

**SUPPORTING STATEMENT**

**Part B**

**Collection of Information for  
Agency for Healthcare Research and Quality's (AHRQ)  
Nursing Home Survey on Patient Safety Culture Database**

**April 18, 2018**

Agency of Healthcare Research and Quality (AHRQ)

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## B. Collection of Information Employing Statistical Methods

### 1. Respondent universe and sampling methods

The AHRQ Surveys on Patient Safety Culture™ (SOPS™) Nursing Home Database serves as a central U.S. repository for data from the survey. The database is comprised of data that are voluntarily submitted by nursing homes that have administered the survey, and is not a statistically selected sample, nor is it a representative sample of all U.S. nursing homes. 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.

AHRQ developed and pilot tested the Nursing Home SOPS in 2007 with OMB approval (OMB #0935-0132; approved on July 5, 2007). The Nursing Home SOPS Database was approved on June 8, 2012 (OMB #0935-0195; expiration date 6/30/2015).

Results from 209 nursing homes that participated in the 2016 database are available on the AHRQ Web site<sup>1</sup>.

As of 2016, the Centers for Medicare and Medicaid Services (CMS) estimates there are 15,633 nursing homes in the U.S.<sup>2</sup> The distribution of nursing homes by type is presented in Table 1.

**Table 1. Nursing Homes in the CMS Nursing Home Compare Database and the 2016 Nursing Home Survey on Patient Safety Culture (NH SOPS) Database by Ownership**

Type of Ownership	CMS Nursing Home Compare Nursing Homes		NH SOPS Database Nursing Homes	
	Number	Percent	Number	Percent
For profit	10,805	69%	125	60%
Non-profit	3,718	24%	79	38%
Government	1,110	7%	5	2%
Total	15,663	100%	209	100%

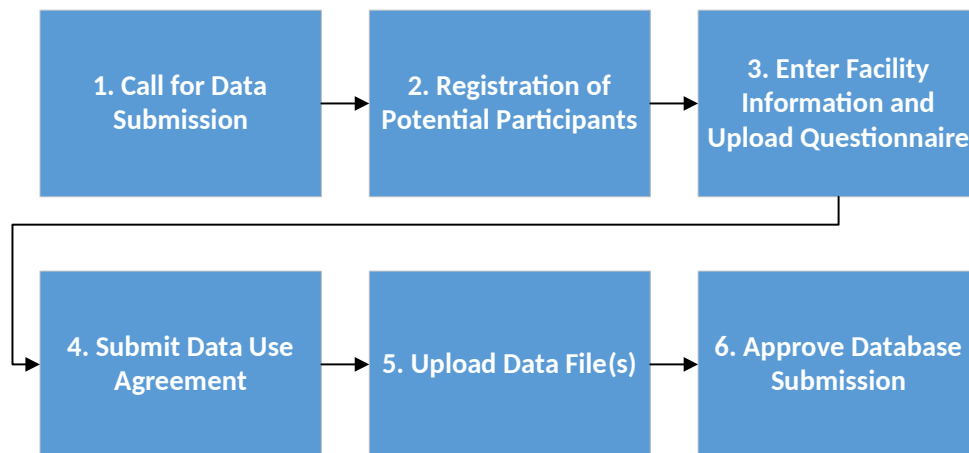
Nursing homes that submit data to the database receive a free, individualized feedback report that displays their nursing home's results against the aggregated and de-identified results of other nursing homes submitting to the database. Nursing homes that do not submit data to the database can still view the Nursing Home SOPS Database report for aggregate results of those nursing homes who voluntarily submitted their data for the Database.. As part of a toolkit of support materials for the Nursing Home SOPS survey, nursing homes can also use a Microsoft® Excel-based Data Entry and Analysis Tool that is an Excel file with macros that will automatically produce graphs and charts of a nursing home's results once data are entered into a data sheet. Many nursing homes use this tool to produce their results.

In the overall database report, nursing homes are provided with a detailed description and explanation of the statistics that are presented and given examples and guidance on how to calculate their own results.

## 2. Information Collection Procedures

Information collection for the AHRQ Nursing Home SOPS Database occurs in a periodic data collection cycle every other year. The next submission period is June 2018. Information collection procedures for submitting and processing data are shown in Figure 1.

Figure 1. Nursing Home SOPS Database Data Submission



**Step 1: Call for Data Submission.** Announcements about the opening of data submission go out through various publicity sources. AHRQ’s patient safety and electronic newsletters target approximately 50,000 subscribers. In addition, the AHRQ Surveys on Patient Safety Culture listserv targets approximately 35,000 subscribers. An example of email announcements calling for data submission is shown in Attachment D, Email # 1 and #3. Through these efforts, U.S. nursing homes are made aware of and invited to submit their survey data to the database.

As the administrator of the database and under contract with AHRQ, Westat provides free technical assistance to submitting nursing homes through a dedicated email address ([DatabasesOnSafetyCulture@westat.com](mailto:DatabasesOnSafetyCulture@westat.com)) and toll-free phone number (1-888-324-9790).

**Step 2: Registration for Potential Participants.** A secure data submission Web site allows interested parties such as nursing homes and nursing home systems to register and submit data. Registration takes about 3 minutes to complete and asks for contact and other basic information (see Attachment A). After registering, if registrants are deemed eligible to submit data, an automated email is sent to authenticate the account and update the user password (see Attachment D, Email #2).

Once users are registered and have a password, they can enter the main page menu of the Web site. Information about eligibility requirements, data use agreements, and data file specifications regarding how to prepare their data for inclusion in the SOPS database is posted and can be reviewed.

**Step 3: Enter Facility Information and Upload Questionnaire.** At this step, users provide information about each of their facilities, such as point of contact, method of survey

administration, overall response rate, and other facility characteristics (bed size, urbanicity, ownership, and region) (see Attachment C). They also upload the survey questionnaire that they administered so that we can determine whether any changes were made to the survey (Attachment G, Figure 1).

**Step 4: Submit Data Use Agreement (DUA).** To protect the privacy of all participating nursing homes, a duly authorized representative from the nursing home must sign a data use agreement (DUA) (Attachment B). The DUA language was reviewed and approved by AHRQ's general counsel. The DUA states that the nursing home's data will be handled in a secure manner using necessary administrative, technical and physical safeguards to limit access to it and maintain its confidentiality. In addition, the DUA states the data are used for the purposes of the database, that only aggregated results are reported, and that the nursing home will not be identified by name. Data are not included in the database without this signed data use agreement. Users can fax, scan and email, scan and upload to a secure web site, or mail a copy of the signed agreement to us.

**Step 5: Upload Data File(s).** At this step, users are asked to upload their individual-level survey data for each nursing home (see Attachment G, Figure 2). Data submitted through the secure data submission Web site are encrypted to ensure secure transmission of the survey data. Data are accepted in Microsoft Excel® format since this is the format preferred by nursing homes. Users must upload one data file per nursing home. If a user has multiple nursing homes within a system, users can upload one data file that identifies all of the nursing homes in their system. The data file specifications (Attachment E) are provided to data submitters to ensure that users submit standardized and consistent data in the way variables are named, coded, and formatted.

Once a data file is uploaded, a separate load program developed in Visual Basic (VB) reads the submitted files and loads them into the SQL database that stores the data. A data quality report is then produced and made available to the participant. This report displays item frequencies and flags out-of-range values and incorrectly reverse-coded items. If there are no problems with the data, an acknowledgement of data upload and acceptance will be granted during the user session. If data are improperly coded, the user is informed by having a message post on the screen indicating that the data file failed during the user session. Users are expected to fix any errors and resubmit their data file(s) for processing. Once there are no problems, the user is informed of the acceptance of data during the user session with an online message of acceptance.

**Step 6: Approve Data Submission.** Once all of the information required for submission has been submitted and approved, an email is sent to the facility contact indicating that their data have received final acceptance.

### ***3. Methods to Maximize Response Rates***

AHRQ makes a number of toolkit materials available to assist nursing homes with the SOPS surveys. The Nursing Home SOPS has a Survey User's Guide that gives users guidance and tips about survey administration on the following topics: planning; selecting a sample; determining their data collection method; data collection procedures, (including a section on Web surveys); and analyzing data and producing reports<sup>3</sup>. The Survey User's Guide also gives nursing homes tips about how to increase response rates through publicity efforts, top management support, use

of incentives, and following all steps of proper data collection protocols. Of the nursing homes that voluntarily submitted their data for the 2016 Nursing Home Survey on Patient Safety Culture Database, the average response rate was 56% across 209 nursing homes.

The SOPS User Network promotes the database in a number of ways:

- a) AHRQ and AHRQ SOPS email listservs;
- b) Organizational partners and stakeholders that have national reach to nursing homes;
- c) Users that have contacted the SOPS technical assistance helpline about the nursing home survey;
- d) Other outlets such as Webcasts and conferences

As noted earlier in this document under Information Collection Procedures, Step 1 – Call for Data Submission, announcements about the opening of data submission go out through various publicity sources as a way to boost nursing home participation in the database. AHRQ’s electronic newsletter targets approximately 50,000 subscribers. In addition, the AHRQ Surveys on Patient Safety Culture listserv targets approximately 35,000 subscribers. AHRQ, through its contractor Westat, provides free technical assistance to users through a dedicated email box and toll-free phone number. In addition, reminders are sent to database registrants to remind them of the deadline for data submission.

#### **4. Tests of Procedures**

##### **Input and Feedback for the Development of the SOPS Database Submission System.**

Because the Surveys on Patient Safety Culture are public-use instruments, the SOPS program has generally modeled its data submission processes after those used by the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Database that has been in operation for many years. SOPS staff consulted with CAHPS Database staff and programmers to determine best practices for data submission. This information, as well as feedback obtained during the provision of technical assistance each year the database has been running, has been used to improve the SOPS online data submission system and process over time.

#### **5. Statistical Consultants**

Joann Sorra, PhD  
Westat  
1600 Research Blvd.  
Rockville, MD 20850  
[joansorra@westat.com](mailto:joansorra@westat.com)

Naomi Dyer Yount, PhD  
Westat  
1600 Research Blvd.  
Rockville, MD 20850  
[naomiyount@westat.com](mailto:naomiyount@westat.com)

<sup>1</sup> SOPS Nursing Home Database. Content last reviewed March 2018. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/nursing-home/nh-reports.html>. Last accessed 4/10/2018.

<sup>2</sup> Nursing Home Compare Datasets. Content last updated March 2018. <https://data.medicare.gov/data/nursing-home-compare>. Last accessed 4/10/2018.

<sup>3</sup> Nursing Home Survey on Patient Safety Culture. Content last reviewed March 2018. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.ahrq.gov/sops/quality-patient-safety/patientsafetyculture/nursing-home/index.html>. Last accessed 4/11/2018.