AHRQ Surveys on Patient Safety Culture™
Hospital Survey Version 2.0

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HSOPS 2.0 Development Team

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• AHRQ Sponsors
Background on Patient Safety Culture and the SOPS Surveys
What is Patient Safety Culture?

Patient Safety Culture

The beliefs, values, norms, shared by health care staff

Determines behaviors that are:

- Rewarded
- Supported
- Expected
- Accepted

Exists at multiple levels:

- System
- Organization
- Department
- Unit

AHRO
Agency for Healthcare Research and Quality
What are the SOPS Surveys?

- Surveys of providers and staff about the extent to which their organizational culture supports patient safety

- Hospital (2004)
- Nursing Home (2008)
- Medical Office (2009)
- Community Pharmacy (2012)
- Ambulatory Surgery Center (2015)
How are SOPS surveys used?

• Raise staff awareness about patient safety
• Assess patient safety culture to identify strengths and areas for improvement
• Examine trends over time
• Evaluate the impact of patient safety initiatives
The SOPS Hospital Survey 2.0
(HSOPS 2.0)
Why did AHRQ develop HSOPS 2.0?

• Over the years, users and stakeholders have suggested changes to the survey, including:

1. Rewording complex survey items and survey items difficult to translate;
2. Adding a “Does not apply or Don’t know” (NA/DK) response option;
3. Shifting to a “Just Culture” framework to assess Response to Error;
4. Revising the staff positions and units/work areas; and
5. Determining if the number of negatively worded items could be reduced.
What are the most important things to know about HSOPS 2.0?

1. HSOPS 2.0 assesses many of the same areas of patient safety culture as HSOPS 1.0, but substantial changes were made to the survey.

2. Hospitals that administer HSOPS 2.0 can expect their scores on HSOPS 2.0 to be higher than comparable scores on HSOPS 1.0.
What changes were made in HSOPS 2.0?

- Only 5 HSOPS 1.0 survey items were kept unchanged in HSOPS 2.0
  - 21 HSOPS 1.0 items were dropped
  - 25 HSOPS 1.0 items were reworded or response options were changed
  - 10 new survey items were added to HSOPS 2.0
What other changes were made in HSOPS 2.0?

• HSOPS 2.0 now includes a “Does not apply/Don’t know” (NA/DK) response option.

• Similar to HSOPS 1.0, HSOPS 2.0 still includes a mix of positively and negatively worded survey items.
What areas of patient safety culture does HSOPS 2.0 assess?

HSOPS 2.0 Composite Measures:
1. Communication about error
2. Communication openness
3. Handoffs and information exchange
4. Hospital management support for patient safety
5. Organizational learning—Continuous improvement
6. Reporting patient safety events
7. Response to error
8. Staffing and work pace
9. Supervisor, manager, or clinical leader support for patient safety
10. Teamwork

Composite Measures Dropped from HSOPS 1.0:
1. Overall perceptions of patient safety
2. Teamwork across units
What was the process for developing HSOPS 2.0?

- Reviewed literature and existing surveys
- Identified and convened a Technical Expert Panel (TEP)
- Interviewed experts, providers, and staff
- Identified key areas of patient safety culture
- Developed & cognitively tested draft items
- Obtained input from Technical Expert Panel (TEP)
- Pilot tested the draft survey in hospitals
- Conducted psychometric analyses
- Consulted with TEP & AHRQ to finalize items
HSOPS 2.0 Pilot Testing: 2017 and 2019
What were the goals of HSOPS 2.0 pilot testing?

• Test the new HSOPS 2.0 by administering it in hospitals to see how well the survey items worked

• Conduct psychometric analysis of the pilot results to examine the reliability and construct validity of HSOPS 2.0

• Examine differences in results between HSOPS 1.0 and 2.0
  ▶ How do scores differ between HSOPS 1.0 and 2.0?
  ▶ What’s the impact of adding a “Does not apply/Don’t know” response option?
  ▶ What guidance can we provide to users who want to compare their scores on the two surveys?
What was done in the 2017 pilot test?

• Web survey of all providers and staff in 44 hospitals

• Simultaneous administration of HSOPS 1.0 and HSOPS 2.0
  ► Randomly assigned staff within each hospital into 2 groups

  HSOPS 1.0
  HSOPS 2.0
  Does not apply/
  Don’t know

► About 15,000 respondents in each group; about a 42% response rate
What’s a “percent positive score”? 

Positively worded survey item:

*We are informed about errors that happen in this unit.*

% Positive for positively worded survey items
What’s a “percent positive score”?

Negatively worded item:

*In this unit, staff feel like their mistakes are held against them.*

% Positive for negatively worded survey items

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree
- Does Not Apply or Don’t Know

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What were the results from the 2017 pilot test?

• Overall, we were surprised to find that HSOPS 2.0 percent positive scores were much higher compared to HSOPS 1.0

• Why were scores so much higher on HSOPS 2.0?
  ▶ Having fewer negatively worded items resulted in much more positive HSOPS 2.0 scores

• A lot of concern about the positivity of scores on 2.0 and “acquiescence bias”
What was done to revise HSOPS 2.0 after the 2017 pilot test?

• Reviewed additional literature
• Examined open-ended comments from the 2017 pilot test
• Brought back negatively worded items
• Brought back some HSOPS 1.0 items
• Further edited item wording and developed new survey items
• Conducted more cognitive testing of the revised survey
• Conducted a second pilot test of the revised HSOPS 2.0 in 2019
What was done in the 2019 pilot test?

• Web survey of all providers and staff in 25 hospitals

• Simultaneous administration
  ▶ Randomly assigned staff within each hospital into 3 groups

  - HSOPS 1.0
  - HSOPS 1.0
    Does not apply/ Don’t know
  - HSOPS 2.0
    Does not apply/ Don’t know

  ▶ About 4,400 respondents in each group; about a 39% response rate

• Final HSOPS 2.0 survey was based on the results from the 2019 pilot test
What were the results from the 2019 pilot test?
The Impact of NA/DK on Scores

Since HSOPS 2.0 includes NA/DK, hospitals can expect scores to be slightly higher on 2.0 simply due to the addition of NA/DK.
Smaller Differences in Scores in 2019

• Overall, we found that HSOPS 2.0 percent positive scores were higher (more positive) compared to HSOPS 1.0

BUT

There were smaller differences in scores in the 2019 pilot test
# Largest Score Differences

<table>
<thead>
<tr>
<th>Patient Safety Culture Composite Measures</th>
<th>Average % Positive</th>
<th>Difference HSOPS 2.0 – HSOPS 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Patient Safety Events</td>
<td>74%</td>
<td>+10%</td>
</tr>
<tr>
<td>Communication Openness</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>Response to Error</td>
<td>76%</td>
<td>+13%</td>
</tr>
<tr>
<td>Handoffs and Information Exchange</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>61%</td>
<td>+18%</td>
</tr>
<tr>
<td></td>
<td>58%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>

- **Reporting Patient Safety Events**: Increase from 64% to 74%.
- **Communication Openness**: Increase from 63% to 76%.
- **Response to Error**: Increase from 43% to 61%.
- **Handoffs and Information Exchange**: Increase from 40% to 58%.
## Smallest Score Differences

<table>
<thead>
<tr>
<th>Patient Safety Culture Composite Measures</th>
<th>Average % Positive</th>
<th>Difference HSOPS 2.0 – HSOPS 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Management Support for Patient Safety</td>
<td>68</td>
<td>-2</td>
</tr>
<tr>
<td>Teamwork</td>
<td>81</td>
<td>+2</td>
</tr>
<tr>
<td>Communication About Error</td>
<td>68</td>
<td>+3</td>
</tr>
<tr>
<td>Organizational Learning – Continuous Improvement</td>
<td>72</td>
<td>+4</td>
</tr>
<tr>
<td>Staffing and Work Pace</td>
<td>56</td>
<td>+4</td>
</tr>
<tr>
<td>Supervisor, Manager, or Clinical Leader Support for Patient Safety</td>
<td>81</td>
<td>+5</td>
</tr>
</tbody>
</table>

- **HSOPS 2.0**: Darker bars
- **HSOPS 1.0**: Lighter bars
How did survey item changes impact patient safety culture scores?
### Minor Wording Change

<table>
<thead>
<tr>
<th>Survey Version</th>
<th>Item</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSOPS 2.0</td>
<td>My supervisor, manager, <em>or clinical leader</em> seriously considers staff suggestions for improving patient safety. (B1)</td>
<td>80%</td>
</tr>
<tr>
<td>HSOPS 1.0</td>
<td>My supervisor/manager seriously considers staff suggestions for improving patient safety. (B2)</td>
<td>75%</td>
</tr>
</tbody>
</table>

**Difference**: 5%
### Major Wording Change

<table>
<thead>
<tr>
<th>Survey Version</th>
<th>Item</th>
<th>% Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSOPS 2.0</td>
<td>During busy times, staff in this unit help each other. (A8)</td>
<td>86%</td>
</tr>
<tr>
<td>HSOPS 1.0</td>
<td>When one area in this unit gets really busy, others help out. (A11)</td>
<td>70%</td>
</tr>
</tbody>
</table>

**Difference**: 16%
Is HSOPS 2.0 reliable and valid?

• We conducted psychometric analysis on the 2019 pilot test data to examine the reliability and construct validity of HSOPS 2.0

• All composite measures had acceptable internal consistency reliability (Cronbach’s alpha ≥ 0.70), except Staffing and Work Pace (0.67)

• All composite measures and items had acceptable site-level reliability (≥ 0.70)

• Confirmatory factor analysis showed:
  ▶ All items had acceptable factor loadings on their respective composite measures (≥ 0.40)
  ▶ All items and composite measures demonstrated acceptable overall model fit for several goodness-of-fit indices (CFI, RMSEA, SRMR)
HSOPS 2.0 Conclusions

- HSOPS 2.0 assesses many of the same areas of patient safety culture as HSOPS 1.0, but substantial changes were made to the survey.
- Hospitals that administer HSOPS 2.0 can expect their scores on HSOPS 2.0 to be higher than comparable scores on HSOPS 1.0.
- We did not reduce the proportion of negatively worded items.
- Psychometric properties of the survey are good.
What’s the best way for a hospital to transition from HSOPS 1.0 to HSOPS 2.0?
Three Options for Transitioning to HSOPS 2.0

Option 1: Administer HSOPS 2.0

Option 2: Administer HSOPS 1.0 One More Time

Option 3: Conduct Simultaneous Administration of HSOPS 1.0 and HSOPS 2.0
Option 1: Administer HSOPS 2.0

- For hospitals that want to use HSOPS 2.0 for their next survey administration without trending previous HSOPS 1.0 scores
Option 2: Administer HSOPS 1.0 One More Time

• For hospitals that want to trend their HSOPS 1.0 scores one more time and later establish a new baseline on HSOPS 2.0
Option 3: Simultaneous Administration of HSOPS 1.0 and HSOPS 2.0

- Only for larger hospitals with 1,000 or more staff that want to trend their HSOPS 1.0 scores, establish a new baseline for HSOPS 2.0, and compare their 1.0 and 2.0 scores

Refer to Appendix B of the document “Transitioning to the SOPSTM Hospital Survey Version 2.0: What’s Different and What To Expect” on the AHRQ web site
What supplemental items are available to use with HSOPS 1.0 and HSOPS 2.0?
Supplemental Items

- Can be added toward the end of HSOPS 1.0 or 2.0 surveys

  - **Value and Efficiency** (Hospital & Medical Office) 13 items
    - Improving efficiency, waste reduction, patient centeredness, and high-quality care.

  - **Health Information Technology Patient Safety** (Hospital) 15 items
    - EHR issues, training, system support, communication, and workflow
Are there results available for HSOPS 2.0?
Will there be a database and research datasets for HSOPS 2.0?
Results from the 2019 HSOPS 2.0 pilot test in 25 hospitals are available on the AHRQ web site.

Data submission for the SOPS Hospital Database opens June 1 – July 20, 2020 and will accept:

- HSOPS 1.0
- HSOPS 2.0
- HIT Patient Safety Supplemental Items
- Value and Efficiency Supplemental Items
SOPS Research Datasets

- For research purposes only

- De-identified Data Requests
  - Hospital, medical office, nursing home, community pharmacy, and ambulatory surgery database data are available

- Hospital-Identifiable Data Requests—SOPS Hospital Database only
  - Allows linking SOPS data to other datasets
  - Requests are reviewed and approved by AHRQ
  - Requestors complete a research abstract and sign a data release agreement
  - Database hospitals must agree release their data
What resources are available for HSOPS 2.0?
HSOPS 2.0 Survey

Items and Composite Measures

SOPS Hospital Survey 2.0: Items and Composite Measures

In this document, the items in the SOPS Hospital Survey 2.0 are grouped according to the safety culture composite measures they are intended to assess. The item’s survey location is shown to the left of each item. Negatively worded items are indicated. Reliability statistics based on the pilot test data from 25 hospitals and 4,345 hospital staff are provided for the composite measures.

1. Teamwork

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don’t Know)

A1. In this unit, we work together as an effective team.
A2. During busy times, staff in this unit help each other.
A9. There is a problem with disrespectful behavior by those working in this unit. (negatively worded)

Reliability of this composite measure—Cronbach’s alpha (3 items) = .76

2. Staffing and Work Pace

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don’t Know)

A2. In this unit, we have enough staff to handle the workload.
A3. Staff in this unit work longer hours than is best for patient care. (negatively worded)
A3. This unit relies too much on temporary, float, or PRN staff. (negatively worded)
A11. The work pace in this unit is so rushed that it negatively affects patient safety. (negatively worded)

Reliability of this composite measure—Cronbach’s alpha (4 items) = .67

3. Organizational Learning—Continuous Improvement

(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don’t Know)

A4. This unit regularly reviews work processes to determine if changes are needed to improve patient safety.
A12. In this unit, changes to improve patient safety are evaluated to see how well they worked.
A14. This unit lets the same patient safety problems keep happening. (negatively worded)

Reliability of this composite measure—Cronbach’s alpha (3 items) = .76
HSOPS 2.0 Guides

Surveys User’s Guide

HOSPITAL SURVEY ON PATIENT SAFETY CULTURE VERSION 2.0 USER’S GUIDE

Transitioning Guide

Transitioning to the SOPS™ Hospital Survey Version 2.0: What’s Different and What To Expect

Part I: Main Report

Prepared for:
Agency for Healthcare Research and Quality
U.S. Department of Health and Human Services
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www.ahrq.gov

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Naomi Dyer Yount, Ph.D.

AHRQ Publication No. 19-0076-1-EF
September 2019
Simultaneous Administration Comparison Tool

- For Simultaneous Administration **ONLY**

<table>
<thead>
<tr>
<th>Supervisor, Manager, or Clinical Leader Support for Patient Safety</th>
<th>Supervisor/Manager Expectations &amp; Actions Promoting Patient Safety</th>
<th>Your Hospital % Positive</th>
<th>Difference: HSOPS 2.0 - HSOPS 1.0</th>
<th>2019 Pilot Hospital Average % Positive</th>
<th>Difference: HSOPS 2.0 - HSOPS 1.0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>HSOPS 2.0</td>
<td>HSOPS 1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervisor, Manager, or Clinical Leader</td>
<td></td>
<td>85%</td>
<td>77%</td>
<td>8%</td>
<td>81%</td>
</tr>
<tr>
<td>My supervisor, manager, or clinical leader seriously considers staff suggestions for improving patient safety. (B1)</td>
<td>My supervisor/manager seriously considers staff suggestions for improving patient safety. (B2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>85%</td>
<td>77%</td>
<td>8%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Supervisor, Manager, or Clinical Leader:

Support for Patient Safety

Supervisor/Manager Expectations & Actions

Promoting Patient Safety

Your Hospital % Positive

Difference: HSOPS 2.0 - HSOPS 1.0

2019 Pilot Hospital Average % Positive

Difference: HSOPS 2.0 - HSOPS 1.0
Other SOPS Resources

**Research Reference List**

**Resource List**

**Action Planning Tool**

**IV. Resources by Composite**

The following resources are organized according to the relevant AHRQ Hospital Survey on Patient Safety Culture composite measures they are designed to help improve. Some resources are duplicated and cross-referenced, since they apply to more than one composite.

**Composite 1 and 3: Supervisor, Manager, or Clinical Leader Support for Patient Safety and Hospital Management Support for Patient Safety**

1. **Conduct Patient Safety Leadership Walkrounds**

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   - Senior leaders can demonstrate their commitment to safety and learn about the safety issues in their organization by making regular rounds for the sole purpose of discussing safety with staff. These rounds for maritime improvement (SPI) and other leaders discuss the benefits of management making regular rounds and go out for doing the rounds, as well as time to resources. These rounds are especially effective in institution with safety leaders.

2. **Framework for Effective Board Governance of Health System Quality**

   The Institute for Healthcare Improvement (IHI) and AHRQ conducted a research scan on board governance of health system quality, an evaluation of governance education in quality, and expert interviews. This work made it clear that board members, and those who support them, want a clear and consistent framework to guide governance of all dimensions of quality beyond safety, including identifying the core processes and necessary activities for effective governance of quality. The framework, assessment tool, and expert guide frame to explore options for institution and clarify board responsibility for quality oversight. They also provide practical tools for leaders and the health system leaders who support them to govern quality.
20. Why did AHRQ develop Version 2.0 of the SOPS Hospital Survey (HSOPS 2.0)?
21. What is different about the new SOPS Hospital Survey 2.0 (HSOPS 2.0) compared with the original SOPS Hospital Survey 1.0 (HSOPS 1.0)?
22. How long is the SOPS Hospital Survey 2.0 (HSOPS 2.0)?
23. How many completed surveys are needed to submit to the SOPS Hospital Database?
24. What areas of patient safety culture are assessed on the SOPS Hospital Survey 2.0 (HSOPS 2.0)?
25. How was the SOPS Hospital Survey 2.0 (HSOPS 2.0) developed and tested?
26. How can hospitals transition from the SOPS Hospital Survey 1.0 (HSOPS 1.0) to the new SOPS Hospital Survey 2.0 (HSOPS 2.0)? Can hospitals compare scores on HSOPS 2.0 against scores from a previous administration of HSOPS 1.0?
27. How can hospitals conduct a simultaneous administration of SOPS Hospital Survey 1.0 (HSOPS 1.0) and SOPS Hospital Survey 2.0 (HSOPS 2.0) to compare scores?
28. When is the next data submission for the SOPS Hospital Database and which versions of the SOPS Hospital Survey will be accepted?
29. Are the current SOPS Hospital Survey resource materials—including the Survey User’s Guide, Data Entry and Analysis Tool, and Action Planning Tool—still relevant or are there new versions of these resources for the SOPS Hospital Survey 2.0 (HSOPS 2.0)?
30. Will AHRQ continue to support the SOPS Hospital Survey 1.0 (HSOPS 1.0)? If so, for how long?
Other SOPS Updates

- New SOPS Animated Videos
  - *Why Choose AHRQ Surveys on Patient Safety Culture?*
  - *Why Submit Data to the AHRQ SOPS Databases?*

- SOPS Ambulatory Surgery Center Database Report
  - Late 2019/ early 2020

- Diagnostic Safety Supplemental Items for medical offices
  - Under development
SOPS Technical Assistance (TA)

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SafetyCultureSurveys@westat.com

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DatabasesOnSafetyCulture@westat.com

General TA Phone:
1-888-324-9749

Database TA Phone:
1-888-324-9790

Website: www.ahrq.gov/sops
Sign up for SOPS Email Updates

Surveys on Patient Safety Culture
- Hospital Survey
- Medical Office Survey
- Nursing Home Survey
- Ambulatory Surgery Center Survey
- Community Pharmacy Survey