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AHRQ is the lead Federal agency charged with supporting research designed to improve the quality of health care, reduce its cost, address patient safety and medical errors, and broaden access to essential services. AHRQ sponsors and conducts research that provides evidence-based information on health care outcomes; quality; and cost, use, and access. The information helps health care decisionmakers—patients and clinicians, health system leaders, and policymakers—make more informed decisions and improve the quality of health care services.

Medical Office Survey on Patient Safety Culture

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Preface

The Agency for Healthcare Research and Quality (AHRQ) is the lead Federal agency charged with improving the quality, safety, efficiency, and effectiveness of health care for all Americans. AHRQ's goal is to support a culture of safety and quality improvement in the Nation's health care system that will help speed the adoption of research findings into practice and policy.

To that end, AHRQ has sponsored the development of this survey on patient safety culture in medical offices. This tool is designed to measure patient safety culture in an **individual** medical office by assessing the opinions of staff at all levels—from physicians to receptionists. The survey can also be administered to medical offices within a larger medical practice, health care system, or medical building.

The *Medical Office Survey on Patient Safety Culture* emphasizes safety and quality issues that are known to affect patient safety. Although some parts of this survey are similar to our *Hospital Survey on Patient Safety Culture*, others are unique to the medical office environment and the unique safety and culture issues it presents.

Since 2001, AHRQ has supported a wide range of other health care safety research to develop innovative approaches to collecting, analyzing, and reporting safety data; understanding the impact of working conditions on safety, including the sciences of ergonomics and human factors; and fostering the use of information technology to reduce medical errors.

As a result, many other health care safety products and tools also are available from the Agency. These can be found on AHRQ's Web site at http://www.ahrq.gov, or by calling AHRQ's Publications Clearinghouse at 1-800-358-9295.

I hope that this survey, as well as AHRQ's other health care safety tools, will be useful in helping you to ensure that your medical office is as safe as possible. I also hope that the information it yields will help you and your staff achieve the vision that we all share—a health care system in which patients are never harmed in the course of receiving care.

Carolyn M. Clancy, M.D.
Director
Agency for Healthcare Research and Quality

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Chapter 1. Introduction

The safety of patient care is critical to the quality of care provided in medical offices. As medical offices continually strive to improve, there is growing recognition of the importance of establishing a culture of patient 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 patient safety are expected and appropriate. A definition of safety culture applicable to all health care settings is provided below.

Safety Culture Definition

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

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

Development of the *Medical Office 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 medical offices interested in a survey that focuses on patient safety culture in their offices, AHRQ sponsored the development of the *Medical Office Survey on Patient Safety Culture.* The new survey is designed specifically for outpatient medical office providers and staff and asks for their opinions about the culture of patient safety and health care quality in their medical offices. The survey can be used:

- As a diagnostic tool to assess the status of patient safety culture in a medical office,
- 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 medical office survey, researchers reviewed the literature pertaining to patient safety, health care quality, ambulatory medicine, medical errors, error reporting, safety climate and culture, and organizational climate and culture. In addition, they reviewed existing medical office surveys. The researchers also consulted more than two dozen experts in the field of medical office practice and patient safety and many medical office providers and staff 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.

Researchers then developed draft survey items to measure the key dimensions. The survey draft was iteratively pretested with medical office providers and staff to ensure that the items were easy to understand and answer and relevant to patient safety and health care quality in medical offices. The pretest findings were used to revise the survey for the pilot study.

In cooperation with two practice-based research networks, five health care systems, and one health care management association, the *Medical Office Survey on Patient Safety Culture* was pilot tested in late 2007 in more than 200 medical offices across the United States. Participating medical offices varied by number of staff, specialty (primary care, other specialty, or multispecialty), and geographic location. All staff within each medical office, including physicians and other providers, were asked to complete the survey.

At the end of data collection, more than 4,100 surveys were received. Analysts examined item statistics and the reliability and validity 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 *Medical Office Survey on Patient Safety Culture* have sound psychometric properties.

Defining a Medical Office

The purpose of the *Medical Office Survey on Patient Safety Culture* is to measure the culture of patient safety in a **single** medical office in a specific location. Medical offices meeting this definition have the following characteristics:

- The medical office should be an outpatient facility in one geographic location. A medical practice or health care system may have **multiple** medical offices in different locations, but each unique location would be considered a separate medical office for the purposes of the survey and for feedback.

  In addition, a medical office could be located in a building containing multiple medical offices, but each office in the building would be considered a separate medical office for the purposes of the survey.

- Providers in the medical office should share some or all administrative staff, such as receptionists and schedulers, and share some or all clinical support staff.

These characteristics are essential because the survey is designed to measure the **culture of patient safety** in a **single** medical office. You may, of course, choose to administer the survey to multiple medical offices in your practice, health care system, or building. If so, each medical office has to be identified as a separate office rather than being surveyed as one entity.

Size. We recommend restricting administration of the medical office survey to offices **with at least three providers**. We define providers as physicians (M.D. or D.O.), physician assistants, nurse practitioners, and other providers licensed to diagnose medical problems, treat patients, and prescribe medications. Solo practitioners or offices with only two providers are so small that conducting a survey is probably not an effective way to obtain staff opinions about patient safety culture. Staff in small offices will not feel that their answers are anonymous and may not be willing to complete the survey or answer honestly.

We recommend that there be at least five respondents in an office before feedback reports are created, to protect anonymity. Therefore, offices have to survey more than five providers and staff because it is unlikely that all of them will respond to the survey. In small offices, rather than administering the survey, you can use it as a tool to initiate open dialogue or discussion about patient safety and quality issues among providers and staff. You will be the best judge, however, of whether your office is large enough for staff to be willing respondents to the survey.

The survey was designed to be appropriate for any specialty. Your office may provide primary care services only, other specialty care services only, or a mix of primary and specialty care services.

Identifying Who Should Complete the Survey

The survey is designed to be administered to all providers and staff in your medical office—from billing staff and receptionists to nurses and physicians. It is expected, though, that some staff may not be informed enough to answer all the questions. The survey includes a "Does Not Apply or Don't Know" response option. Also, you may need to consider the following issues when identifying whom to survey.

Part-Time Providers and Staff. The survey is best suited for medical office providers and staff who spend enough time in the office to know the office and report on the topics assessed in the survey. Use your best judgment in deciding which part-time providers and staff should receive the survey. For example, a part-time specialist who practices in the office one full day a week may know enough about your medical office to respond. On the other hand, a physician who has worked only on Saturday mornings once a month for the past 6 months might not be familiar enough with typical office processes and staff to answer many of the survey items. Similarly, staff who help with administrative tasks a few hours a week may not be knowledgeable respondents.

Providers and Staff Working in Multiple Participating Medical Offices. Medical practices or systems with more than one location may have some providers and staff who work in more than one medical office that is participating in the survey. In such cases, distribute the survey to them in the participating office where they spend most of their time and instruct them

to answer about **that office location only**. If they spend an equal amount of time in multiple participating medical offices, choose one office for them to receive the survey in and instruct them to answer the survey only for that medical office.

Staff Working Away From the Main Office. Some of your office staff, such as billing staff, insurance processors, and appointment schedulers, may be located in an area away from the main office area. Again, you will need to decide if they interact enough with others in your main office area and are familiar enough with activities in the main office area to answer the survey items.

New Employees. You may want to set a criterion of a minimum number of weeks that a provider or staff member has worked in the office to be included in the survey. The goal is to make sure new employees know enough about the office to provide informed answers.

Safety Culture Dimensions Measured in the Survey

The *Medical Office Survey on Patient Safety Culture* emphasizes patient safety and health care quality issues. The survey includes 51 items measuring 12 dimensions. Six of the survey dimensions (Communication Openness, Communication About Error, Organizational Learning, Overall Perceptions of Patient Safety and Quality, Owner/Managing Partner/Leadership Support for Patient Safety, and Teamwork) are similar to dimensions in the *Hospital Survey on Patient Safety Culture* (HSOPS), although the items are different in the two surveys. The remaining six survey dimensions are unique to the medical office survey with items that focus specifically on issues related to patient safety or quality of care in medical offices.

The dimensions in the medical office survey include:

1. Communication Openness (4 items)
2. Communication About Error (4 items)
3. Information Exchange With Other Settings (4 items)
4. Office Processes and Standardization (4 items)
5. Organizational Learning (3 items)
6. Overall Perceptions of Patient Safety and Quality (4 items)
7. Owner/Managing Partner/Leadership Support for Patient Safety (4 items)
8. Patient Care Tracking/Followup (4 items)
9. Patient Safety and Quality Issues (9 items)
10. Staff Training (3 items)
11. Teamwork (4 items)
12. Work Pressure and Pace (4 items)

In addition, the medical office survey includes three items about respondent background characteristics and two overall rating questions:

1. How they would rate this medical office on five different areas of health care quality (patient centered, effective, timely, efficient, and equitable) (5 items)
2. How they would rate this medical office on patient safety (1 item)

Modifying or Customizing the Survey

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

Adding or Removing Items

Adding items. If your medical office decides to add items to the survey, we recommend that you add these items toward the end of the survey (just before the Background Questions section).

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 medical office is not interested in assessing (that means deleting all the items in those dimensions). In this way, your medical office's results on the remaining safety culture dimensions can still be compared with results from other medical offices using the survey. We do not recommend selectively removing items within the various dimensions.

Web-Based Data Collection

We strongly recommend using paper-based survey data collection methods to make sure you obtain the highest possible response rate in your medical office. Because some medical office staff may have limited access to e-mail and the Internet, as well as limited computer skills, 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 do (Groves, 2002; Shih and Fan, 2008). However, your medical office, practice, or health care system may decide to use a Web-based survey to collect the data because you have done so successfully on other surveys. Web-based surveys have a wide range of design features and can involve different data collection procedures. Please read Chapter 5, "Conducting a Web-Based Survey," for guidelines

on how to use the *Medical Office Survey on Patient Safety Culture* with 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 medical offices 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. The guide presents information about data collection and how to organize and plan your survey 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 medical office.

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

Chapter 5—Conducting a Web-Based Survey. Chapter 5 presents the pros and cons of using a Web-based survey approach to data collection and outlines special considerations that must be taken into account.

Chapter 6—Preparing and Analyzing Data and Producing Reports. Chapter 6 discusses the steps needed to prepare the data and analyze the responses and provides suggestions for producing feedback reports.

The end of the guide includes the medical office survey form, followed by an overview of the survey items, grouped according to the safety culture dimensions they are intended to measure, and reliability statistics from the pilot test. 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 includes a sample data collection protocol for medical offices to use during survey administration. Appendix B includes questions about medical office background characteristics that should be completed for every medical office surveyed.

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 medical office, practice, or 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 medical office, 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 medical office, 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 in Figure 1 as a guideline in planning the tasks to be completed for surveying a single medical office, and note the modifications we recommend if you are surveying multiple medical offices or conducting a Web-based survey.

Single Medical Office: Paper Survey

For a single, medium-sized medical office, plan for **at least 6 weeks** from the beginning of the project to the end of data collection if you are conducting a paper-only survey (Figure 1). Add a few more weeks for data cleaning, analysis, and report preparation.

Figure 1. Task Timeline for Project Planning for a Single Medical Office: Paper Survey

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 surveys will be distributed and returned		✓						
Establish a point of contact in the medical office		✓						
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					←	→		End of data collection
Distribute reminder					✓			
Distribute second survey						✓		
Close out data collection							✓	

If your office is small, you can probably shorten the task timeline in Figure 1. If you have a large office or plan to survey multiple medical offices in your practice or system, you might need to make the following adjustments to the timeline:

- Establish a practice-level or system-level point of contact as well as in each medical office.
- Allow more time for assembling survey materials (e.g., 2 weeks instead of 1 week).
- Distribute the first reminder 2 weeks after distributing the first survey.
- Distribute the second survey 2 weeks after the first reminder.
- Add a week or more to the data collection period.

If your office plans to conduct a Web-based survey, see the task timeline in Chapter 5 for survey administration via the Web.

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 and the facilities and equipment to handle the tasks. A professional and experienced firm may be able to provide your medical office with better quality results faster than if you were to do the tasks yourself.

On the other hand, the use of a vendor may add too much expense to your project. If your medical office is part of a multioffice practice or system, you may want to find out if the headquarters staff is capable of and interested in conducting a survey of your medical office and analyzing the data for you. Your medical office practice or system may be interested in administering the survey to multiple offices. Moreover, your medical office's staff may feel more comfortable about the confidentiality of their responses if surveys can be returned to a practice or 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 medical office or medical office system to find out if particular vendors have been used before for 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 handle all the project components. Some vendors will be able to handle your feedback report needs; others will not.
- Provide potential vendors with a written, clear outline of work requirements. Make tasks, expectations, deadlines, and deliverables clear and specific. 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 medical office staff, health system headquarters staff, outsourced vendor staff, or a combination.

The Project Team's Responsibilities

The project team is responsible for a variety of duties—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 medical offices 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 medical offices.
- **Preparing survey materials—**Printing surveys, preparing postage-paid return envelopes and labels, 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 official 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 a report 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 have determined your available resources, project scope, and timeline and have established a project team, you need to decide on your data collection methods. The methods you choose for distributing and returning surveys will affect how your staff view the confidentiality of their responses. Staff views on confidentiality will influence your overall survey response rate. As noted earlier, we recommend using a paper-based data collection method to achieve maximum response rates among all medical office staff. The procedures outlined in Chapters 3 and 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 Chapter 5.

Decide How Surveys Will Be Distributed and Returned

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

Distributing Surveys

We recommend that a designated point of contact (POC) distribute the surveys directly to providers and staff in the medical office. To promote high participation, you can distribute the surveys at staff meetings where refreshments can be served. However the surveys are distributed, the following guidelines should be followed:

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

Returning Surveys

If your budget is limited, completed surveys can be returned to a designated POC in the medical office or to drop boxes in the medical office. 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 medical office when making decisions about how surveys should be returned.

Your medical office may have limited experience administering employee surveys or you may have confidentiality concerns. In such cases, it is best to have staff mail their completed surveys directly to an outside vendor or to an address outside the medical office via postage-paid return envelopes included with the survey. If you do not use a vendor and are part of a larger medical office practice or health system, consider having the surveys returned to a practice or system headquarters address. This can help reassure staff that no one at their medical office 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 Medical Office

You will want to appoint someone from the office project team to serve as the POC for the survey (e.g., the office manager). 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 medical office.

The medical office 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, as needed
- Communicating with other POCs, as needed

Multiple Medical Offices

If you administer the survey in multiple medical offices in your practice or health care system, you may want to designate a practice- or system-level POC in addition to a POC in each medical office participating in the survey. The contact information for this 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 have decided how you want the surveys distributed and returned and have established a medical office 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. It also outlines methods for tracking responses and collecting data.

Publicize and Promote the Survey

We strongly recommend publicizing the survey before and during data collection. Publicity may include posting flyers or posters in the medical office, promoting the survey during staff meetings, and, if possible, sending staff e-mails and posting information about the survey on an office Intranet. Be sure to advertise that the survey is supported by medical office or health system executive leaders, or both.

If you sponsor the survey in multiple medical offices in a larger practice or health care system, practice or system leaders can promote the survey in any meetings attended by POCs in the participating medical offices. After the survey is underway, if response rates are low in some offices, it may be useful to have medical office POCs share their strategies for promoting the survey with others. Also, physician response rates typically are lower than those of staff. Midway through data collection, you might consider having the senior executive in the office, practice, or health system send a special e-mail to all physicians in participating offices, 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 sending a prenotification letter announcing the upcoming survey is optional. However, if you conduct a Web-based survey (where sending e-mail messages is easy) or you are unsure that all providers and staff know about the upcoming survey, you may want to send a prenotification letter. The letter should be signed by your medical office or health system senior executive, or both. If an outside vendor is handling the data collection duties, use the letter as an opportunity to introduce the vendor.

Follow 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 generalizations about your medical office 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 medical office before you can legitimately present your survey results as a reflection of your medical office'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 involves carrying out the following steps in the order presented:

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

2. **Reminder card or letter.** One week after distributing the survey, distribute a reminder card or letter to providers and staff, thanking those who have already responded and reminding others to please respond. Reminders can also be sent by e-mail to employees with individual work e-mail addresses they can access from their office computers. If your medical office is small, you may choose to have the POC remind staff members simply by speaking to them.

3. **Second survey.** The next step is to distribute a second survey to everyone in your medical office:

   - Single small- or medium-sized medical offices: Distribute the second survey 1 week after distributing the reminder notice.
   - Multiple or large medical offices: Distribute the first reminder 2 weeks after the first survey and distribute the second survey 2 weeks after distributing the first reminder.

     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.** One week after distributing 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, or you can offer group incentives, such as catered lunches for medical offices 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 medical office or multiple medical offices, you need to decide whether to use individual respondent identification numbers or identifiers on your surveys. In addition, if you are surveying multiple medical offices, you need to decide how to track returned surveys by office. 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 office. Finally, we provide important guidelines that must be followed if you choose to use individual identifiers.

Individual Identifiers

Whether you administer the survey in a single medical office or in multiple medical offices, we recommend that you conduct an individually anonymous survey. **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. The advantage of individually anonymous surveys is that fewer respondents will refuse to participate because of concerns that identifiers will be used to figure out their individual responses to the survey. Understand that confidentiality concerns are even stronger in smaller medical offices. You want to ensure that respondents feel comfortable 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.

Office Identifiers

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

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

Restrict options for returning surveys. You can instruct respondents to return their surveys in sealed envelopes to their medical office POC or to drop boxes in the medical office. The POC can then batch the returned surveys, put them in a package that has the office name or an office

identifier on it, and send the package to a designated project leader or to a designated vendor. Under this option, some staff may not participate in the survey because they would prefer, for reasons of confidentiality, to send their completed surveys directly to someone outside their medical office.

Use a medical office identifier. You can include a medical office identifier on the surveys when they are printed by giving each medical office a unique form number as an identifier. The form number would be the same for all surveys in each medical office but would differ across medical offices. For example, if you are surveying three medical offices, you would use Form 1, Form 2, and Form 3 to identify these medical offices. 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 medical office identifier.

Guidelines When Using Individual Identifiers

You may decide, particularly if your medical office is quite large or you are surveying multiple medical offices, that the advantages of using individual identifiers outweigh the advantages of individually anonymous surveys. For example, if you use individual identifiers to track response, 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.

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. You will also need to 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 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/Practice/System Point-of-Contact Letter

You should send a letter to any persons designated as an office 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 medical office senior executive.

If a medical office practice or system is sponsoring the survey in multiple offices, the letter could be signed by a practice or system senior executive or by both the medical office senior executive and a practice or system senior executive.

We also recommend that you provide the POC with a simple data collection protocol that describes POC tasks, along with a proposed timeline. (See a sample data collection protocol in Appendix A for a single, medium-sized medical office. The schedule can be adjusted if your office is small or large or you are surveying multiple medical offices.) In most medical offices, 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 your medical office and sending e-mail notices when possible to publicize the upcoming survey. Your publicity materials can help legitimize the survey effort and increase your response rate by including some or all of the following types of information:

- Endorsements of the survey from your medical office leaders
- Clear statements about the purpose of the survey (to measure staff attitudes and opinions about patient safety in their medical office) and how the collected data will be used (to identify ways to improve safe patient care and quality of care)
- Assurances that only summary data will be reported, thus keeping individual responses confidential
- Introductions to the survey vendor, if you have chosen to use a vendor
- Contact information for the designated POC in the medical office

Cover Letter in First Survey Packet

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

- Why the medical office 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 medical office POC (and practice/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 medical office's efforts to better address patient safety and the quality of care for our patients. All providers and staff in the medical office 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*).]

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

Reminder Notice

Medical office POCs can distribute reminder notices (e.g., a reminder message on a half-page of cardstock) after the first survey administration to all office 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 to those who have done so already. If you are using identifiers to track responses, you can distribute the notices to nonrespondents only. In small medical offices, POCs may opt to remind providers and 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, so you might say: "About *X* days ago a copy of the *Medical Office Survey on Patient Safety* was distributed to you and other staff at your medical office. If you have already returned a completed survey, thank you very much and please disregard this second survey packet."

If you are using individual identifiers, you will be able to identify respondents and remove them from the list of staff receiving followup materials, so you might begin as follows: "About *X* days ago a copy of the *Medical Office Survey on Patient Safety* was distributed to you and other staff at your medical office. 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 in your sample. If you are tracking responses and will send second surveys only to nonrespondents, you may print fewer surveys. For example, if there is a total of 20 providers and staff in your medical office and your medical office's survey response history typically results in a 40 percent response to the first survey, you would need to print 20 first surveys and 12 second surveys (20 staff x 60% nonrespondents = 12), for a total of 32 printed surveys.

Labels

You will need labels for the outside of each survey packet. If the surveys are distributed within the medical office, the labels can include only the names of providers or staff members in the medical office. Even if the survey itself is completed anonymously, it is a good idea to label a survey packet with the name of each staff member. Self-addressed return labels should 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 that you have 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. Tracking returned surveys can be done 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 progress. To calculate preliminary response rates during data collection, divide the number of returned surveys (numerator) by the number of surveys distributed (denominator) minus any surveys sent to ineligible providers and staff:

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

Consider a person ineligible if he or she was away on leave from the medical office during the entire data collection period or if the person's employment in the office ended before the start of data collection. For example, you may have provided a vendor with an initial list of all staff and providers. 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 receptionist 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 6 for a discussion of how to calculate the final official response rate for your medical office).

Close Out Data Collection

To ensure that you receive as many responses as possible, plan to continue data collection for at least 1 full week after the second survey is distributed. Referring to the project timeline in Chapter 2, **allow about 6 weeks from the start to the end of data collection if you are surveying a single, medium-sized medical office, and about 8 weeks if you are surveying a large office or multiple medical offices.** 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. Conducting a Web-Based Survey

We strongly recommend that medical offices administer the *Medical Office Survey on Patient Safety Culture* as a paper-only survey because medical office staff 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, Famolaro, Dyer, 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 *Medical Office Survey on Patient Safety Culture.* Response rates are important because low rates may limit your ability to generalize your results to your entire medical office.

If your medical office has never conducted a 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 you are going to use a vendor or have a history of conducting Web-based surveys and you are familiar with their advantages and disadvantages, your medical office 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, should 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 medical office's specific circumstances, capabilities, resources, and goals.

The primary advantages of 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 letters, labels, envelopes, or postage to handle; 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.

There also are several disadvantages to Web-based surveys:

- **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, log-in usernames and/or passwords, and the convenience of allowing respondents the option of saving their responses and returning later to finish the survey. 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 survey population. Barriers to Internet service and e-mail accessibility issues will lead to poor response rates. Many medical offices have only a limited number of Internet-connected computers. If computers are located centrally, 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 instruments for getting 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 participation in a Web-based survey (Groves, 2002). There are likely to be staff among your sample group who are not computer or Internet savvy and therefore may not respond to the survey if this is their only means of accessing 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 you will take, there are a number of Web survey design aspects to consider. If you plan to use commercial off-the-shelf software, rather than having a vendor design and develop a custom Web-administered survey, assess the various software applications available to you and select the product that best handles the many 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 not 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 on to the next question can annoy respondents. It also is not advisable on the *Medical Office Survey on Patient Safety* 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 *Medical Office Survey on Patient Safety*, we think a progress indicator is optional. Nevertheless, 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, such as, "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 or through the use of individual usernames and/or passwords. Use of individual identification requires confidential identifiers to link individuals to usernames and 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. Designated personnel then must enter the responses into your data set (paper survey data can be entered via the Web site). Also, if you use individual identifiers, there should be a way to include the identifier on the printed version of the survey or otherwise identify the paper response.

Thoroughly pretest the survey (essential and mandatory). Conduct thorough pretests of the survey using low-end computers with slower Internet connections, various Internet browsers (e.g., with different iterations of Internet Explorer, Safari, Mozilla, Opera), 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 very 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 members of the sample group who did not respond to the Web-based instrument.

Web-Based Task Timeline

For a Web-based survey, use the task timeline in Figure 2. Plan for **at least 6 weeks** from the beginning of the project to the end of data collection. You will need to add several weeks in the preparation and planning stage before beginning data collection to design and program the survey for the Web and to pretest to ensure that the Web version works properly. Depending on the sizes of your medical offices and the ability to send e-mail reminders about the survey, the data collection period for a Web-based survey may be shorter than for a paper survey.

Figure 2. Task Timeline for Project Planning for a Web-Based Survey

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								
Design and pretest your Web-based survey (Ch. 5)	✓							
Establish a point of contact in each medical office/system		✓						
Establishing Data Collection Procedures – Ch. 4								
Decide whether to track response through identifiers		✓						
Assemble survey materials (as needed)		✓						
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					◄	———	►	
Distribute first reminder (a few days after invitation)				✓				
Distribute second reminder					✓			
Distribute third reminder						✓		
Close out data collection							✓	

End of data collection

Prenotification/Publicity

For a Web-based survey, we recommend e-mailing staff a prenotification letter telling them about the upcoming 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 the person's 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 medical office, practice, or 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," 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 medical office 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 who can conduct all contact steps through e-mail—to ensure that at least one message reaches each eligible provider and staff member, since individuals respond differently to various forms of communication. You may decide to send the first and second reminders via e-mail, and then distribute a final reminder card or letter to nonrespondents. The final reminder card can 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).

Chapter 6. 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 for data entry or data analysis or to produce feedback reports for your medical office. 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 medical office, you will need to report the results separately for each participating medical office.

You or your vendor will need to accomplish 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 before the survey responses are entered 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 to 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 Final Response Rate

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

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

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 and 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, some respondents may write in an answer such as 3.5 when they have been instructed to circle only one numeric response. Or 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 edited and coded as necessary (most surveys will not need to be coded), you can enter the data directly into an electronic file by using statistical software such as SAS®, SPSS®, or Microsoft Excel®, or you can create a text file that can be easily imported into a data analysis software program.

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 want to eliminate the possibility of linking responses on the electronic file to individuals. After destroying the linkage information, you may enter the identification number in the electronic data file.

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 original 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, the responses will need to be coded according to the type of comment that was made. For example, staff may respond with positive comments about patient safety efforts in their medical office. Or they may comment on some negative aspects of patient 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, return to the original survey and determine the response that should have been entered.

Analyze the Data and Produce Reports of the Results

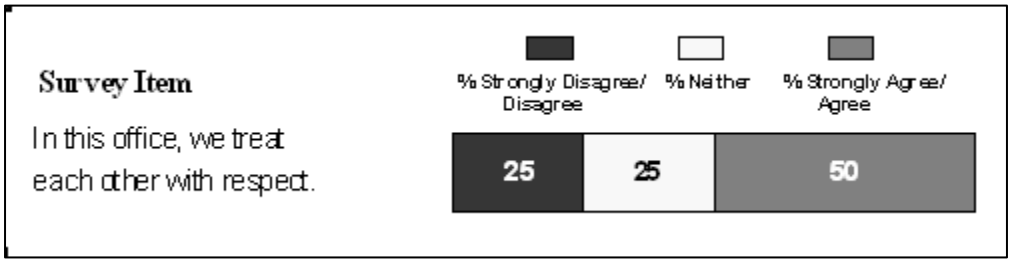
Feedback reports are the final step in a survey project and are critical for synthesizing the survey responses. Ideally, feedback should be provided broadly—to medical office management, health system boards of directors, medical office committees, and medical office staff, either directly during meetings or through centralized communication tools such as e-mail or newsletters. The more broadly the results are disseminated, the more useful the information is likely to become. The feedback also will serve to legitimize the collective effort of the respondents and their participation in 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 each different audience, 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 is available from the AHRQ Web site that you may use to communicate results from the *Medical Office Survey on Patient Safety Culture* (see sample on page 51). The feedback report template groups survey items according to the safety culture dimension each item is intended to measure. You simply insert your medical office'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 the example below.

Figure 3. Sample Graph Displaying Frequencies of Response to an Item



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 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 percent 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 percentages are computed correctly is to recode all "9" responses to missing so that they are not included in the frequency and/or percent negative, neutral, and positive score calculations.

Table 1. Example of How To Compute Frequency Percentages

Item A1. In this office, we treat each other with respect.					
Response	**Frequency (Number of Responses)**	**Correct Percentages of Response**	**Correctly Combined Percentages**	***Incorrect* Percentages of Response**	***Incorrectly* Combined Percentages**
1 = Strongly Disagree	3	12%		*10%*	
2 = Disagree	5	20%	32% Negative	*17%*	*27% Negative*
3 = Neither	4	16%	16% Neutral	*14%*	*14% Neutral*
4 = Agree	6	24%		*21%*	
5 = Strongly Agree	7	28%	52% Positive	*24%*	*45% Positive*
Total	25	100%	100%	*86%*	*86%*
9 = Does Not Apply/Don't Know	2	-	-	*14%*	-
Missing (did not answer)	2	-	-	-	-
Medical Office Total	29	-	-	*100%*	-

Item and Composite Percent Positive Scores

It can be useful to calculate one overall composite score for each dimension. To calculate your medical office's composite score on a particular safety culture dimension, simply average the percent positive response on each item that is included in the composite. Here is an example of computing a composite score for Office Processes and Standardization:

1. There are four items in this composite—two are positively worded (items C9 and C15) and two are negatively worded items C8 and C12). 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, there were four items with 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 Office Processes and Standardization. That is, an average of about 50 percent of the respondents responded positively to the survey items in this composite.

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

Four items measuring Office Processes and Standardization	For positively worded items, the # of "Strongly Agree" or "Agree" responses	For negatively worded items, the # of "Strongly Disagree" or "Disagree" responses	Total # of responses to the item (excluding NA/DK & missing responses)	Percent positive response to item
Item C9-positively worded: "We have good procedures for checking that work in this office was done correctly"	24	NA*	52	24/52=46%
Item C15-positively worded: "Staff in this office follow standardized processes to get tasks done"	26	NA*	50	26/50=52%
Item C8-negatively worded: "This office is more disorganized than it should be"	NA*	22	48	22/48=46%
Item C12-negatively worded: "We have problems with workflow in this office"	NA*	28	50	28/50= 56%
* NA = Not applicable			**Average percent positive response across the 4 items = 50%**	

Do Not Report Results If There Are Not Enough Respondents

To protect the confidentiality of individual responses, do not provide any type of survey feedback report for a medical office **if fewer than five respondents have answered the survey**. In addition, even if a medical office has five overall respondents, if fewer than three respondents answered a particular survey item, do not report percentages of positive, neutral, or negative response for that item—simply indicate that there were not enough data to report results.

There are placeholder pages in the Microsoft PowerPoint® survey feedback report template for highlighting a medical office's strengths and areas for improvement with regard to patient safety issues covered in the survey. You may decide to define patient 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 medical office may choose to report strengths using a higher or lower cutoff percentage.

Similarly, areas needing improvement may 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 their medical office, their staff positions, and so forth. This information helps others to better understand whose opinions are represented in the data. However, be careful not to report item results if the total number of respondents is fewer than 3, where it may be possible to determine which employees fall into those categories (e.g., 2 employees working in the office for 1 to 4 hours per week). You can choose to combine respondents from one or more response categories to ensure enough respondents in the group to report the statistic (e.g., report the number of respondents working from 1 to 32 hours per week).

Submit Your Data to the Medical Office Comparative Database

The Agency for Healthcare Research and Quality (AHRQ) has posted initial comparative data from the pilot study of the *Medical Office Survey on Patient Safety Culture* on its Web site (www.ahrq.gov/qual/hospculture). In the future, AHRQ will ask all medical offices that have administered the survey to voluntarily submit their data files to the *Medical Office 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 for users of AHRQ's *Hospital Survey on Patient Safety Culture*. You will be able to compare your medical office results with the overall medical office comparative data.

When you submit your data file, you will be asked to provide some background information about the characteristics of your medical office, such as the type of practice, majority ownership, total number of providers (MDs, DOs, PAs, NPs, etc.) by specialty, etc. (see Appendix B). This information may be used to conduct analyses of aggregated data files by selected medical office characteristics. Participating medical offices 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 medical offices. If your medical office is interested in submitting its data to the medical office database, send an e-mail to DatabasesOnSafetyCulture@ahrq.hhs.gov.

Technical Assistance

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

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Survey Materials

Medical Office Survey on Patient Safety Culture

Placeholder for Tab

SURVEY MATERIALS

Medical Office Survey on Patient Safety Culture

Survey Items Grouped by Dimension

Sample Page From User Feedback Report

Medical Office Survey on Patient Safety

SURVEY INSTRUCTIONS

Think about the way things are done in your medical office and provide your opinions on issues that affect the overall safety and quality of the care provided to patients in your office.

In this survey, the term **provider** refers to physicians, physician assistants, and nurse practitioners who diagnose, treat patients, and prescribe medications. The term **staff** refers to all others who work in the office.

- If a question does not apply to you or you don't know the answer, please check "Does Not Apply or Don't Know."
- If you work in more than one office or location for your practice, when answering this survey answer only about the office location where you received this survey—do not answer about the entire practice.
- If your medical office is in a building with other medical offices, answer only about the specific medical office where you work—do not answer about any other medical offices in the building.

SECTION A: List of Patient Safety and Quality Issues

The following items describe things that can happen in medical offices that affect patient safety and quality of care. **In your best estimate, how often did the following things happen in your medical office *OVER THE PAST 12 MONTHS*?**

	Daily ▼	Weekly ▼	Monthly ▼	Several times in the past 12 months ▼	Once or twice in the past 12 months ▼	Not in the past 12 months ▼	Does Not Apply or Don't Know ▼
Access to Care							
1. A patient was unable to get an appointment within 48 hours for an acute/serious problem	☐1	☐2	☐3	☐4	☐5	☐6	☐9
Patient Identification							
2. The wrong chart/medical record was used for a patient	☐1	☐2	☐3	☐4	☐5	☐6	☐9
Charts/Medical Records							
3. A patient's chart/medical record was not available when needed	☐1	☐2	☐3	☐4	☐5	☐6	☐9
4. Medical information was filed, scanned, or entered into the wrong patient's chart/medical record	☐1	☐2	☐3	☐4	☐5	☐6	☐9
Medical Equipment							
5. Medical equipment was not working properly or was in need of repair or replacement	☐1	☐2	☐3	☐4	☐5	☐6	☐9

SECTION A: List of Patient Safety and Quality Issues (continued)

How often did the following things happen in your medical office *OVER THE PAST 12 MONTHS*?

	Daily ▼	Weekly ▼	Monthly ▼	Several times in the past 12 months ▼	Once or twice in the past 12 months ▼	Not in the past 12 months ▼	Does Not Apply or Don't Know ▼
Medication							
6. A pharmacy contacted our office to clarify or correct a prescription ..	☐1	☐2	☐3	☐4	☐5	☐6	☐9
7. A patient's medication list was not updated during his or her visit	☐1	☐2	☐3	☐4	☐5	☐6	☐9
Diagnostics & Tests							
8. The results from a lab or imaging test were not available when needed.....	☐1	☐2	☐3	☐4	☐5	☐6	☐9
9. A critical abnormal result from a lab or imaging test was not followed up within 1 business day.....	☐1	☐2	☐3	☐4	☐5	☐6	☐9

SECTION B: Information Exchange With Other Settings

Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:

	Problems daily ▼	Problems weekly ▼	Problems monthly ▼	Problems several times in the past 12 months ▼	Problems once or twice in the past 12 months ▼	No problems in the past 12 months ▼	Does Not Apply or Don't Know ▼
1. Outside labs/imaging centers?.....	☐1	☐2	☐3	☐4	☐5	☐6	☐9
2. Other medical offices/ outside physicians?.....	☐1	☐2	☐3	☐4	☐5	☐6	☐9
3. Pharmacies?	☐1	☐2	☐3	☐4	☐5	☐6	☐9
4. Hospitals?.....	☐1	☐2	☐3	☐4	☐5	☐6	☐9
5. Other ? (Specify): _____	☐1	☐2	☐3	☐4	☐5	☐6	☐9

SECTION C: Working in Your Medical Office

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. When someone in this office gets really busy, others help out	☐1	☐2	☐3	☐4	☐5	☐9
2. In this office, there is a good working relationship between staff and providers	☐1	☐2	☐3	☐4	☐5	☐9
3. In this office, we often feel rushed when taking care of patients	☐1	☐2	☐3	☐4	☐5	☐9
4. This office trains staff when new processes are put into place	☐1	☐2	☐3	☐4	☐5	☐9
5. In this office, we treat each other with respect	☐1	☐2	☐3	☐4	☐5	☐9
6. We have too many patients for the number of providers in this office	☐1	☐2	☐3	☐4	☐5	☐9
7. This office makes sure staff get the on-the-job training they need	☐1	☐2	☐3	☐4	☐5	☐9
8. This office is more disorganized than it should be	☐1	☐2	☐3	☐4	☐5	☐9
9. We have good procedures for checking that work in this office was done correctly	☐1	☐2	☐3	☐4	☐5	☐9
10. Staff in this office are asked to do tasks they haven't been trained to do	☐1	☐2	☐3	☐4	☐5	☐9
11. We have enough staff to handle our patient load	☐1	☐2	☐3	☐4	☐5	☐9
12. We have problems with workflow in this office	☐1	☐2	☐3	☐4	☐5	☐9
13. This office emphasizes teamwork in taking care of patients	☐1	☐2	☐3	☐4	☐5	☐9
14. This office has too many patients to be able to handle everything effectively	☐1	☐2	☐3	☐4	☐5	☐9
15. Staff in this office follow standardized processes to get tasks done	☐1	☐2	☐3	☐4	☐5	☐9

SECTION D: Communication and Followup

How often do the following things happen in your medical office?	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼	Does Not Apply or Don't Know ▼
1. Providers in this office are open to staff ideas about how to improve office processes	☐1	☐2	☐3	☐4	☐5	☐9
2. Staff are encouraged to express alternative viewpoints in this office	☐1	☐2	☐3	☐4	☐5	☐9
3. This office reminds patients when they need to schedule an appointment for preventive or routine care	☐1	☐2	☐3	☐4	☐5	☐9
4. Staff are afraid to ask questions when something does not seem right	☐1	☐2	☐3	☐4	☐5	☐9
5. This office documents how well our chronic-care patients follow their treatment plans	☐1	☐2	☐3	☐4	☐5	☐9
6. Our office follows up when we do not receive a report we are expecting from an outside provider	☐1	☐2	☐3	☐4	☐5	☐9
7. Staff feel like their mistakes are held against them	☐1	☐2	☐3	☐4	☐5	☐9
8. Providers and staff talk openly about office problems.	☐1	☐2	☐3	☐4	☐5	☐9
9. This office follows up with patients who need monitoring	☐1	☐2	☐3	☐4	☐5	☐9
10. It is difficult to voice disagreement in this office	☐1	☐2	☐3	☐4	☐5	☐9
11. In this office, we discuss ways to prevent errors from happening again	☐1	☐2	☐3	☐4	☐5	☐9
12. Staff are willing to report mistakes they observe in this office	☐1	☐2	☐3	☐4	☐5	☐9

SECTION E: Owner/Managing Partner/Leadership Support

A. Are you an owner, a managing partner, or in a leadership position with responsibility for making financial decisions for your medical office? .....

☐1 Yes → (SKIP TO SECTION F)

☐2 No → (ANSWER ITEMS 1–4 BELOW)

How much do you agree or disagree with the following statements about the owners/ managing partners/leadership of your medical office?	**Strongly Disagree** ▼	**Disagree** ▼	**Neither Agree nor Disagree** ▼	**Agree** ▼	**Strongly Agree** ▼	**Does Not Apply or Don't Know** ▼
1. They aren't investing enough resources to improve the quality of care in this office	☐1	☐2	☐3	☐4	☐5	☐9
2. They overlook patient care mistakes that happen over and over	☐1	☐2	☐3	☐4	☐5	☐9
3. They place a high priority on improving patient care processes	☐1	☐2	☐3	☐4	☐5	☐9
4. They make decisions too often based on what is best for the office rather than what is best for patients	☐1	☐2	☐3	☐4	☐5	☐9

SECTION F: Your Medical Office

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. When there is a problem in our office, we see if we need to change the way we do things	☐1	☐2	☐3	☐4	☐5	☐9
2. Our office processes are good at preventing mistakes that could affect patients	☐1	☐2	☐3	☐4	☐5	☐9
3. Mistakes happen more than they should in this office	☐1	☐2	☐3	☐4	☐5	☐9
4. It is just by chance that we don't make more mistakes that affect our patients	☐1	☐2	☐3	☐4	☐5	☐9
5. This office is good at changing office processes to make sure the same problems don't happen again	☐1	☐2	☐3	☐4	☐5	☐9
6. In this office, getting more work done is more important than quality of care	☐1	☐2	☐3	☐4	☐5	☐9
7. After this office makes changes to improve the patient care process, we check to see if the changes worked	☐1	☐2	☐3	☐4	☐5	☐9

SECTION G: Overall Ratings

Overall Ratings on Quality

1. Overall, how would you rate your medical office on each of the following areas of health care quality?

		Poor ▼	Fair ▼	Good ▼	Very good ▼	Excellent ▼
a. Patient centered	Is responsive to individual patient preferences, needs, and values	☐1	☐2	☐3	☐4	☐5
b. Effective	Is based on scientific knowledge	☐1	☐2	☐3	☐4	☐5
c. Timely	Minimizes waits and potentially harmful delays	☐1	☐2	☐3	☐4	☐5
d. Efficient	Ensures cost-effective care (avoids waste, overuse, and misuse of services).....	☐1	☐2	☐3	☐4	☐5
e. Equitable	Provides the same quality of care to all individuals regardless of gender, race, ethnicity, socioeconomic status, language, etc.	☐1	☐2	☐3	☐4	☐5

Overall Rating on Patient Safety

2. Overall, how would you rate the systems and clinical processes your medical office has in place to prevent, catch, and correct problems that have the potential to affect patients?

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

SECTION H: Background Questions

1. How long have you worked in this medical office location?

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

2. Typically, how many hours per week do you work in this medical office location?

☐a. 1 to 4 hours per week
☐b. 5 to 16 hours per week
☐c. 17 to 24 hours per week
☐d. 25 to 32 hours per week
☐e. 33 to 40 hours per week
☐f. 41 hours per week or more

SECTION H: Background Questions (continued)

3. What is your position in this office? Check ONE category that best applies to your job.

☐ **a. Physician (MD or DO)**

☐ **b. Physician Assistant, Nurse Practitioner, Clinical Nurse Specialist, Nurse Midwife, Advanced Practice Nurse, etc.**

☐ **c. Management**

Practice Manager	Business Manager
Office Manager	Nurse Manager
Office Administrator	Lab Manager
	Other Manager

☐ **d. Administrative or clerical staff**

Insurance Processor	Front Desk
Billing Staff	Receptionist
Referral Staff	Scheduler (appointments, surgery, etc.)
Medical Records	Other administrative or clerical staff position

☐ **e. Nurse (RN), Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN)**

☐ **f. Other clinical staff or clinical support staff**

Medical Assistant	Technician (all types)
Nursing Aide	Therapist (all types)
	Other clinical staff or clinical support staff

☐ **g. Other position**; please specify: _____

SECTION I: Your Comments

Please feel free to write any comments you may have about patient safety or quality of care in your medical office.

THANK YOU FOR COMPLETING THIS SURVEY.

Medical Office Survey on Patient Safety Culture: Items and Dimensions

In this document, the items in the *Medical Office 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.

1. List of Patient Safety and Quality Issues

(Daily, Weekly, Monthly, Several times in the past 12 months, Not in the past 12 months, Does Not Apply or Don't Know)

The following items describe things that can happen in medical offices that affect patient safety and quality of care. In your best estimate, how often did the following things happen in your medical office OVER THE PAST 12 MONTHS?

Access to Care

A1. A patient was unable to get an appointment within 48 hours for an acute/serious problem.

Patient Identification

A2. The wrong chart/medical record was used for a patient.

Charts/Medical Records

A3. A patient's chart/medical record was not available when needed.
A4. Medical information was filed, scanned, or entered into the wrong patient's chart/medical record.

Medical Equipment

A5. Medical equipment was not working properly or was in need of repair or replacement.

Medication

A6. A pharmacy contacted our office to clarify or correct a prescription.
A7. A patient's medication list was not updated during his or her visit.

Diagnostics & Tests

A8. The results from a lab or imaging test were not available when needed.
A9. A critical abnormal result from a lab or imaging test was not followed up within 1 business day.

Reliability of this dimension—Cronbach's alpha (9 items) = .86

2. Information Exchange With Other Settings

(Problems daily, Problems weekly, Problems monthly, Problems several times in the past 12 months, Problems once or twice in the past 12 months, No problems in the past 12 months, Does Not Apply or Don't Know)

Over the past 12 months, how often has your medical office had problems exchanging accurate, complete, and timely information with:

B1. Outside labs/imaging centers?
B2. Other medical offices/outside physicians?
B3. Pharmacies?
B4. Hospitals?
B5. Other? (Specify): _____

Reliability of this dimension—Cronbach's alpha (4 items, excluding "Other, specify") = .90

3. 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?

C1. When someone in this office gets really busy, others help out.
C2. In this office, there is a good working relationship between staff and providers.
C5. In this office, we treat each other with respect.
C13. This office emphasizes teamwork in taking care of patients.

Reliability of this dimension—Cronbach's alpha (4 items) = .83

4. Work Pressure and Pace

(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?

C3. In this office, we often feel rushed when taking care of patients. (negatively worded)
C6. We have too many patients for the number of providers in this office. (negatively worded)
C11. We have enough staff to handle our patient load.
C14. This office has too many patients to be able to handle everything effectively. (negatively worded)

Reliability of this dimension—Cronbach's alpha (4 items) = .76

5. Staff Training

(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?

C4. This office trains staff when new processes are put into place.
C7. This office makes sure staff get the on-the-job training they need.
C10. Staff in this office are asked to do tasks they haven't been trained to do. (negatively worded)

Reliability of this dimension—Cronbach's alpha (3 items) = .80

6. Office Processes and Standardization

(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?

C8. This office is more disorganized than it should be. (negatively worded)
C9. We have good procedures for checking that work in this office was done correctly.
C12. We have problems with workflow in this office. (negatively worded)
C15. Staff in this office follow standardized processes to get tasks done.

Reliability of this dimension—Cronbach's alpha (4 items) = .77

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

7. 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 medical office?

D1. Providers in this office are open to staff ideas about how to improve office processes.
D2. Staff are encouraged to express alternative viewpoints in this office.
D4. Staff are afraid to ask questions when something does not seem right. (negatively worded)
D10. It is difficult to voice disagreement in this office. (negatively worded)

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

8. Patient Care Tracking/Followup

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

How often do the following things happen in your medical office?

D3. This office reminds patients when they need to schedule an appointment for preventive or routine care.
D5. This office documents how well our chronic-care patients follow their treatment plans.
D6. Our office follows up when we do not receive a report we are expecting from an outside provider.
D9. This office follows up with patients who need monitoring.

Reliability of this dimension—Cronbach's alpha (4 items) = .78

9. Communication About Error

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

How often do the following things happen in your medical office?

D7. Staff feel like their mistakes are held against them. (negatively worded)
D8. Providers and staff talk openly about office problems.
D11. In this office, we discuss ways to prevent errors from happening again.
D12. Staff are willing to report mistakes they observe in this office.

Reliability of this dimension—Cronbach's alpha (4 items) = .75

10. Owner/Managing Partner/Leadership Support for Patient Safety

A. Are you an owner, a managing partner, or in a leadership position with responsibility for making financial decisions for your medical office? ……

☐1 Yes → (SKIP TO SECTION F)
☐2 No → (ANSWER ITEMS 1- 4 BELOW)

(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 about the owners/managing partners/ leadership of your medical office?

E1. They aren't investing enough resources to improve the quality of care in this office. (negatively worded)
E2. They overlook patient care mistakes that happen over and over. (negatively worded)
E3. They place a high priority on improving patient care processes.
E4. They make decisions too often based on what is best for the office rather than what is best for patients. (negatively worded)

Reliability of this dimension—Cronbach's alpha (4 items) = .76

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

11. 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?

F1. When there is a problem in our office, we see if we need to change the way we do things.
F5. This office is good at changing office processes to make sure the same problems don't happen again.
F7. After this office makes changes to improve the patient care process, we check to see if the changes worked.

Reliability of this dimension—Cronbach's alpha (3 items) = .82

12. Overall Perceptions of Patient Safety and Quality

(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?

F2. Our office processes are good at preventing mistakes that could affect patients.
F3. Mistakes happen more than they should in this office. (negatively worded)
F4. It is just by chance that we don't make more mistakes that affect our patients. (negatively worded)
F6. In this office, getting more work done is more important than quality of care. (negatively worded)

Reliability of this dimension—Cronbach's alpha (4 items) = .79

13. Overall Ratings on Quality and Patient Safety

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

G1. Overall, how would you rate your medical office on each of the following areas of health care quality?

G1A.	Patient-centered	Is responsive to individual patient preferences, needs, and values.
G1B.	Effective	Is based on scientific knowledge.
G1C.	Timely	Minimizes waits and potentially harmful delays.
G1D.	Efficient	Ensures cost-effective care (avoids waste, overuse, and misuse of services).
G1E.	Equitable	Provides the same quality of care to all individuals regardless of gender, race, ethnicity, socioeconomic status, language, etc.

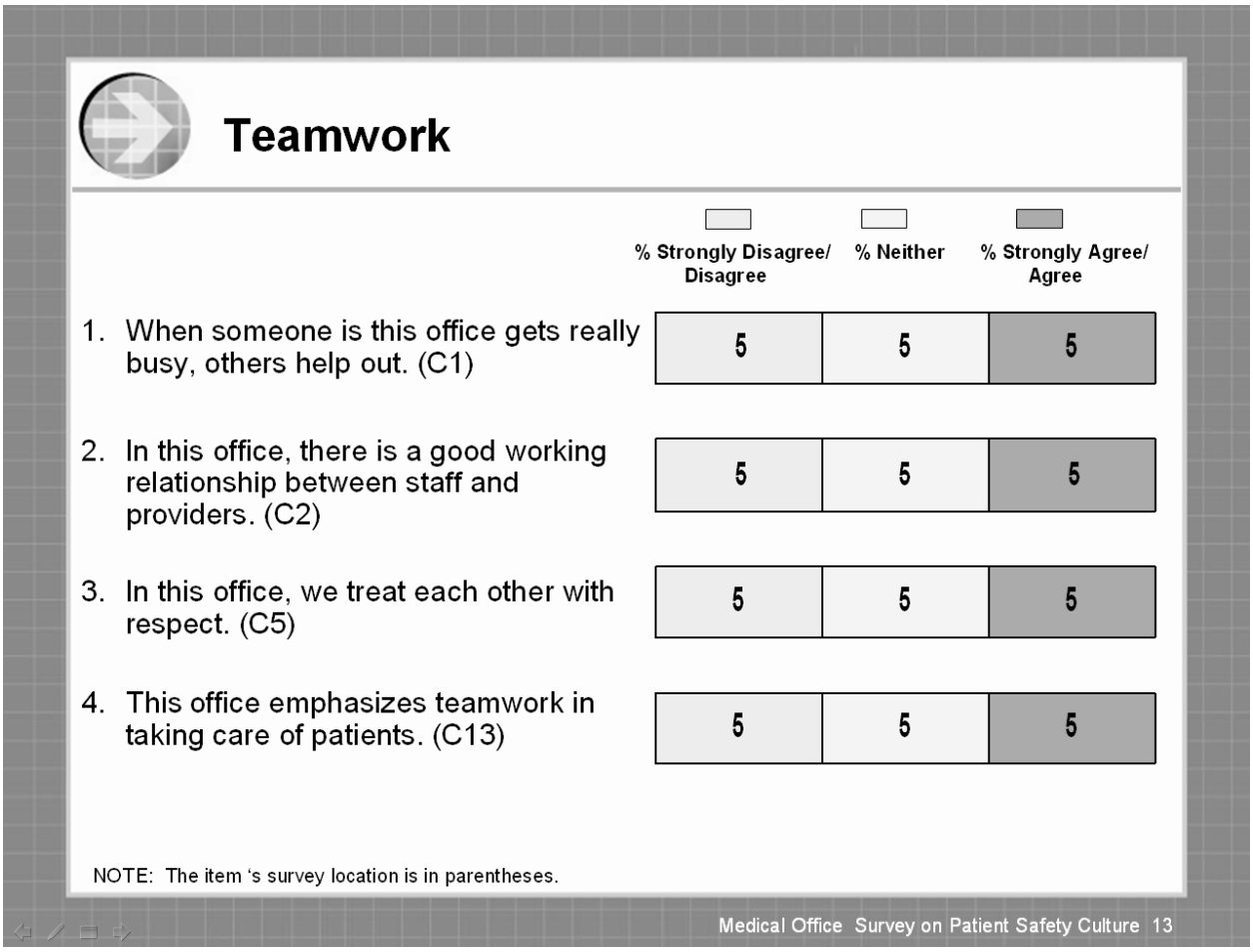
Reliability of this dimension—Cronbach's alpha (5 items) = .87

G2. Overall, how would you rate the systems and clinical processes your medical office has in place to prevent, catch, and correct problems that have the potential to affect patients?

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 Medical Office Survey on Patient Safety form are available free of charge at www.ahrq.gov/qual/hospculture/.

Appendixes

Placeholder for Tab

Appendix A. Sample Data Collection Protocol for the Medical Office Point of Contact: Paper Survey

Your Data Collection Tasks and Schedule for the *Medical Office Survey on Patient Safety*

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 medical office (e.g., on bulletin boards, in work areas). Promote survey throughout the data collection period.
Beginning of Week 1 (Start of Survey Data Collection) Date: _____	**Distribute survey packets to all staff members on the survey distribution list.** Consider distributing the packets at staff meetings and encourage survey participation. Caution staff, however, not to discuss their answers if they complete their surveys during the meeting.
Beginning of Week 2 Date: _____	**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 medical office 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 3 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 4 Date: _____	**Close out data collection.**

Appendix B. Medical Office Background Characteristics

To Be Completed by Office Point-of-Contact for Each Medical Office Submitting Data to the *Medical Office Survey on Patient Safety* Comparative Database

Instructions: Please provide the following information, which will be used to analyze data collected with the *Medical Office Survey on Patient Safety*. If you need assistance in answering any of the questions, please email DatabasesOnSafetyCulture@ahrq.hhs.gov

Name of Office Point-of-Contact: (First)_____ (Last)_____
Job Title:_____
Name of Office:_____
Office Mailing Address: (Street)_____
(City)_____(State)_____(Zip code)_____
POC Phone:_____ Fax:_____ Email:_____

1a. Does your medical practice have:

☐1 One location? → (SKIP TO QUESTION 2)
☐2 Multiple locations? → Total number of locations: _____

1b. Is this office location the:

☐1 Primary/headquarters location?
☐2 Satellite location (not the primary/headquarters location)?

2. Which best describes the majority ownership of this medical office/practice?

☐1 Provider(s) and/or Physician(s)
☐2 Managed Care or Health Maintenance Organization (MCO/HMO)
☐3 University or Medical School or Academic Medical Institution
☐4 Hospital or health system
☐5 Federal, state, or local government, community board, etc.
☐6 Other, please specify:_____

3. Please record the total number of providers and staff from your medical office asked to complete the survey in each of the following staff categories.

Staff Position	Number of Individuals
a. Physician (MD/DO)	_____
b. Physician Assistant	_____
c. Nurse Practitioner/Clinical Nurse Specialist/Nurse Midwife/ Advanced Practice Nurse, etc.	_____
d. Practice Manager/Office Manager/Office Administrator/ Business Manager/Nurse Manager, Lab Manager, Other Manager	_____
e. Administrative or Clerical Insurance Processor; Billing Staff; Referral Staff; Front Desk; Medical Records; Receptionist; Scheduler (appt., surgery, etc.); Other administrative or clerical staff	_____
f. Registered Nurse/LVN/LPN	_____
g. Medical Assistant/Nursing Aide	_____
h. Other Clinical Staff Technician (all types), Therapist (all types), Other clinical staff	_____
i. Other Positions	_____
TOTAL NUMBER OF INDIVIDUALS ASKED TO COMPLETE THE SURVEY (This is your response rate denominator)	_____

4a. Which of the following best describes the type of practice at this office location?

- ☐$_1$ Single specialty
- ☐$_2$ Multispecialty with primary care only (family medicine, internal medicine, pediatrics, OB/GYN, general practice)
- ☐$_3$ Multispecialty with primary and specialty care
- ☐$_4$ Multispecialty with specialty care only

4b. In the table below, record the number of providers who work in your office in each specialty listed below. By providers, we mean physicians (MDs and DOs), physician assistants (PAs), and nurse practitioners (NPs) who diagnose, treat patients, and prescribe medications. If a provider is certified in more than one specialty, record only the specialty for which the provider spends most of his/her time. See example:

Example: An office with 3 Family Practice providers and 1 doctor certified in both Gastroenterology (works in this area 70% of time) and General Practice (works in this area 30% of time):

Number of Providers	Specialty
3	Family Practice / Family Medicine
	Forensic Pathology
1	Gastroenterology
	General Practice

Record the number of providers in each specialty in your medical office. Any specialties not represented in your medical office can be left blank.

Number of Providers	Specialty	Number of Providers	Specialty
_____	1. Allergy/Immunology	_____	19. Nephrology
_____	2. Anesthesiology	_____	20. Neurology
_____	3. Cardiology	_____	21. Nuclear Medicine
_____	4. Child & Adolescent Psychiatry	_____	22. OB/GYN or GYN
_____	5. Dermatology	_____	23. Ophthalmology
_____	6. Diagnostic Radiology	_____	24. Orthopedics
_____	7. Emergency Medicine	_____	25. Otolaryngology
_____	8. Endocrinology/Metabolism	_____	26. Pathology – Anatomic/Clinical
_____	9. Family Practice/Family Medicine	_____	27. Pediatrics
_____	10. Forensic Pathology	_____	28. Physical Medicine & Rehabilitation
_____	11. Gastroenterology	_____	29. Psychiatry
_____	12. General Practice	_____	30. Public Health & Rehabilitation
_____	13. General Preventive Medicine	_____	31. Pulmonary Medicine
_____	14. General Surgery	_____	32. Radiology
_____	15. Geriatrics	_____	33. Rheumatology
_____	16. Hematology/Oncology	_____	34. Surgery (All)
_____	17. Internal Medicine	_____	35. Urology
_____	18. Medical Genetics	_____	36. Vascular Medicine
		_____	37. Other specialties

5. **To what extent has this medical office implemented the following electronic (computer-based) tools?** (By implemented, we mean the office has the tool capability and is using it.)

	Not implemented & no plans to implement in the next 12 months ▼	Not implemented but implementation planned in the next 12 months ▼	Implementation in process (only partial implementation) ▼	Fully implemented ▼
a) Electronic appointment scheduling	☐1	☐2	☐3	☐4
b) Electronic ordering of medications (with pharmacies capable of processing electronic orders)	☐1	☐2	☐3	☐4
c) Electronic ordering of tests, imaging, or procedures (with test/ imaging centers capable of processing electronic orders)	☐1	☐2	☐3	☐4
d) Electronic access to your patients' test or imaging results	☐1	☐2	☐3	☐4
e) Electronic medical/health records (EMR/EHR)	☐1	☐2	☐3	☐4

6. **What is the total number of patient visits in a typical week in this medical office location?**
_____total patient visits in a typical week

7. **What is the total number of providers (MDs, DOs, PAs, NPs, etc.) working in this medical office location during a typical week?**
_____total number of providers working during a typical week

8. **When did your medical office finish its administration of the *Medical Office Survey on Patient Safety*?**
_____month _____year

9. **What was the mode used to administer the survey?**
☐1 Paper only
☐2 Web only
☐3 Mixed mode (paper and web)