded (item A10R). 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

Three Items Measuring "Staffing, Work Pressure, and Pace"	For Positively Worded Items, # of "Strongly Agree" or "Agree" Responses	For Negatively Worded Items, # of "Strongly Disagree" or "Disagree" Responses	Total # of Responses to the Item (Excluding Does Not Apply/Don't Know and Missing Responses)	Percent Positive Response on Item
Item A3 – positively worded				
"We have enough staff to handle the workload."	110	NA*	240	110/240=46%
Item A8 – positively worded				
"There is enough time between procedures to properly prepare for the next one."	140	NA*	250	140/250= 56%
Item A10R –negatively worded				
"We feel rushed when taking care of patients."	NA*	125	260	125/260=48%
Composite Measure % 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 item percent positive scores results in a composite measure score of 50 percent on *Staffing, Work Pressure, and Pace*. In this example, an average of 50 percent of the respondents responded positively to the survey items in this composite measure.

Once you calculate your ASC's percent positive response for each of the eight patient safety culture composite measures, you can compare your results with the composite measure results from the 282 database ASCs.

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., number of operating/procedure rooms or geographic region). 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 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 ASC scores around the average. The standard deviations presented in Chapter 6 tell you the extent to which ASC's scores differ from the average:

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

When the distribution of ASC 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 ASC scores. For example, if an average percent positive score across the database ASCs were 70 percent with a standard deviation of 10 percent (and scores were normally distributed), then about 68 percent of all the database ASCs 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 ASCs and are actual scores from the lowest and highest scoring ASCs.

When comparing your data with the minimum and maximum scores, keep in mind that these scores may represent ASCs 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 ASC scores. A specific percentile score shows the percentage of ASCs that scored at or below a particular score.

We computed percentiles using the SAS® software default method. The first step in this procedure is to rank the percent positive scores from all the participating ASCs, from lowest to highest. The next step is to multiply the number of ASCs (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 282 (the total number of ASCs) 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 = 28 and g = .2, since 282 x .10 = 28.2.

If “g” equals 0, the percentile score is equal to the percent positive value of the ASCs in the jth position plus the percent positive value of the ASC 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 ASC 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 ASCs (using fake data shown in Table N2). First, the percent positive scores are sorted from low to high on Composite Measure “A.”

Table N2. Data Table for Example of How To Compute Percentiles

Ambulatory Surgery Center	Composite Measure “A” % Positive Score	
1	33%	
2	48%	←10 th percentile score = 48%
3	52%	
4	60%	
5	63%	
6	64%	
7	66%	←50 th percentile score = 65%

10th percentile

1. For the 10th percentile, we would first multiply the number of ASCs by .10: ($n \times p = 12 \times .10 = 1.2$).
2. The product of $n \times p = 1.2$, where “j” = 1 (the integer) and “g” = 2 (the decimal). Since “g” is *not* equal to 0, the 10th percentile score is equal to the percent positive value of the ASC in the jth +1 position:
 - a. “j” equals 1.
 - b. The 10th percentile equals the value for the ASC in the 2nd position = 48 percent.

50th percentile

1. For the 50th percentile, we would first multiply the number of ASCs by .50: ($n \times p = 12 \times .50 = 6.0$).
2. The product of $n \times p = 6.0$, where “j” = 6 and “g” = 0. Since “g” = 0, the 50th percentile score is equal to the percent positive value of the ASC in the jth position plus the percent positive value of the ASC in the jth +1 position, divided by 2:
 - a. “j” equals 6.
 - b. The 50th percentile equals the average of the ASCs in the 6th and 7th positions ($(64\%+66\%)/2 = 65$).

When the distribution of ASC 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 N3.

Table N3. Interpretation of Percentile Scores

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

To compare with the database percentiles, compare your ASC’s percent positive scores with the percentile scores for each composite measure and item. See example in Table N4.

Table N4. Sample Percentile Statistics

Survey Item	Survey Item % Positive Response								
	Average % Positive	s.d.	Min	10th %ile	25th %ile	Median/ 50 th %ile	75th %ile	90th %ile	Max
Item 1	36%	17.43%	0%	20%	30%	45%	70%	80%	100%
If your ASC's score is 78 percent, your score falls here: ↑ ↑ If your ASC's score is 85 percent, your score falls here: ↑									

If your ASC's score is 78 percent positive, it falls above the 75th percentile (but below the 90th), meaning that your ASC scored higher than at least 75 percent of the ASCs in the database.

If your ASC's score is 85 percent positive, it falls above the 90th percentile, meaning your ASC scored higher than at least 90 percent of the ASCs in the database.

Data Limitations

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

First, ASCs voluntarily submit their data to the databases; therefore, the database only includes those ASCs that have administered the survey and were willing to submit their data to the database. As such, only a small percentage of all ASCs in the United States (less than 5 percent) are represented (see Table N5). These voluntary submitters are not representative of all ASCs in the United States.

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 geographic distribution of the ASCs in the database is to some degree consistent with the distribution of ASCs based on the 2020 Centers for Medicare & Medicaid Services (CMS) Ambulatory Surgical Center Compare data. We calculated the CMS Ambulatory Surgical Center Compare Data by region by looking up the number of ASCs represented in each State (see Table N5).²

² Centers for Medicare & Medicaid Services. Find an Ambulatory Surgical Center (ASC) Near You. <https://data.cms.gov/asc-lookup>. Accessed December 9, 2019.

Table N5. Distribution of AHRQ 2020 SOPS ASC Database Compared With Centers for Medicare & Medicaid Services Ambulatory Surgery Centers by Region

Geographic Region	AHRQ Database ASCs (2020)		Centers for Medicare & Medicaid Services Ambulatory Surgery Centers	
	Number	Percent	Number	Percent
Northeast	37	13%	813	14%
Midwest	63	22%	953	17%
South	104	37%	2,259	40%
West	78	28%	1,628	29%
Total	282	100%	5,653	100%

Note: States are categorized into regions as follows:

- Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT
- Midwest: IL, IN, IA, KS, MI, MN, MO, ND, NE, OH, SD, WI
- South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
- West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

In addition, ASCs that administered the survey were not required to undergo any training and administered the survey in different ways. Some ASCs used paper-only survey administration and others used web only. These different administration modes could have led to differences in survey responses; further research is needed to determine whether and how different administration modes affect results.

Finally, the data ASCs submitted have been cleaned for out-of-range values (e.g., invalid response values due to data entry errors), blank records (where responses to all survey items were missing or “Don’t know” except for demographic items), and straight-lining (where responses to all survey items in a section were the same even though at least one item in the section was negatively worded). 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 Facility Characteristics and Respondent Characteristics

In addition to the overall results on the database ambulatory surgery centers presented, Part II of the report presents data tables showing average percent positive scores on the survey composite measures and items across database ASCs, broken down by the following facility and respondent characteristics:

Appendix A: Results by Facility Characteristics

- Number of Operating/Procedure Rooms
- Geographic Region

Appendix B: Results by Respondent Characteristics

- Staff Position
- Hours Worked per Week in ASC

The breakout tables are included as appendixes 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 at <https://www.ahrq.gov/sops/databases/asc/index.html>.

Highlights From Appendix A: Overall Results by Facility Characteristics

Number of Operating/Procedure Rooms (Tables A-1, A-5)

- There were small differences on the Composite Measure Average by number of operating/procedure rooms.
- ASCs with 3 *operating/procedure rooms* had the highest average percent positive response for the item “Immediately after procedures, team members discussed any concerns for patient recovery” (80 percent); ASCs with 6 or more *operating/procedure rooms* were the least positive for this item (72 percent).

Geographic Region (Tables A-6, A-8, A-10)

- There were small differences on the Composite Measure Average by geographic region.
- ASCs from the *South* and *West* geographic regions had the highest average percentage of respondents who indicated that near-miss incidents were “Always” or “Most of the time” documented in an incident or occurrence report (90 percent each); ASCs from the *Midwest* region had the lowest (83 percent).
- ASCs from the *Northeast* had the highest average percent positive response for the item “Immediately after procedures, team members discussed any concerns for patient recovery” (81 percent); ASCs from the *Midwest* were the least positive for this item (73 percent).

Highlights From Appendix B: Overall Results by Respondent Characteristics

Staff Position (Tables B-1, B-3, B-4, B-5)

- *Doctors/Physicians (excluding Anesthesiologists) or Surgeons* had the highest score on the Composite Measure Average (96 percent); *Technicians* had the lowest (80 percent).
- *Physician Assistants or Nurse Practitioners* had the highest average percentage of respondents who indicated that near-miss incidents were “Always” or “Most of the time” documented in an incident or occurrence report (98 percent); *Certified Registered Nurse Anesthetists (CRNAs)* had the lowest (83 percent each).
- *Doctors/Physicians (excluding Anesthesiologists) or Surgeons* had the highest average percentage of respondents who gave their ASC an Overall Rating on Patient Safety of “Excellent” or “Very good” (96 percent); *Nurses* had the lowest (80 percent).
- *Doctors/Physicians (excluding Anesthesiologists) or Surgeons* and *Administrative, Clerical, or Business Staff* had the highest average percent positive response for the item “Just before the start of procedures, the doctor encouraged all team members to speak up at any time if they had any concerns” (85 percent); *Nurses* were the least positive for this item (58 percent).

Hours Worked per Week (Tables B-6, B-8, B-9, B-10)

- Respondents who typically work *1 to 16 hours per week* had the highest score for the Composite Measure Average (92 percent); respondents who typically work *32 to 40 hours per week* had the lowest (81 percent).
- Respondents who typically work *1 to 16 hours per week* had the highest average percentage of respondents who indicated that near-miss incidents were “Always” or “Most of the time” documented in an incident or occurrence report (92 percent); respondents who typically work *17 to 31 hours per week* or *32 to 40 hours per week* had the lowest (87 percent each).
- Respondents who typically work *1 to 16 hours per week* had the highest percentage of respondents who gave their ASC an Overall Rating on Patient Safety of “Excellent” or “Very good” (93 percent); respondents who typically work *32 to 40 hours per week* had the lowest (82 percent).
- Respondents who typically work *1 to 16 hours per week* had the highest average percent positive response for the item “Just before the start of procedures, the doctor encouraged all team members to speak up at any time if they had any concerns” (80 percent); respondents who typically work *32 to 40 hours per week* were the least positive for this item (62 percent).