SUPPORTING STATEMENT

Part B

Pilot Test of the Proposed Workplace Safety Supplemental Item Set
For the AHRQ Surveys on Patient Safety Culture™ (SOPS®) Nursing Home Survey

January 20, 2022

Agency for Healthcare Research and Quality (AHRQ)

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B. STATISTICAL METHODS

1. Respondent Universe and Sampling Methods

Cognitive Interview Participants

Cognitive interviews will be conducted with individual respondents to test the feasibility and applicability of the Workplace Safety Supplemental Items for the AHRQ Surveys on Patient Safety Culture™ (SOPS®) Nursing Home Survey. Cognitive interview participants will be selected from nursing homes that will vary by size, and geographic location. We will recruit cognitive interview participants from various staff positions within nursing homes. We aim to conduct English cognitive testing with a total of 25 clinicians and staff across the range of positions found in nursing homes from physicians and nurses to managers, certified nursing assistants, and other staff. Limited Spanish cognitive testing will also be conducted with up to 5 individuals from nursing homes. No special selection procedures will be used to select specific participants, with the exception of ensuring the appropriate distribution across staff positions.

Pilot Test Study Sample

The workplace safety item set will be pilot tested in applicable nursing home settings. Types of potential nursing homes will be developed in consultation with AHRQ staff and may include nursing homes that have participated in the SOPS Nursing Home Database.

The aims of the overall sample design are two-fold: (1) to obtain enough pilot test data at both the nursing home site level and the individual respondent level to ensure sufficient sample size (n) for examining the psychometric properties of the data, and (2) to include a variety of nursing homes that differ in ownership, size, and geographic region.

Since the goals are to examine the psychometric properties of the item set, not to produce national estimates, purposive sampling will be used. Purposive sampling will ensure adequate variability on important nursing home characteristics given the small number of nursing homes included in the pilot test. It should be noted that the reason for including nursing homes of different types (e.g., ownership, size, and geographic regions) is not to compare survey results across the types, but rather to ensure that there is representativeness of nursing homes by these characteristics. The final item set will be publicly available for use by all types of nursing homes.

As shown in Table 1, we propose that data be collected from 75 nursing homes within each of the five categories of nursing homes by ownership (for profit or nonprofit/Government) and size (small, medium, or large). We do not propose to evenly distribute the number of nursing homes across the two types; rather, we propose distributing the nursing homes into these categories based on the distribution among nursing homes that have submitted to the SOPS Nursing Home Database.

Participating nursing homes will provide clinician and staff lists. We will obtain approximately 7,015 individuals from 75 nursing homes (Table 2). Assuming a response rate of 60 percent, we expect a total of approximately 4,209 completed questionnaires.

For the pilot study, in order to conduct the psychometric and factor analyses, we need at least 20 respondents for each survey item. Assuming the supplemental item set will have about 25 items, we will need at least 500 total respondents answering the survey items to conduct these analyses. Given item non-response due to respondents choosing not to answer an item or not knowing how to answer an item that may not applicable to them, we aim to obtain more completed surveys than the minimum number required for psychometric analyses.

Table 1. Estimated Distribution by size and type: 75 nursing homes selected for pilot test

Nursing Home Size (# of beds)	Type of Nursing Home		Total Pilot Nursing Homes
	For Profit	**Nonprofit/ Government**	
Small (1-49)	6	3	9
Medium (50-199)	44	18	62
Large (200+)	2	2	4
Total	52	23	**75**

Table 2. Estimated distribution by size and type of 7,015 individuals* surveyed within 75 nursing homes selected for pilot test

Nursing Home Size (# of staff, includes providers)	Nursing Home		Total Individuals Surveyed
	For Profit (# of nursing homes x average number of individuals surveyed)	**Nonprofit/ Government** (# of nursing homes x average number of individuals surveyed)	
Small (1-49)	6 x 35 = 210	3 x 35 = 105	315
Medium (50-199)	44 x 94 = 4,136	18 x 94 = 1,692	5,828
Large (200+)	2 x 218 = 436	2 x 218 = 436	872
Total	4,782	2,233	7,015

* Assuming a 60 percent response rate, 4,209 individuals with completed workforce safety supplemental item sets will be available for analysis purposes.

2. Information Collection Procedures

Cognitive interviews will include these steps:
- Virtual interviews with respondents to complete the instrument and discuss responses (via phone or a web platform such as Microsoft Teams or Zoom.gov)

The pilot test survey data collection will include these steps:
- Programming the surveys for web-based data collection

- Printing and mailing all paper survey materials to the nursing homes wanting to administer a paper survey
- Emailing nursing home staff to notify them of the web survey version
- Weekly reminder emails and paper survey reminders to nonrespondents during a 6-8 week data collection period

3. **Methods to Maximize Response Rate**

We are offering a proposed $1,500 remuneration for nursing home participation. The first $1,000 will be provided at the start of data collection. Sites achieving a 50 percent or higher response rate will receive the remaining $500. In addition, we are giving nursing homes the option to administer the survey by web or paper survey free of charge. We will also be sending a series of follow up reminder emails to nonrespondents to maximize response rates. Lastly, all participating nursing homes will be provided a feedback report of their data as an incentive to participate.

4. **Tests of Procedures**

The procedures for this specific project have not been subjected to testing. However, the contractor, Westat, has conducted many similar projects and will apply standard, well-established research methods for this project.

5. **Statistical Consultants**

The following Westat statistical analysts developed both the study design and analytic plan for this project:

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