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Implementation of Medicare CAHPS® Fee-for-Service Survey

Final Report for the 2004 Survey
Executive Summary

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EXECUTIVE SUMMARY

This report summarizes the methodology and findings of the 2004 Medicare Consumer Assessment of Health Providers and Systems (CAHPS®) Fee-for-Service (MFFS) Survey conducted for the Centers for Medicare & Medicaid Services (CMS) by RTI, with the assistance of RAND, Pearson NCS, and Discovery Research Group (DRG). The work was performed under subcontract to the Center for Health Systems Research and Analysis at the University of Wisconsin-Madison (UW), as part of UW's contract with CMS. More detailed information on many of the topics presented in this report is available in the individual project task reports prepared for the 2004 CAHPS MFFS survey.

Section 2: 2004 Medicare CAHPS Fee-for-Service Survey Questionnaire

The CAHPS surveys were developed using comprehensive reviews of the existing literature, focus groups with consumers, cognitive testing of survey content and question wording, and field testing of preliminary versions of individual items. A set of core items was developed for all consumers, and certain items were targeted for special subpopulations, such as Medicare managed care enrollees. The CAHPS items include evaluations (ratings) of care and reports of specific experiences with health plans. This combination of global assessments and reports about different aspects of health plan performance also allows users to link global evaluations with specific information to guide quality improvement efforts.

The MFFS questionnaire is based on the CAHPS core questionnaire for adult, privately insured populations developed as part of the CAHPS research project sponsored by the Agency for Healthcare Research and Quality (AHRQ). In 1998, the MFFS project team conducted a field test on a sample of MFFS beneficiaries in five states to test field procedures and evaluate the psychometric performance of standard CAHPS questions within this population. As a result of this field test, the 12-month recall period for health-related experiences was shortened to 6 months. A 6-month recall period is also used for the Medicare Advantage (MA) CAHPS Survey. A report on the findings of the CAHPS MFFS field test survey is available electronically from CMS. The MFFS survey has been implemented annually in all 50 states, the District of Columbia, and Puerto Rico since fall 2000, with the U.S. Virgin Islands added in 2003.

The MFFS project team worked extensively with CMS and the MA project team during the first 7 months of 2004 to coordinate and discuss changes to the questionnaires that would be used in the 2004 Medicare CAHPS surveys. As a result of those discussions, CMS and the project teams made a number of changes to the 2004 surveys. The most significant changes were the deletion of six questions that had been included in the questionnaire in prior survey years and the addition of some new questions about prescription drugs and health promotion advice.

We present details of the changes made to the 2004 MFFS questionnaire (included in ***Appendix A***) in Section 2 of this report.

Section 3: Sample Selection, Weighting, and Data Presentation

For the 2004 MFFS survey, the MFFS project team selected a sample of 178,650 fee-for-service Medicare beneficiaries from a sampling frame constructed from the July 2004 version of

CMS' Enrollment Database (EDB). The frame comprised almost 32.5 million persons who were continuously enrolled in fee-for-service Medicare for at least 6 months, did not have a representative payee, were over 18 years of age, and resided in any of the 50 states, the District of Columbia, Puerto Rico, or the Virgin Islands.

Prior to sample selection, we constructed local geographic areas (geounits), with each local area consisting of one or more counties. Factors considered for grouping counties included geographic contiguity, Medicare Advantage contract areas, and metropolitan statistical area (MSA) and state boundaries. County samples were then aggregated into geographic areas approximating fee-for-service market areas. In the 2000 MFFS survey, the selection allocation was defined to be 600 beneficiaries from each of the 275 geounits in the United States and 3,000 beneficiaries from Puerto Rico, for a total sample size of 168,000 beneficiaries in 276 geounits. Subsequent survey years involved additional sample and/or reallocations of sample but adhered to the goals of the original design.

For the 2001 MFFS survey, the total sample size was increased to 177,950 beneficiaries in 276 geounits. For the 2002 survey, no change was made to the number of geounits or to the total (national) MFFS sample size from the 2001 survey. However, we reallocated the sample for the 2002 survey to provide better power for estimates in counties that experienced significant changes in MA enrollment and/or counties with insufficient sample owing to higher than expected nonresponse in the prior MFFS survey. For the 2003 MFFS survey, we added one geounit for the Virgin Islands, bringing the total number of geounits in our study design to 277 and our total sample size to 178,650. In addition, we reallocated the sample for the 2003 survey, based on responses from the previous year. For the 2004 survey, we retained the number of geounits and the total (national) MFFS sample size from the 2003 survey. However, we reallocated sample in 2004 so that selected counties in five "donor" states contributed a proportionate amount of their allocated sample in excess of 330 completes from the previous year to recipient counties in Idaho and Kentucky. The states selected as donors of sample were those with the most effective sample size when compared with MA.

We stratified the MFFS population by county and selected a simple random sample from within each county. We then assigned an initial sampling weight to each selected beneficiary as the inverse of the selection probability, reflecting the differential selection rates used to identify beneficiaries from each county. To reduce the potential biasing effects of differential nonresponse, we post-stratified the initial sampling weights of respondents to sum to 337 separate counts of MFFS beneficiaries obtained from the October 2003 version of the EDB, which is the approximate midpoint of data collection. The counts included 277 totals for each of the local geounits in the United States, Puerto Rico, and the Virgin Islands, as well as 60 totals formed by the intersection of the age, gender, race, and dual Medicare/Medicaid eligibility factors.

Using responses from the 2004 survey, we evaluated the effect of the MFFS analysis weights on the accuracy of the survey estimates by comparing the mean square errors (MSEs) of weighted estimates to the corresponding MSEs of unweighted estimates. The MSE, defined as the sum of the bias squared and the variance, is used to measure the combined effect of bias and variance on the survey estimates. We assumed that the weighted estimates represent unbiased estimates because of the bias reduction and improved coverage that the weights offer. We

estimated the bias associated with the unweighted estimates as the deviation from the corresponding weighted estimate. We used the CAHPS macro with case-mix adjustment (CMA) to generate both the weighted and unweighted state-level estimates of two CAHPS ratings (Rate Medicare and Rate Health Care) and three CAHPS composites (Needed Care, Care Quickly, and Good Communication).

The results indicate that the weights are ignorable for many state estimates, especially those for the Good Communication composite. However, the weights are nonignorable for a number of state estimates of the overall ratings of Medicare and health care and the Needed Care and Care Quickly composites. Because all of the root MSEs (square root of the MSE) for the weighted estimates are either equal to or lower than those for the unweighted estimates, we conclude that the weighted analysis of the CAHPS MFFS survey data can improve the accuracy of state-specific estimates of CAHPS outcomes without adversely affecting the associated statistical power.

For the 2004 MFFS survey, we constructed a three-category disability variable based on the ADL survey question with the following categories: "Severe ADL Limitations," "Mild ADL Limitations," and "No ADL Limitations."

Finally, we continue to maintain the MFFS trend data file, which combines the survey results from all 5 years of the MFFS survey (2000 through 2004). Because there are some differences in the survey instruments used during this time period, we created a crosswalk of survey questions. Users of the trend file should be aware of the differences in the survey instruments across the 5 years. These differences might lead to statistically significant trends that may, in fact, be artifacts of the question differences. The trend file assumes that the samples from each of the survey years are independent of each other and, hence, can be combined as one sample.

We present details of the sample selection, weighting, and data presentation activities for the 2004 MFFS survey in Section 3.

Section 4: Data Collection

The 2004 implementation of the MFFS survey was its fifth round. The MFFS survey is a self-administered mail survey with telephone follow-up of nonrespondents that also offers sample members the option of calling a toll-free number to complete the survey over the telephone. The biggest change in the 2004 implementation was that we increased the number of call attempts allowed to any sample member from 12 to 16 attempts. This change was based on the results of research conducted to learn the optimal number of calls for this population. In general, during telephone surveys we find that returns diminish after 6 call attempts. However, with the MFFS population there is no drop in response up to 16 call attempts. This finding was presented in a paper titled "The Costs and Benefits of Improving Response Rates of the CAHPS® Medicare Fee-for-Service Survey," which was published in the proceedings of the *Joint Statistical Meetings of the American Statistical Association* (Campbell et al., 2004).

The data collection period for the 2004 MFFS started with the mailout of the prenotification letter on September 8, 2004, and ended with the close of the telephone follow-up on February 7, 2005. The response rate achieved for the 2004 MFFS was lower than that for the

2003 MFFS. The response rate among eligible sample members was 66.9 percent for the 2004 MFFS, which is 2.4 percent lower than the 2003 MFFS response rate of 69.3 percent. We also noted a decrease in the number of beneficiaries who completed the survey in Spanish. In 2004, only 1,154 surveys were completed in Spanish, and only 49 percent of those were completed by beneficiaries living in Puerto Rico. In 2003, there was a peak in the completion of surveys in Spanish, with 3,104 such surveys completed.

We present details of the data collection activities for the 2004 MFFS survey in Section 4.

Section 5: Using the Minimum Data Set (MDS) to Identify the Institutionalized in the Medicare Fee-for-Service Population

The Long-Term-Care Minimum Data Set (MDS) is a standardized, primary screening and health status assessment tool that forms the foundation of the comprehensive assessment for all residents of long-term care facilities certified to participate in Medicare or Medicaid. The MDS contains items that measure physical, psychological, and psychosocial functioning and provides a multidimensional view of the patient's functional capacities. MDS data from CMS are available starting in June 1998, although CMS does not recommend using MDS data until October 1998.

We acquired an extract of the November 1, 2003, MDS for institutionalized CAHPS MFFS sample members selected for the 2000, 2001, and 2002 surveys. We created a "finder" file of the 2000 through 2002 MFFS sample members, which included information about each MFFS sample member that could be used to obtain the MDS assessments (if any) for that member. The health insurance claim (HIC) number was used to uniquely identify each member. The finder file was matched with the MDS, and assessments were extracted for all sample members found to have records in the MDS to create an assessment-level file.

A stay-level data set was created from the assessment-level data set by creating one record for all assessments done during one stay. A person-level data set was then created from the stay-level data set by aggregating the stays for one person into one record. The institutionalized status variable, *mdsinst*, was created by examining each person's stays and creating an aggregated variable. Analyses of the MFFS data using the *mdsinst* variable were performed with the person-level data set.

We present details of our analyses using this constructed variable in Section 5.

Section 6: Case-Mix Adjustment

The CAHPS MFFS survey is centered around two types of comparisons: (1) beneficiary comparisons of MFFS and MA (formerly Medicare Managed Care) within local areas and (2) administrative comparisons of MFFS across local areas. Case-mix adjustment (CMA) is a central element in these comparisons. From ratings and reports of care, CMA attempts to remove response patterns that are systematically associated with such patient-level characteristics as demographics, socioeconomic status (education and Medicaid dual eligibility), and general health status, which may vary considerably across reporting units. These systematic patterns of association may reflect "response bias"—response patterns that do not correspond to actual

differences in quality of care. In any event, these are patient characteristics that are generally agreed to be beyond the control of providers or plans once they have been selected by beneficiaries. The goal of CMA can therefore be thought of as follows: to estimate the ratings and reports that a plan or collection of MFFS providers would have received if all providers and plans treated the same standardized population of patients (Medicare beneficiaries). This adjustment should make attributions of ratings and reports to MFFS providers and MA plans more appropriate, supporting better decision making by beneficiaries and quality improvement by CMS and Quality Improvement Organizations (QIOs).

The two goals of MFFS CMA (within-MFFS comparison and MFFS-vs.-MA comparison) suggest similar, but slightly different, CMA models. ***Table ES.1*** describes the independent variables recommended for case-mix adjustment for both models.

Table ES.1
Description of independent variables used in MFFS case-mix adjustment (2004)

Variable	Response options
Age	<44, 45-64, 65-69, 70-74, 75-79, 80-85, >85
Education	<8th grade, some high school, high school graduate or GED, some college (but less than 4-year degree), 4-year college graduate, >college graduate (some graduate school beyond the 4-year degree)
General health perception	Excellent, very good, good, fair, poor
Mental health perception	Excellent, very good, good, fair, poor
Proxy respondent status	No assistance on survey, someone helped but did not answer for you, someone answered for you
Dual-eligibility indicator (eligible for Medicaid program)	Yes, no

The present study found that the case-mix adjusters employed in 2001 through 2003 MFFS-vs.-MA CMA (age, education, self-rated health status, self-rated mental health status, and proxy respondent status[1]) constitute an effective case-mix model for both comparison purposes. Self-rated health, self-rated mental health, and education were the three most important CMA variables. An indicator of dual eligibility, long used in the within-MFFS model, is a useful addition to the MFFS-vs.-MA model, given the new inclusion of the dually eligible in these comparisons. These findings are consistent with CMA results for 2000 through 2003.

[1] While proxy respondent status has only a small empirical effect on CMA, it has been included because many stakeholders feel it is important for the face validity of CMA.

Within-MFFS CMA employs the above independent variables plus dummies corresponding to the geographic units being compared (county-based sampling stratum, state, or CMS region) in a linear regression. In these regressions, CAHPS ratings in reports serve as dependent variables, sometimes in their original forms, sometimes dichotomized to correspond to displays of data to consumers. Although age is very important for adjusting the rating of Medicare, the most important CMA variables for within-MFFS CMA in 2002 through 2004 were education and self-rated mental health.

In MFFS-vs.-MA CMA, these same variables from ***Table ES.1*** also serve as independent variables in a linear regression, but dummies correspond to MA plans, with MFFS treated as an additional "plan." While the direction of CMA coefficients is similar for MFFS and MA, the magnitudes of the effects sometimes differ. In 2000 and 2001, the well-established tendency of healthier beneficiaries to rate their care more positively or to report better health care experiences was considerably stronger in MA than in MFFS, with MA slopes generally 50 to 100 percent larger than MFFS slopes for the general self-rated health item for most subjective global ratings and many objective report items. In other words, ratings and reports of one's health care were considerably more sensitive to one's (general) health status in MA than in MFFS. In 2002 through 2004, this pattern was largely restricted to the global ratings. If this is a reliable trend, and if one considers the report items to be more objective, one possible interpretation of these findings would be that health-status-based differences in MFFS and MA experiences may be diminishing, though not the perceptions of those differences. Interestingly, the self-rated mental health item did not follow this pattern; mentally healthier beneficiaries reported more positively than less mentally healthy beneficiaries to the same extent in MFFS and MA, 2000 through 2004. In the case of the global rating of Medicare or Medicare Advantage plan, the tendency of the dually eligible to be especially positive about Medicare was stronger than the tendency of the dually eligible to be especially positive about MA. For three report items within the Needed Care composite and three report items within the Care Quickly composite, the dually eligible provided less favorable reports than others within MFFS, whereas within MA dually eligible differed little or not at all from other beneficiaries.

A major implication of the difference in general health status coefficients is that the difference between the case-mix adjusted mean of an MA plan and an MFFS reporting entity depends on the reference population. Case-mix adjustment to a healthy reference population would be relatively more favorable to MA, and case-mix adjustment to an unhealthy reference population would be relatively more favorable to MFFS. In 2000 through 2004 Medicare Compare consumer materials, MFFS-vs.-MA CMA used the midpoint of MFFS beneficiary and MA beneficiary characteristics as the reference population. Because of the generally poorer health status of MFFS beneficiaries (even excluding the dually eligible), the general health perception (GHP) component of CMA tends to adjust in favor of MFFS relative to MA.

In comparing MFFS and MA, there was concern that underlying geographic factors not captured in a case-mix model might inappropriately influence MFFS-vs.-MA comparisons. To ensure geographic equivalence of state-level comparisons, county-based "geographic

equivalence weights" (GEW) were created in the states[2] where MA exists. These weights were then combined with MFFS nonresponse weights.

Comparison weights have gone from moderate adjustments in favor of MA in 2001 to very small adjustments in 2002 through 2004. One interpretation is that MFFS sample was initially scarce in the geographic regions that had the least positive Medicare experiences among those regions with MA penetration. The shrinking effect of the comparison weights may be attributable to the reallocation of MFFS sample into the counties with high MA penetration but low population that were initially unrepresentative, in the efforts to reduce the design effect of the comparison weights. In other words, the geographic distribution of the MFFS sample is much better matched to MA in 2004 than it was in 2001.

The impact of case-mix adjustment on within-MFFS comparisons has remained moderate. The adjustments for the most affected states are quite substantial for both between-state comparisons of MFFS and within-state comparisons of MFFS with MA. Nationally, case-mix adjustment has gone from moderate adjustments in favor of MA in 2001 to small adjustments in favor of MA in 2002 to moderate adjustments in favor of MFFS in 2003 and 2004. A similar pattern exists for case-mix adjustment of state-level comparisons of MA and MFFS, except that the amount of adjustment of these estimates by CMA has increased notably in 2002 through 2004.

Adjustments favoring MA probably correspond to MA having a higher proportion of certain types of negative responders: the young and the better educated. Adjustments favoring MFFS probably correspond to MFFS having a higher proportion of a different class of negative responders: the unhealthy. The shift from adjustments favoring MA to adjustments favoring MFFS could mean that age and education selection into MA is becoming weaker or is being dominated by stronger selection on the basis of health. Future research should investigate trends in MFFS-vs.-MA case-mix demographics.

We present details of our case-mix adjustment activities in Section 6.

Section 7: Beneficiary Health Status and Health Care Experiences: Differences Between Medicare Advantage and Fee-for-Service, 2000-2003

Section 6 (Case-Mix Adjustment) notes persistent differences between MFFS and MA in the tendency for healthier beneficiaries to report more positive experiences. While this tendency exists within both systems, it has generally been stronger for MA than for MFFS.

This pattern suggests the possibility that differences between MFFS and MA beneficiary experiences might differ by beneficiary health status. If this were the case, beneficiaries might want to consider their own health status when comparing MFFS and MA, and reporting that clarified such distinctions might prove useful.

To address this question, we made national comparisons between MFFS and MA on outcomes from the 2000 through 2003 CAHPS Medicare surveys within subgroups defined by

[2] Including the District of Columbia and Puerto Rico.

self-rated beneficiary health status. Within each combination of year and health status category, we compared MFFS and MA nationally for each of a series of CAHPS survey outcomes. To ensure that annual comparisons reflected actual change within the same geographic regions, rather than changes in managed care penetration, we restricted comparisons to a common set of counties that had both MFFS and MA beneficiaries in each of the 4 years.

Sample

The geographic area used for this study consisted of the 617 counties within 40 states where beneficiaries had a choice between MFFS and MA in each of the 4 years, 2000 through 2003. This area included more than 90 percent of MA beneficiaries and about half of all MFFS beneficiaries in any given year. The total corresponding sample sizes were 610,231 MA and 220,584 MFFS beneficiaries. No CMS region contributes more than 19 percent of the sample for MFFS or MA.

Variables

Six outcomes reported on the Medicare Compare web site were used as outcomes. They included all three report composites (Care Quickly, Needed Care, Good Communication) and one global rating (Care Received). Also included were two reported measures of immunization (Flu, Pneumonia).

Beneficiaries were classified into three categories of self-rated health: “Excellent or very good,” “Good,” and “Fair or poor.” Education, age, proxy respondent status, and county of residence were employed as categorical case-mix adjusters.

Models

A total of 72 linear regressions were performed, one for each factorial combination of the six outcomes, 4 years, and three self-reported health status categories. These models were performed using the CAHPS macro, adjusting for education, age, proxy response status, and exact county of residence. This is equivalent to a linear regression with the CMA variables and an MFFS indicator predicting each outcome. We examined the coefficients associated with the MFFS indicator and their statistical significance at the .05 level of statistical significance.

Results

Overall Levels—One overall pattern that emerged was that performance was consistently high. The mean global rating of care received ranged from 84 percent to 92 percent of its maximum possible value, with more positive experiences for those in better health. The mean composite score ranged from 71 percent to 95 percent of its maximum possible value, with more positive experiences for those in better health. Immunization rates ranged from 57 percent to 78 percent, with lower rates for those in better health. This result probably reflects a perception of the severity of the need, even though these immunizations are indicated for all beneficiaries.

Direction and Significance of Differences—A clear split is apparent between the immunization outcomes on the one hand and the beneficiary ratings and reports on the other. In

the case of immunization, all 24 cells favor MA. MA has consistently provided higher rates of both immunizations to beneficiaries of all health statuses.

For the other four outcomes, 35 of 38 comparisons favored MFFS, only 2 favored MA, and 11 did not differ at $p < .05$. The advantage of MFFS was most consistent for those in fair or poor health, where MFFS was rated higher in 14 of 16 comparisons and MA was rated higher in none. The outcome that most consistently favored MFFS was Care Quickly (significantly better in 10 comparisons of 12).

It also appears that the consistency of the MFFS advantage on these items increased from 2000 to 2003. In 2000, 5 comparisons of 12 favored MFFS and 2 favored MA. In 2001 and 2002, 18 of 24 favored MFFS. By 2003, all 12 favored MFFS.

Size of Differences—Immunization rates for MA are 4 to 7 percent higher than MFFS for flu and 5 to 10 percent higher than MFFS for pneumonia. The differences are greatest for those in fair or poor health. The advantage of MFFS over MA for the composites and the global rating is generally small (0.03 to 0.20 standard deviations averaging across health status; greater than 0.2 standard deviations for three of four measures for beneficiaries in fair to poor health).

We present details of these comparisons in Section 7.

Section 8: Subgroup Analyses

During the past 5 years, the Medicare CAHPS implementation project has provided CMS with data that have been used to help beneficiaries decide among health plan options. Data collected through the CAHPS MFFS and MA surveys have enabled beneficiaries residing in areas in which there is a choice of plans (managed care or fee-for-service) to access data comparing CAHPS measures for these plan types.

In addition to providing data for comparison among plan options, RTI has conducted analyses of the data to examine experience and satisfaction with health care services by subgroups of Medicare beneficiaries. Analyses of Medicare subgroups are conducted to gain a better understanding of the differences in health services experience and satisfaction among Medicare beneficiaries by geographic levels (national, regional, and state level), sociodemographic characteristics, health plan options, and health status. The MFFS population is quite heterogeneous in terms of demographic characteristics, region of residence, presence of supplemental insurance (whether with or without prescription drug coverage or Medicaid), and health-related characteristics. These subgroups of MFFS beneficiaries have vastly different experiences with and expectations of the health care system and, thus, may perceive the quality of and access to services differently.

In Section 8, we provide results of analyses of data from the 2004 CAHPS MFFS survey. (The complete survey instrument is provided in ***Appendix A***.) The analyses presented examine differences across selected subgroups for the most-positive CAHPS ratings and reports (i.e., "10," "Always," "Not a problem," or "Yes"). Nine performance indicators (five composite indicators based on reports and four rating indicators) were used from the survey:

- Needed Care Composite
- Good Communication Composite
- Care Quickly Composite
- Respectful Treatment Composite
- Medicare Customer Service Composite
- Rate Personal Doctor
- Rate Specialist
- Rate Health Care
- Rate Medicare

Key Findings

Key findings are summarized in two ways. First, we describe a 5-year trend (2000 through 2004), and then we provide specific highlights from the 2004 findings.

Trends From 2000 Through 2004—During the 5-year period (2000 through 2004), between 84 and 89 percent of MFFS beneficiaries reported that they always received needed care. Although there was a drop from 89 percent in 2001 to 84 percent in 2002, the proportion of beneficiaries reporting that they always received needed care remains quite high (86 percent in 2004). However, the proportion of beneficiaries who reported always getting care quickly during the 5-year period was lower—about three out of five beneficiaries (58 percent) reported no problems getting care quickly in 2004. There were no changes for the Care Quickly composite from 2003 to 2004 (58 percent), but the small differences in results for that composite between the 2003, 2002, 2001, and 2000 surveys may be due to changes in the wording of questions that make up this composite indicator.

Most-positive responses for the Respectful Treatment composite remained fairly constant over the 5-year period. Throughout the period, approximately four out of five beneficiaries (79 to 80 percent) reported optimal experiences with being treated respectfully by providers and their staff. However, less than two-thirds of beneficiaries provided most-positive responses to the Good Communication composite.

Of the composites, the Medicare Customer Service composite saw the largest drop overall and over any 2-year period (from 2003 to 2004). In 2004, 56 percent of beneficiaries reported most-positive experiences with Medicare customer service, a 6-percentage-point drop from the 62 percent reported in 2003. This decrease in most-positive responses for the Medicare Customer Service composite appears to be driven by increases in reports of problems for all three of the CAHPS questions that comprise the Customer Service composite. Beneficiaries responding to questions about customer service are those who made some attempt to seek

information about Medicare. During the same period, we observed an increase in the percentage of beneficiaries seeking information, from 13 percent in 2003 to 18 percent in 2004.

Approximately half of beneficiaries rated their health care, specialist, and personal doctor a "10" during the 5-year survey period. However, ratings of the Medicare health plan were lower overall and decreased substantially over the 5-year period. During the first 3 years of the reporting period, there was a gradual downward trend in best possible ratings of Medicare—47 percent in 2000, 46 percent in 2001, and 44 percent in 2002. The most noteworthy change in the ratings over the survey period was a 6-percentage-point decrease in the proportion of beneficiaries rating the Medicare health plan a "10"—from 44 percent in 2002 to 38 percent in 2003. The sharp downward trend slowed for 2004, with a slight decrease to 36 percent. This trend occurred despite no change in ratings of physicians, specialists, or overall health care during the period.

Patient experiences with getting care quickly and good communication were very similar for the MFFS and MA beneficiary populations. By contrast, a higher percentage of MFFS beneficiaries provided most-positive responses to the Needed Care composite during the 5 years, compared with their peers enrolled in MA. MFFS beneficiaries were also slightly more likely to provide the best ratings for their health care and the Medicare health plan compared with MA beneficiaries.

Sociodemographic Characteristics

2004 Highlights—For most CAHPS composites and ratings, beneficiaries between 18 and 45 years of age were less likely to provide most-positive responses than all other age groups. For the Needed Care and Respectful Treatment composites and ratings of the Medicare plan and overall health care in 2004, there was at least a 12-percentage-point difference between the proportion of most-positive responses reported by beneficiaries 80 years of age or older and those in the youngest age group, 18 to 45 years of age. For the Medicare plan rating, there was a 25-percentage-point difference for most-positive responses between the oldest age group and youngest age group—48 percent for beneficiaries 80 years of age or older versus 23 percent for beneficiaries 18 to 45 years of age. There is a general trend with age, and these age differences may reflect response tendencies, rather than better care for older beneficiaries.

Black (African American) beneficiaries were generally more likely than White beneficiaries or beneficiaries of other races to provide most-positive responses to CAHPS indicators in 2004. There was little to no difference between Whites and Blacks for most-positive responses to the CAHPS composites, with the exception of the Good Communication composite—72 percent of Black beneficiaries provided most-positive responses regarding their communication with providers, compared with only 66 percent of White beneficiaries. However, other races provided a lower percentage of most-positive responses for composites compared with both Whites and Blacks.

CAHPS composite results among Hispanic beneficiaries versus non-Hispanic beneficiaries were mixed. Hispanic beneficiaries provided a higher percentage of most-positive responses than non-Hispanic beneficiaries for the Good Communication and Medicare Customer Service composites, but a lower percentage of most-positive responses for the remaining

composites. For all the ratings, Hispanic beneficiaries were more likely than non-Hispanic beneficiaries to provide most-positive responses.

There was generally an inverse relationship between education and CAHPS ratings and composites. As education level increased among beneficiaries, the percentage of most-positive responses decreased. Although this was generally true for the composites, this relationship was more pronounced for the ratings.

Findings From 2000 Through 2004—A similar proportion of male and female MFFS beneficiaries provided most-positive responses to the CAHPS composite indicators, whereas 3 to 5 percent more women provided best possible responses to three of the four CAHPS ratings during the 5-year period. There was a consistent age effect, with younger beneficiaries less likely to report most-positive experiences than older beneficiaries during all 5 years. CAHPS indicator scores similarly varied by education during the 5-year period; less educated beneficiaries were consistently more likely to report most-positive experiences than more educated beneficiaries. Blacks were generally more likely to report most-positive ratings of satisfaction with care compared with Whites and beneficiaries of other races; however, their responses to composites, reflecting experiences with care, were similar to those of Whites. In general, beneficiaries of other races were less likely than White or Black beneficiaries to provide most-positive responses to all questions. Hispanics rated Medicare and their overall health care slightly higher than did non-Hispanics, but there was generally little to no difference in their composite scores during the 5-year period.

Health Status

2004 Highlights—For all indicators, excellent physical and mental health is associated with most-positive responses as compared with respondents in poor physical and mental health. For example, in 2004, there was a 14- to 15-percentage-point difference between the proportion of the healthiest beneficiaries and sickest beneficiaries providing most-positive responses for the Good Communication composite.

The self-report of a chronic illness had little association with composites and ratings. The only notable exception was for the Medicare plan rating, where a smaller percentage of beneficiaries with a chronic illness provided a “10” rating compared with beneficiaries who did not report having a chronic illness (36 percent vs. 42 percent).

Beneficiaries who had been hospitalized overnight at least once during the year prior to the survey were slightly more likely to rate their specialists a “10”; however, hospitalization during the prior year had little effect on other CAHPS scores during the 5 years. In 2004, disability seemed to have no effect on the CAHPS composites, with the exception of Medicare Customer Service—a smaller percentage of disabled beneficiaries gave most-positive responses than did nondisabled beneficiaries. Disabled beneficiaries gave a slightly higher percentage of “10” ratings for personal doctor and specialist; however, disability seemed to have no measurable effect on the health care or Medicare plan ratings. (See more below on disability status.)

Findings From 2000 Through 2004—During the 5 years and across all indicators, there was a strong and consistent association between health status and CAHPS scores; beneficiaries

reporting better physical and mental health status were more likely to provide most-positive responses for each CAHPS indicator.

Access to Care

2004 Highlights—Beneficiaries who were dually eligible for Medicare and Medicaid gave higher ratings than those who reported having additional insurance and prescription drug coverage; this was the case for all ratings in 2004. Dually eligible beneficiaries had the same health care experiences as beneficiaries with additional insurance and prescription drug coverage for several indicators. Two notable exceptions include the Needed Care composite, for which dually eligible beneficiaries provided a lower percentage of most-positive responses than beneficiaries with additional insurance and prescription drug coverage, and Medicare ratings.

Beneficiaries who reported having a personal doctor were generally more likely to provide most-positive responses, particularly for the composites and the ratings of health care and specialist in 2004.

Findings From 2000 Through 2004—During each of the 5 years, beneficiaries dually eligible for Medicare and Medicaid were more likely to rate their personal doctor, specialist, health care, and Medicare a "10" compared with those who had supplemental health insurance, with or without coverage for prescription drugs. Beneficiaries with supplemental health insurance were most likely to report always getting needed care over the 5 years, whereas dually eligible beneficiaries were most likely to report most-positive responses to the Good Communication composite. Beneficiary experiences with getting care quickly and respectful treatment did not vary by insurance coverage over the 5-year period. The relationship between insurance coverage and customer service was inconsistent during the period. There were no differences by insurance during 2000 and 2001. In 2002 and 2003, dually eligible beneficiaries were most likely to provide most-positive responses to the Customer Service composite, and in 2004 beneficiaries with additional insurance including coverage for prescription drugs and dually eligible beneficiaries were most likely to rate their experience with Medicare customer service highly.

Year 2004 Analyses

For 2004, we conducted two additional analyses. We examined the relationship between CAHPS scores and disability, and we assessed beneficiary experiences accessing prescription medicines.

Supplemental Analysis: Relationship Between CAHPS Scores and Disability—The purpose of this analysis is to examine patterns of reported experience with health care services among a population of activities of daily living (ADL)-disabled MFFS beneficiaries. We constructed a three-category disability variable based on the ADL survey question. The survey question used to create the ADL disability variable asked if the respondent had difficulty or was unable to perform the following ADLs due to a health or physical condition: (1) bathing, (2) dressing, (3) eating, (4) getting in or out of chairs, (5) walking, and (6) using the toilet. Three categories for the disability variable are as follows:

- No ADL limitations—Respondents reporting no difficulties for any of the ADLs.
- Mild ADL limitations—Beneficiaries having difficulty with one or two ADLs.
- Severe ADL limitations—Respondents reporting that they were unable to perform any of the ADLs or had difficulty performing three or more of the ADLs.

In general, as disability increased the percentage of beneficiaries reporting problems with health care increased, as reflected in the CAHPS composites and responses to survey questions about access to prescription drugs. For the Customer Service composite and Problem Getting Prescriptions measure, beneficiaries with severe ADL limitations have more problems than beneficiaries with no ADL limitations. Beneficiaries with severe ADLs and $200 or more in average monthly prescription drug costs report the most problems with getting prescriptions and customer service. These results reflect findings from a growing body of literature that suggests persons with disabilities have different experiences with their health care than persons without activity limitations. Among MFFS beneficiaries, those with ADL limitations report greater problems accessing needed prescription medications and needed care, greater problems with customer service, and more delays getting prescription medications because of cost. Beneficiaries with disabilities were more likely to report that they are worried about being able to afford needed prescription medication over the next year.

Supplemental Analysis: Medicare Beneficiary Experiences of Accessing Prescription Drugs—This supplemental analysis presents findings from the 2004 CAHPS MFFS and MA surveys to provide a detailed view of beneficiary experiences and attitudes related to prescription drug access. Overall, the vast majority of Medicare beneficiaries (83 percent) reported needing prescription drugs, almost three-quarters of whom reported getting three or more different prescriptions during the past 6 months. Sixty percent of beneficiaries reported paying between $1 and $100 for prescriptions each month. An additional 28 percent reported spending between $101 and $300 each month, and 7 percent reported spending more than $300 per month for prescription medicine. The remaining under 5 percent of beneficiaries reported spending nothing on prescription medicines despite reporting that they had obtained some prescriptions in the past 6 months. In general, a small percentage of beneficiaries reported problems getting needed medications (14 percent) or delay getting a prescription medicine because of affordability (15 percent). By contrast, 58 percent of beneficiaries reported being at least a little worried about being able to afford prescription medicines that they would need over the next year.

The results of the logistic regression models showed that controlling for a variety of sociodemographic and health status variables, insurance type and prescription drug coverage were significantly related to beneficiary reports of problems accessing needed prescription medicines, delays in obtaining medicines due to cost, and worry about the affordability of prescription drugs over the next year. Compared to MA enrollees with prescription drug coverage, MFFS beneficiaries were less likely to report problems, delays, or worry about prescription drugs. Similarly, MFFS beneficiaries with additional insurance that did not cover prescription drugs were also less likely to report problems and delays than MA enrollees with prescription drug coverage. MA enrollees and MFFS beneficiaries with no additional insurance were significantly more likely to report problems, delays, and at least a little worry about the

affordability of their drugs during the next year compared with MA enrollees who had coverage for prescription medicines.

We present details of the subgroup analyses for the 2004 MFFS survey in Section 8.

Section 9: 2004 MFFS Reasons Followback Pilot Survey

As part of the 2004 CAHPS MFFS survey, RTI implemented the Reasons Followback (RFB) Pilot Survey with a subsample of respondents to the main survey who reported that they had a "big problem" getting care in one or more of the following access areas:

- Finding a personal doctor or nurse you are happy with
- Seeing a specialist
- Getting care you or your doctor believed was necessary
- Getting prescription medicines

There were two main objectives for conducting the RFB pilot survey. The first was to gain a better understanding of the reasons why Medicare beneficiaries who participated in the 2004 MFFS survey had problems with access to care. The second objective was to determine whether re-asking the question "How much of a problem, if any, was it to..." in the RFB interview would yield more consistent data (based on respondent recall) than asking only applicable RFB survey questions related to problems with access to care.

Although one of the objectives of the RFB was to learn more about Medicare beneficiaries' experience with access to care, the RFB pilot survey is considered a qualitative survey in that it was not designed to yield meaningful, or representative, estimates on a national or state basis. In addition, we collected data using a structured set of survey items; however, telephone interviewers recorded the responses for some key items in open-ended text fields if the respondents' answer to an item did not clearly fit one of the preprinted answer choices.

The RFB pilot survey included a random sample of 1,000 respondents to the main 2004 CAHPS MFFS sample in 11 states who met specific eligibility criteria—that is, they reported that they had a "big problem" getting care in one or more of the designated access areas and they gave their consent in the main survey to be recontacted. We identified and selected the 10 states with the largest number of respondents citing a big problem in one or more of the four access areas by generating and examining unweighted response frequencies from the 2004 main survey. After discussions with CMS about the distribution of access problems reported in the main survey, we selected respondents from the following 10 states: California, Florida, Georgia, Michigan, North Carolina, New York, Ohio, Pennsylvania, Texas, and Virginia. We also included a subsample of respondents from the state of Missouri as requested by CMS.

The RFB pilot survey was conducted from November 19, 2004, through March 6, 2005, via a telephone survey using computer-assisted telephone interviewing (CATI). To determine whether re-asking the problem question would yield better data, we conducted an experiment to test two different sets of questions in the RFB. One-half of the sample was administered a set of

questions in which the "problem" question from the main survey was re-asked for all four access areas, regardless of how the respondent answered that question for each access item in the main survey. If the sample member reported in the RFB interview that an access area was a big problem, an applicable series of questions about the problem with that access area was then asked. For the other half of the RFB sample, referred to as the Version B sample, we did not re-ask the problem question. Version B sample members were only asked applicable RFB questions about the access area(s) they reported as a big problem in the main survey.

Data collection efforts resulted in obtaining a completed RFB interview with 762 sample members, for an overall response rate of 76.2 percent. The response rate was 78.6 percent for the Version A sample and 73.9 percent for the Version B sample. The response rates from respondents in the 11 states varied, ranging from a low of 68.3 percent to 88.1 percent. Selected findings for reasons for problems getting care in the targeted access areas are provided below.

Problems Finding a Personal Doctor or Nurse

The series of questions about problems finding a personal doctor or nurse was administered to 167 respondents. Respondents cited 40 different reasons for problems finding a personal doctor or nurse they could be happy with. The top five reasons cited were as follows:

1. Could not find doctor accepting Medicare at all (10.8 percent)

2. There were few doctors in my area (9.6 percent)

3. Dissatisfied with care/doctor did not give care/services/prescribe medicines needed or wanted (9.0 percent)

4. Doctor did not listen/communicate well/spend enough time/explain things so I could understand (8.4 percent)

5. Could not find doctor taking new Medicare patients (7.8 percent)

Problems Seeing a Specialist

The series of questions about problems seeing a specialist that the sample member needed to see was administered to 175 respondents. Respondents cited 34 different reasons for not being able to see a specialist. Following are the top five reasons most frequently cited:

1. Could not find a doctor accepting Medicare at all (13.1 percent)

2. Found a doctor but could not get an appointment when needed or wanted (10.9 percent)

3. Could not get a good recommendation or referral (6.9 percent)

4. Could not afford what the doctor wanted to charge (6.3 percent)

5. Doctor did not provide good care/service/dissatisfied with care (5.7 percent)

Problems Getting Care Needed

The series of questions about problems getting care, tests, and treatment was administered to 143 respondents. Respondents cited a total of 32 different reasons for not being able to get the care they or a doctor believed they needed. The top five reasons most frequently cited included the following:

1. Could not afford the charges (15.4 percent)
2. Doctor did not provide good care/service/dissatisfied with care (9.8 percent)
3. Could not get a recommendation or referral (6.3 percent)
4. Unspecified problems with the doctor (4.9 percent)
5. Place I needed to go was not accepting Medicare (4.9 percent)

Problems Getting Prescription Medicines

Of the 342 respondents who reported in the RFB interview that getting prescription medicines was a big problem, the majority (31 percent) had a problem getting five or more prescription medicines. Respondents cited 25 different reasons for not being able to get the prescription medicines they needed. The top five reasons most frequently cited were as follows:

1. Cost too much/could not afford (67.5 percent)
2. Insurance would not cover the cost (10.8 percent)
3. Problems getting prescription filled by mail (1.8 percent)
4. The pharmacy lost the prescription or other problem with the pharmacy (1.5 percent)
5. Could not get a prescription from the doctor (1.5 percent)

Thirty-seven (10.8 percent) respondents indicated that there was no consequence of not getting the medicines they needed. The other 89.2 percent gave 21 different consequences of not getting the prescription medicines they needed. The five consequences cited most frequently were the following:

1. The condition got worse (35.4 percent)
2. Eventually got medicine, no consequence specified (12.6 percent)
3. Could not afford the medicine, no consequence specified (9.1 percent)
4. Still do not feel well (8.2 percent)
5. Had to go to the emergency room (6.1 percent)

Results of the Version A/Version B Experiment

Our analysis of the data from the experiment that was conducted showed that we obtained more consistent data from interviews with respondents who participated in a Version B interview. However, even with that version, we found that the amount of time between participation in the main survey and the RFB interview affected the respondents' ability to answer the same way about the same incident at different points in time. Therefore, even though Version B interviews yielded fewer cases with inconsistent responses, we can expect to continue to experience this problem if future followback surveys on problems with access to care are fielded.

We present details of the RFB pilot survey activities in Section 9.

Section 10: Impact of Influenza Immunization on Seasonal Medical Expenditures Among Elderly Medicare Beneficiaries, 2000-2003

RTI conducted an analysis to examine the impact of influenza immunization on subsequent expenditures for inpatient, outpatient, and professional services among independent national samples of elderly Medicare beneficiaries during the four flu seasons between 1999-2000 and 2002-2003. (Some of these additional analyses were sponsored by the U.S. Department of Health and Human Services Office of Public Health Service.)

We surveyed independent samples of approximately 175,000 MFFS beneficiaries annually by mail and telephone as part of the CAHPS surveys. Response rates ranged from 64 percent to 71 percent. Survey data included beneficiaries' demographic characteristics, education, supplemental insurance status, perceived health status, and whether they had a flu shot between September and December of the previous year. Baseline measures derived from Medicare claims for beneficiaries during the year prior to the onset of the flu season included service utilization, comorbidities, and claims-based health status. The primary outcome was medical expenditures for the treatment of acute and chronic respiratory conditions. It was based on Medicare claims for the 33-week annual flu seasons.

The results show a reduction in total medical expenditures for acute and chronic respiratory conditions among those who received a flu shot during all four influenza seasons. However, the amount and statistical significance of the savings seem to depend on the severity of the virus and the match between the vaccine and the prevalent influenza strains: the greater the virulence and the closer the match, the larger the savings (see ***Table ES.2***). The 1999-2000 flu season was the most severe, and the vaccine used that year was a relatively good match to the prevalent flu strains, leading to an average seasonally lower cost for services related to acute and chronic respiratory conditions of $88 for persons receiving influenza immunization (3.06 percent lower average total spending). The 2002-2003 flu season was less severe but had the highest overall vaccine match rate, resulting in lower average seasonal costs for immunized beneficiaries of $103 (3.12 percent lower average total expenditures). These lower total expenditures for beneficiaries receiving influenza vaccinations were accounted for entirely by lower use of inpatient services. Influenza vaccination, however, was associated with slightly greater use of outpatient and professional services.

The cost-effectiveness of influenza vaccinations appears to vary from season to season depending on the virulence of the virus and the match between the vaccine and the influenza strains. We found that when the flu season is severe or when the vaccine closely matches the prevalent strains of the season, vaccination of the elderly against influenza is likely to be cost-effective. Thus, in addition to improving the health of elderly Americans, striving to meet the *Healthy People 2010* influenza immunization goal of 90 percent immunization of the elderly may also result in a modest reduction in Medicare expenditures.

We present details of the influenza immunization study in Section 10.

Table ES.2
Impact of influenza vaccination on seasonal expenditures for acute or chronic respiratory conditions for Medicare-covered services

	1999-2000 ($)	2000-2001 ($)	2001-2002 ($)	2002-2003 ($)
All services	-88.29**	-23.90	-31.23	-103.48***
Inpatient services	-102.92***	-43.61*	-64.47**	-130.47***
Hospital outpatient services	1.37	1.76	7.64***	6.99***
Professional services	0.56	3.89***	7.02***	3.09***

NOTE: Figures derived from regression models. Expenditures measured over claims with primary or secondary diagnosis for acute or chronic respiratory conditions only. Expenditures based on services used during 33-week flu season as reported by the Centers for Disease Control and Prevention (CDC). Flu shot item nonrespondents with no claim for influenza vaccination were coded as nonvaccinated. Total expenditures include expenditures for home health and durable medical supplies. *** indicates significance at 1 percent level, ** at 5 percent level, and * at 10 percent level using two-tailed t-test.

SOURCE: RTI analysis of CAHPS MFFS and Medicare claims data, 1999-2004.