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

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Introduction

The safety of resident care is critical to the quality of care in nursing homes. As nursing homes continually strive to improve, there is growing recognition of the importance of establishing a culture of safety. Achieving such a culture requires an understanding of the values, beliefs, and norms about what is important in the organization and what attitudes and behaviors related to resident safety are expected and appropriate. A definition of safety culture applicable to all health care settings, including nursing homes, 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

In November 2004, the Agency for Healthcare Research and Quality (AHRQ) made available to the public the *Hospital Survey on Patient Safety Culture (HSOPS)*. The hospital survey has been well received and administered in hundreds of hospitals. In response to nursing homes interested in a survey that focuses on safety culture in their organizations, AHRQ sponsored the development of the *Nursing Home Survey on Patient Safety Culture*. The new survey is designed specifically for nursing home staff and asks for their opinions about the culture of patient safety in the nursing home. The survey can be used:

- As a diagnostic tool to assess the status of patient safety culture in a nursing home,

- As an intervention to raise staff awareness about patient safety issues,

- As a mechanism to evaluate the impact of patient safety improvement initiatives, and

- As a way to track changes in patient safety culture over time.

Survey Development and Pilot Test

To develop the nursing home safety culture survey, researchers reviewed the literature on resident safety in nursing homes, health care quality, medical errors, error reporting, safety climate and culture, and organizational climate and culture. In addition, they reviewed many existing nursing home surveys. None of those surveys, however, focused specifically on staff opinions about resident safety issues. The researchers then consulted more than two dozen experts in the field of nursing home safety for help in identifying key topics and issues. On the basis of all those activities, the researchers identified a potential list of dimensions to include in the survey and sought input from long-term care experts to help identify key dimensions.

Researchers then developed draft survey items to measure the key dimensions. The survey draft was iteratively pretested with nursing home staff to ensure that the items were easy to understand and answer and were relevant to resident safety in nursing homes. The pretest findings were used to revise the survey for a larger pilot test. The Flesch-Kincaid score for the pilot test instrument was below a 7th-grade reading level.

The pilot test version of the *Nursing Home Survey on Patient Safety Culture* was administered in late 2007 to more than 5,000 staff working in 40 nursing homes across the United States. Participating nursing homes varied by bed size, geographic region, urbanicity, and ownership.

At the end of data collection, more than 3,700 surveys were received. Analysts examined item statistics and the reliability of the safety culture dimensions. Exploratory and confirmatory factor analyses were conducted to examine the factor structure of the survey. Based on these analyses, the survey was revised so that the final items and dimensions in the *Nursing Home Survey on Patient Safety Culture* have sound psychometric properties.

Defining a "Nursing Home"

The survey was designed to measure resident safety culture in a nursing home facility or in a special contained area of a facility (e.g., a hospital) that includes only licensed nursing home beds, so it is important to understand the type of nursing home facility that the survey was designed for.

- It was **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.

Identifying Who Should Complete the Survey

The survey was designed to be administered to **all** employees in your nursing home, ranging 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.

- New staff who have worked in your nursing home long enough, in your best judgment, to be able to provide informed answers to the survey questions.

- 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. Use your best judgment to decide which physicians and other providers are familiar enough with the nursing home to provide knowledgeable answers to the survey questions.

If any of your staff or providers work in more than one nursing home, instruct them to answer the survey questions **only about the nursing home where they receive the survey**. Also, 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. The survey was **not** designed for assisted living or independent living facilities or areas.

Selecting a Sample

If your nursing home has a large number of staff or if your budget is limited, you may wish to survey only a subset or sample of staff rather than surveying a census of all your nursing home staff. In Appendix A, we provide guidelines on how to select a sample.

Safety Culture Dimensions Measured in the Survey

The Nursing Home Survey on Patient Safety Culture emphasizes resident safety issues. It includes 42 survey items measuring 12 dimensions. Nine of the 12 survey dimensions are similar to those appearing in the *Hospital Survey on Patient Safety Culture (HSOPS),* although the items included in the dimensions are different. Three HSOPS dimensions were dropped from the

nursing home survey: Frequency of event reporting, Teamwork across units, and Teamwork within units. Three new dimensions were added: Compliance With Procedures, Training and Skills, and Teamwork. The list of dimensions in the nursing home survey includes:

1. Teamwork (4 items)
2. Staffing (4 items)
3. Compliance With Procedures (3 items)
4. Training and Skills (3 items)
5. Nonpunitive Response to Mistakes (4 items)
6. Handoffs (4 items)
7. Feedback and Communication About Incidents (4 items)
8. Communication Openness (3 items)
9. Supervisor Expectations and Actions Promoting Resident Safety (3 items)
10. Overall Perceptions of Resident Safety (3 items)
11. Management Support for Resident Safety (3 items)
12. Organizational Learning (4 items)

In addition, the nursing home survey includes 7 background demographic questions and two overall rating questions:

1. Would they tell friends that this is a safe nursing home for their family (1 item)
2. How would they rate this nursing home on resident safety (1 item)

Modifying or Customizing the Survey

The survey was developed to be general enough for use in most nursing homes. You may find that the survey uses terms that are different from those used in your nursing home. It is also possible that your nursing home's management would like to ask additional questions about resident safety and care. Anticipating the need for some modification or customization of the survey, we have included the survey form as a modifiable electronic file on the AHRQ Web site (www.ahrq.gov/qual/hospculture). We recommend making changes to the survey only when they are absolutely necessary, however, because any changes may affect the reliability and validity of the survey and make comparisons with other nursing homes difficult. We provide the following suggestions regarding modifications to the survey.

Modifying Background Items

The survey includes background questions about the respondent's tenure in the organization, work hours, and staff category. You may wish to tailor the response options for these background questions to reflect your nursing home's hours of operation and staff positions.

Adding or Removing Items

Adding items. If your nursing home decides to add items to the survey, we recommend that you add these items just before the Background Information section, which is the last section in the survey.

Removing items. Although the survey takes about 10 to 15 minutes to complete, you may want to administer a shorter survey with fewer items. The best way to shorten the survey is to refer to Part Two of this document to see the safety culture dimensions assessed in the survey. Delete certain **dimensions** that your nursing home is not interested in assessing (that means deleting **all** the items in those dimensions). In this way, your nursing home's results on the remaining safety culture dimensions can still be compared with the results of other nursing homes using the survey. We **do not** recommend selectively removing items within the various dimensions.

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.

Web-Based Data Collection

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-based surveys have lower response rates than paper surveys (Groves, 2002; Shih and Fan, 2008). Despite the probability of lower response rates, your nursing home or health care system may decide to use a Web-based survey to collect the data because you have done so successfully in the past on other staff surveys. Web-based surveys have a wide range of design features and can involve different data collection procedures, so please read Appendix B, "Conducting a Web-Based Survey," for guidelines on how to adapt the *Nursing Home Survey on Patient Safety Culture* to this method of data collection.

Contents of This Survey User's Guide

The survey, this user guide, and the survey dimension descriptions are available on the AHRQ Web site (www.ahrq.gov/qual/hospculture). They are designed to provide nursing homes with the basic knowledge and tools needed to conduct a 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 of the guide presents information about data collection and how to organize and plan your survey project and includes the following chapters:

> **Chapter 2—Getting Started.** Chapter 2 provides information on planning the project, outlines major decisions and tasks in a task timeline, and discusses hiring a vendor and forming a project team.

> **Chapter 3—Determining Your Data Collection Methods.** Chapter 3 outlines decisions about how surveys will be distributed and returned and discusses the importance of establishing a point of contact within the nursing home.

> **Chapter 4—Establishing Data Collection Procedures.** Chapter 4 describes techniques for publicizing and promoting the survey, recommends data collection steps, discusses the importance of protecting confidentiality, and describes the content and assembly of survey materials.

> **Chapter 5—Preparing and Analyzing Data and Producing Reports.** Chapter 5 discusses the steps needed to prepare the data and analyze the responses and provides suggestions for producing summary feedback reports.

Part Two of the guide includes the nursing home survey form, followed by an overview of the survey items, grouped according to the safety culture dimensions they are intended to measure and the reliability statistics from the pilot data. A sample page from the Microsoft PowerPoint® Survey Feedback Template (part of the toolkit downloadable from the AHRQ Web site) that can be used to summarize the survey results is also provided.

Appendix A provides guidelines for designing and selecting a sample of staff in nursing homes. Appendix B provides guidelines for administering a Web-based survey, and Appendix C includes a sample data collection protocol for nursing homes to use during survey administration.

Chapter 2. Getting Started

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

Determine Available Resources, Project Scope, and Schedule

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. Therefore, to plan the scope of the project, you need to think about your available resources. You may want to ask yourself the following questions:

- How much money and/or 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?

You should read this entire user guide before deciding on a budget and the project's scope, because this document outlines the tasks that need to be accomplished. Each task has interrelated cost and scheduling implications to consider. Use the following guidelines to determine your budget and plan:

- Consider all the project tasks and whether the tasks will be performed in-house (in the nursing home, in system headquarters, or both) or through an outside company or vendor.

- Develop initial budget and scheduling estimates and revise as needed given your available resources, existing deadlines, and project implementation decisions.

- Include a cushion for unexpected expenses, and account for tasks that may take longer than expected.

Plan Your Project

Use the timeline below as a planning guideline for your survey. For a single nursing home, plan for at least 9 weeks from the beginning of the project to the end of data collection (Figure 1). Add a few more weeks for data cleaning, analysis, and report preparation. If your nursing home is small, you can probably shorten the task timeline in Figure 1. If your nursing home is much larger than average, you may need to add more time for planning and assembling materials. Also, if you are surveying multiple nursing homes, you may need to add more time for planning, assembling materials, and coordinating activities across the nursing homes.

Figure 1. Task Timeline for Project Planning for Paper Surveys

Task Timeline for Project Planning	Preparation/Planning	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Getting Started – Ch. 2										
Determine available resources, project scope, and schedule	✔									
Decide whether to use an outside vendor (and select vendor)	✔									
Form a project team	✔									
Determining Your Data Collection Methods – Ch. 3										
Decide how surveys will be distributed and returned		←——→								
Establish a point of contact in the nursing home			✔							
Establishing Data Collection Procedures – Ch. 4										
Decide whether to track response through identifiers			✔							
Assemble survey materials (develop and print materials)			←——→							
Publicize and promote the survey				←————————→						
Distribute first survey					✔					
Track responses and calculate preliminary response rates						←————————→				
Distribute reminder							✔			
Distribute second survey									✔	
Close out data collection (end of 9th week)										✔

} End of data collection

Decide Whether To Use an Outside Vendor

You may want to consider using an outside company or vendor to handle your survey data collection tasks, analyze the data and produce reports of the results, or both. 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. In addition, because confidentiality of survey responses is a typical concern, 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, as well as 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 manner than if you were to complete the tasks yourself.

On the other hand, the use of a vendor may add too much expense to your project. If your nursing home is part of a larger health care system, you may want to find out if the headquarters staff can conduct a survey of your nursing home and analyze the data for you. Senior headquarters executives may be interested in administering the survey to multiple nursing homes within the system. Moreover, your nursing home's staff may feel more comfortable about the confidentiality of their responses if surveys can be returned to a system headquarters address.

If you are considering hiring an outside vendor, the following guidelines may help you to select the right one:

- Look for a vendor with expertise in survey research. Local universities may have their own survey research centers or be able to refer you to vendors. You also may inquire within your nursing home or health care system to find out if particular vendors have been used before for employee survey data collection, analysis, and reporting.

- Gain an understanding of the vendor's capabilities and strengths so that you can match them to the needs of your project. Determine whether the vendor can conduct all planned project tasks. Some vendors will be able to produce your feedback reports; others will not.

- Provide potential vendors with a written, clear outline of work requirements. Make tasks, expectations, deadlines, and deliverables clear and specific. Mention all documentation, files, data sets, and other deliverables you expect to receive. 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.

- Once you have chosen a vendor, institute monitoring, supervision, and problem-resolution procedures.

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 project team may consist of one or more individuals from your own nursing home staff, system headquarters staff, vendor staff, or a combination.

The Project Team's Responsibilities

The project team is responsible for a variety of activities—either for conducting them in-house or for monitoring them if you hire a vendor. Highlights of some of these project duties include:

- **Planning and budgeting**—Determining the scope of the project based on available resources, planning project tasks, and monitoring the budget.

- **Establishing contact persons**—Assigning a point of contact in the nursing home to support survey administration, maintain open communication throughout the project, and provide assistance.

- **Preparing publicity materials**—Creating flyers, posters, and e-mail and Intranet messages to announce and promote the survey in the nursing home.

- **Preparing survey materials**—Printing surveys, preparing postage-paid return envelopes and labels (if applicable), and assembling these components for your survey distribution.

- **Distributing and receiving survey materials**—Distributing surveys and reminder notices and handling receipt of completed surveys.

- **Tracking survey responses and calculating preliminary response rates**—Monitoring survey returns and calculating preliminary response rates; if individual identification numbers are used on the surveys to track nonrespondents, identifying the nonrespondents who should receive followup materials.

- **Examining returned surveys at the end of data collection to identify completes and calculating the official response rate**—Identifying complete surveys that will be included in the analysis data file and calculating the final response rate.

- **Handling data entry, analysis, and report preparation**—Reviewing survey data for respondent errors and data entry errors in electronic data files, conducting data analysis, and preparing reports of the results.

- **Coordinating with and monitoring an outside vendor (optional)**—Outlining the requirements of the project to solicit bids from outside vendors, selecting a vendor, coordinating tasks to be completed in-house versus by the vendor, and monitoring progress to ensure that the necessary work is completed and deadlines are met.

The remainder of this user guide contains the information an in-house project team will need to collect survey data. If you decide to hire a vendor, you may use the information as a resource to facilitate communication with your vendor about the various project tasks and decisions that will be required.

Chapter 3. Determining Your Data Collection Methods

Once you determine your available resources, project scope, and timeline and establish a project team, you need to choose your data collection methods. The methods you choose for distributing and returning surveys will affect how your staff view the confidentiality of their responses. Their views on confidentiality will influence your overall survey response rate. As noted earlier, we recommend using a paper-based mode of data collection to achieve maximum response rates among all nursing home staff. The procedures outlined in Chapter 3 and Chapter 4 assume a paper-based approach, but some of the topics in these chapters also apply to Web-based surveys. We provide more specific information about Web-based survey data collection in Appendix B.

Decide How Surveys Will Be Distributed and Returned

When deciding how your paper surveys will be distributed and returned, consider any previous experience your nursing home has had with employee surveys. Have previous nursing home surveys been distributed at work? Were surveys returned to a location within the nursing home, to the nursing home system headquarters, or to an outside vendor? What were employee survey response rates? If possible, use methods that previously were successful in your nursing home.

Distributing Surveys

We recommend that a designated point of contact (POC) distribute the surveys directly to staff in the nursing home. To promote high participation, you can distribute the surveys at staff meetings where refreshments can be served. You may need to make a concerted effort to distribute the surveys to any physicians and staff members who do not work regular hours in the nursing home and to staff working evenings and night shifts. However the surveys are distributed, the following guidelines should be followed:

- 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.

- Caution staff (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 executives and managers support the data collection effort.

Returning Surveys

If your budget is limited, completed surveys can be returned to a designated POC in the nursing home or to drop boxes in the nursing home. These methods of returning surveys, however, may raise staff concerns about the confidentiality of their responses. Rely on your past experience with these methods in your nursing home when making decisions about how surveys should be returned.

If your nursing home has had limited experience administering employee surveys or you think there are confidentiality concerns, it is best to have staff mail their completed surveys directly to an outside vendor or to an address outside the nursing home. Be sure to include postage-paid return envelopes with the survey. If you do not use a vendor and are part of a larger health care system sponsoring the survey, consider having the surveys returned to a system headquarters address to reassure staff that no one at their nursing home will see the completed surveys. Remember, if surveys are returned through the mail, you will need to account for return postage in your budget.

Establish a Point of Contact

Single Nursing Home

You will want to appoint someone from the nursing home project team to serve as a POC for the survey (e.g., a director of nursing or other administrator). A POC can increase the visibility of the survey by showing support for the effort and by answering questions about the survey. We recommend including the POC's name, job title, and contact information (phone number, e-mail address, office number) in the survey cover letter, in any reminder notices that are distributed, and in survey promotion flyers posted in the nursing home.

The nursing home POC has several duties, including:

- Promoting the survey

- Answering questions about survey items, instructions, or processes

- Responding to staff comments and concerns

- Helping to coordinate survey distribution and receipt of completed surveys

- Communicating with outside vendors and other POCs, as necessary

Multiple Nursing Homes Within Your Health Care System

If you are administering 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. The contact information for this system-level POC should also be included in the survey cover letter and in any reminder notices distributed to staff.

Chapter 4. Establishing Data Collection Procedures

Once you decide how you want the surveys distributed and returned and you establish a nursing home point of contact (POC), you need to make several decisions regarding your data collection procedures. This chapter includes strategies for publicizing your survey and maximizing your response rate and outlines methods for tracking responses and collecting data.

Publicize and Promote the Survey

We strongly recommend publicizing the survey before and during data collection. You can, for example, post flyers or posters in the nursing home, promote the survey during staff meetings, and, if possible, send staff e-mails and post information about the survey on a nursing home Intranet. Be sure to advertise that the survey is supported by nursing home or health care system executive leaders, or both.

If your health care system is sponsoring the survey in multiple nursing homes, system leaders can promote the survey in any meetings attended by designated POCs in the participating nursing homes. After the survey is underway, if response rates are lagging in some nursing homes, it may be useful to have POCs in nursing homes with high response rates share their strategies for promoting the survey with others. Also, physician response rates often are lower than those of staff and other providers. Midway into data collection, you might consider having the senior executive in the nursing home or at system headquarters send a special e-mail to all physicians in your survey population, thanking them if they have completed the survey and encouraging the others to do so.

If you have publicized your survey well and your survey cover letter includes important information about the purposes of the survey, we think distributing a separate prenotification letter announcing the upcoming survey is optional. However, if you are unsure whether all providers and staff know about the upcoming survey, you may want to send a prenotification letter to announce the survey effort before administering the survey. The letter should be signed by a nursing home or health care system senior executive, or both. If an outside vendor is handling data collection, use the letter as an opportunity to introduce the vendor.

Follow Standard Survey Administration Steps

We recommend following a basic data collection approach to achieve high response rates. Achieving a high response rate is important for drawing valid conclusions about your nursing home from the survey data you collect. Surveys are used to infer something about a particular population. There must be enough survey respondents to accurately represent the nursing home before you can legitimately present your survey results as a reflection of your nursing home's safety culture.

If your response rate is low, there is a danger that the large number of staff who did **not** respond to the survey would have answered very differently from those who did respond.

Therefore, an overall response rate of 50 percent or more should be your minimum goal. The higher the response rate, the more confident you can be that you have an adequate representation of the staff's views. The approach we recommend for paper surveys involves carrying out the following steps in the order presented:

1. **First survey.** About 1 week after you begin publicizing the survey (or several days after sending a prenotification letter if you decide to do that), distribute a survey packet to each eligible provider and staff member in your nursing home. The packet should include the survey, a supporting cover letter, and a return envelope that the respondent can seal. If staff will return their surveys by mail, rather than returning them to the nursing home POC or to a special box in the nursing home, the return envelope in the survey packet should be a preaddressed postage-paid envelope. This will make it easier for respondents to return their surveys.

2. **Reminder postcard or letter.** Two weeks after distributing the survey, distribute a reminder postcard or letter to staff, thanking those who have already responded and reminding others to respond. Reminders can also be sent by e-mail to employees with individual work e-mail addresses. If your nursing home is small, you may choose to have the POC remind staff members simply by talking to them.

3. **Second survey.** Two weeks after distributing the reminder, distribute the second survey. Include a cover letter in the second survey packet thanking those who have already responded and reminding others to please complete the second survey. (If you have chosen to put individual identification numbers or identifiers on your survey, you can distribute second surveys only to nonrespondents.)

4. **Data collection closeout**. At the end of the second week following distribution of the second survey, end data collection and begin preparing for data cleaning and analysis.

> ## Consider Using Incentives To Maximize Response Rates
>
> 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. Another option is 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.

Decide Whether To Use Survey Identifiers

Whether or not you are surveying a single nursing home or multiple nursing homes, you need to decide whether to use individual respondent identification numbers or identifiers on your surveys. In addition, if you are surveying multiple nursing homes, you need to decide how to

track returned surveys by each individual nursing home. We provide recommendations and discussion regarding these issues. First, we discuss our recommendation regarding the use of individual identifiers; then we discuss options for tracking surveys by nursing home. Finally, we provide important guidelines that must be followed if you choose to use individual identifiers.

Individual Identifiers

Whether you are administering the survey in a single nursing home or in multiple nursing homes, we recommend that you conduct an individually anonymous survey and **do not** use individual identifiers (usually a number or code) on the survey to track survey respondents and nonrespondents. Also, **do not** ask respondents to provide their names on completed survey forms. A strong potential advantage of individually anonymous surveys is that fewer respondents will refuse to participate because of concerns that the identifiers will be used to figure out their individual responses to the survey. Confidentiality concerns may be stronger in smaller nursing homes. You want to make sure that respondents feel comfortable about reporting their true perceptions and confident that their answers cannot be traced back to them.

If you decide not to use identifiers, you will need to distribute reminder notices and second surveys to **all** eligible staff, with instructions to disregard the reminder and second survey if the first survey was completed and mailed. You may receive phone calls from respondents who completed and returned their survey, wondering why they received followup materials. You can tell them that you have no information about who responded, so followup materials were distributed to everyone. You can tell them to disregard the materials and then remove their names from further followup. You will run a small risk that someone may complete and return more than one survey.

Nursing Home Identifiers

If you are surveying multiple nursing homes, you will want to be able to produce feedback reports for each nursing home. Therefore, you need to be able to identify which returned surveys came from which nursing home. We offer a few ways of doing that. Our suggestions vary depending on the number of nursing homes you survey and your preferences regarding how respondents will return their surveys.

Vary survey color. If the number of nursing homes you are surveying is not too large, you can print the survey on different colored paper for each nursing home. Then respondents can return the survey either within the nursing home or to a headquarters or vendor address and their surveys will still be identifiable by nursing home.

Restrict options for returning surveys. You can instruct respondents to return their surveys in sealed envelopes to their nursing home POC or to drop boxes in the nursing home. The POC can then batch the returned surveys, put them in a package that has the nursing home name or nursing home identifier on it, and send the package to a designated project leader or designated vendor. Under this option, some staff may not participate in the survey because they prefer, for reasons of confidentiality, to send their completed surveys directly to someone outside their nursing home.

Use a nursing home identifier. You can include a nursing home identifier on the surveys at the time they are printed by giving each nursing home a unique form number as an identifier. The form number would be the same for all surveys in each nursing home but would differ across nursing homes. For example, if you are surveying three nursing homes, you would use Form 1, Form 2, and Form 3 to identify these nursing homes. Print the identifier in an unobtrusive location on the survey (e.g., lower left corner of the back page). Because the words "Form 1," Form 2," etc., are part of the **printed** document, they do not stand out. Be aware, however, that some respondents will be so concerned about the confidentiality of their responses that they might mark out the nursing home identifier.

Guidelines When Using Individual Identifiers

You may decide, particularly if your nursing home is quite large or you are surveying multiple nursing homes, that the advantages of using individual identifiers outweigh the advantages of individually anonymous surveys. For example, if you use individual identifiers to track responses, you can distribute reminders and followup materials only to nonrespondents, thus reducing your costs and eliminating the possibility of someone completing more than one survey. However, it is possible that some respondents will deidentify their own surveys by removing or marking out the identifiers anyway.

If you use individual identifiers, you must adhere to careful procedures to protect the confidentiality of the information linking individual staff names to the identification numbers or codes. You will need to ensure that only key project personnel have access to information linking individual names or groups to the identification numbers or codes; and destroy all information linking names to identifiers at the end of data analysis.

Develop and Assemble Survey Materials

The following materials will need to be developed and assembled in preparation for the survey distribution. Personalizing outer envelopes and letters (e.g., addressed to "Dear John Doe") sometimes promotes higher response rates (Dillman, 2007). Care should be taken, however, to prevent names from appearing on the actual survey forms.

Office/System Point of Contact Letter

You should send a letter to any persons designated as a nursing home or system-level POC describing the purposes of the survey and explaining their role in the survey effort. Print the letter on official letterhead, dated with month/year, signed by the nursing home senior executive and/or health care system senior executive.

We also recommend that you provide the POC with a simple data collection protocol that describes their tasks along with a proposed timeline (see a sample data collection protocol in Appendix C). In most nursing homes, POCs will be busy with their regular responsibilities. The protocol will help them stay on schedule.

Publicity Materials

We recommend preparing and posting informational flyers or posters in the nursing home and sending e-mail notices when possible to publicize the upcoming survey. Your publicity materials can help to 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 nursing home leaders

- Clear statements about the purpose of the survey (to measure staff attitudes and perceptions about resident safety in their nursing home) and how the collected data will be used (to identify ways to improve safe resident care)

- Assurances that only summary data will be reported, thus keeping individual responses confidential

- An introduction about the survey vendor, if you have chosen to use a vendor

- Contact information for the designated POC in the nursing home

Cover Letter in First Survey Packet

The cover letter that is included in the first survey packet should be on official nursing home letterhead and should address the following points:

- Why the nursing home is conducting the survey and how survey responses will be used

- How much time is needed to complete the survey

- Assurances that the survey is voluntary and can be completed during work time

- Confidentiality or anonymity assurances

- Suggested reply timeframe and how to return completed surveys

- Incentives for survey participation (optional)

- Contact information for the nursing home POC (and system-level POC, if applicable)

In the cover letter, or on the survey form, ask staff to complete the survey within 7 days, but **do not print an actual deadline date** on the letter or survey. Sometimes data collection schedules get delayed, and you do not want to reprint letters or surveys because they are outdated. In addition, sometimes people will not complete a survey if they notice that it is beyond the deadline date.

Sample Cover Letter Text

The enclosed survey is part of our nursing home's efforts to better address safety and quality care for our residents. All staff in the nursing home are receiving this survey. It will take about 10 to 15 minutes to complete, and your individual responses will be kept confidential. Only group statistics, not individual responses, will be prepared and reported.

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

If you have any questions, please contact [*POC name and job position*] at [*provide phone number and e-mail address*]. Thank you in advance for your participation in this important effort.

Reminder Notice

Nursing home POCs can distribute reminder notices (e.g., a reminder message on a half-page of cardstock) after the first survey administration to all eligible nursing home providers and staff (if the survey is anonymous). The notice should ask them to please complete and return their surveys and should include a thank you for those who have responded. If you are using identifiers to track responses, you can distribute the reminders to nonrespondents only. In small nursing homes, POCs may opt to remind staff simply by talking to them individually or in a group.

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. For example, if you are conducting an anonymous survey, you will have to distribute second surveys to everyone. You might say: "About *[X]* weeks ago a copy of the *Nursing Home Survey on Patient Safety Culture* was distributed to you and other staff in this nursing home. If you have already returned a completed survey, thank you and please disregard this second survey packet."

If you are using individual identifiers, you will be able to identify respondents and remove them from the list of staff receiving followup materials, so you might begin as follows: "About *[X]* weeks ago a copy of the *Nursing Home Survey on Patient Safety Culture* was distributed to you and other staff in this nursing home. Because we have not yet received a completed survey from you, we are enclosing a second copy of the survey (if you recently returned your survey, thank you and please disregard this second survey packet)."

Surveys

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 to be surveyed. If you are tracking responses through individual identifiers and will send second surveys only to nonrespondents, you may print fewer surveys. For example, if your nursing home has a total of 80 staff and your nursing home's survey response history typically results in a 40 percent response to the first survey, you would need 80 first surveys and 48 second surveys (80 staff x 60% nonrespondents = 48), for a total estimate of 128 printed surveys needed.

Labels

You will need labels for the outside of each survey packet. If the surveys are distributed within the nursing home, the labels could include only the names of providers or staff members in the nursing home. Even if the survey itself is completed anonymously, it is a good idea to label a survey packet for each staff member. Self-addressed return labels will be used on return envelopes. Labels also may be used to place identifiers on the surveys if you have chosen to use identifiers.

Envelopes

You will need a set of outer envelopes to distribute the surveys and a set of return envelopes that can be sealed for the return of completed surveys. Preprint the return address on the return envelopes (or use labels). To make sure that the cover letter, survey, and return envelope fit without folding or bending, use slightly larger outer envelopes. Calculate the number of envelopes based on the number of initial and followup surveys to be sent.

Postage

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

Track Responses and Calculate Preliminary Response Rates

Tracking Surveys

You, or your vendor, will need to follow survey response rates by tracking surveys as they are returned. Returned surveys can be tracked very simply with a spreadsheet software program. If you plan to use survey identifiers, create a separate row for each individual identifier. Create columns across the top of your spreadsheet for the date the initial survey is distributed, the date the returned survey is received (so that respondents can be excluded from followup reminders), and the distribution dates for any first reminders and second surveys.

Calculating Preliminary Response Rates

Calculate a preliminary response rate for each round of followup—for example, at the time of the reminder message and the second survey—to track your response rate progress. To calculate preliminary response rates during data collection, divide the number of returned surveys (numerator) by the number of surveys distributed minus any surveys sent to ineligible providers and staff (denominator):

$$\frac{\text{Number of surveys returned}}{\text{Numbers of surveys distributed} - \text{ineligibles}}$$

Consider a person ineligible if he or she was away on leave from the nursing home during the entire data collection period or if the person's employment with the nursing home ended before the start of data collection. For example, you may have provided a vendor with a list of all staff and providers on your survey distribution list. However, between the time you provided the list and the start of data collection, a staff member went on medical leave for 3 months and a nurse resigned. Those two staff members should be removed from the distribution list and from the denominator in your response rate calculation.

At the end of data collection, after you have examined all returned surveys, you will need to adjust your last preliminary response rate to reflect decisions made about whether a survey is complete or incomplete (see Chapter 5 for a discussion of how to calculate the final official response rate for your nursing home).

Close Out Data Collection

To ensure that you receive as many responses as possible, plan to continue data collection for 2 full weeks after the second survey is distributed. Referring back to the project timeline in Chapter 2, **allow about 9 weeks from the start to the end of data collection.** If any unexpected circumstances arise during data collection that delay the return of completed surveys, you may want to hold the data collection period open longer. However, once the final cutoff date arrives, close out data collection and begin preparing the data for cleaning and analysis.

Chapter 5. Preparing and Analyzing Data and Producing Reports

At the end of data collection, you will need to prepare the collected survey data for analysis. As mentioned in Chapter 2, you may want to hire a vendor to conduct data entry or data analysis or to produce feedback reports for your nursing home. 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, use this chapter as a guide to establish data preparation procedures. If you plan to conduct a Web-based survey, you can minimize data cleaning by programming the Web survey to perform some of these steps automatically. In addition, 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.

You or your vendor will need to complete a number of tasks to prepare the survey data for analysis. During the data preparation process, several data files will be created. It is important to maintain the original data file that is created when survey responses are data entered. Any changes or corrections should be made to duplicate files, for two reasons:

- Retaining the original file allows you to correct possible future errors made during the data cleaning or recoding processes, and

- The original file is important should you ever want to go back and determine what changes were made to the data set or conduct other analyses or tests.

Identify Incomplete Surveys

Each survey needs to be examined for completeness prior to entering the survey responses into the data set. Exclude surveys that were returned completely blank or those with only background demographic questions answered. In addition, you may want to visually or programmatically (during data cleaning) omit surveys where the respondent gave the exact same answer for all the questions in the survey. Because the survey includes negatively worded items, respondents should use both the positive and negative ends of the response scales to provide consistent answers. If every answer is the same, the respondent did not give the survey his or her full attention and the responses are probably not valid.

Calculate Your Final Response Rate

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

$$\frac{\text{Number of returned surveys} - \text{incompletes}}{\text{Numbers of surveys distributed} - \text{ineligibles}}$$

This formula differs from that used for calculating preliminary response rates (shown in Chapter 4) only in the numerator. 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. You may have to exclude them from the analysis data file.

Edit, Code, and Enter the Data

In this section we describe several data file preparation tasks.

Illegible, Mismarked, and Double-Marked Responses

Some survey responses may need to be edited or coded before the data are entered into an electronic data file or statistical analysis program. Editing and coding involve decisionmaking regarding the proper way to enter ambiguous responses. These editing and coding steps will probably not be necessary if you are using a Web-based survey or scannable forms.

One potential issue is survey responses that are difficult to determine. For example, respondents may write in an answer such as 3.5, when they have been instructed to circle only one numeric response. They may circle two answers for one item. Develop and document decision rules for these situations and apply them consistently. Examples of such rules are to use the highest 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.

After surveys have been corrected as needed (most surveys will not need to be corrected), you can enter the data directly into an electronic file by using statistical software. Available packages include SAS®, SPSS®, and Microsoft Excel®. You also can create a text file that can be easily imported into a data analysis software program.

Individual Identifiers on Your Data File

If you used identifiers (identification numbers or codes) on your surveys, after you close out data analysis, destroy any information linking the identifiers to individual names. You no longer need this information, and you will want to eliminate the possibility of linking responses on the electronic file to individuals.

If no identifiers were used on the surveys, you will need to include some type of individual identifier in the data file. Create an identification number for each survey and write it on the hard copy surveys 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 paper survey answers if there are values that look like they were entered incorrectly.

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. If you wish to analyze these data further, you need to code the responses according to the type of comment. For example, staff may respond with positive comments about resident safety efforts in the nursing home. They may comment on some negative aspects of resident safety that they think need to be addressed. You may assign code numbers to similar types of comments and later tally the frequency of each comment type. Open-ended comments may be coded either before or after the data have been entered electronically.

Check and Electronically Clean the Data

After the surveys have been coded and edited as necessary and entered electronically, you will need to check and clean the data file before you begin analyzing and reporting results. The data file may contain data entry errors. You can check and clean the data file electronically by producing frequencies of response to each item and looking 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, refer to the original survey and determine the response that should have been entered.

Analyze the Data and Produce Reports of the Results

Feedback reports are the final step in a survey project and are critical for synthesizing survey responses. Ideally, feedback should be provided broadly—to nursing home administrators and management, health system boards of directors, nursing home committees, and nursing home staff. Reports can be given either directly during meetings or through centralized communication tools such as e-mail and newsletters.

The more broadly the survey results are disseminated, the more useful the information is likely to become. The feedback also will serve to legitimize the collective effort of the staff in responding to the survey. It is gratifying and important for respondents to know that something worthwhile came out of the information they provided. Different types of feedback reports can be prepared for different audiences, from one- or two-page executive summaries to more complete reports that use statistics to draw conclusions or make comparisons.

Frequencies of Response

One of the simplest ways to present results is to calculate the frequency of response for each survey item. A Microsoft PowerPoint® presentation template is available from the AHRQ Web site that you may use to communicate results from the *Nursing Home Survey on Patient Safety Culture* (see sample on page 41). The feedback report template groups survey items according to the safety culture dimension each item is intended to measure. You simply insert your nursing

home's survey findings in the charts to create a customized feedback report. The two lowest response categories are combined (e.g., Strongly Disagree/Disagree or Never/Rarely) and the two highest response categories are combined (e.g., Strongly Agree/Agree or Most of the Time/Always) to make the results easier to view in the report. The midpoints of the scales are reported as a separate category (Neither Agree nor Disagree or Sometimes). The percentage of answers corresponding with each of three response categories then are displayed graphically—see Figure 2 below.

Figure 2. Sample Graph Displaying Frequencies of Response to an Item
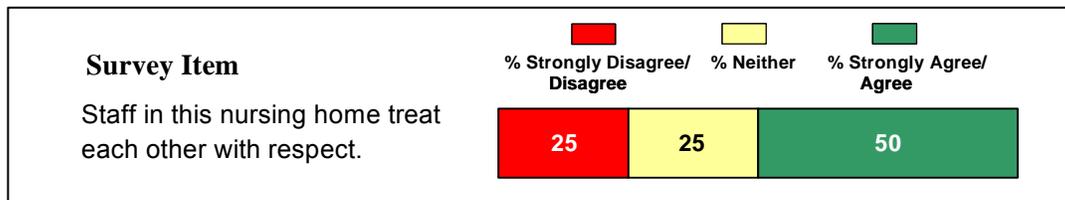
You will need to exclude "Does Not Apply/Don't Know" and missing responses when showing overall percentages of response. Most of the survey's items include a Does Not Apply/Don't Know response option. This option is included so that staff who do not have enough information or do not know about a particular issue can select this answer rather than guessing or providing an answer about something they are not familiar with. 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 the does not apply/don't know and missing responses when calculating survey results is shown in Table 1. As Table 1 shows, respondents who answered does not apply/don't know are treated the same way as those who did not answer the item (missing). The column labeled "Correct Percentages of Response" shows the correct percentage for each response option in the example. The column labeled "Correctly Combined Percentages" shows the correct percentage of negative, neutral, and positive scores, which **do not** include the does not apply/don't know responses or missing responses.

The two shaded columns on the right in Table 1 labeled "Incorrect Percentages of Response" and "Incorrectly Combined Percentages" show the **incorrect** or wrong way to compute results if you were to mistakenly include the does not apply/don't know responses as valid responses. Again, the easiest way to ensure that the percentages are computed correctly is to recode all "9" responses to missing so that they are not included in the frequency and/or percentage of negative, neutral, and positive score calculations.

Table 1. Example of How To Compute Frequency Percentages

Response	Frequency (Number of Responses)	Correct Percentages of Response	Correctly Combined Percentages	*Incorrect Percentages of Response*	*Incorrectly Combined Percentages*
Item A1: Staff in this nursing home treat each other with respect					
1 = Strongly Disagree	12	12%	} 25% Negative	*11%*	} *23% Negative*
2 = Disagree	13	13%		*12%*	
3 = Neither	25	25%	} 25% Neutral	*24%*	} *24% Neutral*
4 = Agree	19	19%	} 50% Positive	*18%*	} *48% Positive*
5 = Strongly Agree	31	31%		*30%*	
Total	100	100%	100%	*95%*	*95%*
9 = Does Not Apply/ Don't Know	5	-	-	*5%*	-
Missing (did not answer)	5	-	-	-	-
Nursing Home Total	110	-	-	*100%*	-

Item and Composite Percent Positive Scores

It can be useful to calculate one overall composite score for each dimension. To calculate your nursing home's composite score on a particular safety culture dimension, simply average the percentage positive response on each item that is included in the composite. Here is an example of computing a composite score for Staffing:

1. This composite includes four items. Two are positively worded (items A3 and A16) and two are negatively worded (items A8 and A17). Keep in mind that DISAGREEING with a negatively worded item indicates a POSITIVE response.

2. Calculate the percent positive response at the item level (see example in Table 2).

In this example, four items had percent positive response scores of 46 percent, 52 percent, 46 percent, and 56 percent. Averaging these item-level percent positive scores (46% + 52% + 46% + 56% / 4 = 50%) results in a composite score of .50 or 50 percent on Staffing. That is, an average of about 50 percent of the respondents responded positively on the survey items in this composite.

Table 2. Example of How To Calculate Item and Composite Percent Positive Scores

Four Items Measuring "Staffing"	For <u>Positively</u> Worded Items, # of "Strongly Agree" or "Agree" Responses	For <u>Negatively</u> Worded Items, # of "Strongly Disagree" or "Disagree" Responses	Total # of Responses to Item (Excluding NA/DK & Missing Responses)	Percent Positive Response on 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%
* NA = Not applicable	**Average percent positive response across the 4 items = 50%**			

Identifying Strengths and Areas for Improvement. There are placeholder pages in the Microsoft PowerPoint® survey feedback report template to highlight your nursing home's strengths and areas for improvement with regard to resident safety issues covered in the survey. You may decide to define resident safety strengths as those positively worded items that about 75 percent of respondents endorsed by answering Strongly Agree/Agree or Always/Most of the Time (or, for negatively worded items, where 75 percent of respondents disagreed or responded Never/Rarely). The 75 percent cutoff is somewhat arbitrary, and your nursing home may choose to report strengths using a higher or lower cutoff percentage.

Similarly, areas needing improvement could be identified as those items that 50 percent or fewer respondents answered negatively (they either answered Strongly Disagree/Disagree or Never/Rarely to positively worded items, or they answered Strongly Agree/Agree or Always/Most of the Time to negatively worded items). The cutoff percentage for areas needing improvement is lower, because if half the respondents are not expressing positive opinions about a safety issue, improvement is probably needed.

It also is important to present information about the background characteristics of all the respondents—how long they have worked in the nursing home, their staff positions, and so forth. This information helps others to better understand whose opinions are represented in the data. Be careful not to report frequencies in small categories (e.g., if the number of activity directors who

responded is fewer than five), where it may be possible to determine which employees fall into those categories.

Submit Your Data to the Nursing Home Comparative Database

The Agency for Healthcare Research and Quality (AHRQ) has posted initial comparative results from the pilot study of the *Nursing Home Survey on Patient Safety Culture* on its Web site (www.ahrq.gov/qual/hospculture). In the future, AHRQ will ask all nursing homes that have administered the survey to voluntarily submit their data files to the *Nursing Home Survey on Patient Safety Culture Comparative Database*. This database will be modeled on the *Hospital Survey on Patient Safety Culture Comparative Database*, which contains comparative data from users of AHRQ's *Hospital Survey on Patient Safety Culture*. You will be able to compare your nursing home's results with the overall nursing home comparative data.

When you submit your data file, you will be asked to provide background information about:

- The characteristics of your nursing home (e.g., bed size, State/geographic region, and ownership) and whether it is part of a larger nursing home chain)
- How the survey was administered (paper only, Web only, or mixed mode)
- When data collection was completed (month and year)
- How many staff were asked to complete the survey (response rate denominator)

This information may be used to conduct analyses of the data files by selected nursing home characteristics. Participating nursing homes will not be identified by name. Only aggregate data will be reported, and only when there are sufficient data so that such aggregation will not permit reidentification of participating nursing homes. If your nursing home is interested in submitting its data to the nursing home database, e-mail DatabasesOnSafetyCulture@ahrq.hhs.gov.

Technical Assistance

For free technical assistance on the *Nursing Home Survey on Patient Safety Culture* regarding survey administration issues, data analysis and reporting, or action planning for improvement, e-mail SafetyCultureSurveys@ahrq.hhs.gov. AHRQ is also sponsoring periodic in-person User Group Meetings so that users of the nursing home survey, along with users of the hospital and medical office surveys, can network and learn from one another.

References

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SURVEY MATERIALS

Nursing Home Survey on Patient Safety

Survey Items Grouped by Dimensions

Sample Page From User Feedback Report

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: ☒ 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   ☐ d. 3 to 5 years
☐ b. 2 to 11 months   ☐ e. 6 to 10 years
☐ c. 1 to 2 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: Items and Dimensions

In this document, the items in the *Nursing Home Survey on Patient Safety Culture* are grouped according to the safety culture dimensions they are intended to measure. The item's survey location is shown to the left of each item. Negatively worded items are indicated. Reliability statistics based on the pilot test data from 40 nursing homes and over 3,600 nursing home staff are provided for the dimensions.

1. Teamwork
(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)
How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (4 items) = .86

2. Staffing
(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)
How much do you agree or disagree with the following statements?

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)

Reliability of this dimension—Cronbach's alpha (4 items) = .71

3. Compliance With Procedures
(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)
How much do you agree or disagree with the following statements?

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)

Reliability of this dimension—Cronbach's alpha (3 items) = .73

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

4. Training & Skills
(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)
How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (3 items) = .76

5. Nonpunitive Response to Mistakes
(Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree, Does Not Apply or Don't Know)
How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (4 items) = .74

6. Handoffs
(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)
How often do the following things happen in your nursing home?

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.

Reliability of this dimension—Cronbach's alpha (4 items) = .86

7. Feedback & Communication About Incidents
(Never, Rarely, Sometimes, Most of the time, Always, Does Not Apply or Don't Know)
How often do the following things happen in your nursing home?

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.

Reliability of this dimension—Cronbach's alpha (4 items) = .85

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

8. Communication Openness

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

How often do the following things happen in your nursing home?

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.

Reliability of this dimension—Cronbach's alpha (3 items) = .84

9. Supervisor Expectations & Actions Promoting Resident Safety**

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

How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (3 items) = .81

10. Overall Perceptions of Resident Safety

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

How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (3 items) = .86

11. Management Support for Resident Safety

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

How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (3 items) = .83

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

**Partially adapted from Zohar, D. (2000). A group-level model of safety climate: Testing the effect of group climate on microaccidents in manufacturing jobs. *Journal of Applied Psychology, 85*(4), pp. 587–596.

12. Organizational Learning

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

How much do you agree or disagree with the following statements?

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.

Reliability of this dimension—Cronbach's alpha (4 items) = .81

13. Overall Ratings

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

Yes, Maybe, No

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

Poor, Fair, Good, Very good, Excellent

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

Sample Page From PowerPoint Survey Feedback Report Template
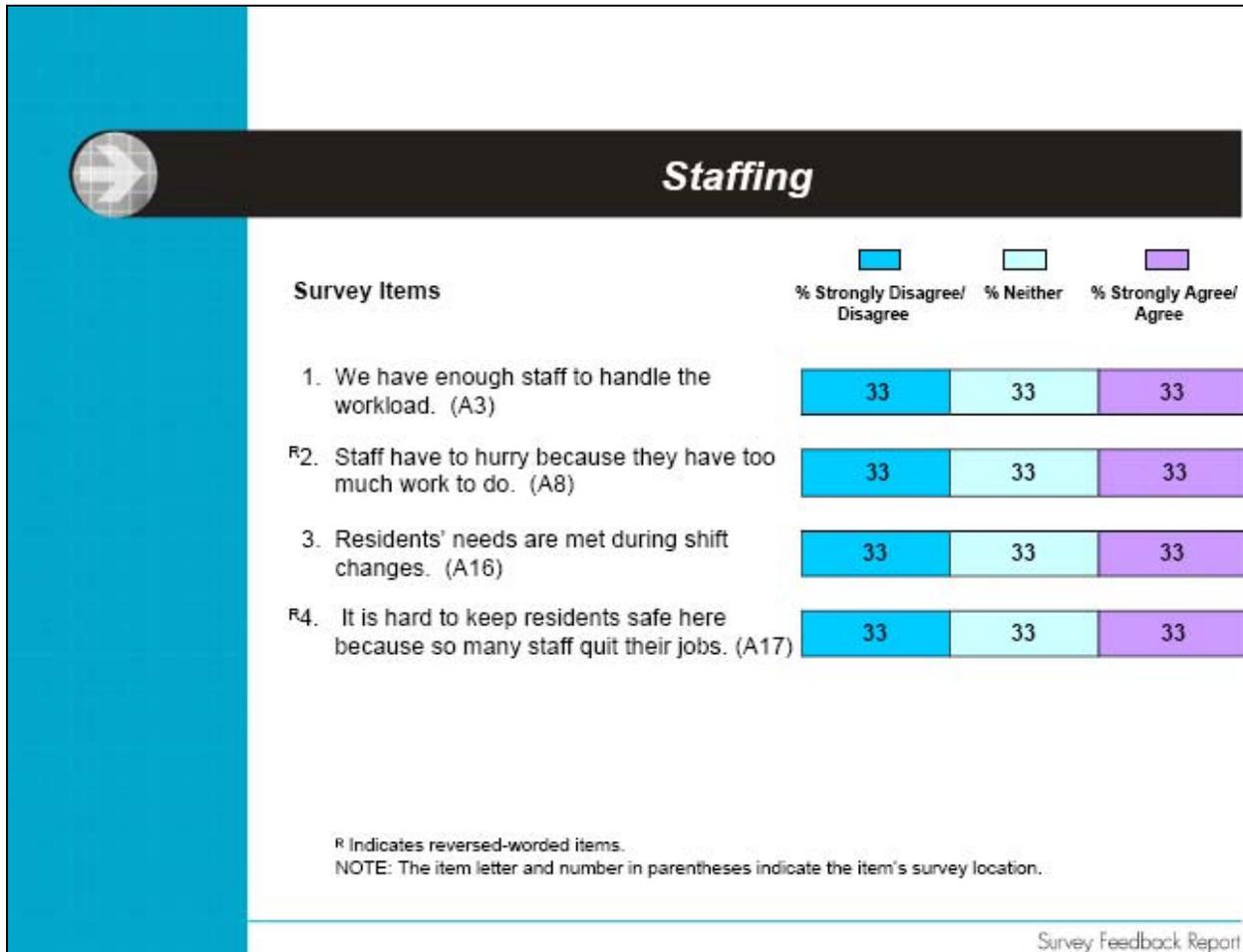
The PowerPoint Survey Feedback Report template and the Nursing Home Survey on Patient Safety survey form are available free of charge at www.ahrq.gov/qual/hospculture/.

Appendix A. Selecting a Sample of Staff

You can administer surveys to all staff in your nursing home, or to only a subset or sample of staff. Although surveying all staff may seem simple or most desirable, it will take additional time and resources.

If you choose to sample part of your staff, your goal should be to select a group of people who closely represent the characteristics of all your nursing home staff. That way, you can be more confident that your sample's results adequately reflect the opinions of staff in the whole nursing home.

Review the following suggested steps for selecting a sample:

1. Include all executive leaders, all managers, all physicians, and all staff positions where there may be only one or two staff in the position, such as dietitians and activity directors.

2. Determine how many of your remaining staff you want to sample; most of these staff will be nurses, nursing assistants or aides, and other support staff. Although your resources may limit the number of staff you can survey, the more staff you survey, the more likely you are to represent your nursing home adequately.

    - First, think about your budget and how many responses you want to receive (i.e., your response goal). Your budget will need to include the costs of distributing both first and second survey packets. Your budget also should include additional costs for materials such as envelopes, as well as postage if respondents will mail their completed surveys to a vendor or to a system headquarters address.

    - Second, think about your expected response rate. Because not everyone will respond, you can expect to receive completed surveys from about 40 percent to 60 percent of your sample. Therefore, to reach your response goal, if you assume a response rate of 50 percent, **your sample size should be at least __twice__ the number of responses you want to receive.** If the number of responses you eventually want to achieve is 100 completed surveys, be prepared to select about 200 staff.

3. To select individuals to include in your sample, develop a list of all the staff in your nursing home who meet your eligibility criteria for participating in the survey. Exclude management, physicians, and other staff from Step 1 since they are already included in the list of people you will survey. We suggest using software such as a Microsoft Excel® spreadsheet that will let you sort your list. In the following example, we have a nursing home with 500 staff (excluding management, physicians, etc., from Step 1) and want to select a sample of about 200 staff to receive 100 completed surveys.

    - In the first column of your spreadsheet, list the numbers 1 to 500 for every eligible staff member. In the second column, include the first and last name of each staff

person. In the third column, list the person's job title. It is important that the job titles you enter for the same staff position are consistent because you will sort this column.

- Review the list to make sure it is appropriate to survey each staff member on the list. To the extent possible, ensure that your list information is complete, up to date, and accurate. Points to check for include:

  o Staff on administrative or extended sick leave

  o Staff who no longer work at the nursing home

  o Other changes that may affect the accuracy of your list of names

  If you believe there are certain staff who should **not** receive the survey, selectively remove them from the list.

4. Electronically sort the list by job title so that, for example, all licensed practical nurses are grouped together and all housekeeping/linen service staff are grouped together.

5. After sorting your list, select your sample of 200 staff from the 500 on your list as follows:

   - First, divide the number of staff on your list (500) by the number of staff you want to select from the list (200). The result is $500/200 = 2.5$.

   - When the result is a whole number such as 2, this number tells you that you should select every second person on your list after a random starting point. When the result is a fractional number, such as 2.3, 2.5, or 2.7, it will be easier to select your sample if you round the number down (to 2 in this example) and use that number to select every "n^{th}" person on your list (in this example, every 2nd person).

   - Start with a staff member chosen randomly from your list of 500 staff; then select every 2nd person on the list. For example, say you randomly chose staff member #270 as your starting point. You would select numbers 270, 272, 274, and so forth, on your list. Continue to the end of the list and then keep selecting staff from the beginning of the list until you reach person #270 again. Stop.

   - Because you rounded from 2.5 to 2 in this example, you will select about 250 staff, which is 50 more than your planned sample size of 200. You can either survey the larger selected sample of 250 staff, or you can randomly remove 50 staff members from your selected sample.

This method of sample selection—sorting a list of staff you want to sample by job title and systematically selecting sample members from the list after a random start—will increase the likelihood of selecting a sample that is representative of your entire nursing home.

Appendix B. Conducting a Web-Based Survey

As mentioned earlier in this guide, we strongly recommend that nursing homes administer the *Nursing Home Survey on Patient Safety Culture* as a paper-only survey. Nursing home staff's access to e-mail and the Internet, as well as staff computer skills, may be very limited. Current research and evidence show that Web-based surveys typically have lower response rates than paper-based surveys (Groves, 2002; Shih and Fan, 2008). This general finding seems to hold true in health care settings. For example, as reported in the AHRQ *Hospital Survey on Patient Safety Culture 2008 Comparative Database Report* (Sorra, et al., 2008)*,* the average response rate for hospitals that administered the survey by paper was highest (60 percent), followed by mixed mode using Web and paper (52 percent) and Web only (44 percent). We believe it is likely that similar differences in response rates by survey mode will occur with the *Nursing Home Survey on Patient Safety Culture*. Response rates are important because low rates may limit your ability to generalize your results to your entire nursing home.

If you have never conducted a nursing home Web-based survey, you will need to allow for the extra time and resources that are usually needed when conducting a Web-based survey for the first time. However, if your organization is going to use a vendor or has a history of conducting nursing home Web-based surveys and you are familiar with their advantages and disadvantages, your nursing home may want to consider this type of approach. To help you decide which approach is best suited to your situation, or if a combination approach is warranted, we present some of the pros and cons of conducting a Web-based survey. We also outline special considerations that need to be taken into account and present guidelines that will help you make the most of a Web-based survey, if you decide to take that approach.

A major factor, of course, is cost. Although the costs of a Web-based survey may seem lower because there are no printing, postage, or data entry expenses, do not overlook the labor costs associated with Web survey programming and testing. At the same time, a Web-based approach generally tends to be more economical as the survey sample size becomes larger. Surveys of only a few hundred individuals are likely to be more cost-effective using a paper-based survey. Cost, however, is just one of the many factors that need to be considered in deciding which approach to take.

Consider the Pros and Cons of Web-Based Surveys

There are a number of pros and cons to conducting Web-based surveys. The relative weight given to each of these advantages and disadvantages, and the final decision on whether to conduct a Web-based survey, will be determined by your nursing home's specific circumstances, capabilities, resources, and goals.

The primary advantages to Web-based surveys are:

- **Simpler logistics.** Web-based surveys can be virtually paperless, making them easier in some ways to manage. There are no surveys to print; no handling of letters, labels, envelopes, or postage; and no completed paper surveys to manage.

- **No need for data entry and minimal need for data cleaning.** Web-based surveys typically are programmed to prevent invalid responses. Moreover, the responses are automatically copied to a database, so the need for separate data entry is eliminated and the need for data cleaning is greatly reduced.

- **Potential for faster data collection.** Although not always the case, Web-based surveys can facilitate shorter data collection periods. Web-based surveys involving e-mail notification and followup correspondence are received immediately after being sent, so the time interval between survey administration steps often is reduced.

Web-based surveys also have several disadvantages:

- **Time and resources needed for development and testing.** Time and resources are needed to program a Web-based survey so that it meets acceptable standards of functionality, including usability requirements. Of equal importance are security safeguards for protecting the data. In addition, the Web-based survey must be pretested thoroughly to ensure that it works properly and that the resulting data set is established correctly.

- **Limited access to the Internet or e-mail.** A Web-based survey should be accessible to **all** the individuals in your sample group. If staff Internet access is limited, your nursing home will have poor response rates. If computers with Internet access are located centrally for staff to use to complete the survey, staff may be concerned about the privacy of their responses. In addition, all staff may not have e-mail access or may not access their e-mail regularly. In such cases, e-mail notification or e-mail messages with hyperlinks to the survey Web site may not be effective ways to get respondents to complete the survey.

- **Individual differences in computer and Internet use.** The intensity of computer and Internet usage is the most important predictor of cooperation in a Web-based survey (Groves, 2002). In nursing homes, it is likely that many staff will not be computer or Internet savvy. Therefore, they may not respond to the survey if this is their only way to complete the survey.

Design and Pretest the Web-Based Survey

If you decide after weighing the pros and cons of conducting a Web-based survey that this is the approach your nursing home or health care system will take, there are a number of Web survey design aspects to consider. If your nursing home plans to use off-the-shelf commercial software, rather than having a vendor design and develop a custom Web-administered survey, assess the various software applications available to you. Select the product that best accommodates the features and recommendations we outline below.

Web-Based Survey Design Features

Although research on the best ways to design Internet-administered surveys continues to evolve, current knowledge suggests that a good Web-based survey has the following elements:

- **Do <u>not</u> force respondents to answer every question.** Allow staff to continue completing the survey after choosing not to answer a particular question. Forcing respondents to answer each question before being allowed to move to the next question may annoy respondents. It also is not advisable on the *Nursing Home Survey on Patient Safety Culture* because 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. In addition, you will want the Web version to be similar to the paper version, which does not require an answer to every question.

- **Provide respondents with a way to assess their survey progress (optional).** Because it is difficult to know the length of a Web-based survey, it is sometimes helpful for respondents to have some type of indicator showing their overall progress in the survey. However, for a relatively short instrument like the *Nursing Home Survey on Patient Safety Culture*, we think a progress indicator is optional. If you prefer to use one, there are several ways to indicate progress in completing the survey. For example, you could use a graphical progress bar that indicates completion percentages at various points (e.g., "Survey is 50% complete."). Other options include allowing respondents to move forward and backward through a multiple-page format at their convenience so that they can view the entire length of the survey. If a multiple-page format is used, however, **avoid** using an extreme one-question-per-page design.

- **Include username and/or password protection (optional).** Unless access is restricted in some way, Web sites are accessible to the public. Your survey Web site can be restricted through the use of a password that is common to all users or groups of users. You also can use individual usernames and/or passwords (which require the use of confidential identifiers to link individuals to usernames/passwords). The use of passwords and/or usernames is also an effective way to ensure that respondents will not be able to complete the survey more than once, even when the survey is published to part of a restricted company or organization Intranet. We recommend providing usernames and/or passwords and hyperlinks to the survey Web site in all your e-mail survey notifications. Respondents will be able to click directly on the hyperlink, then copy and paste their individual username and/or password directly from the e-mail.

- **Allow respondents to print a hard-copy version of the survey and complete it on paper (optional).** Some respondents will 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-based survey so that it can be printed in paper form, but this functionality must be tested thoroughly to ensure that it prints properly on different printers. Attention must be given to line lengths and page lengths in the design of the survey page template. Alternatively, you can include a link to a portable document file (PDF) version of the survey on the Web site. With either alternative, respondents will need instructions to

know where to return the completed paper surveys, and designated personnel then must enter the responses into your data set (paper survey data can be entered via the Web site).

- **Thoroughly pretest the survey (essential and mandatory).** Conduct thorough pretests of the survey using low-end computers with slower Internet connections, with various Internet browsers (e.g., with different iterations of Internet Explorer, Safari, Mozilla, Opera), and with different display settings (screen resolutions set at 800 x 600 pixels versus 1152 x 864 pixels), and so forth. Pretesting will help to ensure that the survey appears and performs as it should, despite the different settings and personal preferences selected on individual computers. For more information on Web survey design principles and pretesting, see Dillman (2007).

Develop a Web-Based Data Collection Plan

A Web-based survey data collection plan is similar to a paper-based data collection plan in its basic steps. Rather than reiterate all the necessary data collection steps in this section, we have chosen to highlight various steps and strategies unique to Web-based surveys, while offering advice on the best approaches.

> ## A Combination of Web- and Paper-Based Survey Methods
>
> If you prefer to use a combination of Web-based and paper survey approaches, it is most economical to implement the Web-based survey first. Later, you can distribute paper surveys to those who did not respond to the Web-based instrument.

Survey Administration Timeline

Although you may need to add several weeks to the planning/preparation period in the overall timetable for developing and testing the Web-based instrument, actual administration time for a Web-based survey may be shorter than for a paper-based survey. See the sample timeline in Figure B-1. The data collection period is 3 weeks from the time the e-mail invitation to participate in the survey is sent until the closeout of data collection.

Figure B-1. Task Timeline for Project Planning for Web-Based Surveys

Task Timeline for Project Planning	Preparation/ Planning	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
Getting Started – Ch. 2								
Determine available resources, project scope, and schedule	✔							
Decide whether to use an outside vendor (and select vendor)	✔							
Form a project team	✔							
Determining Your Data Collection Methods – Ch. 3								
Decide how paper surveys will be returned (optional)		✔						
Establish a point of contact in the nursing home		✔						
Establishing Data Collection Procedures – Ch. 4								
Decide whether to track response through identifiers		✔						
Assemble survey materials (develop and print materials)			←——→					
Publicize and promote the survey				←————————→				
Send prenotification e-mail				✔				
Send survey invitation e-mail with link to survey					✔			
Track responses and calculate preliminary response rates						←——→		End of data collection
Distribute first reminder (a few days after invitation)					✔			
Distribute second reminder						✔		
Distribute third reminder/close out data collection							✔	

Prenotification/Publicity

For a Web-based survey, we recommend e-mailing staff a prenotification letter telling them about the upcoming nursing home survey and alerting them that they will soon receive an invitation to complete this Web-based survey. Prenotification messages are easy to prepare and inexpensive to deliver in most Web-based surveys. Also, because e-mail messages can be easily overlooked in a crowded inbox, the prenotification message will help to alert providers and staff to expect the upcoming survey invitation e-mail. Prenotification messages do require an up-to-date list of the e-mail addresses for those individuals in your survey population.

To boost response rates, we recommend personalizing any e-mail prenotification messages (i.e., addressed to each respondent, using first and last name). If e-mail notification is used, the name or e-mail address in the "From" line should be easily recognizable to staff to prevent them from mistaking your e-mail for spam and deleting it. For example, you might use the title and name of the nursing home or health care system senior executive leader, or another recognized staff executive, to ensure that the e-mail gets opened and read (FROM: Dr. Joe Smith, with "X" Nursing Home, or FROM: Jane Smith, CEO, with Health System "X").

As we recommended with paper-based surveys, you should also publicize the survey by posting paper flyers in the nursing home and posting messages on office or health care system Intranet sites. In addition, you can promote the survey during staff meetings.

Followup

Followup steps improve response rates for Web-based surveys in the same way they help with paper surveys (Groves, 2002). It is important to follow up with nonrespondents in a timely manner to ensure that the data collection period does not drag on too long.

If you have the means to conduct **all** contact steps via e-mail, time intervals between followup steps can be reduced. Consider sending the first e-mail reminder within a few days after the survey Web site link has been e-mailed (rather than using a 1-week reminder, as recommended with a paper survey). Include the hyperlink to the survey Web site in each e-mail reminder, along with the individual's username and/or password, if applicable. Then send a second e-mail reminder 1 week after the first reminder. A third e-mail reminder can be sent the following week. Use a larger, colored font to make the heading of the reminder e-mail more noticeable, and ensure that the subject lines and texts of the first and second reminder messages are slightly different, to capture the recipients' attention.

If you have used individual identifiers and can determine which providers and staff have completed the survey, you can send reminder notices only to nonrespondents. However, if you did not use identifiers, reminders must be sent to everyone. It is important in such cases to include a sentence thanking those who have already completed their surveys and asking them to disregard the reminder.

We recommend using a combination of printed reminders and electronic reminders—even for those with the capabilities to conduct all contact steps through e-mail—to ensure that at least one of the messages reaches each eligible provider and staff member. Remember that individuals respond differently to various forms of communication. You may decide to send the first and second reminders via e-mail, then distribute a final reminder card or letter to nonrespondents. The final reminder card could be printed on brightly colored card stock, thanking those who have responded for their help and asking those who have not responded to please complete the survey in the next 7 days.

If all followup reminders are printed on paper and distributed to staff, more distribution time will be needed between data collection steps. The followup steps for a Web-based survey are the same as those associated with a paper survey (see Chapter 4: Establishing Data Collection Procedures).

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Appendix C. 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
One week before survey distribution Date: _____	**Print and post publicity materials.** Post survey flyers throughout the nursing home (e.g., in elevators, 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 3 Date: _____	**Remind staff to complete the survey.** If you are not using individual identifiers to track respondents, distribute reminder cards to all staff. If you are using identifiers to track respondents, distribute reminder cards only to nonrespondents. If your nursing home is not very large and you have the time, you may find it more effective to remind staff in person to complete the survey. Thank those who have already done so.
Beginning of Week 5 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.
End of Week 6 Date: _____	**Close out data collection.**