NURSING HOME SURVEY ON PATIENT SAFETY CULTURE: USER'S GUIDE

Surveys on Patient Safety Culture™

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PATIENT SAFETY

AHRQ Nursing Home Survey on Patient Safety Culture: User's Guide

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Contents of This Survey User's Guide

The AHRQ *Nursing Home Survey on Patient Safety Culture*, this User's Guide, and other toolkit materials are available on the AHRQ Web site (http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/index.html). These materials are designed to provide nursing homes with the basic knowledge and tools needed to conduct a patient safety culture assessment, along with ideas for using the data. This guide provides a general overview of the issues and major decisions involved in conducting a survey and reporting the results.

Part One: Survey User's Guide

Chapter 1. Introduction 1

Development of the Nursing Home Survey on Patient Safety Culture 1
Patient Safety Culture Composites 3
Survey Modifications 4

Chapter 2. Getting Started 6

Determine Available Resources and Project Scope 6
Decide on Your Data Collection Method 6
Decide Whether To Use Survey Identifiers 6
Decide Whether To Use an Outside Vendor 7
Form a Project Team 8
Establish a Point of Contact 9

Chapter 3. Paper Surveys 10

Distribute Surveys 10
Arrange for Returning Surveys 10
Publicize and Promote the Survey 10
Follow Survey Administration Steps 11
Develop and Assemble Survey Materials 12

Chapter 4. Analyzing Data and Producing Reports 10

Identify Incomplete and Ineligible Surveys 15
Calculate the Final Response Rate 15
Edit the Data and Prepare the Data File 15
Analyze the Data and Produce Reports of the Results 17

Technical Assistance 20
References 20

Part Two: Survey Materials

Nursing Home Survey on Patient Safety Culture 23
Nursing Home Survey on Patient Safety Culture: Composites and Items 29

List of Figures

Figure 1. Task Timeline for Project Planning for a Single Nursing Home 8

List of Tables

Table 1. Patient Safety Culture Composites and Definitions 4
Table 2. Example of How To Compute Frequency Percentages 18
Table 3. Example of How To Reverse Code Negatively Worded Items 18
Table 4. Example of How To Calculate Item and Composite Percent Positive Scores.....19

Appendixes

Appendix A. Web-Only and Mixed-Mode Surveys A-1
Appendix B. Sample Data Collection Protocol for the Nursing Home Point of Contact: Paper Survey B-1
Appendix C. Sample Data Collection Protocol for the Nursing Home Point of Contact: Web Survey.....C-1
Appendix D. Sample Data Collection Protocol for the Nursing Home Point of Contact: Mixed-Mode Survey D-1

Part One: Survey User’s Guide

Chapter 1. Introduction

As nursing homes continually strive to improve patient safety and quality, nursing home leadership increasingly recognizes the importance of establishing a culture of safety. Achieving such a culture requires leadership, providers, and staff to understand their organizational values, beliefs, and norms about what is important and what attitudes and behaviors are expected and appropriate. A definition of safety culture applicable to all health care settings is provided below.

Safety Culture Definition

The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures.

Study Group on Human Factors. Organising for safety: Third report of the ACSNI (Advisory Committee on the Safety of Nuclear Installations). Sudbury, UK: HSE Books; 1993.

Development of the Nursing Home Survey on Patient Safety Culture

Purpose

The Agency for Healthcare Research and Quality (AHRQ) sponsored the development of the *Nursing Home Survey on Patient Safety Culture.* The nursing home survey is designed specifically for nursing home staff and asks for their opinions about the culture of patient safety at their nursing home. The survey can be used to:

- Raise staff awareness about patient safety,
- Assess the current status of patient safety culture,
- Identify strengths and areas for patient safety culture improvement,
- Examine trends in patient safety culture over time,
- Evaluate the cultural impact of patient safety initiatives and interventions, and
- Conduct comparisons within and across organizations.

Survey Development and Pilot Test

Under contract to AHRQ, a survey design team from Westat conducted the following activities to identify key composites of nursing home safety culture, relevant background questions about staff and nursing home characteristics, and appropriate terms and words to use in the survey:

- Reviewed the literature, including existing surveys, pertaining to resident safety, nursing home medical errors and quality-related events, error reporting, safety climate and culture, and organizational climate and culture.
- Conducted background interviews with more than two dozen experts in the field of nursing home safety and administration, as well as nursing home managers and quality improvement directors.

Based on these activities, the design team developed draft survey items to measure the identified key composites and conducted cognitive interviews with nursing home staff. Cognitive interview participants included a director of nursing, a nurse practitioner, nurses (RNs), a licensed practical nurse, certified medical assistants, the head of physical therapy/occupational therapy, a human resources specialist, an activity director, a social worker, food service staff, housekeeping/linen services staff, a porter, and maintenance staff. The design team also received input on the draft survey from additional nursing home researchers and long-term care experts.

The draft survey was pilot tested with more than 5,000 staff working in 40 nursing homes across the United States. The design team examined the reliability and factor structure of the patient safety culture composites. Based on these analyses, the final items and composites in the *Nursing Home Survey on Patient Safety Culture* were determined to have sound psychometric properties (Sorra, et. al., 2008).

Nursing Home Definition

The purpose of the *Nursing Home Survey on Patient Safety Culture* is to measure the culture of patient safety at a **single** nursing home in a specific location or in a special contained area of a facility (e.g., a hospital) that includes only licensed nursing home beds. We therefore consider each unique facility to be a separate site for the purposes of survey administration and providing nursing home-specific feedback. When you administer the survey at multiple nursing homes, you should identify each nursing home as a separate site so that each site can receive its own results in addition to overall results across sites.

- The survey is **not** designed for use in assisted living facilities, community care facilities, or independent living facilities.
- If a nursing home is located on a large campus or facility that has a mix of nursing home and other long-term care programs (such as independent living, assisted living, and rehabilitation services), survey **only** the facilities or areas with nursing home beds. Exclude staff who work only in areas with independent living, assisted living, or rehabilitation beds.

We also recommend that there be at least 10 respondents from a nursing home for a survey feedback report to be provided to the site, to protect respondent anonymity.

Identification of Survey Participants

The survey examines patient safety culture from a nursing home staff perspective. All staff asked to complete the survey should have enough knowledge about your nursing home and its operations to provide informed answers to the survey questions. Overall, when considering who should complete the survey, ask yourself:

- Does this person know about the *day-to-day activities* at this nursing home?
- Does this person interact regularly with staff working at this nursing home?

Types of Staff

The survey can be completed by all types of nursing home staff —from nursing home administrators, physicians (M.D. or D.O.), physician assistants, and nursing staff to housekeeping, maintenance, and security staff. However, because you want to survey staff with the knowledge and ability to answer the survey questions, we recommend that you consider defining eligible staff members for the survey as follows:

- Staff members, including agency and contract staff, who routinely work in the nursing home. You want to make sure staff have enough experience with your nursing home policies and day-to-day activities to be able to accurately answer the survey questions.
- Staff members who can read and understand the English language or Spanish language (the survey is available in English and Spanish).
- Physicians and other providers, such as physician assistants and nurse practitioners, who may work as full-time employees in the nursing home or who may visit and provide health care to one or more residents. Because it is important to obtain the perceptions of these caregivers, we recommend including physicians and providers who may spend only a few hours a week in the nursing home, particularly if they have done so regularly for several months or more.

Physicians or staff working at more than one nursing home. Some physicians or staff may work in more than one nursing home, so distribute the survey in the nursing home *where they spend most of their time* and instruct them to answer the survey questions about that nursing home only. If they work in multiple areas of a campus or facility that has a mix of nursing home and other long-term care programs, instruct them to think only about the nursing home facility or unit when answering the survey questions.

Selecting a Sample. For most nursing homes, we recommend a census—surveying all physicians and staff; however, if you have a large number of staff, you may wish to survey only a subset or sample of staff (see the Hospital User's Guide for guidelines on how to select a sample).

Patient Safety Culture Composites

The Nursing Home Survey on Patient Safety Culture emphasizes resident safety issues. It contains 42 survey items grouped into 12 composite measures, or composites. In addition to the composites, the survey includes two questions that ask respondents whether they would tell friends that this is a safe nursing home for their family (also called "willingness to

recommend”) and to provide an overall rating on resident safety for their nursing home. In addition, respondents are asked to provide limited background demographic information.

Table 1 provides the patient safety culture composites included in the survey and their definitions.

Table 1. Patient Safety Culture Composites and Definitions

Patient Safety Culture Composite	Definition: *The extent to which…*
Communication Openness	Staff speak up about problems, and their ideas and suggestions are valued.
Compliance With Procedures	Staff follow standard procedures to care for residents and do not use shortcuts to get their work done faster.
Feedback and Communication About Incidents	Staff discuss ways to keep residents safe, tell someone if they see something that might harm a resident, and talk about ways to keep incidents from happening again.
Handoffs	Staff are told what they need to know before taking care of a resident or when a resident's care plan changes, and have all the information they need when residents are transferred from the hospital.
Management Support for Resident Safety	Nursing home management provides a work climate that promotes resident safety and shows that resident safety is a top priority.
Nonpunitive Response to Mistakes	Staff are not blamed when a resident is harmed, are treated fairly when they make mistakes, and feel safe reporting their mistakes.
Organizational Learning	There is a learning culture that facilitates making changes to improve resident safety and evaluates changes for effectiveness.
Overall Perceptions of Resident Safety	Residents are well cared for and safe.
Staffing	There are enough staff to handle the workload, meet residents' needs during shift changes, and keep residents safe, because there is not much staff turnover.
Supervisor Expectations and Actions Promoting Resident Safety	Supervisors listen to staff ideas and suggestions about resident safety, praise staff who follow the right procedures, and pay attention to safety problems.
Teamwork	Staff treat each other with respect, support one another, and feel like they are part of a team.
Training and Skills	Staff get the training they need, have enough training on how to handle difficult residents, and understand the training they get in the nursing home.

Modifications to the Survey

We recommend administering the survey in its entirety without modifications or deletions. If any changes to the core survey are made (such as changing the wording of the items or response options, changing the order of the items or response options, deleting one or more items, or adding supplemental or custom questions among the core items within the survey), the survey is no longer considered a SOPS survey. Any changes may affect the reliability and

validity of the survey and make comparisons with other nursing homes difficult. The successful use of SOPS surveys depends on everyone administering the same items in the same order.

Changing Background Items

The survey ends with a background question. Your nursing home may wish to modify the responses to this question so they better match your staff position names.

Modifying Work Areas or Staff Positions

Modifications of units/work areas and staff positions is acceptable; however, if the organization plans to submit to the Nursing Home SOPS Database, they must recode the modified units/work areas or staff positions so they crosswalk back to the original survey's units/work areas or staff positions.

Adding Items

If your nursing home adds items to the survey, add these items toward the end of the survey (just before the Background Questions section).

Surveying Nursing Homes With a New Model of Care

A new movement in nursing home care, designed to enhance nursing home residents' choice and autonomy in an atmosphere of "home," is currently being implemented in a small number of nursing homes around the country. In this alternative model of care, residents may live in "neighborhood" clusters or communities staffed by a permanent team of clinical and nonclinical workers. One aim of this resident-centered model is that staff get to know residents as individuals and can thus better meet their needs.

When administering the *Nursing Home Survey on Patient Safety Culture* in nursing homes with this arrangement, instruct staff to answer the survey questions in the context of the entire nursing home, not just their particular neighborhood or area.

Presumably, the unique culture in these nursing homes is consistent throughout the organization.

To capture information about where a respondent works, the specific name of each neighborhood cluster can be added to the response options for item 7 in the background information section of the survey. This information will enable survey feedback results to be provided to each cluster or neighborhood.

Chapter 2. Getting Started

Before you begin, it is important to understand the tasks involved in collecting survey data and decide who will manage the project. This chapter is designed to guide you through the planning and decisionmaking stage of your project.

Determine Available Resources and Project Scope

Two of the most important elements of an effective project are a clear budget to determine the scope of your data collection effort and a realistic schedule. Think about your available resources:

- How much money and resources are available to conduct this project?
- Who within the nursing home or health care system is available to work on this project?
- When do I need to have the survey results completed and available?
- Do we have the technical capabilities to conduct this project in the nursing home, or do we need to consider using an outside company or vendor for some or all of the tasks?

Decide on Your Data Collection Method

We strongly recommend using paper-based survey data collection to make sure you obtain the highest possible response rate in your nursing home. Because nursing home staff's access to e-mail and the internet, as well as staff computer skills, may be very limited, it is best to administer the survey on paper only. In addition, recent research and evidence shows that, generally, Web surveys have lower response rates than paper surveys (Dillman, et al., 2009; Lozar Manfreda, et al., 2008; Shih and Fan, 2008).

Despite the probability of lower response rates, your nursing home or health care system may decide to use a Web survey to collect the data because you have done so successfully in the past on other staff surveys. Web surveys have a wide range of design features and can involve different data collection procedures, so please read Appendix A, "Web-Only and Mixed Mode Surveys," for guidelines on this method of data collection.

Decide Whether To Use Survey Identifiers

You need to decide whether you will use individual survey identifiers and, if you are surveying multiple nursing homes, how you will identify responses from each nursing home.

Individual Identifiers

Staff are usually concerned about the confidentiality of their responses, so we recommend that you conduct an *individually anonymous* survey. This means you should *not* use identifiers to track individuals. Also, *do not* ask respondents to provide their names. You want to ensure that respondents feel comfortable reporting their true perceptions and confident that their answers cannot be traced back to them.

Nursing Home Identifiers

If you are surveying multiple nursing homes, you *will* need to use *nursing home-level* identifiers to track surveys from each nursing home. Doing so will allow you to produce feedback reports for each nursing home. We offer a few ways of using identifiers for paper surveys.

Vary survey color. Consider printing surveys on different colored paper for each nursing home.

Print a nursing home identifier on the survey. You can print a nursing home identifier on the surveys by giving each nursing home a unique form number (e.g., Form 1, Form 2, Form 3) to identify different centers. Print the identifier on the survey (e.g., lower left corner of the back page). Be aware, however, that some staff members will be so concerned about the confidentiality of their responses that they might mark out the site identifier or form number.

Decide Whether To Use an Outside Vendor

You may want to use an outside company or vendor to conduct some or all of your survey data collection, analysis, and report preparation. Hiring a vendor may be a good idea for several reasons:

- Working with an outside vendor may help ensure neutrality and the credibility of your results.
- Staff may feel their responses will be more confidential when they are returned to an outside vendor.
- Vendors typically also have experienced staff to perform all the necessary activities, and the facilities and equipment to handle the tasks. A professional and experienced firm may be able to provide your nursing home with better quality results faster than if you were to complete the tasks yourself.

If you plan to hire a vendor, the following guidelines may help you to select the right one:

- Look for a vendor with expertise in survey research.
- Determine whether the vendor can handle all the project components. Some vendors will be able to handle your data analysis and feedback report needs; others will not.
- Provide potential vendors with a written, clear outline of work requirements. Make tasks, expectations, deadlines, and deliverables clear and specific. Then, ask each vendor to submit a short proposal describing the work they plan to complete, the qualifications of their company and staff, and details regarding methods and costs.
- Meet with the vendor to make sure you will be able to work well together and they understand your expectations.
- Once you have chosen a vendor, institute monitoring and problem-resolution procedures.

Plan Your Project Schedule

The sample timeline in Figure 1 can be used as a guideline for administering a paper survey. For a single nursing home, plan for **at least** 8 weeks from the beginning of the project to the end.

Figure 1. Task Timeline for Project Planning for a Single Nursing Home

Task Timeline for Project Planning	Planning	Prepara-tion		Data Collection			Analysis and Reports		
Week		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Getting Started – Ch. 2									
Determine Available Resources and Project Scope	✓								
Decide on Your Data Collection Method	✓								
Decide Whether To Use Survey Identifiers	✓								
Decide Whether To Use an Outside Vendor	✓								
Plan Your Project Schedule	✓								
Form a Project Team	✓								
Establish a Point of Contact	✓								
Survey Administration Steps – Ch. 3									
Decide How Surveys Will Be Distributed and Returned	✓								
Publicize and Promote the Survey		↔	↔	↔	↔	↔			
Develop, Print, and Assemble Survey Materials		↔	↔						
Distribute First Survey				✓					
Track Responses and Preliminary Response Rates				↔	↔	↔			
Distribute Second Survey					✓				
Close Out Data Collection						✓			
Analyzing Data and Producing Reports – Ch. 4									
Identify Incomplete and Ineligible Surveys							✓		
Calculate the Final Response Rate							✓		
Prepare the Data File							✓		
Analyze the Data and Produce Reports of the Results							↔	↔	↔

If you plan to survey multiple nursing homes, you may need to adjust the timeline:

- Establish a system-level point of contact (POC) as well as a POC in each nursing home.
- Allow more time to assemble survey materials (e.g., 4 weeks instead of 2 weeks).
- Add a week or more to the data collection period.
- Add a week or more to the data analysis period.

Form a Project Team

Whether you conduct the survey in-house or through an outside vendor, you will need to establish a project team responsible for planning and managing the project. Your team may consist of one or more individuals from your own nursing home staff, system headquarters staff, outsourced vendor staff, or a combination. Their responsibilities will include the following:

- **Planning and budgeting**—Determine the scope of the project given available resources, plan project tasks, and monitor the budget.

- **Establishing contact persons**—Assign a POC in the nursing home to support survey administration, maintain open communication throughout the project, and provide assistance (see next section for more details).
- **Preparing publicity materials**—Create fliers, posters, and email and intranet messages to announce and promote the survey in the nursing home.
- **Preparing paper survey materials**—Print surveys, prepare postage-paid return envelopes and labels, and assemble these components for your survey distribution.
- **Distributing and receiving paper survey materials** (if conducting a paper survey)—Distribute surveys and reminder notices and handle receipt of completed surveys.
- **Developing a Web survey instrument** (if conducting a Web survey)—Design the instrument, program the survey, and pretest the instrument.
- **Tracking survey responses and calculating preliminary response rates**—Monitor survey returns and calculate preliminary response rates. If you use individual identification numbers on the surveys to track nonrespondents (although we do not recommend this approach), identify the nonrespondents who should receive followup materials.
- **Handling data entry, analysis, and report preparation**—Review survey data for respondent errors and data entry errors in electronic data files, conduct data analysis, and prepare a report of the results.
- **Distributing and discussing feedback results with staff**—Disseminate results broadly to increase their usefulness.
- **Coordinating with and monitoring an outside vendor (optional)**—Outline the requirements of the project to solicit bids from outside vendors, select a vendor, coordinate tasks to be completed in-house versus by the vendor, and monitor progress to ensure that the necessary work is completed and deadlines are met.

Establish a Point of Contact

You will need to establish someone in the nursing home to serve as POC for the survey (e.g., a director of nursing or other administrator). We recommend including contact information for the POC in all survey materials in case respondents have questions about the survey. The main POC has several duties, including:

- Answering questions about survey items, instructions, or processes.
- Responding to staff comments and concerns.
- Helping to coordinate survey mailing and receipt of completed surveys.
- Communicating with outside vendors as needed.
- Communicating with other POCs as needed.

If you administer the survey in multiple nursing homes in your system, you may want to designate a system-level POC in addition to a POC in each nursing home participating in the survey. Include the contact information for this POC in all survey materials.

Chapter 3. Paper Surveys

In this chapter, we present information to help you decide how your paper surveys will be distributed and returned, suggest ways to promote and publicize your survey, describe survey administration steps, and provide a detailed description of how to develop and assemble the survey materials.

Distribute Surveys

We recommend that a designated point of contact (POC) distribute the surveys directly to nursing home staff. To promote participation, you can distribute the surveys at staff meetings and serve refreshments, following these guidelines for distributing surveys:

- Provide explicit instructions for completing the survey.
- Inform staff that completing the survey is voluntary.
- Assure staff that their responses will be kept confidential. Emphasize that reports of findings will include only summary data and will not identify individuals.
- Caution them (especially if they are completing the survey during a meeting) not to discuss the survey with other staff while answering the survey.
- Permit staff to complete the survey **during work time** to emphasize that nursing home administration support the data collection effort.

Arrange for Returning Surveys

There are several options for respondents to return completed paper surveys:

- **Drop-boxes:** Surveys can be returned to locked drop-boxes placed throughout your nursing home.
- **Interoffice mail:** Surveys can be returned via interoffice mail to a designated POC within your nursing home or to a corporate headquarters address.
- **Mail:** If you use a vendor or do not have an interoffice mail system, staff can mail their completed surveys to the outside vendor or designated POC. If surveys are returned through the mail, you will need to account for return postage in your budget.

Whatever process you choose, it should help reassure staff that no one at their nursing home will see the completed surveys.

Publicize and Promote the Survey

We strongly recommend publicizing the survey before and during data collection. Be sure to advertise that nursing home leadership supports the survey. Publicity activities may include:

- Posting fliers or posters at the nursing home, sending staff emails, and posting information about the survey on the nursing home intranet;
- Promoting the survey during staff meetings; and
- Having the nursing home senior executive and/or health care system senior executive send a supportive email or letter of support for the data collection effort.

Publicity materials can help legitimize the survey effort and increase your response rate by including some or all of the following types of information:

- Endorsements of the survey from your leadership
- Clear statements about the purpose of the survey, which is to assess staff attitudes and opinions about resident safety in your nursing home
- Description of how the collected data will be used to identify ways to improve safety culture in your nursing home
- Assurances that only summary (aggregated) data will be reported, thus keeping individual responses confidential
- Assurance of individual anonymity (if no individual identifiers are used) or confidentiality of response (if individual identifiers are used)
- Introductions to the survey vendor, if you have chosen to use a vendor
- Contact information for the designated POC

Follow Survey Administration Steps

We recommend the following basic data collection steps to achieve high response rates.

1. **Optional prenotification letter.** If you have publicized your survey well and your survey cover letter explains the purposes of the survey, distributing a prenotification letter announcing the upcoming survey is optional. If you obtained a letter of support from your leadership, you can use this as your prenotification letter.
2. **First paper survey.** About 1 week after publicizing the survey, distribute a survey packet to each staff member that includes the survey, a supporting cover letter, and a return envelope. If you want staff to return their surveys by mail, include a preaddressed postage-paid envelope.
3. **Second survey.** To promote a higher response rate, a week after the first survey is distributed, distribute a second survey to everyone in your nursing home (it has to go to everyone if you are conducting an individually anonymous survey, because you do not know who responded). Include a cover letter thanking those who have already responded and reminding others to complete the second survey. If you used individual identifiers on your survey (although not recommended), you can distribute second surveys only to nonrespondents.
4. **Calculate preliminary response rates.** Calculate a preliminary response rate at least once a week to track your response progress. Divide the number of returned surveys (numerator) by the number of eligible staff who received the survey (denominator).

$$\frac{Number\ of\ surveys\ returned}{Number\ of\ eligible\ staff\ who\ received\ a\ survey}$$

If staff members' employment ends *during* data collection, they are still considered eligible and should be included in the denominator even if they did not complete and return the survey. See Chapter 4 for a discussion of how to calculate the final official response rate for your nursing home.

5. **Close out data collection.** Keep in mind that your goal is to achieve a high response rate. If your response rate is still too low after distributing the second survey, add another week to the data collection period or consider sending a followup reminder notice.

Track and Maximize Response Rates

When sending your first paper survey, be sure to document the number of providers and staff to whom you distribute the survey, which will be the denominator for your response rate.

Offering incentives can be a good way to increase responses to a survey, because respondents often ask, "What's in it for me?" You may want to offer individual incentives, such as a raffle for cash prizes or gift certificates, or you can offer group incentives such as catered lunches for nursing homes with at least a 75 percent response rate. Be creative and think about what would motivate your staff to complete the survey.

Develop and Assemble Survey Materials

Estimate the number of surveys you need to print and assemble the following materials for your paper survey data collection.

We suggest the following printing guidelines:

- If you are conducting an anonymous survey and plan to send second surveys to everyone, print at least twice the number of surveys as staff in your sample. Include a few extra surveys in case some staff misplace theirs.
- If you are tracking responses and will send second surveys only to nonrespondents, you may print fewer surveys overall. For example, if you are administering the survey to 80 staff and your nursing home typically experiences a 40 percent response to the first survey packet, print 80 first surveys and 48 second surveys (80 staff x 60% nonrespondents = 48), for a total of 128 printed surveys. Add a few extra surveys in case some staff misplace theirs.

Points of Contact Letters and Instructions

Send a letter to each nursing home or system-level POC describing the purpose of the survey and explaining his or her role in the survey effort. The letter should be on company letterhead, signed by the nursing home senior executive and/or health care system senior executive. Provide the POCs with a data collection protocol that describes their tasks, along with a proposed timeline. (A sample data collection protocol is in Appendix B.)

Cover Letter in First Survey Packet

The cover letter should be on official nursing home letterhead and signed by a senior nursing home leader or executive. The cover letter should address the following points:

- Why the nursing home is conducting the survey, how survey responses will be used, and why the staff member's response is important
- How much time is needed to complete the survey
- Assurance that the survey is voluntary and can be completed during work time
- Assurance of individual anonymity (if no individual identifiers are used) or confidentiality of response (if individual identifiers are used)
- How to return completed surveys
- Incentives for survey participation (optional)
- Contact information for the nursing home POC (and system-level POC, if applicable)

Sample Cover Letter Text for Paper Survey

The enclosed survey is part of our nursing home's efforts to better address patient safety. All nursing home staff are being asked to complete this survey. Your participation is voluntary, but we encourage you to complete the survey to help us improve the way we do things at this nursing home. It will take about 10 to 15 minutes to complete, and your individual responses will be kept anonymous [*say* confidential *if you are using respondent identifiers*]. Only group statistics, not individual responses, will be prepared and reported.

Please complete your survey WITHIN THE NEXT 7 DAYS. When you have completed your survey, please [*provide return instructions for paper surveys*]. [*Optional incentive text:* In appreciation for participation, staff who complete and return their surveys will receive (*describe incentive*).]

Please contact [*POC name and job position*] if you have any questions [*provide phone number and email address*]. Thank you in advance for your participation in this important effort.

Cover Letter in Second Survey Packet

The contents of the second survey cover letter should be similar to the first cover letter but should have a different beginning. If you conduct an anonymous survey, you will have to distribute second surveys to everyone, so you might begin with: "About *X* days ago a copy of the *Nursing Home Survey on Patient Safety Culture* was distributed to you and other staff at your nursing home. If you have already returned a completed survey, thank you very much and please disregard this second survey packet." If you are using individual identifiers, you will be able to send the second survey to nonrespondents only.

Followup Reminder Notices

If needed to improve response, distribute reminder notices after the second survey administration. The notices, which can be on a half-page of cardstock, should ask staff to complete and return their surveys and should include a thank you to those who have done so already. If you use individual identifiers to track responses, you can distribute the reminders to nonrespondents only.

Labels and Envelopes for Paper Survey Packets

To ensure that every staff member receives a survey, consider outer envelope labels with staff names even if the survey itself is completed anonymously. Labels may also be used to place nursing home identifiers onto surveys.

Use a slightly larger outer envelope to keep from bending or folding the survey or return envelope contained in the survey packet. Use your estimate of the number of surveys to print to estimate the number of outer and return envelopes you will need.

Postage for Returning Paper Surveys

If staff will return their surveys by mail, weigh the survey and the return envelope to ensure adequate postage on the envelopes. When calculating the total cost of postage, be sure to base the amount on your estimated number of initial **and** followup surveys that need to be mailed.

Chapter 4. Analyzing Data and Producing Reports

You will need to prepare the collected survey data for analysis. If you decide to do your own data entry, analysis, and report preparation, use this chapter to guide you through the various decisions and steps. If you decide to hire a vendor for any of these tasks, use this chapter as a guide to establish data preparation procedures.

If you plan to administer the survey in more than one nursing home, you will need to report the results separately for each participating nursing home.

Identify Incomplete and Ineligible Surveys

Examine each returned survey for possible problems before the survey responses are entered into the dataset. We recommend that you exclude returned surveys that:

- Are completely blank or contain responses only for the background demographic questions, or
- Contain the exact same answer to all the questions in the survey (since a few survey items are negatively worded, the same response to all items indicates the respondent probably did not pay careful attention and the responses are probably not valid).

Calculate Final Response Rate

After you have identified which returned surveys will be included in the analysis data file, you can use the following formula to calculate the official response rate:

$$\frac{Number\ of\ surveys\ returned - incompletes}{Number\ of\ eligible\ staff\ who\ received\ a\ survey}$$

Note that the numerator may be smaller than in your last preliminary response rate calculation because during your examination of all returned surveys, you may find that some of the returned surveys are incomplete or ineligible. Ineligible staff are those who were not employed or on contract with your nursing home at the time of the survey.

Edit the Data and Prepare the Data File

In this section we describe several data file preparation tasks.

Edit Illegible, Mismarked, and Double-Marked Responses

Problematic responses may occur with paper surveys if some respondents write in an answer such as 3.5 when they have been instructed to mark only one numeric response. Or they may mark two answers for one item. Develop and document editing rules that address these problems and apply them consistently. Examples of such rules are to use the highest or most positive response when two responses are provided (e.g., a response with both 2 and 3 would convert to a 3) or to mark all of these types of inappropriate responses as missing.

Create and Clean Data File

After your paper surveys have been edited as needed, you can enter the data directly into an electronic file by using statistical software such as SAS®, SPSS®, or Microsoft Excel®, or you can create a text file that can be easily imported into a data analysis software program. If you enter data into a Microsoft Excel® file, each row in your data file should represent one staff member's responses and each column should represent a different survey question. The next step is to check the data file for possible data entry errors. To do so, produce frequencies of responses for each item and look for out-of-range values or values that are not valid responses.

Most items in the survey require a response between 1 and 5, with a 9 coded as *Does not Apply/Don't know.* Check through the data file to ensure that all responses are within the valid range (e.g., that a response of 7 has not been entered). If you find out-of-range values, return to the original survey and determine the response that should have been entered.

Nursing Home Data Entry and Analysis Tool

AHRQ has developed a Nursing Home Data Entry and Analysis Tool that works with Microsoft Excel® and makes it easy to input your individual-level data from the survey. The tool then automatically creates tables and graphs to display your survey results. To request the tool, email DatabasesOnSafetyCulture@westat.com.

Include Individual Identifiers in Your Data File

If you used identifiers on your surveys, enter the identification number in the electronic data file and then destroy any information linking the identifiers to individual names. You want to eliminate the possibility of linking responses in the electronic file to individuals.

If you used paper surveys *without* individual identifiers, include some type of respondent identifier in the data file. Create an identification number for each completed paper survey and write it on the completed paper survey in addition to entering it into the electronic data file. This identifier can be as simple as numbering the returned surveys consecutively, beginning with the number 1. This number will enable you to go back and check the electronic data file against a respondent's original answers if any values look like they were entered incorrectly.

Deidentify, Analyze, and Code Open-Ended Comments

Respondents are given the opportunity to provide written comments at the end of the survey. Comments can be used to obtain direct quotes for feedback purposes, but they should be carefully reviewed and deidentified first to ensure that they do not contain any information that could be used to identify the person who wrote the comment or the individuals referenced in the comment. You may also want to analyze the comments and identify common themes (e.g., communication, teamwork, staffing). You can then assign code numbers to match comments to themes and tally the number of comments per theme. Open-ended comments on paper surveys may be coded either before or after the data have been entered electronically.

Analyze the Data and Produce Reports of the Results

Ideally, feedback should be provided broadly—to nursing home administrators and management, health system boards of directors, nursing home committees, and nursing home

Minimum Number of Respondents To Produce Reports

To protect the confidentiality of individual respondents, **do not provide any type of survey feedback report for a nursing home if fewer than 10 respondents have answered the survey.** Also, if fewer than three respondents answered a particular survey item, do not report percentages of positive, neutral, or negative response for that item—simply indicate there were not enough data to report results for the item.

staff —either directly during meetings or through communication tools such as email, intranet sites, or newsletters. The more broadly the results are disseminated, the more useful the information is likely to become and the more likely respondents will feel that taking the survey was worthwhile.

Feedback reports can be customized for each audience, from one- or two-page executive summaries to more complete reports that use statistics to draw conclusions or make comparisons.

In any feedback reports, include the following types of information:

- How the survey was conducted (paper, Web, survey administration period) and report your response rate.
- Background characteristics of all respondents—their staff positions, weekly hours, etc.—to help others understand who responded to the survey.
- Breakout of results by staff position or other background characteristics. Do not report results for any background characteristic category (e.g., nurses) if there are fewer than five respondents in that category and if there are fewer than three respondents to an item in that category.
    - It is possible to still provide breakout results when you have fewer respondents by collapsing categories together. For example, if only two employees reported that they work at the nursing home for 15 or fewer hours per week, you can combine those respondents with respondents reporting they work 16 to 24 hours per week if the total number of respondents in the combined group is five or more.

Calculate Frequencies of Response

One of the simplest ways to present results is to calculate the frequency of response for each survey item. To make the results easier to view in a report, you can combine the two lowest response categories (e.g., *Strongly Disagree/Disagree* and *Never/Rarely*) and the two highest response categories (e.g., *Strongly Agree/Agree* and *Most of the Time/Always*). The midpoints of the scales can be reported as a separate category (*Neither* or *Sometimes*).

Most survey items include a *Does not apply/Don't know* response option. In addition, each survey item will probably have some missing data from respondents who simply did not

answer the question. *Does not apply/Don't know* and missing responses are *excluded* when displaying percentages of response to the survey items.

When using a statistical software program, you will recode the "9" response (*Does not apply/Don't know*) as a missing value so that it is not included when displaying frequencies of response. An example of how to handle *Does not apply/Don't know* and missing responses when calculating survey results is shown in Table 2.

Table 2. Example of How To Compute Frequency Percentages

Item A1. Staff in this nursing home treat each other with respect.			
Response	**Frequency (Number of Responses)**	**Response Percentage**	**Combined Percentages**
1 = Strongly disagree	1	10%	30% Negative
2 = Disagree	2	20%	
3 = Neither	1	10%	10% Neutral
4 = Agree	4	40%	60% Positive
5 = Strongly agree	2	20%	
Total	10	100%	100%
9 = Does not apply/Don't know and Missing (did not answer)	3	-	-
Total Number of Responses	13	-	-

Calculate Item and Composite Percent Positive Scores

It can be useful to calculate an overall score for items within a composite. To calculate your nursing home's score on a particular safety culture composite, average the percentage of positive responses (percent positive) on all items included in the composite.

To calculate percent positive scores, you will need to reverse code negatively worded items. Disagreeing or responding *Never* to a negatively worded item indicates a positive response. Negatively worded items are identified in the document *Nursing Home Survey on Patient Safety Culture: Composites and Items.*

Table 3 provides guidelines for reverse coding negatively worded items.

Table 3. Example of How To Reverse Code Negatively Worded Items

Response Option for Negatively Worded Items	Original Coding	Recode
Strongly disagree or Never	1	5
Disagree or Rarely	2	4
Neither or Sometimes	3	3
Agree or Most of the time	4	2
Strongly agree or Always	5	1

Here is an example of computing a percent positive composite score for the composite *Staffing*:

- This composite has four items—two are positively worded (A3 and A16) and two are negatively worded (A8 and A17). Keep in mind that DISAGREEING with a negatively worded item indicates a POSITIVE response.
- Calculate the percent positive response at the item level (see example in Table 4). In this example, averaging the item-level percent positive scores [(46% + 52% + 46% + 56%)/4 = 50%] results in a composite score of 50 percent positive on *Staffing*.

Table 4. Example of How To Calculate Item and Composite Percent Positive Scores

Four Items Measuring Staffing	For Positively Worded Items, # of "Strongly Agree" or "Agree" Responses	For Negatively Worded Items, # of "Strongly Disagree" or "Disagree" Responses	Total # of Responses to Item (Excluding NA/DK & Missing Responses)	Percent Positive Response to Item
Item A3-positively worded: "We have enough staff to handle the workload"	120	NA*	260	120/260 = 46%
Item A16-positively worded: "Residents' needs are met during shift changes"	130	NA*	250	130/250 = 52%
Item A8-negatively worded: "Staff have to hurry because they have too much work to do"	NA*	110	240	110/240 = 46%
Item A17-negatively worded: "It is hard to keep residents safe here because so many staff quit their jobs"	NA*	140	250	140/250 = 56%
Average percent positive response across the 4 items = 50%				

* NA = Not applicable.

Compare Results Within Your Nursing Home and With Other Nursing Homes

Another way to understand your results is to compare results within your nursing home. The Nursing Home Data Entry and Analysis Tool mentioned earlier in this chapter will produce nursing home-level comparisons by staff position, work area, and resident contact.

Many nursing homes using the Agency for Healthcare Research and Quality (AHRQ) *Nursing Home Survey on Patient Safety Culture* have expressed interest in comparing their results with other nursing homes. In response, AHRQ has established the *Nursing Home Survey on Patient Safety Culture Comparative Database.* This database is a central repository for survey data from nursing homes that have administered the AHRQ patient safety culture survey instrument. If you choose to voluntarily submit your data, you will be able to compare your nursing home results with the overall nursing home comparative data.

Submitting to the Comparative Database

If your nursing home is interested in submitting its data to the Nursing Home Comparative Database, send an email to DatabasesOnSafetyCulture@westat.com or go to http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/nursing-home/resources/nhdbsubmissions.html.

Technical Assistance

For free technical assistance on the *Nursing Home Survey on Patient Safety Culture*, email SafetyCultureSurveys@westat.com.

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PART TWO: SURVEY MATERIALS

1. Nursing Home Survey on Patient Safety Culture
2. Nursing Home Survey on Patient Safety Culture: Composites and Items

Nursing Home Survey on Patient Safety

In this survey, **"resident safety"** means preventing resident injuries, incidents, and harm to residents in the nursing home.

This survey asks for your opinions about resident safety issues in your nursing home.
It will take about 15 minutes to complete.

To mark your answer, just put an X or a √ in the box: [x] or [√].

If a question does not apply to your job or you do not know the answer, please mark the box in the last column. If you do not wish to answer a question, you may leave your answer blank.

SECTION A: Working in This Nursing Home

How much do you agree or disagree with the following statements?	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. Staff in this nursing home treat each other with respect	☐1	☐2	☐3	☐4	☐5	☐9
2. Staff support one another in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
3. We have enough staff to handle the workload	☐1	☐2	☐3	☐4	☐5	☐9
4. Staff follow standard procedures to care for residents	☐1	☐2	☐3	☐4	☐5	☐9
5. Staff feel like they are part of a team	☐1	☐2	☐3	☐4	☐5	☐9
6. Staff use shortcuts to get their work done faster	☐1	☐2	☐3	☐4	☐5	☐9
7. Staff get the training they need in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
8. Staff have to hurry because they have too much work to do	☐1	☐2	☐3	☐4	☐5	☐9
9. When someone gets really busy in this nursing home, other staff help out	☐1	☐2	☐3	☐4	☐5	☐9
10. Staff are blamed when a resident is harmed	☐1	☐2	☐3	☐4	☐5	☐9

SECTION A: Working in This Nursing Home (continued)

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
11. Staff have enough training on how to handle difficult residents	☐1	☐2	☐3	☐4	☐5	☐9
12. Staff are afraid to report their mistakes	☐1	☐2	☐3	☐4	☐5	☐9
13. Staff understand the training they get in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
14. To make work easier, staff often ignore procedures	☐1	☐2	☐3	☐4	☐5	☐9
15. Staff are treated fairly when they make mistakes	☐1	☐2	☐3	☐4	☐5	☐9
16. Residents' needs are met during shift changes	☐1	☐2	☐3	☐4	☐5	☐9
17. It is hard to keep residents safe here because so many staff quit their jobs	☐1	☐2	☐3	☐4	☐5	☐9
18. Staff feel safe reporting their mistakes	☐1	☐2	☐3	☐4	☐5	☐9

SECTION B: Communications

How often do the following things happen in your nursing home?	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. Staff are told what they need to know before taking care of a resident for the first time	☐1	☐2	☐3	☐4	☐5	☐9
2. Staff are told right away when there is a change in a resident's care plan	☐1	☐2	☐3	☐4	☐5	☐9
3. We have all the information we need when residents are transferred from the hospital	☐1	☐2	☐3	☐4	☐5	☐9
4. When staff report something that could harm a resident, someone takes care of it	☐1	☐2	☐3	☐4	☐5	☐9
5. In this nursing home, we talk about ways to keep incidents from happening again	☐1	☐2	☐3	☐4	☐5	☐9

SECTION B: Communications (continued)

	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
6. Staff tell someone if they see something that might harm a resident.....	☐1	☐2	☐3	☐4	☐5	☐9
7. Staff ideas and suggestions are valued in this nursing home.....	☐1	☐2	☐3	☐4	☐5	☐9
8. In this nursing home, we discuss ways to keep residents safe from harm.....	☐1	☐2	☐3	☐4	☐5	☐9
9. Staff opinions are ignored in this nursing home.....	☐1	☐2	☐3	☐4	☐5	☐9
10. Staff are given all the information they need to care for residents	☐1	☐2	☐3	☐4	☐5	☐9
11. It is easy for staff to speak up about problems in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9

SECTION C: Your Supervisor

How much do you agree or disagree with the following statements?	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. My supervisor listens to staff ideas and suggestions about resident safety.....	☐1	☐2	☐3	☐4	☐5	☐9
2. My supervisor says a good word to staff who follow the right procedures	☐1	☐2	☐3	☐4	☐5	☐9
3. My supervisor pays attention to resident safety problems in this nursing home.....	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Your Nursing Home

How much do you agree or disagree with the following statements?	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
1. Residents are well cared for in this nursing home.....	☐1	☐2	☐3	☐4	☐5	☐9
2. Management asks staff how the nursing home can improve resident safety.....	☐1	☐2	☐3	☐4	☐5	☐9
3. This nursing home lets the same mistakes happen again and again.....	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Your Nursing Home (continued)

	Strongly Disagree ▼	Disagree ▼	Neither Agree nor Disagree ▼	Agree ▼	Strongly Agree ▼	Does Not Apply or Don't Know ▼
4. It is easy to make changes to improve resident safety in this nursing home	☐1	☐2	☐3	☐4	☐5	☐9
5. This nursing home is always doing things to improve resident safety	☐1	☐2	☐3	☐4	☐5	☐9
6. This nursing home does a good job keeping residents safe	☐1	☐2	☐3	☐4	☐5	☐9
7. Management listens to staff ideas and suggestions to improve resident safety	☐1	☐2	☐3	☐4	☐5	☐9
8. This nursing home is a safe place for residents	☐1	☐2	☐3	☐4	☐5	☐9
9. Management often walks around the nursing home to check on resident care	☐1	☐2	☐3	☐4	☐5	☐9
10. When this nursing home makes changes to improve resident safety, it checks to see if the changes worked	☐1	☐2	☐3	☐4	☐5	☐9

SECTION E: Overall Ratings

1. I would tell friends that this is a safe nursing home for their family.
   - ☐ a. Yes
   - ☐ b. Maybe
   - ☐ c. No

2. Please give this nursing home an overall rating on resident safety.

Poor ▼	Fair ▼	Good ▼	Very good ▼	Excellent ▼
☐1	☐2	☐3	☐4	☐5

SECTION F: Background Information

1. What is your job in this nursing home? Check ONE box that best applies to your job. If more than one category applies, check the highest level job.

☐ a. **Administrator/Manager**

Executive Director/Administrator
Medical Director
Director of Nursing/Nursing Supervisor
Department Head
Unit Manager/Charge Nurse
Assistant Director/Assistant Manager
Minimum Data Set (MDS) Coordinator/ Resident Nurse Assessment Coordinator (RNAC)

☐ b. **Physician (MD, DO)**

☐ c. **Other Provider**

Nurse Practitioner
Clinical Nurse Specialist
Physician Assistant

☐ d. **Licensed Nurse**

Registered Nurse (RN)
Licensed Practical Nurse (LPN)
Wound Care Nurse

☐ e. **Nursing Assistant/Aide**

Certified Nursing Assistant (CNA)
Geriatric Nursing Assistant (GNA)
Nursing Aide/Nursing Assistant

☐ f. **Direct Care Staff**

Activities Staff Member
Dietitian/Nutritionist
Medication Technician
Pastoral Care/Chaplain
Pharmacist
Physical/Occupational/Speech/ Respiratory Therapist
Podiatrist
Social Worker

☐ g. **Administrative Support Staff**

Administrative Assistant
Admissions
Billing/Insurance
Secretary
Human Resources
Medical Records

☐ h. **Support Staff**

Drivers
Food Service/Dietary
Housekeeping
Laundry Service
Maintenance
Security

☐ i. **Other** (Please write the title of your job):

_____

2. How long have you worked in this nursing home?

☐ a. Less than 2 months
☐ b. 2 to 11 months
☐ c. 1 to 2 years
☐ d. 3 to 5 years
☐ e. 6 to 10 years
☐ f. 11 years or more

3. How many hours per week do you usually work in this nursing home?

☐ a. 15 or fewer hours per week
☐ b. 16 to 24 hours per week
☐ c. 25 to 40 hours per week
☐ d. More than 40 hours per week

SECTION F: Background Information (continued)

4. When do you work most often? Check ONE answer.
   - ☐ a. Days
   - ☐ b. Evenings
   - ☐ c. Nights

5. Are you paid by a staffing agency when you work for this nursing home?
   - ☐ a. Yes
   - ☐ b. No

6. In your job in this nursing home, do you work directly with residents most of the time? Check ONE answer.
   - ☐ a. YES, I work directly with residents most of the time.
   - ☐ b. NO, I do NOT work directly with residents most of the time.

7. In this nursing home, where do you spend most of your time working? Check ONE answer.
   - ☐ a. Many different areas or units in this nursing home / No specific area or unit
   - ☐ b. Alzheimer's / Dementia unit
   - ☐ c. Rehab unit
   - ☐ d. Skilled nursing unit
   - ☐ e. Other area or unit (Please specify): _____

SECTION G: Your Comments

Please feel free to write any comments about resident care and safety in this nursing home.

THANK YOU FOR COMPLETING THIS SURVEY.

Nursing Home Survey on Patient Safety Culture: Composites and Items

In this document, the items in the *Nursing Home Survey on Patient Safety Culture* are grouped according to the safety culture composites they are intended to measure. The item's survey location is shown to the left of each item. Negatively worded items are indicated.

1. Teamwork

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

A1. Staff in this nursing home treat each other with respect. A2. Staff support one another in this nursing home.
A5. Staff feel like they are part of a team.
A9. When someone gets really busy in this nursing home, other staff help out.

2. Staffing

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

A3. We have enough staff to handle the workload.
A8. Staff have to hurry because they have too much work to do. (negatively worded)
A16. Residents' needs are met during shift changes
A17. It is hard to keep residents safe here because so many staff quit their jobs. (negatively worded)

3. Compliance With Procedures

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

A4. Staff follow standard procedures to care for residents.
A6. Staff use shortcuts to get their work done faster. (negatively worded)
A14. To make work easier, staff often ignore procedures. (negatively worded)

4. Training & Skills

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

A7. Staff get the training they need in this nursing home.
A11. Staff have enough training on how to handle difficult residents.
A13. Staff understand the training they get in this nursing home.

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

5. Nonpunitive Response to Mistakes

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

A10. Staff are blamed when a resident is harmed. (negatively worded)
A12. Staff are afraid to report their mistakes. (negatively worded)
A15. Staff are treated fairly when they make mistakes.
A18. Staff feel safe reporting their mistakes.

6. Handoffs

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

B1. Staff are told what they need to know before taking care of a resident for the first time.
B2. Staff are told right away when there is a change in a resident's care plan.
B3. We have all the information we need when residents are transferred from the hospital.
B10. Staff are given all the information they need to care for residents.

7. Feedback & Communication About Incidents

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

B4. When staff report something that could harm a resident, someone takes care of it.
B5. In this nursing home, we talk about ways to keep incidents from happening again.
B6. Staff tell someone if they see something that might harm a resident.
B8. In this nursing home, we discuss ways to keep residents safe from harm.

8. Communication Openness

(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)

B7. Staff ideas and suggestions are valued in this nursing home.
B9. Staff opinions are ignored in this nursing home. (negatively worded)
B11. It is easy for staff to speak up about problems in this nursing home.

9. Supervisor Expectations & Actions Promoting Resident Safety[1]

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

C1. My supervisor listens to staff ideas and suggestions about resident safety.
C2. My supervisor says a good word to staff who follow the right procedures.
C3. My supervisor pays attention to resident safety problems in this nursing home.

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

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[1] Adapted from Zohar, D. A group-level model of safety climate: testing the effect of group climate on microaccidents in manufacturing jobs. J Appl Psychol 2000;85(4):587–96. http://psycnet.apa.org/journals/apl/85/4/587.html. Accessed July 20, 2016.

10. Overall Perceptions of Resident Safety

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

D1. Residents are well cared for in this nursing home.
D6. This nursing home does a good job keeping residents safe.
D8. This nursing home is a safe place for residents.

11. Management Support for Resident Safety

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

D2. Management asks staff how the nursing home can improve resident safety.
D7. Management listens to staff ideas and suggestions to improve resident safety.
D9. Management often walks around the nursing home to check on resident care.

12. Organizational Learning

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

D3. This nursing home lets the same mistakes happen again and again. (negatively worded)
D4. It is easy to make changes to improve resident safety in this nursing home.
D5. This nursing home is always doing things to improve resident safety.
D10. When this nursing home makes changes to improve resident safety, it checks to see if the changes worked.

13. Overall Ratings

(Yes, Maybe, No)

E1. I would tell friends that this is a safe nursing home for their family.

(Poor, Fair, Good, Very Good, Excellent)

E2. Please give this nursing home an overall rating on resident safety.

NOTE: Negatively worded questions should be reverse coded when calculating percent "positive" response, means, and composites.

Appendix A. Web-Only and Mixed-Mode Surveys

As mentioned earlier in this guide, we strongly recommend that nursing homes administer a paper survey, because staff's access to email and the Internet, as well as staff computer skills, may be very limited. However, if your nursing home has a history of conducting Web surveys, your nursing home may be interested in conducting a Web survey or a mixed-mode survey. This Appendix suggests ways to publicize your survey, describes survey administration steps for Web-only and mixed-mode surveys, describes materials that need to be developed, and highlights important best practices in Web survey design and pretesting.

Publicize and Promote the Survey

As with paper surveys, we strongly recommend publicizing the survey before and during data collection. Be sure to advertise that nursing home leadership supports the survey. Publicity activities may include:

- Posting fliers or posters in the nursing home, sending staff emails, and posting information about the survey on the nursing home intranet.
- Promoting the survey during staff meetings.
- Having the nursing home senior executive and/or health care system senior executive send a supportive email thanking staff if they have completed the survey and encouraging others to do so.

Publicity materials can help legitimize the survey effort and increase your response rate by including some or all of the following types of information:

- Endorsements of the survey from your leadership
- Clear statements about the purpose of the survey, which is to assess staff attitudes and opinions about resident safety in your nursing home
- Description of how the collected data will be used to identify ways to improve safety culture in your nursing home
- Assurance that only summary (aggregated) data will be reported, thus keeping individual responses confidential
- Assurance of individual anonymity (if no individual identifiers are used) or confidentiality of response (if individual identifiers are used)
- Introduction to the survey vendor, if you have chosen to use a vendor
- Contact information for the designated point of contact (POC)

Follow Survey Administration Steps

We recommend the following basic data collection steps to achieve high response rates.

1. **Prenotification email.** Email staff a prenotification letter telling them about the upcoming survey and alerting them that they will soon receive an invitation to complete the Web survey. You will need an up-to-date list of staff email addresses. If you obtained a letter of support from your leadership, you can use this as your prenotification email.

2. **Survey invitation email.** Send the survey invitation email a few days after sending the prenotification email. Include the hyperlink to the Web survey (or instructions for accessing the survey on the nursing home intranet), along with the individual's password, if applicable. Provide instructions about whom to contact for help accessing and navigating the survey.
3. **Followup communications.** Send an email reminder one week after sending the survey invitation. In the message, thank those who have already completed the survey and encourage others to do so. Distribute a second reminder a week later. Consider sending a third email reminder to boost response as needed. Be sure to make the subject lines of followup email reminder messages slightly different to capture recipients' attention. In the reminders, also include the original message and instructions for accessing the survey.

   If you use individual identifiers, you can send email reminders only to nonrespondents. Otherwise, reminders must be sent to everyone. Be sure to thank those who have already completed their surveys and ask them to disregard the reminder.
4. **Calculate preliminary response rates.** Calculate a preliminary response rate at least once a week to track your response progress. Divide the number of returned surveys (numerator) by the number of eligible staff who received the survey (denominator).

$$\frac{Number\ of\ surveys\ returned}{Number\ of\ eligible\ staff\ who\ received\ a\ survey}$$

   If any staff members' employment ends *during* data collection, they are still considered eligible and should be included in the denominator even if they did not complete and return the survey. See Chapter 4 for a discussion of how to calculate the final official response rate for your nursing home.

5. **Close out data collection.** Keep in mind that your goal is to achieve a high response rate. If your response rate is still too low after distributing the second survey, add another week to the data collection period and consider sending another reminder email.

Survey Administration Steps for Mixed-Mode Surveys

Administer the Web survey first, followed by a paper survey.

- Week 1: Carry out Web survey administration steps for the first week of data collection.
- Week 2: Email or distribute a followup reminder.
- Week 3: Distribute survey packets to all staff (or to nonrespondents only if using identifiers to track response). In the cover letter, tell staff to disregard the paper survey if they completed and submitted the Web survey.
- Follow paper survey administration steps but continue the Web survey option. For followup reminders (if needed), you can use a mix of email and printed (or in-person) reminders.

Track and Maximize Response Rates

When sending your survey, be sure to document the number of providers and staff to whom you send the survey, which will be the denominator for your response rate.

Offering incentives can be a good way to increase responses to a survey, because respondents often ask, "What's in it for me?" You may want to offer individual incentives, such as a raffle for cash prizes or gift certificates, or you can offer group incentives, such as catered lunches for nursing homes with at least a 75 percent response rate. Be creative and think about what would motivate your staff to complete the survey.

Develop Survey-Related Materials

The following materials will need to be developed in preparation for Web survey data collection.

Points of Contact Letters and Instructions

Send a letter to each nursing home or system-level point of contact (POC) describing the purpose of the survey and explaining his or her role in the survey effort. The letter should be on company letterhead, signed by the nursing home senior executive and/or health care system senior executive. We also recommend that you provide the POCs with a data collection protocol that describes their tasks, along with a proposed timeline. (Sample data collection protocols are in Appendixes B, C, and D.)

Prenotification Email

We recommend the following for the prenotification email to help boost survey response:

- Have it signed by a nursing home senior executive and/or health care system senior executive.
- Use a name or email address in the "From" line that will be easily recognizable to staff to prevent them from mistaking your email for spam and deleting it.
- Include the following points in your message:
    - Statement that in a few days the person will receive an invitation from [XXX] to participate in a brief survey on resident safety in the nursing home
    - Statement about the purpose and intended use of the survey and the importance of responding
- Assurance of individual anonymity (if no individual identifiers are used) or confidentiality of response (if individual identifiers are used)
- Introduction to survey vendor (if applicable)

Survey Invitation

The survey invitation email should also be signed by a nursing home senior executive and/or health care system senior executive. We recommend providing hyperlinks to the Web survey in your invitation email and any followup email reminders. Respondents will be able to click directly

on the hyperlink. You may also provide passwords for beginning the survey. If the survey is located on the nursing home intranet, provide instructions for accessing the survey. You can include a nursing home identifier as part of the password that is used to access the survey. The password would be linked to a particular nursing home. Alternatively, you can use a customized hyperlink for staff within a nursing home that differs across sites.

The survey invitation message should include the following information:

- Brief statement of why the nursing home is conducting the survey, how it will use the data, and why their response is important
- How much time is needed to complete the survey
- Assurance that the survey is voluntary and can be completed during work time
- Assurances of individual anonymity (if no individual identifiers are used) or confidentiality of response (if individual identifiers are used)
- Incentives for survey participation (optional)
- Contact information for the nursing home POC (and system-level POC, if applicable)

If someone other than the POC will handle questions about possible technical problems with the survey, provide contact information for that person.

Sample Survey Invitation Email

You are invited to participate in an important survey that is part of our nursing home's resident safety program. All staff are being asked to complete this survey. Your participation is voluntary, but we encourage you to complete the survey to help us improve the way we do things at this nursing home. It will take about 10 to 15 minutes to complete and you may take it during work time. Your individual responses will be kept anonymous [*say* confidential *if you are using respondent identifiers*]. Only group statistics, not individual responses, will be prepared and reported.

To access the secure survey Web site, click on the following link: http://www... [*Optional, if using passwords:* Then enter the following password to begin the survey: xxxxxxxxxx]

[*Optional incentive text:* In appreciation for participation, staff will receive (*describe incentive*).]

Please contact [*POC name and job position*] if you have any questions about the survey [*provide phone number and email address*]. If you have a technical problem with the survey, please respond to this email with a description of your problem, or contact [*Name, phone number*].

Thank you in advance for participating in this important resident safety effort.

Followup Reminder Notices

Send email reminder notices a few days after data collection begins and again a week after that. The contents of the reminder notices should be similar to the first invitation email but should have a different beginning. If you conduct an anonymous survey, you will have to send a reminder to everyone, so you might begin with: "About *X* days ago an invitation to participate in the *Nursing Home Survey on Patient Safety* was emailed to you and other staff at your nursing home. If you have already completed the survey, thank you very much and please disregard this reminder." If you use individual identifiers, you can send the reminders to nonrespondents only.

Design and Pretest the Web-Based Survey

If you decide to conduct a Web survey, there are a number of Web survey design aspects to consider. Whether you use commercial off-the-shelf software or have a vendor conduct a Web survey, you should assess the various Web survey options available to you. Below we present a number of important features for designing a Web survey.

Web Survey Design Features

Although research on the best ways to design Web-administered surveys continues to evolve, current knowledge suggests that a good Web-based survey follows the principles below:

1. **Do not force respondents to answer every question.** There are several good reasons for allowing staff to not answer a particular question:

    - Forcing respondents to answer each question may annoy respondents and lessen their motivation to complete the survey.
    - Some respondents may have legitimate reasons for not answering an item. Forcing a response may cause them to make a wild guess, rather than provide an informed answer.
    - You will want the Web version to be similar to the paper version, which does not require an answer to every question.

2. **Display notifications for questions with missing answers before the respondent leaves the Web page.** To help prevent missing data, it is a good idea to display notifications for questions with missing answers before the respondent proceeds to the next Web page. Do not force the respondent to answer the question, but let the respondent see which questions are missing answers.
3. **Decide on the number of questions on each Web page.**
    - Most Web survey applications have space for 6 or more questions on an individual page without scrolling, which will accommodate Section C and Section E. However, for the larger sections of the survey (i.e., Sections A, B, and D), we recommend you display the questions in chunks of 5 or 6 questions per individual Web page. It is better to avoid vertical scrolling if possible since respondents can miss questions not visible on the Web page and just proceed to the next section.
    - We do not recommend that you format the survey with one item per page. This increases the time it takes to complete the survey.

- We do not recommend that you program the survey so that respondents must scroll horizontally to see parts of the survey. This can contribute to response error if respondents overlook parts of the survey, and it may annoy respondents.

4. **Make sure the response categories (e.g., Strongly disagree, Disagree) appear on every Web page.** Response errors may occur if the respondent cannot see the response categories when the question appears across more than one Web page. Be sure that the response categories are repeated as frequently as needed so that respondents always see them when answering every question. Use a large screen resolution of 800 pixels by 600 pixels when testing the Web survey, because this issue is more problematic as the screen resolution gets larger.
5. **Design for mobile devices.** It is important to test your Web survey on different types of mobile devices (e.g., tablet computers, smart phones) to ensure that it is viewable and can be taken on those devices.
6. **Do not indicate progress by Web page.** Current survey research also suggests that for short surveys, progress indicators (e.g., a progress bar) could be counterproductive since they often do not display progress accurately. Rather, it is recommended to tell the respondent that the survey takes about 10 to 15 minutes to complete. If, however, you want some indication of where the respondent is in the survey, you can have a section indicator that shows which section of the survey the respondent is currently completing.
7. **Save the survey.** It is important that the respondent's answers be saved automatically as the respondent moves from Web page to Web page. Sometimes the respondent will break off and complete the survey at a later time. You do not want to lose the respondent's answers due to a temporary breakoff.
8. **(Optional) Allow respondents to print a hard-copy of the survey and complete it on paper.** Some respondents may prefer to complete a paper version of the survey, and providing this option may boost your response rate. It is possible to design your Web survey so it can be printed in paper form, but test this functionality thoroughly to ensure that the survey prints properly on different printers. Attention must be given to line lengths and page lengths in the design of the Web survey pages to be sure they print properly.

   Alternatively, you can include a link to a portable document file (PDF) of the survey on the Web site. With either alternative, respondents will need instructions to know where to return the completed paper surveys. Designated personnel then must enter the responses into your dataset (paper survey data can be entered via the Web site). Also, if you use individual identifiers, find a way to include the identifier on the printed version of the survey or otherwise identify the paper response.

Thoroughly Test the Survey

It is essential to thoroughly test the survey. When testing:

- Use the same type of computer that will be available to staff taking the survey at your nursing home. If you have more than one type of computer, be sure to test with a range of computer types and include the lower end type with slower Internet connections. You may also want to test the Web survey using mobile devices with small screens if you think some staff will complete the survey on a cell phone or tablet.

- Test the survey with various Internet browsers (e.g., with different iterations of Internet Explorer, Safari, Firefox, Chrome, Mozilla, Opera), different display settings (screen resolutions set at 800 x 600 pixels versus 1200 x 800 pixels), and so forth.
- After you have completed the first two testing steps, submit test survey responses to ensure that the Web survey is working properly and is easy to use.
- Check the Web survey data output. For example, check to make sure that *Does not apply/Don't know* responses show up with a value of 9, not a value of 1 through 5. Also, make sure the responses (e.g., *Strongly disagree* through *Strongly agree*) have the correct 1 to 5 values. If the Web responses are miscoded, there is no way to correct the dataset after the survey has been administered.

Testing will help to ensure that the survey appears and performs as it should despite the different settings and personal preferences that staff may use. For more information on Web survey design principles and survey testing, see Couper (2008); Dillman, et al. (2009); and Tourangeau, et al. (2013).

Appendix B. Sample Data Collection Protocol for the Nursing Home Point of Contact: Paper Survey

Your Data Collection Tasks and Schedule for the *Nursing Home Survey on Patient Safety Culture*

Listed below are the schedule and tasks for administering the paper survey. Fill in the dates for your survey. Post this protocol in your office to remind you of the schedule.

Target Date	Activity
Two weeks before survey distribution Date: _____	**Print and post publicity materials.** Post survey fliers throughout the nursing home (e.g., on bulletin boards, in work areas). Promote survey throughout the data collection period.
Beginning of Week 1 (Start of Survey Data Collection) Date: _____	**Distribute survey packets to all staff members on the survey distribution list.** Consider distributing the packets at staff meetings and encourage survey participation. Caution staff, however, not to discuss their answers if they complete their surveys during the meeting.
Beginning of Week 2 Date: _____	**Distribute a second survey packet.** If you are not using individual identifiers to track respondents, distribute second survey packets to all staff. If you are using identifiers to track respondents, distribute second survey packets only to nonrespondents.
Near End of Week 2 Closeout Date: _____	**Calculate preliminary response rate**. If the rate is high enough, **close out data collection at the end of Week 2.** To increase your response rate, extend data collection by a few days or a week. If your response rate is lower than 50 percent, consider distributing reminder cards to all staff (or only to nonrespondents if you are using identifiers). It may be sufficient to remind staff in person to complete the survey.
New Closeout Date: _____	**Close Out Extended Data Collection**

Appendix C. Sample Data Collection Protocol for the Nursing Home Point of Contact: Web Survey

Your Data Collection Tasks and Schedule for the *Nursing Home Survey on Patient Safety Culture*

Listed below are the schedule and tasks for administering the Web survey. Fill in the dates for your survey. Post this protocol in your office to remind you of the schedule.

Target Date	Activity
Two weeks before starting data collection Date: _____	**Print and post publicity materials.** Post survey fliers throughout the nursing home (e.g., on bulletin boards, in work areas). Promote survey throughout the data collection period.
One week before starting data collection Date: _____	**Email the prenotification message about the survey.** Send the invitation to all staff with email access in the nursing home. You can share the message with staff without email access.
Beginning of Week 1 (Start of Survey Data Collection) Date: _____	**Email the survey invitation (or announce the start of data collection).** If the survey is hosted on the World Wide Web, include a hyperlink (URL) and password in the email invitation. If the survey is hosted on the nursing home intranet, provide instructions for locating and taking the survey.
Beginning of Week 2 Date: _____	**Distribute 1st reminder notice.** Email your prepared reminder notices and/or distribute reminder cards to all staff. If you use identifiers to track respondents, email/distribute reminders only to nonrespondents. It may be sufficient to remind staff in person to complete the survey.
Beginning of Week 3 Date: _____	**Distribute 2nd reminder notice.** Email your 2nd reminder notice to all staff (or only to nonrespondents if you use identifiers). It may be sufficient to remind staff in person to take the survey.
Near End of Week 3 Closeout Date: _____	**Calculate preliminary response rate**. If the rate is high enough, **close out data collection at the end of Week 3.** To increase your response rate, extend data collection by a few days or a week. If your response rate is lower than 50 percent, email or distribute 3rd reminders to all staff (or only to nonrespondents if you use identifiers). It may be sufficient to remind staff in person to complete the survey.
New Closeout Date: _____	**Close Out Extended Data Collection**

Appendix D. Sample Data Collection Protocol for the Nursing Home Point of Contact: Mixed-Mode Survey

Your Data Collection Tasks and Schedule for the *Nursing Home Survey on Patient Safety Culture*

Listed below are the schedule and tasks for administering the survey when you are using both Web and paper surveys at the same medical office. Fill in the dates for your survey. Post this protocol in your office to remind you of the schedule.

Target Date	Activity
Two weeks before survey distribution Date: _____	**Print and post publicity materials.** Post survey fliers throughout the nursing home (e.g., on bulletin boards, in work areas). Promote survey throughout the data collection period.
One week before starting data collection Date: _____	**Email the prenotification message about the Web survey.** Send the invitation to all staff with email access in the nursing home. You can share the message with staff without email access.
Beginning of Week 1 (Start of Survey Data Collection) Date: _____	**Email the survey invitation (or announce the start of data collection).** If the survey is hosted on the World Wide Web, include a hyperlink (URL) and password in the email invitation. If the survey is hosted on the office intranet, provide instructions for locating and taking the survey.
Beginning of Week 2 Date: _____	**Distribute 1st reminder notice.** Email your prepared reminder notices and/or distribute reminder cards to all staff. If you use identifiers to track respondents, email/distribute reminders only to nonrespondents. It may be sufficient to remind them in person to take the survey.
Beginning of Week 3 Date: _____	**Distribute paper survey packets.** Distribute paper survey packets to all staff (or only to nonrespondents if you use identifiers).
Near End of Week 3 Closeout Date: _____	**Calculate preliminary response rate**. If the rate is high enough, **close out data collection at the end of Week 3.** To increase your response rate, extend your data collection by a few days or a week and distribute 2nd reminders to all staff (or only to nonrespondents if you use identifiers). It may be sufficient to remind them in person to take the survey.
New Closeout Date: _____	**Close Out Extended Data Collection**

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