

# **National Implementation of Hospital CAHPS (HCAHPS) – OMB Paperwork Reduction Act (PRA) Submission**

## **A 1.0 CIRCUMSTANCES OF INFORMATION COLLECTION**

### **A 1.1 Background**

The Centers for Medicare & Medicaid Services (CMS) has begun efforts to make comparative performance information on hospitals publicly available. Such information can help consumers make more informed choices when selecting a hospital and can create incentives for hospitals to improve the care they provide. As part of this effort, CMS has been working with the Agency for Healthcare Research and Quality (AHRQ) to develop a standard survey instrument that can be used to collect and report information on hospital patients' perspectives on the care they receive. Many hospitals already work with survey vendors to design and administer a patient satisfaction survey as part of their own internal quality improvement efforts, and some hospitals administer their own surveys. However, the questions and methodologies are customized and do not allow comparison across hospitals. The instrument that has been developed to meet the need for publicly reporting patient perspectives on care information is called Hospital CAHPS, or HCAHPS.

HCAHPS will be included in a public/private partnership on hospital measurement and reporting called the Quality Initiative: A Public Resource on Hospital Performance. This partnership includes the major hospital associations, government, consumer groups, measurement and accrediting bodies, and other stakeholders interested in reporting on hospital quality. In the first phase of the partnership, hospitals are voluntarily reporting the results of their performance on 10 clinical quality measures for three medical conditions: acute myocardial infarction, heart failure, and pneumonia. HCAHPS reporting will comprise the second phase of the effort. All of the partners are working closely together to assure a high level of hospital participation in this voluntary initiative. Ultimately, CMS will publicly report HCAHPS survey results through [www.Medicare.gov](http://www.Medicare.gov). CMS is designing an implementation strategy for HCAHPS that includes multiple independent vendors and hospitals using the standard instrument and allowable protocols. This strategy is being designed to ensure that final reported data provide accurate comparisons of patient perspectives across hospitals.

As previously mentioned, CMS has partnered with AHRQ to develop a standard HCAHPS instrument. AHRQ is a leader in developing instruments for measuring patient perspectives on care. AHRQ and its grantees developed the CAHPS® (Consumer Assessment of Health Plans) instrument, which is currently used to assess the care provided by health plans covering over 123 million Americans. AHRQ employed its extensive knowledge and experience to help CMS develop a standard survey about patients' perspectives on and ratings of their care in the hospital setting.

A Federal Register notice was published on July 24, 2002 soliciting the submission of existing instruments measuring patients' perspectives on care. The notice of request for measures closed on September 23, 2002. Seven submissions were received, undergoing a rigorous review by the CAHPS II Grantees (AIR, Rand, and Harvard). Three criteria were considered in reviewing the submissions: 1) does the instrument capture the patients' perspectives on care in acute care and/or hospital settings; 2) does the instrument demonstrate a high degree of reliability and validity; and 3) has the instrument been widely used, not just in one or two research studies or local hospital settings.

On October 24, 2002, a web chat was held to answer questions from interested parties about the Hospital CAHPS project. Stakeholders, including survey vendors, have had an opportunity to ask questions and provide input into the process for developing and implementing this survey. AHRQ and CMS sponsored a stakeholders meeting on November 7, 2002 as well as a separate survey vendors meeting on November 18, 2002. A second meeting with stakeholders was held on November 20, 2003. These exchanges have provided valuable guidance and at the same time provided the chance to gather insight into the existing methodology and background of existing patient perspectives surveys.

In January 2003, AHRQ submitted to CMS a draft HCAHPS instrument that consisted of 66 questions. The survey was not modeled after any one existing commercial survey. AHRQ drew upon seven surveys submitted by vendors, a comprehensive literature review, and earlier CAHPS work to develop the draft HCAHPS instrument. In instances when AHRQ drew upon items in existing surveys from vendors, it made material changes modifying wording and changing the response sets. The draft instrument reflects the CAHPS design principles and closely resembles other CAHPS surveys developed over the years.

We have been, and will continue to be, very interested in receiving public input on this work. We published the draft instrument in the Federal Register on February 5 and received a number of very useful suggestions. On June 27 we published another Federal Register notice, requesting further comments on the draft instrument and options for survey administration. This comment period was designed to ensure that all interested parties had a chance to give us their thoughts.

In cooperation with AHRQ, CMS designed a pilot test for the draft instrument. This instrument was tested as part of the CMS Hospital 3-state pilot project in Arizona, Maryland, and New York. Delmarva, the coordinating Quality Improvement Organization (QIO) for the pilot, contracted with National Opinion Research Center (NORC) to administer the draft instrument. The pilot served as a laboratory for assessing the draft HCAHPS instrument. The data was used to examine the reliability and validity of the items in the draft HCAHPS questionnaire and identify items that are the most useful for public reporting. AHRQ, through its CAHPS grantees, analyzed the psychometric properties of various questions using the pilot data to identify the best questions for the final instrument. The description of the analyses from the pilot will be available on [www.cms.hhs.gov/quality/hospital](http://www.cms.hhs.gov/quality/hospital).

As a result of the pilot test and input from the Federal Register notices, a shorter version of the instrument was developed. The revised instrument includes 24 core HCAHPS items covering patient perspectives about their care from nurses; their care from doctors; the hospital environment; their experiences in the hospital; information at discharge; and overall rating of the hospital. It also includes eight questions on respondent demographics and other information that will be used to take into account differences in the mix of patients across hospitals so we can make fair comparisons. Again, the revised survey was not modeled after any one existing commercial survey. AHRQ drew upon the pilot results and public input to develop the revised instrument. The revised instrument reflects the CAHPS design principles and closely resembles other CAHPS surveys developed over the years.

HCAHPS should be seen as a core set of questions that can be administered as a stand-alone questionnaire or combined with a broader set of hospital-specific items. HCAHPS is designed to gather only the necessary data that CMS needs for comparative public reporting and should complement, not replace, data that hospitals are currently collecting that support improvement in internal hospital customer services and related activities.

CMS anticipates distinct roles for hospitals and survey vendors in the national implementation of HCAHPS. Hospitals and vendors will be responsible for all aspects of data collection, including: developing a sampling frame of relevant discharges, drawing the sample of discharges to be surveyed, collecting survey data from sampled discharges, and submitting HCAHPS data to CMS in a standard format. The government will be responsible for support and public reporting, including: providing technical assistance, conducting a mode experiment, ensuring the integrity of data collection, accumulating HCAHPS data from individual hospitals, producing case mix-adjusted hospital-level estimates, conducting research on the presentation of data for public reporting, and publicly reporting the comparative hospital data.

Unlike other survey efforts that CMS has undertaken, a robust effort to accumulate patient satisfaction and perspectives on hospitals is already underway in the private sector, and many hospitals already work with an outside vendor to administer a patient satisfaction survey. These vendors have established long-term business relationships with hospitals. Each vendor has a unique business model, instrument, and administration protocol, in which they specialize. Customization for each hospital allows the vendor to provide a tailored product and to distinguish itself from its competitors. There is wide variation in administration protocols, such as all-mail, all-phone, and other modes (interactive voice recognition, touch-screen), number of refusals, Computer Assisted Telephone Interviewing (CATI) scripts, and letter language.

Variation in administration protocols can be a significant source of bias in results reported across hospitals. Appropriate actions are needed to reduce variability both prior to administration and in the data collection phase. This can be accomplished through the use of a standard survey and through statistical adjustment of collected responses to take

into account differences in administration protocol, patient populations, and response propensities.

On June 27, 2003, CMS began to address these issues, publishing a Federal Register Notice requesting public input on the preferred form of allowable protocols and justification for allowing such variability. CMS specifically requested input on the topics of mode of administration, periodicity of administration, specific criteria for inclusion in the sampling frame, and necessary additional elements.

CMS used the June 27<sup>th</sup> Federal Register Notice and comment process to identify survey administration procedures. CMS' goal was to identify a set of protocols and adjustments that can generate accurate data for public reporting and also be combined with and complement existing surveys used for quality improvement.

### **A 1.2 Survey Approach**

HCAHPS is designed to gather only the necessary data that CMS needs for comparative public reporting. It should complement, not replace, data that hospitals are currently collecting that support improvement in internal hospital customer services and related activities. Thus, HCAHPS should be seen as a core set of questions that can be administered as a stand-alone questionnaire, or combined with a broader set of hospital-specific items.

The patient perspectives on care survey will be administered to a sample of adult patients, with at least one overnight stay, discharged from participating acute care hospitals. Hospitals/vendors will sample 1,000 live inpatient discharges from acute care hospitals per year. When fully implemented we intend for this survey to be conducted continuously throughout the year with approximately 80 discharges sampled per month per hospital. CMS realizes that 1,000 live discharges may not be possible for some small hospitals. We are currently working with AHRQ to determine the necessary sample size for small hospitals to ensure a representative sample. The sample requirements will be made available to all hospitals as part of the training and technical assistance material being developed for national implementation. We will also make these requirements available on our website ([www.cms.gov](http://www.cms.gov)) as they become available.

We are currently working to determine how quickly results from this survey can be publicly reported on [www.medicare.gov](http://www.medicare.gov). Initially, the survey may be conducted over a short period of time to more quickly start publicly reporting the data. We are also considering whether there should be a short HCAHPS trial period for hospitals that would entail no public reporting of the data. When fully implemented, we intend for this survey to be conducted continuously throughout the year with approximately 80 discharges sampled per month per hospital. Again, the number of discharges will be less for smaller hospitals. The data would be accumulated such that at all times a year's worth of data for each participating hospital would be reported on the website. Once the survey is fully operational the website will be updated on a quarterly basis by removing the oldest quarter of data for each hospital and inserting the most recent quarter.

Hospitals/vendors will draw a simple random sample of live discharges taking into account specified exclusions. The exclusions are as follows: psychiatric, pediatric (under age 18) patients, and OB/GYN patients with stillborns or miscarriages. The current instrument does not address the behavioral health issues pertinent to psychiatric patients. We will continue to explore survey issues pertinent to this population. The instrument also does not address the situation of pediatric patients and their families. We will be working in the future on developing a pediatric version of HCAHPS. We have decided to exclude OB/GYN patients with stillborns or miscarriages because of the very sensitive nature of those events. Should a hospital/vendor choose to implement a slightly different sampling strategy from simple random sampling, the hospital/vendor will be required to submit to CMS the information needed to adjust the data using SUDAAN or comparable software to ensure that all data being publicly reported are equivalent.

Patients will be sampled and surveyed between 48 hours and 12 weeks following discharge. To accommodate the different modes used by hospitals/vendors in their current surveys, hospitals/vendors will be able to choose among three different modes of administration: mail only, telephone only, and mixed mode. The mail only version will entail three separate mailings. Each mailing will contain both the cover letter and the actual survey instrument. The telephone only version will require up to ten call attempts. The mixed mode version will consist of two separate mailings (each containing a cover letter and the survey) with up to five telephone call attempts of nonrespondents. Hospitals/vendors will obtain more detailed instructions about the modes, including timing of mailings and telephone contacts, content of cover notes, Computer-Assisted Telephone Interviewing (CATI) scripts, and any other additional requirements as part of the training and technical assistance materials being created for national implementation. While a hospital/vendor may request approval for some variant of the HCAHPS implementation procedures, the hospital/vendor must demonstrate to CMS that it will be able to achieve at least a 50 percent response rate with the variant.

Because we realize that allowing different modes may introduce biases, CMS will be conducting a large-scale mode experiment with approximately 50 hospitals around the country in Spring 2004. The sample per hospital will consist of 300 discharges per hospital with 100 discharges being randomly assigned to mail only, phone only and mixed modes. In the national implementation the survey data will be adjusted to take into account the effect of different modes of administration, if any are found.

Initially, the survey will be conducted in English and Spanish. Over time CMS will work with AHRQ to develop additional versions in different languages.

The hospital/vendor may add its own questions following the HCAHPS core items (which consist of questions 1 through 24 on the current HCAHPS instrument). The hospital/vendor will have the option of placing its own additional questions on the survey provided they follow the HCAHPS core items. Our current thinking is that the hospital/vendor will be permitted to add up to 30 appropriate questions to the survey following the core HCAHPS items. None of the core HCAHPS items, however, may be

altered, eliminated, or re-ordered in any way. The demographic, or “About You”, HCAHPS questions (which comprise questions 25 through 32 on the current instrument) can be placed anywhere in the questionnaire following the HCAHPS core items. Responses to the additional questions will not be submitted to CMS as part of the public reporting requirement.

Once data have been collected, the hospital/vendor will be required to submit its data to CMS in specified file formats. Data submission will occur quarterly, thus the hospital/vendor will accumulate its data for three months prior to data submission.

## **A2.0 Purpose and Use of Information**

The HCAHPS survey instrument, developed under the CAHPS umbrella, is a reliable and valid instrument that any organization can use at no cost to obtain patient data about hospital experiences. This tool will also be adopted by the Quality Initiative: A Public Resource on Hospital Performance.

Though the important purposes of the patient perspectives on care survey are consumer choice and hospital accountability, we intend and expect that the collection and reporting of these data will stimulate the desire for quality improvement.

A standardized hospital survey from the patient’s perspective will generate both universal measures and comparative data for consumers who need to select a hospital, and a new incentive for hospitals to further improve their quality of care and accountability. There are many excellent patient surveys in use, but most are proprietary and not constructed in a way that would allow patient assessment of hospital care across the country -- that is, these existing instruments are not standardized. A standardized instrument will allow consumers to make “apples to apples” comparisons among hospitals, allow hospitals and hospital chains to self compare, and provide state oversight officials with useful data.

## **A 3.0 Use of Improved Information Technology**

Hospitals/vendors may use a Computer Assisted Telephone Interviewing (CATI) system for telephone modes of administration. Hospital discharge records will be accessed to select survey samples. For those using CATI, respondents’ names and telephone numbers will be downloaded into the CATI sample management software module. Survey data are entered directly into the CATI system as the telephone interview is taking place. The use of CATI enables precise sample management and fast turnaround of data.

## **A 4.0 Efforts to Identify Duplication**

Unlike other survey efforts that CMS has undertaken, robust efforts to accumulate patient satisfaction and perspectives on hospitals are underway in the private sector. Many hospitals already work with an outside vendor to administer a patient satisfaction survey. These vendors have established long-term business relationships with hospitals. Each

vendor has a unique business model, instrument, and administration protocol in which they specialize. Customization for each hospital allows the vendor to provide a tailored product and to distinguish itself from its competitors. However, there is wide variation in administration protocols, including all-mail, all-phone, and other modes (interactive voice recognition, touch-screen), number of refusals, CATI scripts, and cover letter language.

Existing patient satisfaction surveys are not useful for the goals of this project because of the wide variety of protocols under which they are administered and the absence of comparability among the patients surveyed or their response propensities.

On June 27, 2003 CMS began to address this issue, publishing a Federal Register notice requesting public input on the preferred form of allowable protocols. CMS specifically requested input on the topics of mode of administration, periodicity of administration, specific criteria for inclusion in the sampling frame, and necessary additional elements.

The HCAHPS Initiative encompasses both a standard core instrument and a set of implementation procedures that will enable fair and objective comparisons across hospitals. CMS has used the Federal Register notice and comment process to identify potential forms of survey administration. In our administration approach we have tried to balance the need for accurate and comparable data for public reporting with the allowance of flexibility in implementation.

#### **A 5.0 Involvement of Small Entities**

CMS and AHRQ are currently calculating the sample size to be required of small hospitals. The sample size will correspondingly be smaller for very small hospitals. Final sample sizes for small hospitals will be included in the national training materials for HCAHPS.

#### **A 6.0 Consequences if Information Collected Less Frequently**

Our objective for HCAHPS is to collect data continuously throughout the year. (As mentioned above, the initial data collection may be over a shorter period of time.) In our June 27<sup>th</sup> Federal Register notice requesting input on implementation procedures, the majority of responders suggested that continuous data collection would be less disruptive to their current survey procedures. Responders raised concerns about seasonality effects if the data were collected at only one point during the year. There was also concern that ongoing efforts to improve quality would not be reflected in a timely manner if data were only collected and reported once a year.

#### **A 7.0 Special Circumstances**

There are no special circumstances with this information collection request.

#### **A 8.0 Federal Register Notice**

CMS will publish the attached Federal Register notice.

### **A 9.0 Payments/Gifts to Respondents**

There are no provisions for payments or gifts to respondents.

### **A 10.0 Assurance of Confidentiality**

All information obtained through the survey will be reported in the aggregate. No individual respondent's information will be reported independently or with any identifying information. All identifying information will be removed from analytic files and will be destroyed after the aggregated information is assembled.

### **A 11.0 Information of a Sensitive Nature**

There are no questions of a sensitive nature on the survey.

### **A 12.0 Estimates of Annualized Burden**

As of November 19, 2003, some 2,197 hospitals have pledged to participate in the Quality Initiative: A Public Resource on Hospital Performance. We are not certain at this point how many of these hospitals will also participate in HCAHPS. However, for purposes of this submission we are assuming all of the hospitals will participate in HCAHPS. Thus, approximately 2,197,000 patients (2,197 hospitals x 1,000 patients per hospitals) will be surveyed. The survey takes approximately 10 minutes to complete. Therefore, the total annual burden hours would be 366,167 hours. This is an over estimate since small hospitals will sample fewer patients. (The annualized burden will be directly affected by both the number of hospitals that actually participate and the proportion of those that are small and thus sample fewer patients.)

We will also conduct a mode experiment in Spring 2004 in which 50 hospitals will participate. We plan to survey 300 patients per hospital, resulting in 15,000 patient surveys. As the survey takes approximately 10 minutes to complete, the burden hours would be 2,500 hours.

### **A13.0 Capital Costs**

There is no capital cost associated with this information collection request.

### **A14.0 Estimates of Annualized Cost to the Government**

There is no cost to respondents other than approximately 10 minutes of their time. Costs to the government include: providing technical assistance to the hospitals/vendors implementing the HCAHPS survey; ensuring the integrity of data collection; conducting a mode experiment; accumulating data from individual hospitals/vendors; producing case-mix adjusted hospital-level estimates; conducting research on the presentation of

data for public reporting; and publicly reporting comparative hospital data. The government support is going to be through a contract with the Health Services Advisory Group (HSAG), the Arizona Quality Improvement Organization (QIO). The cost of this support is estimated to be \$2,000,000.

### **A 15.0 Changes in Burden**

Two factors account for a change in burden from our previously cleared HCAHPS submission. First, more hospitals will be surveyed through this submission as the initial submission was for only the pilot survey while this submission is for national implementation. Second, the length of the survey has been decreased by half in this submission.

### **A 16.0 Time Schedule, Publication, and Analysis Plans**

Training of hospitals/vendors for HCAHPS will begin immediately following the receipt of approval by OMB. Data collection for national implementation should begin during Summer 2004. We are still determining the period of time over which initial data collection will occur. Once data are submitted for public reporting, CMS (through the Arizona QIO, HSAG) will be responsible for preparing the data for public reporting on the website. This preparation includes making the necessary adjustments to the data for the effects of mode, non-response, case mix and any approved exceptions to the HCAHPS administration procedures. The data for public reporting will also be adjusted to take into account differences in the mix of patients across hospitals so we can make fair comparisons. We will be using questions in the “About You” section of the survey as well as information from the discharge record to adjust the data. Analysis to determine which items should be in this adjustment is ongoing. Some of the current items in the “About You” section may be excluded if they are not needed for this adjustment.

### **A 17.0 OMB Expiration Date Exemption**

Not applicable. We are not seeking any exemptions.

### **A 18.0 Exceptions to Certification Statement**

The proposed data collection does not involve any exceptions to the certification statement identified in line 19 of OMB Form 83-I.

## **COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS**

### **B 1.0 Respondent Universe and Sampling Methods**

The primary objective of this survey is to obtain comparative hospital information from the perspective of patients for public reporting. Through the Quality Initiative: A Public Resource on Hospital Performance, hospitals will be able to volunteer for this effort. Each acute care hospital volunteering for this effort will take a random sample of live acute care hospital discharges, excluding pediatric patients, psychiatric patients, and OB-GYN patients with stillborn or miscarriage.

Our target for completed surveys is 500 completed surveys/interviews annually from each hospital participating in this Initiative. This target will be smaller for smaller hospitals. We anticipate that we will get around a 50 percent response rate with the modes proposed for this effort; thus, we will be sampling 1,000 discharges each year in participating hospitals. While we will strive for a higher response rate, commercial surveys in this area generally achieve less than a 50 percent response rate. We will have information from the discharge records of participating hospitals to adjust for non-response bias.

#### **B.2.0 Information Collection Procedures**

The hospital/vendor will pull the sample of hospital discharges using information from the discharge record and administer the survey using mail only, telephone only or mixed mode methodology. The mail only version will consist of three mailings. Each mailing must contain a cover letter and the actual instrument. The telephone only version will require up to ten call attempts. The mixed mode version will consist of two mailings (each containing a cover letter and survey) with up to five telephone call attempts of nonrespondents. Hospitals/vendors will obtain more detailed instructions about the modes, including timing of mailings and telephone contacts, content of cover notes, Computer-Assisted Telephone Interviewing (CATI) scripts, and any other additional requirements as part of the training and technical assistance materials being created for national implementation. A hospital/vendor may request approval for some variant of the implementation procedures, but the hospital/vendor must demonstrate that they will be able to achieve at least a 50 percent response rate with the variant.

#### **B.3.0 Methods to Maximize Response Rates**

We are proposing three different modes of administration for the HCAHPS survey. For the mail only version of the survey procedures, we have proposed a three-wave mailing of the survey to try to increase response rates. Our experience from the HCAHPS pilot has shown us that two waves of mailing is not sufficient to achieve a 50 percent rate. Thus, we have increased this for the national implementation. We have proposed up to ten call attempts for the telephone only version. Hospitals/vendors will be required to make these attempts on different days of the week and at different times to help increase

response rates. The mixed mode methodology is the other option for completing this survey. This methodology is similar to that used by CMS for the health plan CAHPS® surveys. For the managed care CAHPS® survey CMS consistently achieves better than an 80 percent response rate. We realize that we cannot expect to get as high a response rate in the general population, but the combination of mail and telephone methods should help increase response rates.

We are currently analyzing data from the discharge record to determine what type of patients are less likely to respond to the survey. Models predicting the propensity to respond are being developed to adjust respondent weights for public reporting.

#### **B.4.0 Tests of Procedures**

Many of the items on this instrument are modifications of survey questions on hospital satisfaction surveys conducted by a variety of private survey vendors, or from other instruments in the CAHPS® family. Some items were newly developed by CAHPS® grantees with years of experience developing these types of questions. The items included in this revised instrument were all carefully tested as part of the HCAHPS pilot. In addition, we tested the proposed survey instrument using both mail and mixed mode methodologies, and in English and Spanish.

#### **B.5.0 Statistical Consultants**

Jack Fowler – University of Massachusetts, Boston  
Steven Garfinkel – AIR  
Ron Hays – Rand  
San Keller – AIR