



Surveys on Patient Safety Culture™

*Introducing the New
SOPS Hospital Survey 2.0
October 30, 2019 – Webcast Transcript*

Speakers:

Laura Gray, M.P.H.
Senior Study Director
User Network for the AHRQ Surveys on Patient Safety Culture (SOPS), Westat (Moderator)

Caren Ginsberg, Ph.D.
Director, CAHPS Division
Center for Quality Improvement and Patient Safety Agency for Healthcare Research and Quality (Presenter)

Joann Sorra, Ph.D.
Project Director
User Network for the AHRQ Surveys on Patient Safety Culture (SOPS), Westat (Presenter)

Presentation:

Laura Gray

Gray (opening), Slide 1

My name is Laura Gray and I'll be your moderator. I'm a Senior Study Director at Westat and the Project Manager for the contract that supports the Agency for Healthcare Research and Quality SOPS program.

Gray (opening), Slide 2

Before we begin, I have just a few housekeeping details to go over with you. If you are having difficulty hearing the audio from your computer speakers, you can switch the audio selection by having Webex call you at a phone number you provide and you can then connect through your phone. In the event that your computer freezes, at any point during the presentation, you can try logging out and logging back into the webcast to refresh the page. Remember though that you may just be experiencing a lag in the advancement of slides due to the internet connection speed. If you need help at any time during this webcast, use the Q and A icon to ask questions or to request help.

Gray (opening), Slide 3

At any point for our presentation today, if you have any further technical difficulties or you have a question that you would like to ask our speakers, you may ask a question through this Q and A feature. Depending on the browser that you are using, your Webex screen may look slightly different than this slide but just look for the Q and A icon and then be sure that the drop down option displays all panelists for you to ask a question so our team can see it.

Today's session is being recorded and a replay of today's webcast and the slides will be made available on the AHRQ webcast, or I'm sorry, the AHRQ website.

Gray (opening), Slide 4

So now that we have some of the housekeeping items out of the way I am happy to introduce our speakers for today's webcast. So we are very pleased to welcome Caren Ginsberg who serves as the Division Director for the Agency for Healthcare Research and Quality's work on the Consumer Assessment of Healthcare Providers and Systems, or CAHPS, and Surveys on Patient Safety Culture, or SOPS. An anthropologist and demographer, Dr. Ginsberg has broad-based experience in patient experience, patient safety and public health. In her position at AHRQ she focuses on program development implementation, operations and evaluation, with specialty in survey design and development and qualitative evaluation and assessment. Previously she held positions at the Centers for Medicare and Medicaid Services, Westat, and the National Quality Forum.

I'm also pleased to have my colleague Joann Sorra, an Industrial Organizational Psychologist and Associate Director at Westat with over 20 years of experience conducting organizational and health services research, with a particular focus on patient safety, patient and caregiver experience and survey methodology. Dr. Sorra led the development of the original AHRQ SOPS Hospital Survey that was released in 2004, and led the team that developed version 2.0 which is the focus of our webcast today.

As previously mentioned, I'm Laura Gray, your moderator today.

Gray (opening), Slide 5

So here's our agenda for today's call, we'll start with Dr. Caren Ginsberg giving a brief overview from AHRQ and then Dr. Joann Sorra will introduce us to the SOPS Hospital Survey Version 2.0. And lastly we hope to have some time to answer your questions. So let's begin and I'll hand things over to Caren.

Caren?

**Caren Ginsberg
Ginsberg, Slide 6**

Hello everyone, I'm delighted to welcome you today to this webcast, it's our formal release of the updated version, version two of our Hospital SOPS Survey. So I hope you enjoy this presentation and take away knowledge that you're going to need to be able to use this survey. And before we start I'd like to give you a little bit of background to what our agency does, the Agency for Healthcare Research and Quality, and why this work is important to our agency. So I'd just like to set the context for this work for you.

Ginsberg, Slide 7

So AHRQ's mission is to improve the life of patients by helping the healthcare systems and professionals deliver care that's of high quality, high value and care that's safe. And we're a science-based agency so as such what we do is we invest in research and evidence to make healthcare safer and improve quality, we create tools for healthcare professionals to use to improve care for their patients, and we generate measures and data that are used by providers and policy makers and researchers and others to monitor their progress of the US healthcare system and to improve its performance. And we feel that it's important to get this science out to implementation, push it to implementation and to get these tools and our products to you, our users.

Ginsberg, Slide 8

So in AHRQ's patient safety program we talk about our priorities, which are to focus on areas of greatest impact, extend patient safety improvement to all settings and if you're familiar with the SOPS program you know we have five different surveys for five different healthcare settings. Another priority is to prevent healthcare associated infections and to reduce antibiotic resistance, to build capacity in the US healthcare system to accelerate safety improvements, to improve communication and engagement between clinicians and patients is a really important priority, and to make the safe thing the easy thing to do.

Ginsberg, Slide 9

So the SOPS program's been around since 2001, that's when it was initiated and the first survey came out, Hospital Survey came out in 2004. So this is a mature program and what we're most known for is the development of our surveys, survey measures that are validated and in which we've used best methods in their development of these surveys and measures. But we do more and there's a broader context for this program and this program also advances the understanding and the measurement and improvement of patient safety culture within healthcare settings. For example, we recently provided a webcast for you on Best Practices for Web-based SOPS Surveys. So focusing on how you can best collect SOPS data using electronic technology and please look for announcements from us in the next year for other webcasts that will be featuring users of SOPS surveys and how they've used data to improve patient safety culture in their institution.

Ginsberg, Slide 10

So let me just give you a little bit of background to the revision of Hospital SOPS one to Hospital SOPS two. The AHRQ SOPS program is committed to periodically reviewing our surveys and material to ensure their continued relevance to you, our users, and over the years since we've released the first version of this survey we've received feedback from you and some of that feedback's been for example survey content. You talked to us about staff positions in work areas for example needing revision. You've talked to us about orientation of the survey to just culture and you've talked to us about the structure of the survey for example wanting not applicable or don't know response option to the questions, to the items. You've talked to us about negatively worded items and complex items.

So we listened to your feedback and we used the standard SOPS survey methodology to develop new items and to test them and we started this effort in 2016. In 2017, we tested our new items and we got some pretty surprising results that we really couldn't explain and so we went back to the drawing board, we redesigned the survey and retested them in 2019 and that's the work that we're going to be talking about today.

Ginsberg, Slide 11

So today's discussion is going to feature, one, why we developed version two of the Hospital SOPS Survey, what's different about version two compared to version one of the survey, what you can expect to see in terms of score changes with this new survey. We're going to talk to you about transitioning from version one to version two if you've already been using version one of the survey. We're going to talk to you about submitting data to the Hospital Survey database and that would be in June of next year. And we're going to talk to you about the supplemental items as well.

So, again, I want to thank you for joining this webcast today and I'm going to turn this over to Joann Sorra.

Joann Sorra

Sorra, Slide 12

Thank you Caren. Happy to be here and speak about the development of 2.0.

Sorra, Slide 13

So let me first acknowledge the Westat research team members listed here who were involved with the development pilot testing and analysis of HSOPS 2.0. I'd also like to thank our SOPS Technical Expert Panel members and our AHRQ sponsors, including Caren Ginsburg and Elma Chowdhury.

Sorra, Slide 14

I'm going to begin with a few slides that give some background on patient safety culture and the SOPS surveys.

Sorra, Slide 15

What is patient safety culture? Patient safety culture can be defined as the belief, values and norms that are shared by healthcare providers and staff in an organization. Patient safety culture determines the behaviors that are rewarded, supported, expected and accepted within an organization as it relates to patient safety. It's important to also note that culture exists at multiple levels, from the unit level to the department, organization, and system levels.

Sorra, Slide 16

What are the SOPS surveys? The SOPS surveys are surveys of providers and staff that assess the extent to which their organizational culture supports patient safety. The SOPS program began in 2001 with the development of the Hospital Survey on Patient Safety Culture, which was released in 2004. There are now four more SOPS surveys for nursing homes, medical offices, community pharmacies, and ambulatory surgery centers.

Sorra, Slide 17

How are SOPS surveys used? Healthcare organizations use the SOPS surveys to raise staff awareness about patient safety, to assess patient safety culture, to identify strengths and areas for improvement, to examine trends over time, and to evaluate the impact of patient safety initiatives.

Sorra, Slide 18

Now let's get into the details and talk about HSOPS 2.0.

Sorra, Slide 19

First of all, you might be asking, "Why did AHRQ develop HSOPS 2.0?" Over the years, since the release of the Hospital SOPS in 2004, users and stakeholders have provided AHRQ with feedback about the survey. While many have highlighted the value and usefulness of the survey for their patient safety improvement efforts, AHRQ has also received suggestions for changes to the survey. Including rewording complex survey items and survey items that are difficult to translate, adding a "Does not apply or Don't know" response option, shifting to a Just Culture framework to assess response to error, revising the staff positions and units, work areas, and to determining if the number of negatively worded items could be reduced. Using this feedback AHRQ developed and pilot tested a new version of the survey, the SOPS Hospital Survey 2.0, or HSOPS 2.0, which was released this month.

Sorra, Slide 20

Before we dive into a lot of details about HSOPS 2.0, what are the most important things to know about it? If I had to sum it up in two key points it would be these, first, HSOPS 2.0 assess many of the same areas of patient safety culture as HSOPS 1.0, but substantial changes were made to the survey. So HSOPS 2.0 is fundamentally a different survey than HSOPS 1.0. Second, based on the results from the pilot test of HSOPS 2.0 in 2019, hospitals that administer HSOPS 2.0 can expect their scores on the survey items and composite measures to be higher than comparable scores on HSOPS 1.0. The reasons the HSOPS 2.0 scores are likely to be higher is because of the changes we made in the 2.0 survey: changes in the wording of items, changes to response options and changes to the order of the questions. I'll be discussing the impact of these changes throughout my presentation.

Sorra, Slide 21

So what changes were made in HSOPS 2.0? As I indicated, there were a number of changes. While HSOPS 1.0 has 51 survey items, HSOPS 2.0 is a little shorter with only 40 survey items. Only five 1.0 survey items were kept unchanged in the 2.0 version, meaning that we did not change the wording of five of the HSOPS 1.0 items. However, 21 HSOPS 1.0 items were dropped, 25 HSOPS 1.0 items were reworded or response options were changed and 10 new survey items were added to HSOPS 2.0.

Sorra, Slide 22

What other changes were made in HSOPS 2.0? Another change was that we added a "Does not apply/Don't know" response option, shown here on the screen. Including this option enables providers and staff to opt out of answering questions that don't apply to them or that they don't have the knowledge or experience to answer. And similar to HSOPS 1.0, HSOPS 2.0 still includes a mix of positively and negatively worded survey items. Given that one of our goals was to determine whether we could reduce the number of negatively worded items, we concluded after conducting two pilot tests that it would be best to retain negatively worded items and I'll explain why when I review the results from our pilot tests.

Sorra, Slide 23

What areas of patient safety culture does HSOPS 2.0 assess? HSOPS 2.0 has 10 composite measures. A composite measure is a group of two or more survey items that assess the same area of patient safety culture. These composite measures should look familiar to users of HSOPS 1.0, but the names of some composite measures were changed to align with changes to the content that is now assessed in those measures. For example, HSOPS 2.0 includes Communication About Error, shown here as the first composite measure, but that measure was called Feedback and Communication About Error in HSOPS 1.0.

You'll also see that Nonpunitive Response to Error on HSOPS 1.0 was changed to Response to Error in HSOPS 2.0 which is shown as composite number seven on this list. I also want to point out the two composite measures from HSOPS 1.0 were dropped. Overall Perceptions of Patient Safety was dropped because the patient safety rating question was deemed to be sufficient as a single item overall assessment of patient safety. The HSOPS 1.0 composite measure Teamwork Across Units was highly correlated or highly related to the composite measure Handoff and Transitions. So in HSOPS 2.0 similar content from both of these measures was combined into a single composite measure now called Handoffs and Information Exchange, which is listed third here.

Sorra, Slide 24

What was the process for developing HSOPS 2.0? First, we conducted a review of the literature on patient safety, safety culture, medical error, and event reporting and we gathered existing surveys. We identified and convened a Technical Expert Panel with members representing various settings of care including hospitals and medical offices. We also interviewed patient safety experts and hospital providers and staff. Using all of this information we then identified key areas of patient safety culture that the survey should assess and then developed draft survey items. We cognitively tested the survey items with hospital providers and staff to determine how well they understood and could respond to the questions. We iteratively revised and cognitively tested the draft survey items, we again obtained input from the technical expert panel and then pilot tested the draft survey in hospitals. We conducted psychometric analysis of the pilot test results to examine the reliability and construct validity of the survey measures and as a last step we consulted with the TEP and AHRQ to finalize the survey.

Sorra, Slide 25

Now I'm going to describe the two pilot tests that we conducted in 2017 and 2019.

Sorra, Slide 26

What were the goals of HSOPS 2.0 pilot testing? Well first we wanted to test the new 2.0 survey by administering it in hospitals to see how well the survey items worked. We also wanted to conduct analysis of the pilot results to examine the reliability and construct validity of the new survey. And we wanted to examine differences in results between HSOPS 1.0 and 2.0. How do scores differ between 1.0 and 2.0? What's the impact of adding "Does not apply or Don't know" as a response option? And what guidance can we provide to users who want to compare their scores on the two surveys?

Sorra, Slide 27

What was done in the 2017 pilot test? We administered a web survey to all providers and staff in 44 hospitals using a simultaneous administration of HSOPS 1.0 and HSOPS 2.0. We randomly assigned staff within each hospital into two groups by staff positions within units so that half of the providers and staff received HSOPS 1.0 and the other half received HSOPS 2.0. HSOPS 2.0 included a "Does not apply/Don't know" response option but HSOPS 1.0 as shown here on the left did not include that response option. This design allowed us to have equal numbers of staff in each staff position and work area in the two groups. Because the two groups were roughly equivalent, any differences in scores between HSOPS 1.0 and 2.0 would therefore be due to differences in the surveys, not due to actual differences in patient safety culture. In the 2017 pilot test we had about 15,000 respondents that completed 1.0 and 15,000 that completed 2.0 with about a 42% response rate in each group. So this is a pretty large robust pilot test.

Sorra, Slide 28

What's a percent positive score? As I indicated, one of the goals of the simultaneous administration was to compare scores on HSOPS 1.0 and 2.0 to understand the impact of the survey changes on scores. To do this, we compared percent positive scores. For a positively worded survey item like, "We are informed about errors that happen in this unit," a percent positive score is the percentage of respondents who answer "Agree" or "Strongly agree" to this item.

Sorra, Slide 29

For a negatively worded survey item like, "In this unit staff feel like their mistakes are held against them," a percent positive score is the percentage of respondents who answer "Strongly disagree" or "Disagree" to this item.

Sorra, Slide 30

What were the results from the 2017 pilot test? Overall, we were surprised to find that almost all of the scores on HSOPS 2.0 were much higher compared to 1.0. For example, one composite measure score was 40 percentage points, four, zero, percentage points higher on the new HSOPS 2.0. So why were the scores so much higher on HSOPS 2.0? When we drilled down into the data, we found that the survey change that led to the largest score differences was rewording negatively worded items to positively worded items. Because the HSOPS 2.0 that we pilot tested in 2017 had fewer negatively worded items, this appeared to result in much more positive scores on 2.0.

So there was a lot of concern on our team at AHRQ and with the SOPS Technical Expert Panel members about the positivity scores from the 2017 pilot test. The survey changes we had made were resulting in what survey developers call acquiescence bias, where survey respondents showed a strong tendency to agree with or respond positively to most of the survey items. When there is strong acquiescence bias a survey simply won't be able to differentiate between hospitals very well because most hospitals will have high scores. Because the degree of positivity in the scores didn't seem to accurately reflect patient safety culture in the 2017 pilot test hospitals, we recognize that we needed to further revise the 2.0 survey.

Sorra, Slide 31

So what was done to revise HSOPS 2.0 after the 2017 pilot test? Well we reviewed additional literature to see if there were some concepts that we had not included but should, we also examined the open ended comments from the 2017 pilot test to see the types of patient safety culture concerns that providers and staff were mentioning and the words they used to describe their concerns. We brought back negatively worded items and brought back some of the HSOPS 1.0 items with minor wording changes. We further edited item wording and developed new survey items, and we conducted more cognitive testing of the revised survey. We then conducted a second pilot test of the revised HSOPS 2.0 in 2019.

Sorra, Slide 32

What was done in the 2019 pilot test? We again administered a web survey to all providers and staff but this time we conducted the pilot test in 25 hospitals rather than 44. Similar to the 2017 pilot test, we conducted a simultaneous administration of 1.0 and 2.0, but this time we randomly assigned staff within each hospital into three groups. So one-third of the providers in each hospital received HSOPS 1.0, one-third received HSOPS 1.0 with the addition of a “Does not apply/Don't know” response option and one-third received HSOPS 2.0 which included a “Does not apply/Don't know” response option. This design allowed us to not only compare HSOPS 1.0 and 2.0 scores, but to also examine the impact of adding a “Does not apply/Don't know” response option on scores.

In the 2019 pilot test we had about 4400 in each of these three groups, with about a 39% response rate in each group. So even though this was a smaller pilot test than in 2017, it was still a robust pilot test. And I'm happy to report that the final HSOPS 2.0 survey was based on the results from this 2019 pilot test, we did not need to do a third pilot test.

Sorra, Slide 33

So what were the results from the 2019 pilot test?

Sorra, Slide 34

Looking at the impact of NA/DK on scores we found that on average percent positive scores were about two percentage points higher when there was a “Does not apply/Don't know” response option. Differences ranged from one to five percentage points higher when there was an NA/DK response option. The reason NA/DK increases scores is that when NA/DK is not present, like in HSOPS 1.0 and that example on the left, some respondents will simply select the midpoint, neither agree nor disagree, if they don't know how to answer a question or if the question doesn't apply to them. If they select the midpoint, that leads to lower percent positive scores. But when respondents select “Does not apply/Don't know”, as shown on the right that response is considered missing and doesn't affect percent positive scores. The reason this is important is that since HSOPS 2.0 includes a “Does not apply/Don't know” response option, hospitals can expect percent positive scores to be slightly higher on 2.0 simply due to the addition of NA/DK.

Sorra, Slide 35

Overall in the 2019 pilot test, we found that HSOPS 2.0 percent positive scores were higher or more positive compared to HSOPS 1.0. But there were smaller differences in scores in the 2019 pilot test, than in the 2017 test. Next we'll take a look at composite measure score differences from the 2019 pilot test in 25 hospitals.

Sorra, Slide 36

These are the four composite measures that showed the largest score differences between HSOPS 2.0 and 1.0 from the 2019 pilot test. On the left you see the wording of the composite measures from HSOPS 2.0.

Let's start and look at the bottom here at Handoffs and Information Exchange. The HSOPS 2.0 score on top in the dark blue bar was 58% positive, and the comparable HSOPS 1.0 score on the bottom in the light blue bar was 40% positive. On the right, you can see that the HSOPS 2.0 score was 18 percentage points higher than the HSOPS 1.0 score on this measure. Moving up to Response to Error, you can see that the HSOPS 2.0 score was 61%, and the comparable HSOPS 1.0 score below was 43%. So the HSOPS 2.0 percent positive score on this measure was also 18 percentage points higher. All four of these composite measures showed differences ranging from 18 percentage points to 10 percentage points with HSOPS 2.0 scores higher than HSOPS 1.0.

When looking at these differences in scores, it's important to remember that the survey items in 2.0 are different than the 1.0 items. We're comparing 2.0 and 1.0 composite measures on this slide that were intended to measure similar aspects of patient safety culture, but we would expect some differences in scores because the survey items in the composite measures were different. In addition, score differences are also slightly larger due to the inclusion of a “Does not apply/Don't know” response option in the HSOPS 2.0 as we discussed earlier.

So although the 18 percentage point differences on Handoffs and Information Exchange and Response to Error are relatively large score differences, they were smaller than differences than we obtained in the 2017 pilot test.

Sorra, Slide 37

Moving on, let's take a look at score differences between HSOPS 2.0 and 1.0 for the remaining six composite measures that showed the smallest score differences. Different scores for these composite measures were five

percentage points or smaller. Looking at the bottom at Supervisor, Manager or Clinical Leader Support for Patient Safety, the HSOPS 2.0 score on the top was 81% positive and the comparable HSOPS 1.0 score below was 76%. On the right you can see that the 2.0 score was five percentage points higher than the 1.0 score on this measure. Looking at the top at Hospital Management Support for Patient Safety, you can see that this composite measure actually scored a little lower on HSOPS 2.0 at 68% positive compared to 70% positive for HSOPS 1.0.

This slide and the previous slide provide information about the magnitude of the differences in scores that hospitals are likely to see when they administer version 2.0. And you can see that scores on HSOPS 2.0 are pretty consistently higher than HSOPS 1.0.

Sorra, Slide 38

How did survey item changes impact patient safety culture scores? Let's now look at some examples of the types of survey item wording changes that were made and the effect of these wording changes on scores.

Sorra, Slide 39

This is an example of a minor wording change for a survey item in the composite measuring Supervisor, Manager or Clinical Leader Support for Patient Safety. The wording changes are shown in red italics with underlining, and in this example the only difference between the HSOPS 2.0 survey item at the top and the HSOPS 1.0 survey item at the bottom is the addition of the words, "or clinical leader." The 2.0 percent positive score for this item was 80% and the 1.0 score was 75%. So the score difference was relatively small at five percentage points. So in general, minor wording changes had smaller effects on scores.

Sorra, Slide 40

Now let's look at an example of a major wording change for a survey item in the Teamwork composite. In this example, the survey item at the top in red italics with underlining has been completely reworded. The 2.0 item, "During busy times staff in this unit help each other," is different than the 1.0 item, "When one area in this unit gets really busy, others help out." We're comparing these items because they were generally intended to measure similar concepts but in the 2.0 item we clarified that staff in the unit are the ones who are helping, whereas in the 1.0 item it's not clear if others who help out are within the unit or outside the unit. The major wording change for this item resulted in a 16 percentage point difference when comparing item percent positive scores. So in general major wording changes had larger effect on scores.

Sorra, Slide 41

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 of the composite measures had acceptable internal consistency reliability with Cronbach's alpha greater than or equal to .7, except for staffing and work pace, which was a little lower at .67. Internal consistency reliability indicates how consistently respondents are answering a set of composite measure items by assessing how closely related or correlated those items are. The Staffing composite measure in HSOPS 1.0 also had lower reliability because in both versions, 1.0 and 2.0. This composite is designed to assess rather broad ranging aspects of staffing and work pace, so the items don't hang together as well as items in the other composite measures. But we retain this composite because what it does measure is critical to patient safety.

All composite measures and items also had acceptable site-level reliability, greater than or equal to .7, which assess the extent to which scores on the composite measures can sufficiently differentiate or distinguish hospitals. We also conducted confirmatory factor analysis to assess how well the items in the composite measures fit the data by examining the relationships between the survey items and the underlying constructs that they're supposed to measure. We found that all items had acceptable factor loadings, greater than or equal to .4, and overall goodness-of-fit indices all demonstrated acceptable fit to the data.

Sorra, Slide 42

In conclusion, HSOPS 2.0 assesses many of the same areas of patient safety culture as HSOPS 1.0 but again substantial changes were made to the survey. Hospitals that administer HSOPS 2.0 can expect their scores to be higher than comparable scores on HSOPS 1.0. Although we tried in the 2017 pilot test, in the end we did not reduce the proportion of negatively worded items. HSOPS 2.0 has about the same proportion of negatively worded items as HSOPS 1.0. And finally, the psychometric properties of the 2.0 survey are good.

Sorra, Slide 43

So what's the best way for a hospital to transition from HSOPS 1.0 to HSOPS 2.0?

Sorra, Slide 44

There are basically three options for hospitals interested in transitioning to version 2.0. Option one is to simply administer HSOPS 2.0. Option two is to administer HSOPS 1.0 one more time before transitioning to 2.0, and option three is to conduct a simultaneous administration of 1.0 and 2.0 similar to what we did in our pilot tests.

Sorra, Slide 45

So let's take a look at each of these options. With option one, hospitals have already conducted a previous survey administration with HSOPS 1.0. So a hospital can simply administer 2.0 during their next scheduled survey administration to establish a new baseline measurement on 2.0. One or two years later, or whenever the hospital would normally re-administer the survey, it would administer HSOPS 2.0 again and then trend 2.0 scores. Option one is for hospitals that want to switch to HSOPS 2.0 right away, but it does not enable hospitals to trend against previous 1.0 scores because measurement of 2.0 and 1.0 would be done at different times. When HSOPS 1.0 and 2.0 are administered at different times, there's no way to figure out the extent to which differences in scores are due to changes in the 2.0 survey or due to true improvements or declines in patient safety culture over time. So if hospitals don't need to trend their previous HSOPS 1.0 scores they can simply adopt the new 2.0 survey and administer it moving forward.

Sorra, Slide 46

With option two, hospitals would administer HSOPS 1.0 one more time, and later establish a new baseline on HSOPS 2.0. For hospitals that have already established improvement goals on HSOPS 1.0, it might be important to obtain at least one more measurement on 1.0. Then a year later or whenever the hospital would normally re-administer the survey, the hospital can administer 2.0 and continue administering the new survey moving forward. As with option one, this approach does not enable hospitals to compare their 1.0 and 2.0 scores because measurement of the two versions would be done at different times. Option two is also resource intensive since another administration of 1.0 is needed before moving to 2.0.

I also want to point out that we do not administer HSOPS 1.0 and then very soon after, like a month later, administering HSOPS 2.0 because your response rates are likely to suffer and it will be a burden for staff to take two patient safety culture assessments so close in time.

Sorra, Slide 47

Option three is a simultaneous administration of HSOPS 1.0 and 2.0, which is what we did in our 2017 and 2019 pilot tests. When both surveys are administered at the same time, randomly assigning half of the providers and staff to complete 1.0 and the other half to complete 2.0. This option is only for larger hospitals with 1000 or more staff because you need a sufficiently large number of providers and staff to produce reliable and accurate measurements on both surveys at the same time. This option allows hospitals to trend their HSOPS 1.0 scores as you can see at the top, while at the same time establishing a new baseline for 2.0. Option three allows hospitals to compare scores on the two survey versions because differences in scores are likely due to changes in the 2.0 survey rather than differences in patient safety culture over time. Comparing scores on the two survey versions helps hospitals understand how changes made in the 2.0 survey affect their scores. In future years only HSOPS 2.0 would need to be administered for trending purposes.

Sorra, Slide 48

What supplemental items are available to use with HSOPS 1.0 and HSOPS 2.0?

Sorra, Slide 49

There are currently two supplemental item sets developed by AHRQ that can be used with either HSOPS 1.0 or 2.0. Supplemental items can be added toward the end of the surveys just before the background questions. The Value and Efficiency Supplemental Items help hospitals and medical offices assess the extent to which their organizations place a priority on and promote efficiency, waste reduction, patient centeredness and high quality care. The Health Information Technology Patient Safety Supplemental Items assess how organizational culture influences health IT and patient safety and includes items about EHR issues, training, system support, communication and workflow. Both of these item sets can be used with either HSOPS 1.0 or 2.0.

Sorra, Slide 50

Are there results available for HSOPS 2.0 and will there be a database and research datasets for HSOPS 2.0?

Sorra, Slide 51

Results from the 2019 HSOPS 2.0 pilot test in 25 hospitals are available on the AHRQ website, on the SOPS Hospital Database webpage. And yes, data submission for the SOPS Hospital Database opens June first through July 20th, 2020 and will accept data from HSOPS 1.0, 2.0 and the Health IT Patient Safety and Value and Efficiency Supplemental Items.

Sorra, Slide 52

AHRQ has also established a process for researchers to request de-identified and hospital identifiable data files from the AHRQ SOPS databases. The datasets are for research purposes only, de-identified data can be obtained for any of the SOPS databases but for the SOPS Hospital Database only, hospital identifiable data files are available to allow linking of HSOPS data to other datasets. Researchers must complete a research abstract form and sign a data release agreement. Westat and AHRQ review all requests and database hospitals must agree to release their data for the specific research purposes for which the data will be used. Information about how to request these datasets is available on the SOPS Hospital Database webpage.

Sorra, Slide 53

What resources are available for HSOPS 2.0?

Sorra, Slide 54

The HSOPS 2.0 formatted survey is available in English and in Spanish. There's also an Items and Composite Measures document that groups the survey items according to the composite measures they were intended to assess.

Sorra, Slide 55

There's also a User's Guide that provides step by step guidance on how to conduct a paper or web-based survey using HSOPS 2.0. There's also a very important document called Transitioning to the SOPS Hospital Survey Version 2.0: What's Different and What To Expect. This document and its appendix cover a lot of detail about differences in scores between HSOPS 1.0 and 2.0 from the 2019 pilot test and provides instructions on how to conduct a simultaneous administration of both surveys for larger hospitals that choose to do that.

Sorra, Slide 56

There's also a Data Entry and Analysis tool that is a Microsoft Excel document with macros that enables hospitals to enter their individual survey data and the tool then automatically calculates charts and graphs of the results. There's an Excel tool for every SOPS survey and for the supplemental item sets. You can email the technical assistance email address at Westat to request the HSOPS 1.0 or 2.0 tools.

Sorra, Slide 57

In addition, we've developed a tool for hospitals that conduct a simultaneous administration of 1.0 and 2.0 that enables them to compare their results on the two versions against the results from the 2019 pilot test to better understand how changes in the HSOPS 2.0 survey effect their scores.

Sorra, Slide 58

Other SOPS resources include a bibliography that references research articles that have used SOPS surveys, a resource list that links to online tools and materials to help hospitals improve patient safety culture, and an Action Planning Tool that enables hospitals to document action plans.

Sorra, Slide 59

And there are frequently asked questions with helpful answers located on the AHRQ SOPS webpages.

Sorra, Slide 60

I'd also like to mention a few other SOPS updates including two new short animated videos about why you should choose the SOPS surveys and why you should submit to the SOPS databases. We also recently completed data submission on the new Ambulatory Surgery Center SOPS Database and AHRQ will release the first ASC SOPS Database report in late 2019 or early 2020. And finally, we are currently developing Diagnostic Safety Supplemental Items that can be used with the SOPS Medical Office survey. Stay tuned for the release of that item set in 2021.

Sorra, Slide 61

Please feel free to contact us for any technical assistance questions, we're happy to answer any questions you may have about the surveys or resources. Our email address is safetyculturesurveys@westat.com or

databasesonsafetyculture@westat.com. Our general TA phone number is 1(888)-324-9749 and our database TA phone number is 1(888)-324-9790. You can also visit the AHRQ website for this contact information at www.ahrq.gov/SOPS.

Sorra, Slide 62

We periodically send email announcements through SOPS email updates notifying users about various SOPS products, such as webcasts, data submission timelines and other resources. You can sign up for these email updates by going to the top right corner of the AHRQ website and choosing the email updates associated with the Surveys on Patient Safety Culture.

And now I'll turn it over to Laura to facilitate the question and answer session.

Laura Gray

Gray (closing), Slide 63

Great, thank you. All right, my next slide here is just going to be a reminder for you all about how to submit your questions to us via the Q and A box.

Gray (closing), Slide 64

So again, to access that you might need to select the button with the three dots there at the bottom of your screen and then the question mark marks Q and A, so that that will pop up. And be sure to send your question to all the panelists. I will say I'm not sure that this reminder is needed because we really appreciate your engagement and have been getting lots of great questions during the webcast. So we will begin answering those as we can and if we do not have the opportunity to ask and answer your question aloud today, please do not hesitate to contact us via any of the technical assistance options that Joann just went through.

All right so let's get started. One of the first questions that we did receive was asking about getting these PowerPoint slides. So I'm just going to go ahead and answer that for you that the slides and the replay of today's webcast that's been recorded will be posted on the AHRQ website. So to receive notification when those materials are posted, you can go ahead and sign up for those email updates from the AHRQ SOPS mailing list and to do that you go to the AHRQ website and in that top right corner you select email updates and then you sign in with your email address and you can pick the Survey on Patient Safety Culture that you want to subscribe to. Another option too to get the slides quickly is to email safetyculturesurveys@westat.com, our TA email, and we'll be happy to send you a copy of the slides.

All right, next question coming in here. "How did adding the 'Does Not Apply' response option impact the scores?"

Joann Sorra

Thanks Laura. In general, adding the "Does not apply/Don't know" response option increased percent positive scores slightly, by about two percentage points ranging from one to five percentage points. Because HSOPS 2.0 includes a "Does not apply/Don't know" response option, in general the scores on HSOPS 2.0 would be expected to be slightly higher than 1.0 simply due to the addition of this response option.

Laura Gray

Okay, thank you.

Next question. "My hospital just administered HSOPS 1.0 about a month ago, when should we plan to administer HSOPS 2.0?"

Joann Sorra

As I mentioned earlier, we don't recommend that you administer HSOPS 2.0 very soon after administering HSOPS 1.0, again, probably because your response rates are going to suffer and it will be a burden for staff to take two assessments so close in time. So simply administer HSOPS 2.0 at your next scheduled time period for administering the survey.

Laura Gray

Okay, great. Thank you.

The next question, you mentioned that AHRQ will be accepting both HSOPS 1.0 and 2.0 survey data for the 2020 hospital database. "Will AHRQ also accept HSOPS 1.0 data in the Hospital Database after 2020?"

Joann Sorra

Good question. Data from both version 1.0 and 2.0 of the hospital survey will be accepted in June/July of 2020 for the SOPS Hospital Database. In 2020, we'll also be accepting data from the Health IT, Patient Safety and Value and Efficiency Supplemental Items. After 2020 the current plan is to only accept data from version 2.0 and the supplemental items. So hospitals are therefore encouraged to transition to the 2.0 version of the survey.

Laura Gray

Okay, thank you.

Next question. "Can we change the units, work areas and the staff positions that are listed at the beginning of the survey to better match those work areas or staff positions in our hospital?"

Joann Sorra

Yes. So for all the SOPS surveys you're able to change the response options for the units and work areas and staff positions to better match your organization. However please note that if you opt to lift work areas or staff positions where there are very few staff, this might lead to some confidentiality concerns. You'll want to make sure that your units are work areas and staff positions have enough providers and staff to eliminate any concerns that checking those boxes will identify them as a respondent. And when you submit to the database, you'll need to cross walk your custom units and work areas and staff positions so that they match back to the original survey categories when you submit to the database.

Laura Gray

Okay, thank you. A couple questions about supplemental items. "So can I use the Health IT Patient Safety and the Value and Efficiency Supplemental Items with Hospital SOPS version 2.0?"

Joann Sorra

Yes. The supplemental items can be used with either version 1.0 or 2.0 but remember to place these items after the core questions in the survey just before the background questions section at the end.

Laura Gray

Okay, and another supplemental question. "This is actually can my hospital add its own supplemental items to the HSOPS 1.0 or 2.0 surveys?"

Joann Sorra

That's a really good question too. So the short answer is yes, hospitals can add at the AHRQ supplemental items or their own custom supplemental items to either HSOPS 1.0 or 2.0. However, any supplemental items should be added after the core questions in the survey just before the background questions toward the end. That way the core survey is administered in its entirety without any modifications, deletions or reordering of survey items. For your hospital's data to be accepted into the SOPS Hospital Database, you have to use the trademarked versions, which means you cannot make any changes to the survey item text or response options except you can edit the work areas, units, staff positions and the background questions at the end but none of the core items. So you can't omit or reorder any of the core survey items.

If your hospital isn't sure whether its survey is acceptable for submission to the database, you can just email your survey to our database technical assistance helpline at databasesonsafetyculture@westat.com and we'll review it for you.

Laura Gray

All right, thank you.

And this question's asking, "What is the reading level for HSOPS 2.0?"

Joann Sorra

The reading level for HSOPS 2.0 using the Flesch-Kincaid is grade 6.4. In comparison, the reading level for HSOPS 1.0 using the same Flesch-Kincaid grade level is 9.3. So we're hoping that this makes the survey a little bit more accessible, the new survey, for providers and staff.

Laura Gray

Okay, thank you.

And next question, “During the pilot test were respondents forced to answer every question?”

Joann Sorra

No, during the pilot test, which was a web administration, respondents were not forced to answer every question or any question in particular. We don't recommend that hospital users force respondents if you're doing a web survey because some hospitals will administer on paper and if you answer on paper you have to allow people to leave questions blank. And it's just good practice to be able to ask people to leave questions blank. You don't want to force answers. Staff may not wish to answer a question, they may not even want to choose “Does not apply or Don't know,” so they should be able to skip the question. And those questions would simply not go into the calculation of scores, they'd be considered missing.

Laura Gray

Okay. And then a question here also about calculations. “The “Neither Agree nor Disagree” and the “Not applicable/Does not apply” responses, are those excluded when doing calculations?”

Joann Sorra

So when respondents select the midpoint like “Neither Agree nor Disagree,” it's considered a valid response and it is included in the calculations. It would be included in the denominator of a percent positive score, which is why if somebody answers for example on a positively worded item “Neither Agree nor Disagree,” “Disagree,” or “Strongly disagree,” those are the answer that would go in the denominator and it counts against a percent positive score. Right? Because the percent positive score for a positively worded item for the percentage of respondents who answered “Strongly agree” or “Agree”. The “Does not apply/Don't know” response is excluded when calculating percentage positive calculations and therefore it doesn't count for your percent so it doesn't help your percent positive score and it doesn't hurt your percent positive score.

Laura Gray

Great, thanks for clarifying.

“When was version 1.0 released?”

Joann Sorra

HSOPS 1.0 was released in 2004, about 15 years ago.

Laura Gray

Okay. And this questions is, “are the comparisons between HSOPS 2.0 and HSOPS 1.0 with or without that NA/DK option?”

Joann Sorra

So during the 2019 pilot test we included three groups. We had HSOPS 1.0, the original survey, which did not include NA/DK. Then we had a version of 1.0 where we added NA/DK, and then we had version 2.0. So the original 1.0 version on the AHRQ website that users have been using since 2004 does not include an NA/DK response option. The other SOPS surveys including medical office, nursing home, were all developed after the hospital survey and all of the other SOPS surveys do include this response option and the reason is that we find that hospitals and other healthcare settings administer these surveys very broadly within their organizations and there are going to be some staff positions where certain questions just don't apply to them or they don't have the information to be able to respond. So we feel that it's better to allow them to select that option and not have it count against your percent positive score.

Laura Gray

Okay, thank you.

Joann Sorra

So when hospitals are going to do their own comparison, you're going to compare, if you do a simultaneous administration, you're going to be comparing your HSOPS 1.0 scores without NA/DK because that's the original survey, with 2.0 which does include NA/DK. But the numbers that we were showing in terms of the differences between 1.0 and 2.0 are those comparisons. The new 2.0 survey was compared to 1.0 which did not have NA/DK.

Laura Gray

Great, thank you.

All right this question, “not all of the hospitals within our system have a staff over 1000 employees, would each hospital within our system need to use a different survey option?”

Joann Sorra

That's a good question. You would have to decide, right? So using a different option is really not a bad thing to do. We just don't recommend that a really small hospital divide up, right? See, let's say you have 500 employees, we really don't want you to divide up and give 250 of them 1.0 and 250 of them 2.0 because given that you're going to have probably a 50% response rate or less, the number of completed surveys that you're going to have is not going to give you a robust and reliable measure on either survey.

I don't think you have to do a simultaneous administration in every hospital. It might be that you do it in a couple of your larger hospitals and then the others ones you just directly move to HSOPS 2.0 and then you use the results that you see from your larger hospitals to give other hospitals a general sense, in these hospitals where we did the simultaneous administration, here's the range of different scores that we saw. So you can just kind of understand a little bit better in these hospitals, "Oh okay, here's generally the magnitude of the differences we're seeing."

Laura Gray

Great, thank you.

And regrettably I think that brings us right about to time.

Gray (closing), Slide 65

So thank you all so much. A brief webcast evaluation will pop up when you close out from today's webcast. Please take a moment to provide us with your feedback because it will help us improve our offerings and plan future events to meet your needs. And again, we invite you to visit the AHRQ website, contact us anytime by email or phone. Thank you so much for joining us. This concludes today's presentation.