

Fielding the CAHPS® Health Plan Survey 5.0

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Documents Available for the CAHPS Health Plan Survey 5.0

This document is part of a comprehensive set of instructional materials that address implementing the Health Plan Survey, analyzing the data, and reporting the results. All documents are available on the [Agency for Healthcare Research and Quality's Web site](#). For assistance in accessing these documents, please contact the CAHPS Help Line at 800-492-9261 or cahps1@westat.com.

For descriptions of these documents, refer to: *What's Available for the CAHPS Health Plan Survey 5.0*.

Questionnaires

- *CAHPS Health Plan Survey: Overview of the Questionnaires*
- *Health Plan Survey 5.0* (Adult and Child, English and Spanish)
 - *Medicaid Survey 5.0*
 - *Commercial Survey 5.0*

Supplemental Items

- [Supplemental Items for the Clinician & Group Survey 3.0](#)

Some supplemental items for this survey are intended to be administered together. Learn more about these item sets:

- [People with Mobility Impairments](#)
- [Children with Chronic Conditions](#)

Survey Administration Guidelines

- *Preparing a Questionnaire Using the CAHPS Health Plan Survey*
- *Fielding the CAHPS Health Plan Survey*
- *Sample Notification Letters and Emails for the CAHPS Health Plan Survey*
- *Sample Telephone Script for the CAHPS Health Plan Survey*

Reporting Measures and Guidelines

- *Patient Experience Measures from the CAHPS Health Plan Survey*

Available for all CAHPS surveys

- [Analyzing CAHPS Survey Data](#): Free programs for analyzing the data, guidance on preparing survey results for analysis, and instructions for using the CAHPS Analysis Program.
- [Translating Surveys and Other Materials](#): Guidelines for translating surveys and selecting translators and translation reviewers.

Introduction

This document explains how to field the CAHPS Health Plan Survey 5.0 and gather the data needed for analysis and reporting. It provides instructions and advice related to the following topics:

- Constructing the sampling frame.
- Choosing the sample.
- Maintaining confidentiality.
- Collecting the data.
- Tracking returned questionnaires.
- Calculating the response rate.

These instructions are primarily aimed at the vendors who field the survey, but they are also meant to help survey sponsors better understand the technical steps in the process. They apply to both the Medicaid and Commercial versions of this survey.

Figure 1. Summary of Key Requirements for Administering a Health Plan Survey

Administration	To generate the standardized data necessary for valid comparisons, the survey should be conducted by a third-party vendor according to the CAHPS guidelines specified in this document. Users of version 5.0H should follow the HEDIS protocol maintained by the National Committee for Quality Assurance.
Sampling frame	Age (Adult: 18 and over; Child: 17 and under)
Collection mode	Mail, telephone, email (with mail or telephone), or mixed mode protocols
Sample size	The sample needs to be large enough to yield 300 completed surveys per health plan product, a cost-effective method shown to produce statistically valid survey comparisons.
Target response rate	40 percent for the Medicaid Survey and 50 percent for the Commercial Survey, assuming rigorous data collection efforts.

Sampling Guidelines

These sampling guidelines will help you understand who is eligible to be included in the sample frame for the adult and child versions of the CAHPS Health Plan Survey. They also explain how to select a sample. By following these guidelines, you can be confident that your results will be comparable to those produced by other vendors and survey sponsors (organizations that fund or oversee the administration of the survey).

Users of the Medicaid version of the Health Plan Survey can submit their survey results to [AHRQ's CAHPS Database](#) and obtain comparative data reports. Adherence to the administration guidelines is particularly important if you want to submit your results to the CAHPS Database.

Determining the Number of Sampling Units You Need: Plans Versus Products

Your sample design will be based on the units for which you want to compare results once the survey is completed. These can be health insurance plans or products within health plans. “Health insurance plan” is the entity that offers the health insurance (e.g., Plan A), and the “product” is the specific benefit plan design or coverage offered by the plan (e.g., Plan A’s HMO product).

You will be drawing a sample for **each** health insurance plan or product in your sample design. Separate plans into products if there are differences in geography, provider networks, or administrative structure. Also, treat each product separately if the benefits and coverage are different, since these differences can affect consumers’ reports of their experiences with care and their ratings of care. Be sure to analyze and report separate results for each of the unique samples.

Defining the Sample Frame: Eligibility Guidelines

The sample will be drawn from a list of individuals (adults age 18 and older, or children 17 and younger) covered by the plan or product. This list is called a sample frame. Please review these guidelines for determining whom to include in your sample frame:

- **The target time frame, or look-back period, is 6 months for the Medicaid Survey and 12 months for the Commercial Survey.** This target time frame is intended to make the sample frame as inclusive as possible and to standardize data collection for comparisons of results.
- **If you are surveying adults, include all individuals 18 years or older** who have been enrolled in the plan or product for the full look-back period or longer, with no more than one 30-day break in enrollment during that time period.
- **If you are surveying children, include all individuals 17 years or younger** who have been enrolled in the plan or product for the full look-back period or longer, with no more than one 30-day break in enrollment during that time period.
- **To determine the look-back period for your sampling frame, use the anticipated start date of data collection.** For example, if your anticipated start date is December 1, 2017, include all those who have been continuously enrolled since June 1, 2017, for the Medicaid Survey or December 1, 2016 for the Commercial Survey.

- The sample frame may include multiple individuals from the same household, but **the sample you draw should not have more than one person (adult or child) per household.** (If you will be surveying both adults and children, please see the guidelines for Creating a Sample to Survey Both Adults and Children.)
- **Include individuals with primary health coverage through the plan.** Do not include individuals with only other types of coverage, like a dental-only plan.
- In the case of individuals who switch (or children who are switched) from one product to another within the same plan during the continuous enrollment period, **count them as enrolled in the product in which they were enrolled the longest.** For example, if an individual who was enrolled in a health plan’s HMO product for 4 of the previous 6 months switched to the **same** health plan’s POS product, consider that person continuously enrolled in the health plan’s HMO product.

Figure 2. Sample Frame Elements

The following information (data elements) should be included in the sample frame that a survey sponsor provides to the vendor.

Adult Survey	Child Survey
Unique member ID (this number is typically provided by the health plan)	Unique child ID (this number is typically provided by the health plan)
Plan ID (unique number that identifies the health plan)	Plan ID (unique number that identifies the health plan)
Name of health plan	Name of health plan
Health plan product type (HMO, POS, PPO, PCCM, etc.)	Health plan product type (HMO, POS, PPO, PCCM, etc.)
Name of person (first and last names in separate fields)	Name of child (first and last names in separate fields)
Date of birth	Child’s date of birth
--	Parent or guardian’s name
Gender	Gender of parent or guardian
Complete address (includes street address, city, State, and ZIP Code, each in a separate field)	Complete address of parent or guardian (includes street address, city, State, and ZIP Code, each in a separate field)
Telephone number with area code (if available)	Parent or guardian’s telephone number with area code (if available)
Email address (if available)	Parent or guardian’s email address (if available)

Adult Survey	Child Survey
Indicate if Spanish-language materials are required (if known)	Indicate if Spanish-language materials are required (if known)
Date of enrollment in plan	Date of child's enrollment in plan
Months of continuous enrollment	Months of continuous enrollment of the child

For Commercial Plans: Transforming a Sample Frame of Policyholders to a Sample of All Covered Lives

If you are conducting a survey of commercially insured consumers, you may find that the sample frame includes only policyholders because the names of covered spouses and children may not be available in the data files used to construct the sample frame. In other cases, the sample frame may include all covered lives—that is, policyholders as well as their family members who are covered by the policy.

If you have a sample frame that includes only policyholders, you have two options:

- Survey only policyholders; or
- Revise your sample frame so that it includes all covered lives and then select a sample drawn from that frame.

Surveying a sample drawn from a sample frame of all covered lives is preferable because it gives you information about the experience of all health plan members, not just those members who are policyholders. You may also have a situation where you have a list of covered lives for some of the sampled plans but a list of policyholders for others. In this case, we recommend that you convert the frame for all of the plans to a frame of covered lives.

This section outlines a few ways in which you can create a frame of covered lives using a procedure called **two-stage sampling**. Two-stage sampling involves selecting a sample of policyholders and, at the same time, a sample of individuals from the selected policyholders' households. Such designs usually require weighting at the time of analysis to reflect the fact that the probability of selection is inversely proportionate to the number of covered adults in a household. You will need the assistance of a statistician to draw the sample.

- **Option 1.** In this option, you first select a sample of policyholders. An interviewer then calls each sampled policyholder and screens for additional individuals covered under the policy. (This total list serves as the equivalent of a sample frame of all covered lives.) During this call, the interviewer uses a set of rules to select a person to be interviewed and completes the questionnaire, over the phone, with the sampled respondent. This selected respondent is either the policyholder or another adult covered by the policy.
- **Option 2.** This option uses a telephone screening step in which the interviewer asks each policyholder in the sample frame to list all the people

enrolled under their policies. The resulting list, which is the sample frame, includes all covered lives (adults and children). You can then draw an appropriate sample from the sample frame of all covered lives and conduct the survey.

- **Option 3.** This option is similar to Option 2 in that it uses a screening step, but in this case a screening questionnaire is mailed to the policyholder. Although screening by mail is less expensive than screening over the telephone, it takes more time, and you may not get many responses to your mailing. If most of the plans in your survey already have a sampling frame of covered lives, you may decide to use telephone screening as a way to develop a sampling frame of covered lives for the plans that lack them. If you have many plans that lack a sample frame of covered lives, however, the cost of telephone screening may be prohibitive. In this case, you may need to conduct a mail screening, which sacrifices increased time efficiency and quality in favor of lower costs. Once the screening has been completed, you can then draw the sample and begin data collection.

Because each of these sampling options has advantages and disadvantages, you should discuss these issues in detail with a vendor and/or consultant. The CAHPS team recommends Option 1, if feasible; although it is the most expensive option, it is the most accurate and time-efficient and will generate the highest response rate.

Recommended Number of Completes

A minimum number of completed questionnaires are required to ensure that the results are statistically reliable. To have a sufficient number of responses for analysis and reporting, you need to select enough individuals to obtain approximately 300 completed questionnaires per plan/product. (“Questionnaires” are the survey instruments that have been mailed or are administered by telephone or online. **Appendix A** explains how to determine whether the returned questionnaire is “complete.”) This is the minimum number of completed questionnaires required to ensure that the results are statistically reliable.

Please note that the recommendations regarding the number of completed questionnaires apply to the survey with **core items only**. If your survey includes supplemental items, which often apply to a relatively small subset of the overall sample, a higher number of completed questionnaires may be needed to generate enough responses to those items for the purposes of analysis and reporting. Generally speaking, to yield a level of reliability for supplemental items that is consistent with that of the core items, at least 100 responses per item are needed.

Calculating the Starting Sample Size

The starting sample size you need to achieve 300 completed questionnaires should take several factors into account:

- The anticipated response rate.
- The accuracy of the contact information.
- The mode or modes of data collection.
- Any prior surveys of the same or similar populations.
- Expectations about the number of individuals who may be identified as ineligible (see the discussion of response rates in the following section).

Response Rate Goal

The CAHPS team recommends aiming for a response rate of at least a 40 percent for the Medicaid survey and 50 percent for the commercial survey. These figures are based on experience with partners and field trials regarding what is possible with a reasonable amount of effort and expense. Sponsors and vendors that follow the recommended protocols for sampling and data collection, including followup with non-respondents, typically achieve response rates of 40 percent or higher.

Being able to achieve this response rate depends in large part on the accuracy of the sampling frame. If you anticipate that inaccuracies in the sample frame, such as poor contact information (addresses and phone numbers), will decrease the number of questionnaires that reach the sampled individuals, you may need to start with a larger sample size than suggested in the next section on sample size calculations.

A low response rate affects the ultimate sample size, but it is of concern primarily because the lower the response rate, the less confident one can be that the sample is representative of the underlying population of health plan enrollees.

Sample Size Calculation Figure 3 illustrates the calculation of minimum sample sizes assuming you achieve the target response rate of 40 percent for the Medicaid Survey or 50 percent for the Commercial Survey.¹

¹ The CAHPS Consortium has found that a 50 percent response rate is achievable if you take steps to ensure the accuracy of the sample frame and carefully follow the recommended data collection protocol, including one or more attempts to follow-up with non-respondents.

Figure 3. Calculation of Estimated Sample Size Needed

	Medicaid Survey	Commercial Survey
Goal	300 completed surveys	300 completed surveys
Target response rate	40 percent (=0.40)	50 percent (=0.50)
Minimum sample size needed	$(300/0.40) = 750$ per plan/product	$(300/0.50) = 600$ per plan/product

If one or more of the plans/products do not have a membership large enough to draw the required sample size, the sample will be everyone in the health plan enrollee population who meets all of the eligibility criteria. But even under these circumstances, the sample may include only one adult or child per household.

Fielding the Child Version with the Children with Chronic Conditions Item Set

If you have added questions from the CAHPS Children with Chronic Conditions Item Set to your questionnaire, you will have to take additional steps to ensure that you have a sufficient number of responses (at least 300 for each subgroup) to compare the health care experiences of the general child population with those of children with chronic conditions.

For guidance on strategies for drawing a smaller sample than would be needed for a population-based random sampling approach, please contact the CAHPS Help Line at cahps1@westat.com or 800-492-9261.

If you plan on submitting survey data for HEDIS reporting and/or accreditation, you must adhere to NCQA's specifications for these items. Information is available at www.ncqa.org.

Creating a Sample to Survey Both Adults and Children

If you plan to field both the adult and child questionnaires, the CAHPS Team recommends that you select enough individuals to obtain at least 300 completed adult questionnaires per plan/product and 300 child questionnaires per plan/product. However, the sample should include only **one child or adult per household**. Once you have drawn your sample frame, you need to fine-tune it to remove any duplicate names from the lists.

Use the following procedure to sample only one person per household:^{2,3}

1. Separate the sample into two groups: (A) adults and (B) children.
2. Randomly select adults (from Group A) until you have a sample large enough to obtain 300 completed surveys.
3. Check the adult sample to ensure that there is only one adult per household.
4. Remove children from Group B who are in the same household as a selected adult.
5. Randomly select children from Group B until you have a sample large enough to obtain 300 completed surveys.
6. Check the children's sample to ensure that there is only one child per household.

This approach has the advantage of most closely approximating a self-weighting sample in which every person has an equal probability of being selected. This is because there are typically two adults in a household, but the number of children can be much larger (and the median number of adults is less than the median number of children per household).

However, if the sampled plan is too small to create the two mutually exclusive Groups A and B, please consult a sampling statistician to determine the optimal design and how to appropriately weight the result.

Preparing Sample Files for Data Collection

Once the sample has been selected, the vendor assigns a unique identification (ID) number to each sampled person. This number should be used **only** to track the respondents during data collection.

Sample files from the plans may not contain all the information you need for your sample frame. For example, some sample frames may not have up-to-date and accurate information on plan enrollment. Consequently, you may need to gather supplementary information from additional files and sources. When information from two sources differs, sponsors and their vendors should consult with each other to decide which sources of information are most accurate and how best to combine data elements and files. This may be a complex, multi-step process that requires time and rigorous quality control.

² Kalton, G. *Introduction to Survey Sampling*. Sage. 1983.

³ Aday LA, Cornelius LJ. *Designing and Conducting Health Surveys: A Comprehensive Guide*. John Wiley & Son; 2006.

The pieces of information that are most critical to the success of data collection are accurate and complete names and contact information appropriate for the mode of administration (i.e., addresses for mail surveys, telephone numbers for telephone administration, and email addresses for online administration). When you have incomplete address information or have reason to believe that this information may be inaccurate, survey sponsors and/or vendors may be able to use other sources to clean or update the contact information, such as Internet directories.

Maintaining Confidentiality

Privacy assurances are central to encouraging respondent participation. Survey vendors should already have standard procedures in place for maintaining the confidentiality of respondents' names and minimizing the extent to which identifying information, such as names and addresses, are linked to the actual survey responses. For example, the individual ID numbers that are used to track the survey must not be based on existing identifiers, such as Social Security numbers or employee ID numbers. Many survey vendors require employees to sign statements of confidentiality ensuring that they will not reveal the names of respondents or any results linked to specific individuals.

There are several opportunities during the survey process to explain to respondents that their responses are kept strictly confidential. The key avenues are the advance and cover letters and interviewer assurances during telephone interviews.

Recommended Data Collection Modes

Based on field test results, the CAHPS team recommends the following modes for the Health Plan Survey:

- Mail only
- Telephone only
- Mixed mode (mail and telephone, email and mail, or email and telephone)

Survey sponsors that employ one of these modes using the recommended protocols can expect to achieve their response rate goals.

Results from the field tests, as well as the experiences of organizations that have fielded similar surveys, indicate that the mail with telephone followup method is most effective: results from the CAHPS demonstration sites indicate that followup by telephone often adds 10 to 15 percentage points to the response rate. (Please refer to **Appendix B** for advice on improving response rates.)

This section provides protocols for collecting responses by mail with telephone followup and email with mail followup. You can adapt this protocol for mail-only, telephone only, or email with telephone followup. At this time, an email-only mode is not recommended.

If you choose to deviate from these protocols (for example, by mixing mail and another mode or by omitting the postcard reminder), it is important to conduct sufficient followup, i.e., additional attempts to obtain a completed questionnaire in order to achieve the desired response rate.

Each survey sponsor will need to choose the data collection mode that maximizes the response rate at an acceptable cost. Costs associated with administering the Health Plan Survey will vary depending on the mode or mix of modes.

The time required to administer the Health Plan Survey is approximately 15 minutes. This estimate is based on tests of telephone administration as well as data on the self-administration of CAHPS surveys of similar length.

On average, survey field periods are approximately 10-14 weeks. Since different sponsors will require more or less time to implement their data collection modes and achieve the desired response rate, there is no specific cut-off point for the field period. Additionally, data collection should not be stopped prematurely if the target number of completed questionnaires is achieved. The data collection protocol should be completed as planned to ensure comparability of the results with the highest possible response rate.

Mail Protocol

This section reviews the basic steps for collecting data through the mail and offers some advice for making this process as effective as possible.⁴

- **Set up a toll-free number** and publish it in all correspondence with respondents. Assign a trained project staff member to respond to questions on that line. It is useful to maintain a log of these calls and review them periodically.
- **Send the questionnaire to the respondent with a cover letter and a postage-paid envelope.** A well-written, persuasive advance letter authored by a recognizable organization (e.g., the sponsor or participating health care purchaser) will increase the likelihood that the recipient of the questionnaire will complete and return it. The cover letter should include instructions for completing and returning the questionnaire. For an example, see the *Sample Notification Letters and Emails for the CAHPS Health Plan Survey*.

⁴ Adapted from McGee J, Goldfield N, Riley K, Morton J. *Collecting Information from Health Care Consumers*, Rockville, MD: Aspen Publications, 1996.

Tips for the letter:

- Tailor the letter, including language that explains the purpose of your survey, the voluntary nature of participation, and the confidentiality of responses.
- Note that a refusal to participate will not affect an individual's health care.
- Personalize the letter with the name and address of the intended recipient.
- Have it signed by a representative of the sponsoring organization(s).
- Spend some time on the cover letter, checking it for brevity and clarity, and ensuring that there are no grammatical or typographical errors.

Tips for the outside envelope:

- Make it look “official” but not too bureaucratic. It should not look like junk mail.
- Place a recognizable sponsor's name—such as the name of a health plan or government agency—above the return address.
- **Send a postcard reminder to nonrespondents 10 days after sending the questionnaire.** Some vendors recommend sending a reminder postcard to all respondents 3 to 5 days after mailing the questionnaire instead of sending a postcard only to nonrespondents 10 days after the questionnaire is mailed. Their reminder postcards serve as a thank-you to those who have returned their questionnaires and as a reminder to those who have not. The reminder postcard is an inexpensive way to increase your response rate. *Sample Notification Letters and Emails* includes a sample reminder card.
- **Send a second questionnaire with a reminder letter** and a post-paid envelope to those still not responding 3 weeks after the first mailing. *Sample Notification Letters and Emails* includes a sample reminder letter.

Telephone Protocol

The Health Plan Survey must be modified for telephone administration. *Sample Telephone Script for the CAHPS Health Plan Survey* provides a sample telephone script, including instructions and an introductory statement that you can adapt to the instrument you are fielding.

Note on mode effects: Research conducted in collaboration with the CAHPS team indicates that telephone-only administration is associated with more positive reports

and ratings of care.⁵ The direction of this effect is not uncommon in comparisons of mail-only and telephone-only survey administration. Further testing is needed before we can determine if and how survey sponsors should adjust data collected using telephone-only mode.

- **Check telephone numbers.** Check the telephone numbers of sample respondents for out-of-date area codes and partial or unlikely telephone numbers. All survey vendors should have standard automated procedures for checking and updating telephone numbers before beginning data collection.

After extensive tracking, you may still be left with some respondents who do not have a working telephone number, or for whom you have only a mailing address. Delivery of a package containing the questionnaire by an overnight service, such as a Priority Mail or Federal Express, can be an effective method of drawing attention to the need to complete the questionnaire.

- **Train the interviewers before they begin interviewing.** The interviewer should not bias survey responses or affect the survey results. (See the box below for advice regarding the training of interviewers.)
- **Begin contacting nonrespondents.** If following up on an email or a mailed questionnaire, initiate telephone contact with nonrespondents 3 weeks after sending the second questionnaire. You may want to send a letter to respondents in advance to let them know that you will be contacting them by telephone. An example of an advance letter is provided in *Sample Notification Letters and Emails*.
- **Attempt to contact each respondent by telephone at least six times.** The vendor should make at least six attempts unless the respondent explicitly refuses to complete the survey. These attempts must be on different days of the week (both weekdays and weekends), at different times of the day, and in different weeks.

⁵ Hepner KA, Brown JA, Hays RD. Comparison of mail and telephone in assessing patient experiences in receiving care from medical group practices. *Eval Health Prof.* 2005 Dec;28(4):377-89.

Training Interviewers

The CAHPS team recommends the following key procedures for conducting standardized, nondirective interviews:

- Interviewers should read questions exactly as worded so that all respondents are answering the same question. When questions are reworded, it can have important effects on the resulting answers. Please refer to *Sample Telephone Script for the CAHPS Health Plan Survey*.
- When a respondent fails to give a complete or adequate answer, interviewer probes should be nondirective. That is, interviewers should use probes that do not increase the likelihood of one answer over another. Good probes simply stimulate the respondent to give an answer that meets the question's objectives.
- Interviewers should maintain a neutral and professional relationship with respondents. It is important that they have a positive interaction with respondents, but there should not be a personal component. The primary goal of the interaction from the respondent's point of view should be to provide accurate information. The less interviewers communicate about their personal characteristics and, in particular, their personal preferences, the more standardized the interview experience becomes across all interviewers.
- Interviewers should record only answers that the respondents themselves choose. The CAHPS instrument is designed to minimize decisions that interviewers might need to make about how to categorize answers.

Training and supervision are the keys to maintaining these standards. Although these principles may seem clear, it has been shown that training, which includes exercises and supervised role playing, is essential for interviewers to learn how to put these principles into practice. In addition, interviewers may not meet these standards unless their work is monitored. A supervisor should routinely monitor a sample of each interviewer's work to ensure that the interviewers are, in fact, carrying out interviews using prescribed standards and methods. When you are hiring a survey vendor, the protocol for training and supervision should be among the top criteria you consider when choosing among data collection organizations.

Email Protocol

This section reviews the basic steps for contacting respondents via email to invite them to take an online survey and offers some advice for making this process as effective as possible. The CAHPS team does not recommend an email-only protocol at this time. Regardless of the response rate achieved through email alone, the email protocol must be followed by a full mail or telephone protocol for nonrespondents to ensure that all patients in the sample have an equal chance of completing the survey and that the respondents are representative of the patient population. For the same

reason, the sample should not consist of only those patients for whom you have an email address.

Note: This email protocol is also applicable when administering the survey through a patient portal

- **Set up an email address or toll-free telephone number** that respondents can contact with questions and publish it in all correspondence. Assign a trained project staff member to respond to questions that are submitted. It is useful to maintain a log of these emails/calls and review them periodically.
- **Send the respondent an email with a link to the online survey.** A well-written, persuasive message authored by a recognizable organization will increase the likelihood that the recipient will complete the survey. The email should be personalized and contain an individualized ID and password to access the survey as well as an individualized direct link. The email invitation should include instructions for completing the survey and explain whom to contact if recipients have questions. *Sample Notification Letters and Emails for the CAHPS Health Plan Survey* includes examples of email content that can be adapted.

Tips for the email:

- Include information in the email message and subject line to convey to the respondent that the survey is about their experience: for example, “Tell us about your recent medical care.” Subject lines and email messages that request the recipient to “Please help” are not recommended because they do not provide clues to the content and purpose of the email and are more likely to be deleted.
- Tailor the email message and the subject line to the recipient. It can be helpful to personalize the email message with the name of the intended recipient. But be aware of confidentiality issues. In particular, do not include detailed personal information in the subject line.
- In the email message:
 - Include language that explains the purpose of your survey, the voluntary nature of participation, and the confidentiality of responses.
 - Include a brief description of the survey.
 - Note that a refusal to participate will not affect an individual’s health care.
- To accommodate differing screen sizes, keep the email message itself shorter than a paper cover letter. Test it on multiple platforms.

- Spend some time on the email message, checking it for brevity and clarity, and ensuring that there are no grammatical or typographical errors.
- Have the email electronically signed or sent by a representative of the sponsoring organization(s). Include the person's title in the signature.
- **Send an email reminder to nonrespondents 7-10 days after sending the initial email invitation.** The email reminder serves as a thank you to those who have completed their survey and as a reminder to those who have not. *Sample Notification Letters and Emails* includes a sample reminder card that can be used as a template for the email reminder.
- **Send a second email reminder** to those still not responding 2-3 weeks after the initial email invitation.
- **Followup with nonrespondents by mail or telephone.** It is critical to initiate contact by either mail or telephone with everyone who has not completed the survey online. Since not all patients have access to or use email regularly, survey sponsors must follow the email protocol with either the full mail or telephone protocol for all nonrespondents to ensure that the final survey responses represent the patient population that was sampled. The CAHPS team does not recommend including a link to a Web-based online survey in a mailed letter; previous research and experience have shown this to be ineffective.

Tracking Returned Questionnaires

Most vendors have established methods for tracking the sample. You should also set up a system to track the returned surveys by the unique ID number that is assigned to each respondent in the sample. This ID number should be placed on every questionnaire that is mailed, included in the call record of each telephone case, or incorporated into the unique link for online surveys.

To maintain respondent confidentiality, the tracking system should not contain any of the survey responses. The survey responses should be entered in a separate data file linked to the sample file by the unique ID number. (This system will generate the weekly progress reports that sponsors and vendors should review closely.)

Each respondent in the tracking system should be assigned a survey result code that indicates whether the respondent:

- Returned the mail survey,
- Participated in the telephone interview,
- Participated in the online survey,
- Was ineligible to participate in the study,
- Could not be located,

- Is deceased, or
- Refused to respond.

The codes should also indicate whether the questionnaire is complete, partially complete, or incomplete.

- **Complete questionnaire:** A questionnaire is considered complete if responses are available for at least half of the key survey items and at least one reportable item.
- **Partially completed questionnaire:** A questionnaire is considered partially complete if responses are available for at least one reportable item, but less than half of the key items. It is important to keep track of partially completed questionnaires because they should be included for analysis and reporting.
- **Incomplete questionnaire:** A questionnaire is incomplete if the individual did not answer at least one reportable item.

For more information about the key and reportable items in the Health Plan Survey, see **Appendix A** of this document.

The tracking system should also include the date the survey was returned (for mail surveys) or answered (for telephone and online surveys). The interim result code reflects the status of the case during the different rounds of data collection; the final result code reflects the status at the end of data collection. These result codes are used to calculate the response rate, as shown in the next section.

Calculating the Response Rate

In its simplest form, the response rate is the total number of completed questionnaires divided by the total number of individuals selected for the sample. Calculating your response rate is helpful in determining a more accurate starting sample size for future survey administration. For the CAHPS Health Plan Survey, the goal is a response rate of at least 40 percent for Medicaid plans and 50 percent for commercial plans.

To calculate the response rate, use the following formula:

$$\frac{\text{Number of completed returned questionnaires}}{\text{Total number of respondents selected} - (\text{deceased} + \text{ineligible})}$$

Listed below is an explanation of the categories included and excluded in the denominator of the response rate calculation.

Denominator Inclusions

The denominator should include:

- **Respondents.** The individual returned a questionnaire, whether complete, incomplete, or partially complete.
- **Refusals.** The individual (or parent or guardian of the sampled child) refused to participate in writing or by phone.
- **Nonresponse.** The individual (or parent or guardian of the sampled child) is presumed to be eligible but did not complete the questionnaire for some reason (e.g., never responded, was unavailable at the time of the survey, was ill or incapable, had a language barrier).
- **Bad addresses/phone numbers.** In either case, the sampled individual (or parent or guardian) is presumed to be eligible even if you are unable to locate them.

Denominator Exclusions

- **Deceased.** In some cases, a household or family member may inform you of the death of the sampled individual or child.
- **Ineligible – not enrolled in the plan.** The sampled individual or child disenrolled from the plan, was never in the plan, or was enrolled in the plan for less than 6 months.

Appendix A: Determining Whether a Survey Response Is Complete

To determine if a questionnaire is complete, the first step is to flag the key and reportable items in the core survey. Supplemental items are **not** included in the definition of a completed questionnaire.

What are key items? Key items are the survey questions that **all** respondents should answer, including:

- Questions confirming eligibility for the survey.
- The screeners for the questions included in the core composites measures.
- The primary rating question.
- Demographic and other background items.

Table A-1 lists the item numbers in these four categories of questions. Table A-2 lists the key questions from the 5.0 version of the Health Plan Survey.

Table A-1: Item Numbers of Key Questions by Type of Questions

Type of Question	Item Number in Health Plan Survey 5.0 (Adult)
Questions confirming eligibility for the survey	Q1, Q38
The screeners for the questions included in the reporting composites	Q3, Q5, Q7, Q10, Q17, Q21, Q24
The primary rating question	Q26
Demographic items	Q27, Q28, Q29, Q31, Q33, Q34, Q35, Q36, Q37

What are reportable items? Reportable items are the questions included in the composite and rating measures. For a list of the reportable items in the core survey, refer to the appendix in *Patient Experience Measures from the CAHPS Health Plan Survey*.

Number of key items needed for a complete questionnaire. A questionnaire is considered complete if it has responses for at least 50 percent of the key items and 1 reportable item. The number of key items needed for each version of the survey is as follows:

- Adult Survey: At least 10 key items
- Child Survey: At least 10 key items

Table A-2: Key Questions from the Adult and Child Surveys

Short Item Title	Item Number in Adult Survey	Item Number in Child Survey
Covered by xx health plan	1	1
Had an illness, injury, or condition that needed care right away in a clinic, emergency room, or doctor's office	3	3
Made appointments for a check-up or routine care at a doctor's office or clinic	5	5
Number of times went to a doctor's office or clinic to get health care	7	7
Have a personal doctor	10	10
Tried to make an appointment to see a specialist	17	20
Got information or help from health plan's customer service	21	24
Health plan gave enrollee/respondent forms to fill out	24	27
Rating of health plan	26	29
Rating of overall health	27	30
Rating of mental or emotional health	28	31
Enrollee got health care 3 or more times for the same condition or problem	29	--
Enrollee needs or takes prescription medicine	31	--
Child's age	--	32
Child male or female	--	33
Child Hispanic or Latino	--	34
Child's race	--	35
Enrollee/Respondent age	33	36
Enrollee/Respondent male or female	34	37
Enrollee/Respondent highest grade level completed	35	38
Enrollee Hispanic or Latino	36	--

Short Item Title	Item Number in Adult Survey	Item Number in Child Survey
Enrollee race	37	--
Respondent's relationship to child	--	39
Someone helped enrollee/[respondent] complete survey	38	40
Total number of key items	19	20
Number of items needed to be a "complete" survey	10	10

Appendix B: Methods for Increasing the Number of Responses

Out-of-date mailing and email addresses, inaccurate telephone numbers, voicemail, call screening, gatekeepers, and frequent travel by respondents are common problems. To maximize the number of responses, sponsors and vendors can:

- Improve initial contact rates by making sure that addresses, phone numbers, and email addresses are current and accurate (e.g., identify sources of up-to-date sample information, run a sample file through a national change-of-address database, send a sample to a phone number look-up vendor).
- Take steps to improve contact rates after data collection has begun (e.g., increase maximum number of calls, ensure that calls take place at different day and evening times over a period of days, mail second reminders, use experienced and well-trained interviewers).
- Consider using a mixed-mode protocol involving email, mail, and telephone data collection procedure. In field tests, the combined approach was more likely to achieve a desired response rate than one mode alone.
- Train interviewers on how to deal with gatekeepers.
- Train interviewers on refusal aversion/conversion techniques.

These methods will add to the costs of conducting a survey, but sponsors need to weigh these extra costs against the risk of obtaining low response rates and less representative data.

Once the vendor reaches the respondent, other challenges await: people throw away the envelope, sometimes unopened, or set aside the questionnaire but then never complete it. These responses draw attention to the importance of effectively communicating why the person should complete the questionnaire. In addition to persistent follow-up, make sure that the outside envelope, cover letter, and questionnaire are as attractive and compelling as possible.⁶

It is especially important to interview or receive returned questionnaires from those individuals who might be difficult to reach. They are likely to be different from those individuals who immediately complete and return a questionnaire or who are easily interviewed. They may, for example, be chronically ill, have two jobs, or be different in some other way that is relevant to your results. Unless you maintain a high response rate overall and make efforts to reach them, their views and experiences will be underrepresented.

Sponsors and vendors should discuss this possibility in advance and consider plans to do extensive telephone tracing and locating. You may also want to talk about the

⁶ McGee J, Goldfield N, Riley K, Morton J. Collecting information from health care consumers. Rockville, MD: Aspen Publications, 1996.

timing of interviews. Because the Health Plan Survey is a survey of respondents at their homes, interviewers typically work in the evenings and on weekends. However, the survey vendor should provide at least one interviewer during the daytime to maintain appointments made with respondents during the day and try to reach those respondents who do not answer during the evenings (e.g., those who have evening shift jobs). Interviewing during the daytime on weekdays is especially effective and appropriate for Medicare surveys and for surveys that include children in the sample frame.

You are likely to encounter a few special problems with which you should be familiar. Sponsors and vendors should discuss these issues and agree on appropriate procedures.

Common Problems	Some Guidance
The interviewer reaches voicemail.	<p>Voicemail is part of modern life. There is some debate about whether or not it is best to leave a message; unfortunately, there is no right answer to this question.</p> <p>However, you cannot assume that a respondent will call back, so survey vendors should continue to make an effort to reach the respondent. In essence, when an interviewer reaches an answering machine or voicemail, it should be handled as though the person were not at home.</p>
The telephone number for the sampled individual is incorrect.	<p>The vendor should make every effort to find the right number:</p> <ul style="list-style-type: none"> • If the person answering the telephone knows how to reach the sampled individual, use that information. • If there is no information about the sampled individual at the provided number, use directory assistance. • If the vendor cannot find a correct telephone number for the individual, and the sponsor has agreed to both mail and telephone methods of data collection, mail the questionnaire.
The sampled person has moved and the address in the sample is incorrect.	<p>The vendor should make every effort to track down the sampled person. Stamp all mail “Address Service Requested” so that undelivered mail gets returned. If the mail gets returned, refer to sources like Internet directories or national change of address directories to obtain the new address.</p>
The sampled person is temporarily away.	<p>The protocol for this situation will depend somewhat on the data collection schedule. If the person will become available before data collection is scheduled to be concluded, the right procedure is to call back later.</p>

Common Problems	Some Guidance
The sampled person does not speak English.	If the questionnaire has not been translated into the respondent's language, an interview cannot be conducted. For the purpose of calculating response rates, these cases should be considered as "nonresponse" and cannot be excluded from the response rate formula's denominator.
The sampled person is temporarily ill.	Contact the person again before the end of data collection to determine if he/she has recovered and can participate.
The sampled person has a condition that prevents being interviewed, such as having a visual, hearing, or cognitive impairment.	This person becomes a nonrespondent because of that condition.