

WORKING P A P E R

Analysis of Case-Mix Strategies and Recommendations for Medicare Fee-for-Service CAHPS

Case-mix Adjustment Report: 2003

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PREFACE

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SUMMARY

For readers familiar with the 2000-2002 (Years 1-3) Case-Mix Reports, we will briefly describe how this report differs from the previous year's report. First, this report seeks to evaluate the stability of many of the findings and resultant decisions from the 2000-2002 Case-Mix Reports, including the choice of case-mix adjusters, their parameterization, and their impact. Second, we have reformatted the presentation of information in a way that favors comparative tables across years were possible and which relegates older data to the Appendix when this is not possible, with the hopes of producing a more concise document.

The Medicare Fee-for-Service (MFFS) Consumer Assessment of Health Plans (CAHPS) project is centered around two types of comparisons: beneficiary comparisons of MFFS and Medicare Managed Care (MMC) within local areas and administrative comparisons of MFFS across local areas. Case-mix adjustment (CMA) is a central element in these comparisons. CMA attempts to remove from ratings and reports of care response patterns that are systematically associated with such patient-level characteristics as demographics, socio-economic status, 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 FFS 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 FFS providers and managed care plans more appropriate, supporting better decision-making by beneficiaries and quality improvement by PROs and HCFA.

The two goals of MFFS CMA (within-MFFS comparison and MFFS-vs.-MMC comparison) suggest two different, but similar, CMA models. Table ES-1 describes the independent variables recommended for case-mix adjustment. This set of variables is the same as that used in the previous year.

Table ES-1: Description of Independent Variables Used in MFFS Case-Mix Adjustment, 2003 (Year 4)

Name (Dummies)	Description	Response Options
AGE (AGE44, AGE4564, AGE6569, AGE7579, AGE8085, AGE85)	Age	<44, 45-64, 65-69, 70-74, 75-79, 80-85, >85
EDUC (LESS8GRD, SOMEHIGH, SOMECOLL, COLLGRAD, COLLMORE)	Education	<8 th grade, some high school, high school graduate or GED, some college (but less than 4 yr. Degree), 4 year college graduate, >college graduate (some graduate school beyond the 4 year degree)
GHP (EXCEL, VERYGOOD, FAIR, POOR)	General health perception	Excellent, very good, good, fair, poor
MHP (MHExcel, MHGOOD, MHFAIR, MHPOOR)	Mental health perception	Excellent, very good, good, fair, poor
(PROXY, ANSPROXY)	Proxy respondent status	No assistance on survey, someone helped but did not answer for you, someone answered for you
DUALELIG ¹ #	Dual-eligibility indicator (eligible for Medicaid program)	Yes, no

#Recommended for within-MFFS use only

The present study found that the case-mix adjusters employed in 2001 and 2002 MFFS-vs.-MMC CMA (age, education, self-rated health status, self-rated mental health status and proxy respondent status²) 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 further enriches the within-MFFS model. These findings are consistent with CMA results for 2000-2002.

Within-MFFS CMA employs the above independent variables plus dummies corresponding to the geographic units being compared (county-based sampling stratum, state, or HCFA 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

¹ CMS data contain the indicator of state buy-in, which is a proxy for dual-eligibility status; state buy-in can exist for an individual who is not actually on Medicaid

² 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.

variables for within-MFFS CMA 2002-2003 were education and self-rated mental health.

In MFFS-vs.-MMC CMA these same variables from Table 1 (minus the dual-eligibility indicator) also serve as independent variables in a linear regression, but dummies correspond to MMC plans, with MFFS treated as an additional "plan." While the direction of CMA coefficients are similar for MFFS and MMC, the magnitudes of the effects sometimes differ. In 2000- 2001, the well-established tendency of healthier beneficiaries³ to rate their care more positively or to report better health care experiences was considerably stronger in MMC than in MFFS, with MMC slopes generally 50 to 100% 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 MMC than it was in MFFS. In 2002-2003, 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 MMC 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 MMC, 2000-2003

A major implication of the difference in general health status coefficients is that the difference between the case-mix adjusted mean of a managed care plan and a FFS reporting entity depends upon the reference population. Case-mix adjustment to a healthy reference population would be relatively more favorable to MMC, and case-mix adjustment to an unhealthy reference population would be relatively more favorable to MFFS. In 2000-2003 Medicare Compare consumer materials MFFS-vs.-MMC CMA used the midpoint of MFFS beneficiary and MMC beneficiary characteristics as the reference population. Because of the generally poorer health status of MFFS beneficiaries (even excluding the dually-eligible), the GHP component of CMA tends to adjust in favor of MFFS relative to MMC.

In comparing MFFS and MMC, there was concern that underlying geographic factors not captured in a case-mix model might inappropriately influence MFFS-vs.-MMC comparisons. In order to ensure geographic equivalence of state-level comparisons county-based "geographic equivalence weights" were created (GEW) in the 43 "states"⁴ where MMC exists. These weights were then combined with MFFS non-response weights.

Comparison weights have gone from moderate adjustments in favor of MMC in 2001 to very small adjustments 2002-2003. One interpretation is that MFFS sample was initially scarce in the geographic regions that had the least positive Medicare experiences among those regions with MMC penetration. The shrinking effect of the comparison weights may be attributable to the reallocation of MFFS sample into the counties with high MMC penetration but low population that were initially unrepresentative, in the efforts to reduce the comparison weights design effect. In other words, the geographic distribution of the MFFS sample is much better matched to MMC in 2003 than it was in 2001.

³ As measured by general self-rated health

⁴ Including the District of Columbia

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 MMC. Nationally, case-mix adjustment has gone from moderate adjustments in favor of MMC in 2001 to small adjustments in favor of MMC in 2002 to moderate adjustments in favor of MFFS in 2003. A similar pattern exists for case-mix adjustment of state-level comparisons of MMC and MFFS, except that the amount of adjustment of these estimates by CMA is notably larger in 2003 than in 2001-2002.

Adjustments favoring MMC probably correspond to MMC 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 MMC to adjustments favoring MFFS could mean that age and education selection into MMC is becoming weaker, but health selection is becoming stronger. Future research should investigate trends in MFFS vs. MMC case-mix demographics.

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INTRODUCTION

The Medicare Fee-for-Service (MFFS) Consumer Assessment of Health Plans (CAHPS) project surveys Medicare beneficiaries enrolled in the original Medicare health plan⁵ in order to present information regarding their experiences to Medicare beneficiaries, state quality improvement organizations (QIOs)⁶, and the Center for Medicare and Medicaid Services (CMS). The goals of the project include:

1. Empowering beneficiaries to compare the experiences of those receiving FFS Medicare and those receiving Medicare through managed care plans available in their area, as mandated by the Balanced Budget Act of 1997, and
2. Informing CMS and state QIOs about regional, state, and perhaps sub-state variation in experiences with FFS Medicare.

A key component of these comparisons is appropriate case-mix adjustment. Case-mix adjustment attempts to remove from ratings and reports of care response patterns that are systematically associated with such patient-level characteristics as demographics, socio-economic status, 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.⁷ 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 case-mix adjustment can therefore be thought of as follows: to estimate the ratings and reports that a plan or collection of FFS 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 FFS providers and managed care plans more appropriate, supporting better decision-making by beneficiaries and quality improvement by QIOs and CMS.

The Harvard team (see Cioffi, Cleary, Ding, Shaul, Zaborski, and Zaslavsky, 2001) has conducted case-mix adjustment analyses on three years of MMC data, and also performed case-mix adjustment analyses on the MFFS field test data. In doing so, they devised an analytic framework and associated terminology, which are well suited to the case-mix adjustment of MFFS data discussed here. Their reports provide additional background on some of the techniques used here, and the reader who is not familiar with these reports may want to consult them when reading this report. Additional work on case-mix adjustment of CAHPS® data may be found in Zaslavsky, Zaborski, Ding, Shaul, Cioffi,

⁵ These beneficiaries, plus those unsurveyed beneficiaries in the one Private Medicare FFS plan (Sterling), constitute all beneficiaries not enrolled in managed care plans.

⁶ Formerly *peer review organizations* (PROs).

⁷ It should be noted that case-mix methods cannot by themselves distinguish response bias from systematic differences in actual health care experiences that are associated with the case-mix variables.

and Cleary (2001), Elliott, Swartz, Adams, Spritzer, and Hays (2001), Elliott, Hambarsoomian, Edwards, and Solomon (2001), and Elliott, Hambarsoomian, and Edwards (2002). Because of the importance of coordinating MFFS and MMC case-mix adjustment when comparing MMC plans to collections of MFFS providers, this report will parallel the approach and terminology of these previous reports where appropriate. In addition, the selection of case-mix adjuster variables and models for evaluation and comparison in this report draws on the findings established in these reports. In particular, this report will follow the structure of the 2001 MFFS Task 9 Report (Elliott, Hambarsoomian et al, 2001).

Prior to the introduction of the MFFS survey, MMC case-mix adjustment (CMA) had a single focus: the adjustment of ratings and reports for comparison among MMC plans. MFFS case-mix adjustment now has two foci: (1) adjustment of collections of FFS providers for comparison to MMC plans and (2) adjustments of collections of FFS providers for comparison with other FFS providers. This report will develop recommendations for both contexts, and will refer to these contexts as *MFFS-vs.- MMC CMA* and *Within-MFFS CMA*, respectively.

MFFS lacks a predefined reporting unit that is analogous to the plan in MMC. The need to define such a unit and the manner in which such a unit is defined has implications for both reporting and CMA in MFFS. We will use the term *reporting entity* to refer to an aggregation of providers for which CAHPS ratings and reports are reported. This term will thus apply to either a plan in the case of MMC or to a collection of FFS providers in the case of MFFS.⁸ Note that the MFFS reporting entity can be a sub-state, state, or regional aggregation of FFS providers.

⁸ In the case of FFS, the aggregations of providers are based on geographically-defined, non-overlapping sets of FFS beneficiaries. As beneficiaries may seek care outside of their unit of residence, the corresponding sets of providers will be mostly, but not entirely, non-overlapping across units.

SUMMARY OF DATA AND VARIABLES

DATA

The first (2000) national administration of the CAHPS MFFS survey involved the administration of 168,000 surveys to MFFS beneficiaries: 3000 to beneficiaries residing in Puerto Rico, and 165,000 to beneficiaries residing in the 50 states and the District of Columbia. As described in the first report of geographic unit recommendations (Elliott, Solomon, Suttorp, and Hays, 2000), the 165,000 United States surveys were administered to a stratified random sample of MFFS beneficiaries, 600 each in 275 strata. These strata will be referred to as *geo units* or *MFFS Sampling Strata*. These geo units are collections of counties and are entirely contained within states (1 to 17 GU units in each state), are generally contiguous, and were designed to avoid crossing Managed Care Contract Area boundaries, Metropolitan Statistical Area Boundaries, and Health Service Area boundaries where possible. The geo units contain approximately equal numbers of MFFS beneficiaries (with under-sampling of beneficiaries in 30 highly populous counties and over-sampling of non-MSA counties in 12 states being the major departures from proportionality), and were designed to potentially function as reporting units as well as sampling strata. Of the 275 geo units, 205 had some MMC penetration.

As detailed in the RTI Team's 2001 MFFS Operations Report, the 2001 sample design involved an increased and reallocated sample size designed to maximize the precision of MFFS-vs.-MMC comparison within states and resulted in a higher response rate. As detailed in the RTI Team's 2002 and 2003 MFFS Operations Reports, the 2002 and 2003 sample designs involved further iterative reallocations of sample to maximize the precision of MFFS-vs.-MMC comparison within states.

VARIABLES

As detailed elsewhere, CAHPS reports consumer experiences in the form of four global ratings (rated on a 0-10 scale, from *worst possible* to *best possible*) and five composites (each composed of two to four report items, which are rated on a four-point ordinal scale from *never* to *always* or on a three-point ordinal scale from *not a problem* to *a big problem*). Because CMA is applied to individual report items before they are combined into composites, this report will examine CMA of the four global ratings and the 21 report items, as summarized in Table 1 (adapted from Table III-3 in the 2000 MMC Case-Mix Report).

Table 1: CAHPS Ratings and Composites

Variables	Description
<i>Ratings</i>	
Health Plan	Rate your experience with your Medical health plan [Medicare]
Health Care	Rate all the health care you got in the last 6 months
Personal Doctor	Rate your personal doctor or nurse now
Specialists	Rate the specialist you saw most often in the last 6 months
<i>Composites Report Items</i>	
Get Care Needed	Easy to get a referral Get necessary care Easy to find doctor you happy with Delays in care when waiting for approval
Get Care Quickly	Get medical help through phone at doctor office See doctor as soon as wanted Get appointment as soon as wanted Wait in doctor office/clinic for more than 15 minutes
Doctor Communicate Well	Doctor listen carefully Doctor explain things in ways can be understood Doctor show respect Doctor spend enough time
Office Staff Courtesy	Office staff treat with courtesy and respect Office staff helpful
Paperwork, Info, & Customer service	Get info or help needed when call plan customer service Find and understand written information Have problem paperwork for health plan [Medicare]

Other survey variables and one administrative variable (dual eligibility) were considered as case-mix adjusters (independent variables), as summarized in Table 2.

Table 2: Description of Independent Variables Used in MFFS Case-Mix Adjustment

Name (Dummies)	Description	Response Options
AGE (AGE44, AGE4564, AGE6569, AGE7579, AGE8085, AGE85) (AGE64, AGE6569, AGE7579, AGE80) ⁹	Age	<44, 45-64, 65-69, 70-74, 75-79, 80-85, >85 (above are 2002-2003 response options; 2000-2001 response options were <65, 65-69, 70-74, 75-79, and >79)
EDUC (LESS8GRD, SOMEHIGH, SOME COLL, COLLGRAD, COLLMORE)	Education	<8 th grade, some high school, high school graduate or GED, some college (but less than 4 yr. Degree), 4 year college graduate, >college graduate (some graduate school beyond the 4 year degree)
GHP (EXCEL, VERYGOOD, FAIR, POOR)	General health perception	Excellent, very good, good, fair, poor
MHP (MHEXCEL, MHGOOD, MHFAIR, MHPOOR)	Mental health perception	Excellent, very good, good, fair, poor
RPCS12 ¹⁰	SF-12 physical composite score; includes MHP item.	Mixed response options converted to standardized score
RMCS12 ¹¹	SF-12 mental composite score; includes MHP item.	Mixed response options converted to standardized score
(PROXY, ANSPROXY)	Proxy respondent status	No assistance on survey, someone helped but did not answer for you, someone answered for you
DUALELIG ¹²	Dual-eligibility indicator (eligible for Medicaid program)	Yes, no

Finally, three sets of FFS reporting entities were considered. The dummy variables used for these purposes were 275 geo unit indicators

⁹ Exploratory 2001 analyses also broke down the under-65 age group into 18-39, 40-54, and 55-64 categories with a variable called "AGE UNDER 65," which coded these three subcategories linearly. This linear pattern was based on preliminary analyses. See Appendix C.

¹⁰ Not used in 2000.

¹¹ Not used in 2000.

¹² CMS data contain the indicator of state buy-in, which is a proxy for dual-eligibility status; state buy-in can exist for an individual who is not actually on Medicaid.

(one omitted), 51 state/district/territory indicators¹³ (one omitted), and 9 CMS region indicators (one omitted). A list of the states constituting each of the 10 CMS regions appears as Table 3. Geo unit, state, and CMS region indicators were also used to create interaction terms for the evaluation of assumptions of the homogeneity of effects of case-mix adjusters across reporting entities.

Table 3: States Comprising CMS Regions

Region Number	CMS Region
1	Northeast (MA, ME, VT, CT, RI, NH)
2	NY/ NJ/Puerto Rico
3	Mid-Atlantic (PA, DE, DC, MD, VA, WV)
4	S. Atlantic (AL, FL, GA, KY, MS, NC, SC, TN)
5	Mid-West (IL, MN, OH, WI, MI, IN)
6	Southwest (AR, OK, TX, LA, NM)
7	Central (KS, MO, IA, NE)
8	West (CO, MT, ND, SD, UT, WY)
9	Pacific (CA, AZ, HI, NV)
10	Northwest (AK, ID, OR, WA)

¹³ Hereafter called *state* indicators for brevity, but also applicable to the District of Columbia and Puerto Rico. [number of states varied from year to year]

GENERAL ANALYTICAL APPROACH

In this report, CMA involves linear regression models with global ratings and reports of care serving as dependent variables and with beneficiary-level characteristics serving as independent variables (case-mix adjusters).¹⁴ As noted in the 2000 MMC CMA Report, one can describe this model as follows for a single outcome i :

$$y_{ipj} = \beta_i' x_{ipj} + \mu_{ip} + \varepsilon_{ipj}$$

where y_{ipj} represents the response to [outcome] i of respondent j from [reporting entity] p ..., β_i is a regression coefficient vector, x_{ipj} is a covariate vector ... [containing case-mix adjusters], μ_{ip} is an intercept parameter for [reporting entity] p , and ε_{ipj} is the error term.

Because all between-[reporting entity] effects are absorbed into the dummy variable coefficients, the β_i coefficients represent within-[reporting entity] effects of the adjuster variables. The adjusted [reporting entity] ratings correspond to the dummy variable effects μ_{ip} . The adjusted ratings (after centering) can be interpreted as the ratings we would expect for each [reporting entity] if every [reporting entity] had the same distribution of patient-level variables (i.e. equivalent mixes of patients).

Because MFFS has no natural reporting entity corresponding to the plan in MMC, there are several choices for reporting entity: geo unit, state, or CMS region. The choice of reporting entity in MFFS will determine how much geographic variation is "absorbed" into the intercept vector in the above model and how much is left to be attributed to case-mix adjusters. Because geo units are entirely nested within states and states are entirely nested within CMS regions, the smaller reporting entities will absorb at least as much variation as the larger reporting entities. To the extent that case-mix adjusters vary geographically in their values, the choice of reporting entity will affect the magnitude of the coefficients estimated in MFFS CMA.

ASSUMPTIONS OF CMA

In order for case-mixed adjusted means to have the interpretation discussed above, a number of assumptions must be met. A first assumption is that the case-mix adjusters are not *endogenous*. This assumption means that the values of the case-mix adjusters are not substantially influenced by actions of the providers or by beneficiaries' experiences with providers. This assumption is not easily testable in cross-sectional studies. This report will not attempt to independently establish the exogeneity of the case-mix

¹⁴ For the one dichotomous item an analogous logistic regression is used.

adjusters employed, but will instead restrict consideration to the variables in Table 2, for which there is general consensus regarding an absence of serious endogeneity in the context of case-mix adjustment of health care data.

A second assumption is that the case-mix adjusters are linear in their effects on the outcomes to which they are applied. This assumption is applicable to ordinal and continuous case-mix adjusters, and is empirically verifiable.

A third assumption is that the effects of case-mix adjusters are homogenous across the reporting entities being compared. This assumption can be verified empirically through the use of interaction terms in linear models, and is specific to the set of reporting entities being compared.

DESIRABLE PROPERTIES OF CMA MODELS

There are three properties that a good MFFS CMA model would possess: (1) precision, (2) parsimony, and (3) robustness across applications. The criterion of precision means that there is strong evidence that the case-mix adjustment variables are truly associated with ratings and reports, and that the magnitude of these associations is well estimated. The criterion of parsimony means that the model is as simple as possible without sacrificing explanatory power. In other words, variables that add to model complexity without adding to model impact are excluded. The criterion of robustness across applications means that the model selected is appropriate across the variations in reporting formats to which it is applied.

The criterion of precision requires that case-mix adjusters have statistically significant effects and that the ratio of estimated parameters to their standard errors (t-statistics) be large.

Implementing the criterion of parsimony requires a definition of explanatory power. We will use the E.P. (explanatory power) statistic, a unitless measure of the impact of a case-mix adjuster developed by the Harvard team in the context of MMC CMA (Cioffi, Cleary, Ding, Shaul, Zaborski, and Zaslavsky, 2001). Briefly, the impact of a case-mix adjuster on adjusted scores is a product of two quantities: (1) the proportion of the variance of the outcome explained by the case-mix adjuster in an individual-level regression (incremental change in R-sq) and (2) the variance in mean levels of the case-mix adjuster across reporting entities. The formula for E.P. is:

$$\text{E.P.} = \text{Var}(\text{Reporting Entity}) / \text{Var}(\text{Error}) * (\text{net increment in R-sq})$$

The derivation of this formula may be found in the MMC Case-Mix Report. Because values for E.P. tend to be very small, we will follow the convention of presenting E.P. * 1000. Parsimony requires selecting the simplest model that accounts for most of the explanatory power possible with more elaborate models.

Adjusted ratings and composites are presented in a number of different formats, and at different levels of aggregation. It is desirable that a CMA model be applicable across this variety of contexts and that its effects be reasonably consistent across these applications. The linear models presented here treat the 11-point global ratings and the 3- and 4-level ordinal scales as continuous variables, computing means. This approach maximizes the statistical power available to compare CMA models and also corresponds to the format in which adjusted

ratings and composites may be presented to CMS, state QIOs, and researchers. On the other hand, dichotomized presentations of these same ratings and composites will be presented to consumers.¹⁵ It is desirable that CMA models behave similarly with these dichotomized outcomes. Likewise, reporting entities will be states for some applications and presentations, but may be geo units or CMS regions for other applications and presentations. It is desirable that CMA models behave similarly across these contexts.

IMPUTATION OF MISSING VALUES FOR CMA VARIABLES

The potential CMA variables listed in Table 2 exhibited low rates of item missingness in the 2000-2003 MFFS data. Nonetheless, case-wise deletion (omission of all cases with any missing values on CMA variables) would likely lead to bias in estimates of CMA models. Previous MMC CMA reports have used simple mean imputation within managed care plan for missing values of CMA variables (replace missing values for CMA variables with the mean non-missing value within the managed care plan in question). In order to maximize comparability with this approach, we use simple mean imputation within geo units for MFFS, as was the case in the 2000-2002 MFFS Reports (replace missing values for CMA variables with the mean non-missing value within the geo unit in question). Given the low rates of item missingness observed for CMA variables, we feel that the results obtained here are likely to be quite similar to those that would have been obtained with more complex imputation methods, such as model-based imputation. No imputation of outcomes (global ratings and report items) is performed, and no imputation is used in cases of unit non-response (an incomplete or unusable survey).

¹⁵ Global ratings will be dichotomized 10 vs. 0-9; reports will be dichotomized such that the most favorable ordinal response will constitute a single category.

SUMMARY OF MFFS PILOT TEST CASE-MIX ADJUSTMENT REPORT

The Harvard team performed a CMA analysis for the MFFS-CAHPS Pilot Test using data from 1,931 MFFS beneficiaries from a highly diverse but limited number of geographic areas and compared results to those obtained from 1997 and 1998 MMC beneficiaries matched on residential location. They considered a base model that was the same model that has been recommended in the MMC CMA Reports, as well as several alternatives. The base model includes age, education, general health perception, and proxy status, all coded categorically (one dummy per response option, other than a single omitted level). In the Pilot Test, coefficients for the base model were generally similar for MMC and MFFS. Gender, activities of daily living (ADL), instrumental activities of daily living (IADL), and variables based on zip codes did not consistently add explanatory power to the base model. Among those variables present on the MFFS instrument but absent from the MMC instrument, items related to mental health stood out as adding substantially to the explanatory power of the base model. While both the single item, five-level Mental Health Perception (MHP) item and the 12-item SF-12 Mental Health Composite (RMCS12) had substantial additional explanatory power, the single item was recommended over the latter for reasons of simplicity and the potential for future reductions in survey length.

OVERVIEW OF 2003 CASE-MIX REPORT

For readers familiar with the 2000-2002 (Years 1-3) Case-Mix Reports, we will briefly describe how this report differs from the previous year's report. First, this report seeks to evaluate the stability of many of the findings and resultant decisions from the 2000-2002 Case-Mix Reports, including the choice of case-mix adjusters, their parameterization, and their impact. Second, we have reformatted the presentation of information in a way that favors comparative tables across years where possible and which relegates older data to the Appendix when this is not possible, with the hopes of producing a more concise document. Throughout this report, "statistically significant" will indicate a p-value of less than 0.05 with a 2-sided test.

DISTINCTIONS BETWEEN MFFS-VS.-MMC CMA AND WITHIN-MFFS CMA

The primary purpose of MFFS-vs.-MMC CMA is to facilitate unbiased comparison of beneficiary experiences with MFFS and MMC for those beneficiaries with a choice between MFFS and MMC. Dually eligible Medicare beneficiaries (those also eligible for Medicaid) present a challenge for this comparison, because some Medicaid regulations may discourage MMC enrollments in some states. This is reflected by the fact that the proportion of dually eligible beneficiaries in MMC is far less than the 11% observed in the 2000 MFFS sample and in the corresponding MFFS population. Because the dually eligible are known to differ from other Medicare beneficiaries in ways that might not adequately be captured by CMA, dually eligible beneficiaries have been excluded from MFFS-vs.-MMC comparisons and CMA models. This follows our 2000-2002 approach.

The primary purposes of Within-MFFS CMA are (1) to facilitate assessment of geographic variation in MFFS experiences and (2) to facilitate comparison of MFFS experiences among subgroups of beneficiaries by controlling for the effects of exogenous case-mix adjusters. The latter goal may require that case-mix adjusters be used as covariates in a regression or Analysis of Covariance (ANCOVA) model, rather than being used to explicitly adjust means of reporting entities. Because the dually eligible constitute a sizable proportion of the MFFS population, dually eligible beneficiaries are included in Within-MFFS CMA models. The importance of dual eligibility also suggests the necessity of including an indicator of this status in these CMA models.

TESTING MODEL ASSUMPTIONS FOR CMA

The following sections present the results of tests of model assumptions.

LINEARITY

Table A1a in Appendix A reports the coefficients for the base model from the MFFS Pilot Test recommendations, estimated on the full 2000 MFFS data set, excluding the dually eligible, and using geo units as the reporting entity/intercept vector. Case-mix adjusters are specified as dummies. Tables A1b and A1c report the coefficients for the same model, estimated on the full 2001 and 2002 MFFS datasets, respectively, excluding the dually eligible, and using geo units as the reporting entity/intercept vector. Tables A3b (2001 data) and A3c (2002 data) are similar to Tables A1b and A1c, respectively, except that MHP dummies are added to the model. Examination of the coefficients in these tables reveals general patterns similar to those that have been observed in the past in MMC: greater age, less education, better general perceived health, and no proxy assistance are associated with more favorable ratings and reports. These patterns are fairly consistent across global ratings and report items, although education is not always consistent in 2002 data. Table A3d (2003 data) is similar to Tables A3b (2001 data) and A3c (2002 data.) If these ordinal items had linear effects on the outcomes, the coefficients would be both monotonic and approximately evenly spaced, such that the intervals for one unit changes in the ordinal variable (including the implicit coefficient value of 0 for the omitted category) are all approximately equal. As can be seen, while the monotonicity usually holds, the even spacing does not. In the case of age, the difference between those under 65 (disabled) and those 65 to 69 years of age is generally much greater than between any other two adjacent age categories prior to the introduction of subcategories of age less than 65¹⁶. Since this change was made, a further non-linearity persist in 2002: the differences between age categories decreases as age increases; in particular, the effect of age appears to taper beyond age 79.]. In the case of education, there is a small but fairly consistent departure from monotonicity: those with some high school education, but without a high school degree, provide the most favorable ratings and reports. Their ratings and reports are generally more favorable than those with more or less education¹⁷

Table 4 reports the results of partial F-tests of the null hypothesis of linearity for the coefficients in Tables A1a (2000 MFFS), A3b (2001 MFFS), A3c (2002 MFFS) and A3d (2003 MFFS) against the alternative that the dummy coded categories explain significant additional variance. Highlighted cells within Table 4 correspond to significant evidence against linearity of the ordinal CMA categories. As can be seen, strong evidence against the assumption that the ordinal forms of education, age, and mental health perception have linear effects in at least three of four years for all four global ratings. There is similar evidence against the linearity of general health

¹⁶ The under 65 group differs from other age categories both in its much higher level of disability and in the greater age range contained.

¹⁷ This holds less consistently in 2002 than in previous years

perception for two global ratings for all four years. A high proportion of report items also evince violations of the assumption of linearity. These results have led to the categorical parameterization of education, age, GHP, and MHP (since 2001) in 2000-2003 MFFS.

Table 4: F-Statistics for the Null Hypothesis of Linearity of Ordinal Case-Mix Adjusters, Global Ratings, 2000 - 2003

Case-Mix Adjuster:	F-Statistics, by Case-Mix Adjuster															
	Education				Age				General Health				Mental Health			
Survey Year:	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003
Rating Description																
Medicare	41.00	82.12	35.62	27.06	82.12	80.68	69.89	57.15	6.16	1.39	2.74	3.16	NA	9.86	5.82	1.49
Health Care	11.68	21.23	15.63	28.80	11.11	7.48	18.36	19.61	6.29	2.29	0.70	0.99	NA	24.04	6.85	5.41
Personal Doctor	5.78	7.93	9.62	10.45	24.74	40.49	47.51	35.18	20.27	8.24	8.16	4.69	NA	35.60	11.42	17.18
Specialist	4.34	5.59	4.25	10.56	0.94	6.30	8.16	17.17	0.23	1.43	1.81	0.42	NA	9.68	7.62	5.11

^a Model does not include MHP case-mixed adjuster.

HOMOGENEITY FOR MFFS-VS.-MMC CMA

Traditional CMA assumes homogeneity of effects for the case-mix adjusters across the reporting entities being compared. In the context of MFFS-vs.-MMC CMA, this translates into an assumption that the coefficients of case-mix adjusters are similar within MMC and MFFS. While the MFFS Pilot Test CMA Report found no evidence of a difference in these coefficients, the full 2000 MFFS data provide much greater statistical power to detect such differences.

Table 5.1 compares the magnitude of the effects of case-mix adjusters for MFFS and MMC for the four global ratings and 15 report items comprising four reported composites in 2003 data (see Tables E1a, E1b, and E1c in Appendix E for similar analyses of 2000-2002 data). Table 5.1 was based on a model containing age, education, GHP, MHP, proxy status, and intercepts (dummies) for geographical units (for the MFFS sample) and plans (for the MMC sample). Table 5.2 summarizes patterns across the four years.

To facilitate comparison of coefficients between MFFS and MMC, age, education, GHP, and MHP were parameterized linearly here, allowing the patterns of categorical slopes to be summarized with a single number. To facilitate comparisons of the magnitude of CMA coefficients across reports and global ratings, results are standardized so that they represent standard deviations of the outcome per ordinal level of the adjuster. Instances in which MFFS and MMC coefficients differ significantly ($p < 0.05$) are highlighted in these tables. The data used to produce these tables represent the common states with both MFFS and MMC, excluding dual eligible cases.

The most striking pattern in Table 5.1 (and Table 5.2) is the steeper slope for GHP in MMC than in MFFS for all four global ratings and two of 15 report items. This is consistent with the previous three years, during which GHP slopes had been significantly steeper in MMC than in MFFS for at least three of four global ratings and one to five of 15 report items. MHP slopes have never differed significantly between MMC and MFFS for any outcomes. Education and age have shown a few differences in slopes over the four years, most in the direction of steeper slopes within MMC.

Table 5.1: Comparison of Magnitude of CMA Coefficients for the global ratings, FFS vs. MMC (2003)

	STANDARDIZED COEFFICIENTS							
	AGE		EDUCATION		GHP		MHP	
	(7 levels)		(6 levels)		(5 levels)		(5 levels)	
	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>
GLOBAL (scale 0=worst - 10=best)								
How would you rate your personal doctor now	0.03	0.04	-0.05	-0.06	-0.01	-0.06*	-0.11	-0.09
How would you rate your specialist now	0.02	0.02	-0.04	-0.06	-0.04	-0.07*	-0.12	-0.11
Rate overall healthcare, past 6 months	0.04	0.04	-0.06	-0.07	-0.09	-0.13*	-0.14	-0.12
Rate all experience with Medicare/health plan	0.15	0.08*	-0.07	-0.06	-0.05	-0.13*	-0.08	-0.07
GETTING NEEDED CARE (scale 1-4)								
Was it a problem getting your choice of doctor	0.02	0.03	-0.04	-0.06*	-0.06	-0.12*	-0.06	-0.04
6 mo: Problem getting referral to specialist	0.03	0.03	-0.02	-0.02	-0.07	-0.09	-0.07	-0.05
6 mo: Problem getting care needed	0.03	0.02	-0.01	-0.02	-0.07	-0.09	-0.07	-0.07
6 mo: Problem waiting for plan approval	0.08	0.05	-0.03	-0.05	-0.06	-0.10	-0.07	-0.04
CONSUMER SERVICE, INFORMATION, AND PAPERWORK (scale 1-4)								
6 mo: Problem getting help from customer service	0.05	0.04	-0.04	-0.06	-0.08	-0.06	-0.00	-0.03
6 mo: Problem understanding materials	0.03	0.04	-0.01	-0.04	-0.07	-0.09	-0.08	-0.06
6 mo: Paperwork problems	0.04	0.04	-0.06	-0.06	-0.05	-0.06	-0.06	-0.08
GETTING CARE QUICKLY (scale 1-5)								
6 mo: Got help/advice needed	0.02	0.01	-0.04	-0.03	-0.07	-0.09	-0.09	-0.08
6 mo: Saw doctor wanted for routine care	0.03	0.02	-0.05	-0.04	-0.07	-0.09	-0.09	-0.08
6 mo: Got care as soon as wanted	0.03	0.03	-0.01	-0.03	-0.06	-0.09	-0.09	-0.07
6 mo: Taken to room within 15 minutes	-0.01	-0.01	-0.01	-0.00	-0.08	-0.08	-0.06	-0.05
DOCTOR COMMUNICATION (scale 1-5)								
6 mo: Doctor listened carefully	0.02	0.02	-0.06	-0.05	-0.08	-0.10	-0.10	-0.09
6 mo: Doctor explained well	-0.01	-0.01	-0.03	-0.02	-0.09	-0.11	-0.11	-0.10
6 mo: Doctor showed respect to you	0.02	0.02	-0.04	-0.04	-0.08	-0.10*	-0.11	-0.10

6 mo: Doctor spent enough time with you	0.01	0.01	-0.06	-0.05	-0.10	-0.12	-0.11	-0.09
if mmc beta > ffs beta								
if ffs beta > mmc beta								

Table 5.2: Comparison of Magnitude of CMA Coefficients for the global ratings, FFS vs. MMC (Years 2000-2003)

Case-Mix Adjuster:	Age				Education				GHP				MHP			
Survey Year:	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
Rating Description																
GLOBAL (scale 0=worst - 10=best)																
How would you rate your personal doctor now													NA			
How would you rate your specialist now													NA			
Rate overall healthcare, past 6 months													NA			
Rate all experience with Medicare/health plan													NA			
GETTING NEEDED CARE (scale 1-4)																
Was it a problem getting your choice of doctor													NA			
6 mo: Problem getting referral to specialist													NA			
6 mo: Problem getting care needed													NA			
6 mo: Problem waiting for plan approval													NA			
CONSUMER SERVICE, INFORMATION, AND PAPERWORK (scale 1-4)																
6 mo: Problem getting help from customer service													NA			
6 mo: Problem understanding materials													NA			
6 mo: Paperwork problems													NA			
GETTING CARE QUICKLY (scale 1-5)																
6 mo: Got help/advice needed													NA			
6 mo: Saw doctor wanted for routine care													NA			
6 mo: Got care as soon as wanted													NA			

A major implication of this heterogeneity in GHP slopes is that the difference between the case-mix adjusted mean of a managed care plan and a FFS reporting entity depends upon the reference population. For example, because the effect of health status is stronger for MMC than for MFFS (the slope is steeper in a linear approximation), and because better health status is associated with better ratings and reports, case-mix adjustment to a *healthy* reference population would be relatively more favorable to MMC, and case-mix adjustment to an *unhealthy* reference population would be relatively more favorable to MFFS.

There are at least three approaches to dealing with the heterogeneity of case-mix effects for MFFS-vs.-MMC CMA: (1) stratification, (2) estimation of pooled CMA coefficients, and (3) independent estimation of CMA coefficients for MFFS and MMC, with adjustment to the midpoint of MFFS and MMC population means. See Elliott, Swartz, Adams, Spritzer, and Hays (2001) for additional discussion of this topic.

Stratification would attempt to divide beneficiaries into subgroups (on the basis of health status or other variables), such that remaining case-mix variables had essentially homogenous effects within subgroups. While this approach potentially offers very targeted and informative comparisons, additional research regarding (1) the best way to stratify from a statistical perspective and (2) the implications of reporting stratified ratings and reports on consumer comprehension would need to be completed before this approach could be recommended. Stratified reporting would require "drill-down" capability, so that targeted information could be shown to beneficiaries for their stratum only, or would require multiple displays of information. Case-mix adjustment would occur within these strata, using variables not involved in the stratification.

The estimation of pooled CMA coefficients essentially ignores the heterogeneity by forcing common coefficients across MMC and MFFS. This approach has at least two difficulties: (1) the relative weighting of MFFS and MMC in determining the coefficients is somewhat arbitrary¹⁸ and (2) comparisons among MMC plans are adjusted not on the basis of how case-mix adjusters function within MMC, but partially on the basis of how these variables function within MFFS¹⁹.

Independent estimation of CMA coefficients for MFFS and MMC has the advantage of allowing more appropriate adjustment of comparisons within payment type (MMC or MFFS). Furthermore, if the reference population to which both payment types are adjusted is the midpoint of the mean vectors of the two payment types on case-mix adjuster variables, the amount of adjustment is the same as would have been produced by pooled estimation of CMA coefficients. For these reasons, this third approach to case-mix heterogeneity (independent estimation) was chosen for 2000-2001 data and is recommended for 2002 data.

¹⁸ Without intervention, coefficients would be weighted by the relative sample sizes of the MFFS and MMC surveys. Additional weighting could make the relative contributions of MFFS and MMC proportionate to their prevalence in the population, but that would decrease the precision of the estimated coefficients.

¹⁹ The second difficulty could be eliminated only if one were willing for the case-mix adjusted MMC overall mean to be different when comparing within-MMC and when comparing to MFFS.

The steeper slope for GHP within MMC has been consistent for global ratings over 2000-2003. On the other hand, the number of report items for which the GHP slope is steeper in MMC has dropped from four to five items 2000-2001 to one to two items 2002-2003. 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 MMC experiences may be diminishing, but not the perceptions of those differences.

HOMOGENEITY FOR WITHIN-MFFS CMA

Homogeneity of the effects of case-mix adjusters across reporting entities is an assumption behind the comparison of MFFS experiences across reporting entities. To the extent this assumption does not apply, caution must be exercised when interpreting differences in case-mix adjusted means in reports and ratings across MFFS reporting entities. MMC CMA reports have found evidence of statistically significant heterogeneity in case-mix coefficients across the ten CMS regions. A similar finding in MFFS would pose some difficulties when CMS regions were used as reporting entities.

The 2000 MMC CMA Report tested for regional interactions among case-mix adjusters by starting with the standard base model (with the standard dummy specifications of ordinal case-mix adjusters) plus CMS region dummies, and then testing the additional variance contributed by the interactions of CMS region dummies with *linear* specifications of the ordinal case-mix adjusters in the base model (using a partial F-test). A similar approach was followed here for MFFS. ²⁰

Table 6 presents the p-values for these partial-F tests for MFFS for the four global ratings for 2000- 2003. Highlighted cells indicate statistically variation in CMA coefficients by CMS regions. The 2001-2003 models included MHP and its interactions with CMS regions, in addition to the base model. In 2000 MFFS, there was clear evidence of heterogeneity by CMS region for GHP and age, but no evidence of heterogeneity for education and proxy status. These results were similar to those found in 2000 MMC data. In 2001 MFFS data, GHP still shows heterogeneity by region, but age only does for ratings of specialists, and the remaining three variables are inconsistent in their results. In 2002 MFFS data we see consistent heterogeneity by CMS region for age and education, but regional heterogeneity only in some cases for GHP, MHP, and proxy status. In 2003, we only observe two instances of heterogeneity by CMS regions: rating of Medicare for age and rating of Health Care for age. Overall, GHP and age have exhibited the most heterogeneity across CMS regions within MFFS.

²⁰ Categorical, rather than linear interactions were used for proxy status.

Table 6: P-values for partial F-tests of heterogeneity of Within-FFS Case-Mix Effects by CMS Region, Years 2000-2003

Global Rating:	Medicare				Health Care				Personal Doctor				Specialist			
Survey Year:	2000 ¹	2001	2002	2003	2000 ¹	2001	2002	2003	2000 ¹	2001	2002	2003	2000 ¹	2001	2002	2003
Case-Mix Adjuster																
General	0.02	<.01	0.74	0.05	0.08	0.01	0.02	0.90	0.01	0.62	0.67	0.50	0.02	0.01	0.50	0.91
Age	<.01	0.49	<.01	<.01	0.00	0.23	<.01	0.02	0.01	0.36	0.04	0.33	0.03	0.04	0.01	0.31
Education	0.45	0.10	0.02	0.16	0.27	0.03	0.22	0.77	0.49	0.07	0.00	0.59	0.69	0.78	0.01	0.52
Proxy	0.14	0.06	0.44	0.66	0.32	0.10	0.04	0.56	0.56	<.01	0.02	0.78	0.33	0.50	0.74	1.00
Mental Health	NA	0.00	0.01	0.54	NA	0.81	0.03	0.41	NA	0.07	0.12	0.48	NA	0.11	0.22	0.29

The models corresponding to Table 6 were re-estimated, retaining regional interactions for only GHP and age. Summaries of these new models appear as Table 7. After dropping MHP, proxy, and education regional interactions, fairly consistent evidence of the heterogeneity of age effects across regions emerged for 2000-2002 MFFS. 2003 results are less consistent for both GHP and age. As can be seen, there is a moderate amount of regional variation in the magnitude of coefficients 2000-2003. On the other hand, regional patterns in these coefficients are not very consistent 2000-2003, raising questions about how to interpret these regional interactions. The inconsistency of these findings from year to year in MFFS (including inconsistency in which CMS regions have larger slopes from year to year) suggests that allowing regional heterogeneity in CMA coefficients is probably not as helpful within MFFS or for MFFS-vs.-MMC CMA as it is within MMC.

The existence of substantial linear interactions of case-mix adjusters with CMS Regions within MMC suggests that MFFS-vs.-MMC CMA should employ these interaction terms in order to ensure comparability. For Within-MFFS CMA, the existence of these interactions suggests caution in comparing geo units from different CMS Regions. Future research should seek to understand the instability over time of regional variation in CMA coefficients and should consider eliminating these regional interactions for the sake of efficiency for Within-MFFS CMA.

Table 7: Coefficients of Linear Interactions of Case-Mix Adjusters with CMS Regions, Excluding Dually Eligibles, Years 2000 - 2003.

	Medicare				Health Care				Personal Dr				Specialist			
Survey Year:	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003
P-value for Partial F-test for GHP:	<.01	<.01	0.02	<.01	0.02	0.01	0.01	0.62	<.01	0.30	0.03	0.05	<.01	0.01	0.70	0.79
GHP INTERACTION																
GHP-01	-0.15	-0.12	-0.15	-0.11	-0.22	-0.15	-0.16	-0.15	-0.14	-0.12	-0.08	-0.06	-0.11	-0.11	-0.09	-0.09
GHP-02	-0.17	-0.15	-0.11	-0.11	-0.20	-0.17	-0.17	-0.13	-0.11	-0.12	-0.09	-0.02	-0.10	-0.17	-0.12	-0.07
GHP-03	-0.16	-0.15	-0.12	-0.09	-0.19	-0.18	-0.14	-0.14	-0.12	-0.13	-0.05	-0.04	-0.17	-0.14	-0.12	-0.06
GHP-04	-0.12	-0.14	-0.10	-0.07	-0.17	-0.16	-0.14	-0.11	-0.06	-0.12	-0.03	0.01	-0.08	-0.14	-0.09	-0.04
GHP-05	-0.15	-0.15	-0.15	-0.13	-0.22	-0.15	-0.16	-0.14	-0.09	-0.10	-0.07	-0.04	-0.13	-0.12	-0.12	-0.07
GHP-06	-0.11	-0.16	-0.11	-0.03	-0.21	-0.15	-0.15	-0.14	-0.11	-0.11	-0.04	-0.01	-0.17	-0.13	-0.07	-0.05
GHP-07	-0.13	-0.11	-0.14	-0.17	-0.21	-0.15	-0.12	-0.14	-0.12	-0.11	-0.07	-0.05	-0.17	-0.15	-0.08	-0.06
GHP-08	-0.19	-0.11	-0.19	-0.11	-0.26	-0.14	-0.23	-0.13	-0.12	-0.07	-0.09	-0.02	-0.18	-0.12	-0.12	-0.07
GHP-09	-0.21	-0.08	-0.14	-0.08	-0.25	-0.11	-0.20	-0.14	-0.16	-0.10	-0.05	-0.02	-0.18	-0.10	-0.11	-0.07
GHP-10	-0.08	-0.05	-0.09	-0.08	-0.17	-0.11	-0.16	-0.16	-0.12	-0.11	-0.10	-0.01	-0.20	-0.04	-0.11	-0.09
Average	-0.15	-0.12	-0.13	-0.10	-0.21	-0.15	-0.16	-0.14	-0.12	-0.11	-0.07	-0.03	-0.15	-0.12	-0.10	-0.07
P-value for Partial F-test for AGE:	<.01	<.01	<.01	<.01	<.01	<.01	<.01	0.01	0.01	0.01	<.01	0.14	0.04	0.04	0.01	0.21
AGE INTERACTION																
AGE-01	0.24	0.23	0.27	0.33	0.09	0.05	0.06	0.07	0.09	0.03	0.04	0.03	0.05	0.05	0.04	0.02
AGE-02	0.21	0.24	0.23	0.28	0.03	0.08	0.03	0.04	0.02	0.09	0.01	0.04	0.01	0.06	0.02	0.03
AGE-03	0.24	0.24	0.22	0.31	0.07	0.07	0.05	0.07	0.04	0.08	0.01	0.04	0.04	0.04	0.01	0.02
AGE-04	0.22	0.30	0.22	0.28	0.07	0.09	0.05	0.07	0.06	0.14	0.02	0.04	0.05	0.11	0.03	0.04
AGE-05	0.24	0.25	0.24	0.30	0.07	0.05	0.05	0.05	0.04	0.09	0.02	0.03	0.01	0.03	0.01	0.01
AGE-06	0.23	0.27	0.24	0.27	0.08	0.08	0.09	0.08	0.07	0.12	0.05	0.05	0.10	0.12	0.08	0.04
AGE-07	0.24	0.23	0.27	0.31	0.07	0.03	0.06	0.07	0.08	0.08	0.06	0.07	0.05	0.11	0.03	0.03
AGE-08	0.33	0.22	0.28	0.31	0.12	0.01	0.12	0.06	0.06	0.07	0.06	0.06	0.08	0.00	0.08	0.07
AGE-09	0.32	0.23	0.28	0.32	0.14	0.02	0.07	0.09	0.10	0.09	0.05	0.06	0.08	0.03	0.02	0.06
AGE-10	0.37	0.23	0.33	0.38	0.09	0.03	0.09	0.11	0.06	0.08	0.06	0.07	0.05	-0.01	0.03	0.05
Average	0.26	0.24	0.26	0.31	0.08	0.05	0.07	0.07	0.06	0.09	0.04	0.05	0.05	0.05	0.04	0.04

^a Model does not include MHP case-mixed adjuster.

SELECTING VARIABLES FOR THE CASE-MIX MODEL

Building on the findings and recommendations of the MMC CMA Report and the MFFS Pilot Test CMA Report, four case-mix models (differing in their sets of case-mix adjusters/independent variables) were evaluated in the 2000 (Year 1) MFFS CMA Report. Two of these models, plus two new models, were evaluated using 2001 (Year 2) data. In 2002 and 2003, MHP was assumed part of the base model. Four and three additional models were assessed in 2002 and 2003, respectively.

MODELS COMPARED

In the 2000 Report, the first model evaluated was the base model for 1997-1999 MMC: age, general health perception, education, and proxy status, all coded categorically. The second model evaluated was the model recommended by the MFFS Pilot Test CMA Report: the base model plus the single-item mental health perception. The third model evaluated was the base model plus the SF-12 mental health composite score. The fourth model evaluated was the base model plus the SF-12 physical composite score.²¹

Using 2001 data, we evaluated four models: the first two models described above plus two new models. One adds an interaction between linearly coded GHP and an indicator of age under 65 (disabled). This allows GHP to have different meaning for disabled beneficiaries. The analysis that supported the development of this model appears as Appendix C. The last model adds to the base model a subdivision of under-65 age category into three parts (18-39, 40-54, 55-64), and forces a linear pattern among those three subgroups, based on analyses described in Appendix C.

The 2002-2003 base models include MHP. In 2002-2003, we compare the base model to three alternative models: the first one added the consumer life satisfaction measure (CLS) to the base model. The second and third models include the SF-12 mental health and SF-12 physical composite scores calculated the same as in the analysis of 2000 data. In 2002, we also evaluated a fourth model, which added information regarding mode of administration.²²

EXPLANATORY POWER OF CASE-MIX ADJUSTERS

Tables E2a and E2b in Appendix E summarize the explanatory power of the case-mix adjusters involved in the four models that were compared

²¹ The addition of a dual eligibility flag for Within-MFFS CMA will be considered, at least implicitly, within each of these four models.

²² Because mode for those who self-selected to call confounds pure response bias mode effects (the effects of the same people responding differently in different modes) with selection/composition effects (different people responding), we estimated coefficients and the change in R-squared only on those whose follow-up was randomly assigned. Because the pure mode effects should occur in all who responded by phone, we then projected those estimates (and calculated unit-level variance in mode) for all who responded by mode.

in 2000 and 2001 using the four global ratings.²³ Tables 8a and 8b make comparisons for 2002 and 2003 data for the models described above. The variables constituting the base model are labeled Group 1 and appear in Tables E2a and 8a; the variables added to the base model to create the other models are labeled Group 2 and appear in Tables E2b and 8b. Explanatory power was calculated in a different manner for Group 1 and Group 2 variables. The columns labeled 'Change in R-square' in these four tables report the increase in R-square for the individual-level regression when adding the case-mix adjuster in question to the base model (for Group 2 CMAs) or the base model without the case-mix adjuster in question (for Group 1 CMAs). In other words, these columns report the marginal contribution of each Group 1 CMA to the base model, controlling for other Group 1 CMAs, but reports the additional contribution of each Group 2 CMA to the base model. The next two columns of these Tables report the ratio of geo unit variance to error variance. The last two columns report the (rescaled) explanatory power statistic. It should be noted that the middle two columns and hence explanatory power vary with the choice of reporting entity.

2000-2001

Among Group 1 (base model) CMAs, education and general health perception were the most important case-mix adjusters in both 2000 and 2001. Education's explanatory power was partially a function of its substantial variation by geo unit. Education and age have substantial explanatory power for ratings of Medicare; general health perception and education has substantial explanatory power for ratings of health care. In 2001, general health perception had substantial explanatory power for ratings of specialists, as did education for ratings of personal doctors. In general, the explanatory power of education and GHP in the base models was higher in 2001 than 2000, a change which is primarily attributable to larger coefficients/larger changes in R2 for these terms in the 2001 base model.

Among the Group 2 CMAs examined in Table E2b (2000 data), the SF-12 physical health composite added virtually nothing to the R-square of the base model and therefore added very little explanatory power. Both the mental health perception item and the SF-12 mental health composite added substantial explanatory power to the base model for ratings of health care and specialists. The contributions of the SF-12 mental health composite were somewhat larger than for the single-item mental health perception. Given the small contribution of the SF-12 physical health composite, this term was neither recommended in the 2000 Report nor considered in 2001 comparisons. While the SF-12 mental health composite had somewhat greater explanatory power than the MHP item, the former required 12 items on the instrument to the latter's one. For these reasons, the MHP item was recommended for 2001 use (and was added to the corresponding MMC instrument), whereas the SF-12 mental health

²³ We follow MMC practice in basing model comparisons on the four global ratings, rather than on report items or composites. Because case-mix adjustment of composites occurs at the level of the report item, direct CMA models for composites are not possible in general. Because the report items tend to show less variance than the global ratings (typically about 80% of responses in the top category), these items are less powerful for comparisons of CMA models than are global ratings. The appendices, which provide coefficients for all rating and report items, suggest that CMA effects tend to be fairly consistent for global ratings and report items, a finding which has generally held throughout previous CAHPS CMA research.

composite was not (and questions exclusively serving the SF-12 were not added to the MMC instrument). Had the MHP item been used in 2000 CMA it would have been approximately as important an adjuster as GHP and education within MFFS, and more important than age or proxy status.

Among the Group 2 CMAs examined in Table E2b (2001), the MHP item was easily the most important. Its effects were very similar to those observed in 2000, having an impact roughly comparable to GHP and education and larger than that of age or proxy status. The contributions of the two terms involving beneficiaries under 65 were small, considerably less than the contribution of age. These small impacts can be attributed to both the low frequency of these beneficiaries when the dually eligible are excluded and the small variation in their characteristics across geo-units. These factors might become important however in reporting that focuses entirely on beneficiaries under the age of 65.

2002-2003

The addition of MHP to the base model in 2002-2003 affects the interpretation of the GHP variable, with which it is highly correlated. Since the change in R-square reflects the unique contribution of the variables, the drop in the E.P. for GHP in 2002 does not reflect a decline in its importance, but rather the addition of MHP to the base model in 2002-2003. In that light, the 2002-2003 results are consistent with 2000-2001 results. Note, for example, that the GHP and MHP effects as Group 1 variables in 2002-2003 are comparable in magnitude to the effects of MHP as a Group 2 variable in 2000-2001, a comparison which involves controlling for the same other predictors. Although age is very important for predicting the rating of Medicare 2002-2003, the most important CMA variables in the 2002-2003 base models were education and MHP. MHP seemed to increase in importance from 2002 to 2003.

Table 8a: Explanatory Power of Group 1 (Base Model) Case-Mix Adjusters, Geo Unit Reporting Entities, Years 2002 - 2003

Case-Mix Adjusters	Change in R-square		Var(Geo Unit) /Var(Error)		E.P.*1000	
	2002 ^a	2003 ^b	2002 ^a	2003 ^b	2002 ^a	2003 ^b
Medicare						
AGE	0.0329	0.0437	0.0133	0.0130	0.4367	0.5702
GHP	0.0028	0.0015	0.0207	0.0219	0.0571	0.0328
EDUC	0.0091	0.0075	0.0570	0.0533	0.5171	0.4006
MHP	0.0061	0.0050	0.0160	0.0169	0.0980	0.0851
PROXY	0.0024	0.0025	0.0108	0.0084	0.0258	0.0212
ANSPROXY	0.0001	0.0000	0.0043	0.0041	0.0003	0.0000
Health Care						
AGE	0.0030	0.0041	0.0133	0.0130	0.0404	0.0532
GHP	0.0064	0.0061	0.0207	0.0219	0.1328	0.1342
EDUC	0.0070	0.0057	0.0570	0.0533	0.3960	0.3042
MHP	0.0107	0.0166	0.0160	0.0169	0.1715	0.2801
PROXY	0.0006	0.0006	0.0108	0.0084	0.0062	0.0052
ANSPROXY	0.0002	0.0001	0.0043	0.0041	0.0007	0.0002
Specialist						
AGE	0.0006	0.0008	0.0133	0.0130	0.0077	0.0103
GHP	0.0024	0.0011	0.0207	0.0219	0.0490	0.0232
EDUC	0.0033	0.0029	0.0570	0.0533	0.1862	0.1557
MHP	0.0081	0.0135	0.0160	0.0169	0.1292	0.2274
PROXY	0.0001	0.0001	0.0108	0.0084	0.0011	0.0008
ANSPROXY	0.0000	0.0000	0.0043	0.0041	0.0001	0.0002
Personal Doctor						
AGE	0.0008	0.0018	0.0133	0.0130	0.0101	0.0241
GHP	0.0009	0.0002	0.0207	0.0219	0.0187	0.0040
EDUC	0.0043	0.0046	0.0570	0.0533	0.2438	0.2433
MHP	0.0055	0.0093	0.0160	0.0169	0.0887	0.1572
PROXY	0.0001	0.0002	0.0108	0.0084	0.0014	0.0014
ANSPROXY	0.0004	0.0001	0.0043	0.0041	0.0017	0.0005

^a Sample of 43 states common to MMC and MFFS; excluding dually eligible beneficiaries.

^b Sample of 42 states common to MMC and MFFS; excluding dually eligible beneficiaries.

Among the Group 2 CMAs examined in Table 8b (2002-2003 data), the SF-12 physical health composite added virtually nothing to the R-square of the base model and therefore added very little explanatory power, as was the case in previous years. The SF-12 mental health composite added little explanatory power to a base model that already contains the MHP item. The new Current Life Satisfaction (CLS) item added a moderate amount of explanatory power to the base model. In 2002, its unique contributions are roughly equal to unique contributions of GHP in the

current model (less than age, education, and MHP; more than proxy status). In 2003, CLS was more important than GHP for all four global ratings and more important than age for three of four global ratings.²⁴ On the other hand, CLS is less important than education and does not add as much to the model as the one variable that has been added since 2000 (MHP).

An additional 2002 model added phone mode to the base model. Phone mode of response, while varying little from geo-unit to geo-unit, has such a large unique contribution to R-squared that it has consistently substantial explanatory power. If added to the case-mix model, it would add at least as much as MHP added and has the potential to equal education as the most important case-mix adjustor. As noted in Appendix F, there are special concerns with the implementation of adjustments based on mode of response.

Table 8b: Explanatory Power of Group 2 (Prospective) Case-Mix Adjusters, Geo Unit Reporting Entities, Years 2002 - 2003

Case-Mix Adjusters	Change in R-square		Var(Geo Unit) /Var(Error)		E.P.*1000	
	2002 ^a	2003 ^b	2002 ^a	2003 ^b	2002 ^a	2003 ^b
Medicare						
CLS	0.0044	0.0036	0.0177	0.0138	0.0783	0.0497
RPCS12	0.0000	0.0002	0.0183	0.0170	0.0002	0.0031
RMCS12	0.0032	0.0017	0.0110	0.0107	0.0353	0.0182
PHONE	0.0434	NA	0.0071	NA	0.3078	NA
Health Care						
CLS	0.0051	0.0100	0.0177	0.0138	0.0900	0.1383
RPCS12	0.0003	0.0003	0.0183	0.0170	0.0049	0.0044
RMCS12	0.0074	0.0085	0.0110	0.0107	0.0816	0.0915
PHONE	0.0397	NA	0.0071	NA	0.2812	NA
SPECIALIST						
CLS	0.0023	0.0047	0.0177	0.0138	0.0398	0.0642
RPCS12	0.0000	0.0000	0.0183	0.0170	0.0001	0.0005
RMCS12	0.0039	0.0046	0.0110	0.0107	0.0430	0.0491
PHONE	0.0660	NA	0.0071	NA	0.4676	NA
Personal Doctor						
CLS	0.0025	0.0044	0.0177	0.0138	0.0440	0.0605
RPCS12	0.0001	0.0001	0.0183	0.0170	0.0026	0.0011
RMCS12	0.0013	0.0010	0.0110	0.0107	0.0139	0.0105
PHONE	0.0411	NA	0.0071	NA	0.2909	NA

^a Sample of 43 states common to MMC and MFFS; excluding dually eligible beneficiaries.

^b Sample of 42 states common to MMC and MFFS; excluding dually eligible beneficiaries.

²⁴ Considering that E.P.s are inherently smaller in the Group 2 comparison than they would have been in the Group 1 comparison.

PRECISION OF CASE-MIX ADJUSTER ESTIMATES

Tables A1a, A1b, A1c, A3b, A3c, A3d, A2a, A2b, A2c, and A2d in Appendix A contain coefficients and standard errors for the base model and the variation of the base model that adds MHP for all global ratings and report items. Tables A4c and A4d, additionally adds CLS to 2002-2003 year models. Table 9 below outlines the differences among these appendix tables. All possible combinations of model, data, and dually eligible inclusion are not reported, but the eight sets of coefficients do allow a variety of comparisons. As can be seen, virtually all dummies are statistically significant for the four global ratings, with t-statistics (coefficients divided by standard errors) often exceeding ten, indicating that these coefficients are very well estimated. The same is true to a lesser extent for the coefficients of the report items.

Table 9: Characteristics of Appendix Tables Listing Model Coefficients

	Data	2000 Data	2001 Data	2002 Data	2003 Data
Base Model	All States, No Dually Eligible	Table A1a (continuous)	Table A1b (continuous)	Table A1c (continuous)	
		Table A1a_d (dichotomous)	Table A1b_d (dichotomous)	Table A1c_d (dichotomous)	
Base Model + MHP	All States, No Dually Eligible		Table A3b (continuous)	Table A3c (continuous)	Table A3d (continuous)
			Table A3b_d (dichotomous)	Table A3c_d (dichotomous)	Table A3d_d (dichotomous)
	All States, With Dually Eligible	Table A2a (continuous)	Table A2b (continuous)	Table A2c (continuous)	Table A2d (continuous)
Base Model + MHP + CLS	All States No Dually Eligible			Table A4c (continuous)	Table A4d (continuous)
				Table A4c_d (dichotomous)	Table A4d_d (dichotomous)

One can compare the impact of the MHP dummies by comparing Table A1b with A3b, and Table A1c with A3c. In the first comparison, the base model coefficients remain well estimated in the model with MHP, and coefficients for the mental health perception item are also well estimated. As with general perceived health, higher perceived mental health is associated with more positive ratings and reports of care. The addition of the mental health perception item to the base model has little effect on base model coefficients, with the exception that the magnitudes of the coefficients of the general health perception item are diminished (because of correlation between the two items). In the second comparison, the coefficients for the ratings are well estimated even after the addition of MHP; however, for the reports this is not always the case.

The dual eligibility flag is only intermittently statistically significant and is inconsistent in its direction in Tables A2a, A2b, and A2c. In some instances the dually eligible respond more favorably than would be expected on the basis of other case-mix adjusters; in other cases, they respond less favorably. Comparisons of Tables A3b with A2b, and A3c with A2c reveal that the exclusion of the dually eligible has only very small impacts on case-mix coefficients.

ROBUSTNESS TO DICHOTOMIZATION OF OUTCOMES IN REPORTING

Tables A1a_d, A1b_d, A1c_d, A3b_d, and A3c_d in Appendix A are parallel versions of Tables A1a, A1b, A1c, A3b, and A3c, respectively, for the four global ratings, with the exception that the global ratings have been dichotomized in the manner in which they are sometimes presented to consumers: 10 vs. 0-9. The A1 tables compare the base model and the A3 Tables compare the model with MHP. Ideally, the

effects of the base model and base model plus MHP would be similar for the two presentations.

This report focuses on case-mix adjustment of the ratings and report items in their continuous form in order to maximize statistical power. For presentational simplicity, reports to consumers, such as those found on Medicare.gov, present the proportion of "best possible" responses. This dichotomous cut-point was chosen to maximize statistical power. Robustness of our case-mix models to this dichotomization would ensure that there were no systematic differences in the more powerful models being examined here and the ones used to adjust consumer reports.²⁵

An examination of Table A1a_d reveals that a large majority of the coefficients for the dichotomized ratings are statistically significant and well estimated. The direction of age effects is similar to that observed in the standard model, although the distinction between those under 65 and 65 to 69 may not be as pronounced. The direction of education effects is similar to the standard model for three of four ratings, although specialists appear to be more often rated 10 by the better educated. Well-educated health consumers are known to expend more effort in searching for health information related to specific medical conditions (Spranca, Ringel, et. al. 2004). Perhaps the educated have invested more effort in their searches for specialist and therefore are more satisfied with their choices.

The direction of health effects is similar to the standard model for three of four ratings. The distinction between *good*, *fair*, and *poor* health status appears to be weaker for the dichotomized ratings, suggesting that the impact of these health statuses on ratings is generally within the 0-9 range. Once again, dichotomized specialists ratings behaved somewhat differently than in the standard model, with those in worse health more likely to rate their specialists 10.

The 2001 patterns in Table A1b_d are quite similar to those found in the previous year. When MHP is added in Table A3b_d, the impact of GHP becomes smaller (paralleling changes in Table A3b) in general and reverses direction for the dichotomized global rating of Health Care. Part of this may be attributable to the very strong relationship of mental health perception to global ratings of 10. The reversal of the GHP coefficient direction for dichotomized ratings of specialists that were observed in 2000 continued in 2001. In 2002-2003 tables we see patterns consistent with the findings of previous years.

Other ongoing research investigates dichotomous presentation of global ratings and reports in a manner that focuses attention on poor experiences by dichotomizing near the 15th percentile distributions. Early results suggest that the CMA for this method is interpretable and

²⁵ Because the models used for consumer reports have dichotomous outcomes, they could be based on logistic regression. As it turns out, the very large sample sizes result in virtually indistinguishable results when ordinary least squares (linear) regression is used. This convergence occurs because the global ratings tend to have means near 50% and the composites are themselves means of several items, both of which increase the convergence of the normal approximation to the binomial. Given the similarity, OLS was chosen for convenience, in that it permits partitioning of variance, computation of explanatory power statistics, simple interpretation of coefficients, and comparability to the continuous models described here.

generally similar to the current approach, the resulting power to compare plans is reasonable, and the resultant information ranks plans fairly differently than the current approach. In particular, this "problem-oriented" dichotomization may emphasize characteristics such as the proportion of beneficiaries in poor health and the proportion of beneficiaries under age 65, in that these characteristics have stronger predictive associations with the proportion of "low" ratings and reports than with the proportion of "high" ratings and reports. This approach also provides a way of dealing with the reversals in the GHP coefficients observed under standard dichotomization. A manuscript on this topic is expected to be submitted in 2004 or early 2005.

STABILITY OF MFFS CMA COEFFICIENTS

Table E3 of Appendix E compares 2000-2002 CMA coefficients for the four global ratings for MFFS data in the 43 or 44 states with MMC, excluding the dually eligible. Table 10 below compares CMA coefficients for 2000-2003 data. Table E3 uses the base model without MHP, and Table 10 includes MHP. Those coefficients that differ significantly ($p < 0.05$) across the years by a one-way analysis of variance are marked with an asterisk. Note that the change in age categories in 2001 and again in 2002 affects the comparison of age coefficients.

As can be seen in Table 10, 2000-2003 MFFS CMA coefficients are generally similar across years. The already strong positivity of beneficiaries 80 and older seems to be increasing somewhat from 2001 to 2003. There may also be a trend for proxy effects to be diminishing, particularly in those cases in which a proxy answers in place of the beneficiary. In other words, the tendency for proxies to be more negative than self-report appears to be weakening. Preliminary work with propensity score matching suggests that true proxy effects may be even smaller than they appear, and that they are primarily attributable to non-spouse proxies. From 2000-2002, the slope of self-rated physical health (GHP) increased, with ratings becoming more responsive to health. In this regard, the MFFS pattern began to more closely resemble the pattern in MMC. 2003 patterns for GHP represent a partial retreat from this trend. In other words, the steepness of slopes in 2003 is greater than in 2000 but equal to or less than what was observed in 2002. 2004 data may shed light on the long-term trend. MHP slopes have also changed a little 2000-2003, with general (though not entirely consistent) pattern being towards greater sensitivity of ratings to MHP.

Table 10: Comparison of 2000- 2003 MFFS CMA Coefficients for Base Model plus MHP, MMC and MFFS Common States, No Dual Eligibles, Geo Unit Dummies Included in the Models

Global Ratings: Survey Year: Case-Mix Adjusters	Rate Doctor					Rate Specialist					Rate Medicare				Rate Health Care					
	2000 ^a	2001 ^b	2002 ^c	2003 ^d		2000 ^a	2001 ^b	2002 ^c	2003 ^d		2000 ^a	2001 ^b	2002 ^c	2003 ^d	2000 ^a	2001 ^b	2002 ^c	2003 ^d		
AGE																				
AGE44			0.08	0.08				-0.28	-0.26				-0.56	-0.59				-1.41	-1.25	
AGE64	0.05	0.13			*	-0.07	-0.07				-0.18	-0.15			-0.84	-0.76			*	
AGE4564			0.22	0.14				0.03	0.07				-0.05	-0.11				-0.72	-0.84	
AGE6569	-0.14	-0.11	-0.08	-0.09	*	-0.07	-0.12	-0.06	-0.09		-0.12	-0.10	-0.07	-0.10	-0.30	-0.27	-0.31	-0.45	*	
AGE7579	0.08	0.08	0.10	0.11		0.06	0.02	0.06	0.09		0.07	0.06	0.08	0.09	0.19	0.22	0.25	0.33	*	
AGE80	0.13					0.08					0.11				0.33					
AGE8084		0.11	0.16	0.16	*		0.02	0.09	0.10	*		0.06	0.11	0.12	*	0.36	0.40	0.52	*	
AGE85		0.11	0.13	0.19	*		0.00	0.03	0.05			0.07	0.13	0.13		0.41	0.45	0.60	*	
EDUCATION																				
LESS8GRD	0.09	0.17	0.10	0.09	*	0.07	0.08	0.08	-0.01		0.07	0.10	0.07	0.01	*	0.07	0.05	0.06	0.09	
SOMEHIGH	0.11	0.14	0.15	0.12		0.12	0.14	0.13	0.08		0.09	0.13	0.13	0.07	*	0.16	0.12	0.12	0.15	
SOMECOLL	-0.08	-0.13	-0.09	-0.11		-0.11	-0.13	-0.10	-0.12		-0.16	-0.20	-0.15	-0.17		-0.26	-0.28	-0.25	-0.24	
COLLGRAD	-0.23	-0.23	-0.19	-0.22		-0.20	-0.18	-0.19	-0.21		-0.28	-0.26	-0.23	-0.28		-0.42	-0.42	-0.37	-0.37	
COLLMORE	-0.24	-0.26	-0.25	-0.26		-0.23	-0.26	-0.22	-0.25		-0.31	-0.36	-0.33	-0.32		-0.55	-0.55	-0.53	-0.48	
GHP																				
EXCEL	0.22	0.24	0.22	0.14	*	0.10	0.22	0.20	0.15		0.31	0.32	0.31	0.30		0.22	0.19	0.20	0.17	
VERYGOOD	0.09	0.09	0.08	0.07		0.06	0.09	0.08	0.06		0.13	0.17	0.13	0.14		0.07	0.11	0.08	0.11	
FAIR	-0.02	-0.05	-0.09	-0.02	*	-0.05	-0.11	-0.15	-0.07	*	-0.08	-0.13	-0.17	-0.12	*	-0.01	-0.05	-0.12	-0.04	
POOR	0.01	0.01	-0.08	-0.04	*	-0.09	-0.17	-0.23	-0.16	*	-0.15	-0.22	-0.31	-0.29	*	-0.07	-0.13	-0.29	-0.19	
MHP																				
EXCEL	0.36	0.37	0.35	0.43	*	0.39	0.46	0.40	0.48	*	0.45	0.43	0.40	0.47	*	0.32	0.30	0.34	0.33	
VERYGOOD	0.14	0.12	0.12	0.18	*	0.18	0.18	0.15	0.22		0.21	0.15	0.16	0.22	*	0.17	0.11	0.17	0.14	
FAIR	-0.10	0.00	-0.10	-0.12	*	-0.17	-0.11	-0.13	-0.14		-0.18	-0.09	-0.17	-0.16	*	-0.10	-0.07	-0.16	-0.15	
POOR	-0.21	-0.22	-0.30	-0.21		-0.32	-0.39	-0.40	-0.39		-0.33	-0.32	-0.40	-0.40		-0.21	-0.37	-0.52	-0.28	

PROXY																				
PROXY	-0.13	-0.13	-0.07	-0.08	*	-0.11	-0.04	-0.05	-0.04		-0.15	-0.14	-0.11	-0.11		-0.30	-0.32	-0.28	-0.32	
ANSPROXY	-0.20	-0.20	-0.16	-0.10	*	-0.23	-0.09	-0.04	-0.05	*	-0.17	-0.12	-0.10	-0.06		-0.15	-0.17	-0.06	-0.03	*

^a Sample of 43 states ^b Sample of 44 states

^c Sample of 43 states ^d Sample of 42 states

- p-val < 0.05

RECOMMENDATIONS FOR CASE-MIX ADJUSTMENTS

Model 1, the base model, is reliable, parsimonious, and reasonably robust with respect to dichotomization of the global ratings. Models 2 and 3, which add the SF-12 mental and physical scores, respectively, probably add too little to the explanatory power of Model 1 to justify a change.

Model 4, which adds the current life satisfaction (CLS) item, may be in more of a gray zone. Its empirical contributions are moderate, neither so small as to be easily ignorable nor so important as to be a mandatory inclusion. The CLS item differs from existing CMA variables in that it is not a demographic marker (like age, education, or health status) that may function both as a true basis for differential care and also as a proxy for response bias patterns. Instead, it was specifically designed to be a more direct measure of response bias, with those who profess greater life satisfaction being more likely to rate all things, including health care experiences, more positively. The CLS item has strong correlations with GHP and MHP. On the positive side, use of this variable within a CMA model might help distinguish differential treatment of beneficiaries by health status from systematic response patterns associated with beneficiary health status. On the other hand, some feel that the use of the CLS item could lead to confusion and criticism from some interested parties. See Appendix D for a more complete discussion of these issues.

For these reasons, we recommend Model 1 (age, education, GHP, MHP, and proxy status as dummies) for both MFFS-vs.-MMC CMA and within-MFFS CMA in 2003. For the former, we recommend (1) regional interactions of linear age categories and GHP with CMS regions; (2) independent estimation of CMA coefficients for MFFS and MMC; (3) adjustment to the midpoint of MFFS and MMC population means; and (4) the use of 2003 geographic equivalence weights (GEW) detailed in Appendix B. For the latter (within-MFFS CMA), we recommend the addition of the dually eligible indicator.

We recommend consideration of further mode experiments within both MFFS and MMC to explore the viability of phone mode as a potentially very important case-mix adjustor, if a fairly challenging one to implement.

IMPACT OF CASE-MIX ADJUSTMENT OF GEO UNITS WITHIN MFFS, USING CONTINUOUS SCORING

Table 11 summarizes the impact of case-mix adjustment of MFFS geo units, as compared to one another on the four global ratings, using continuous scoring. The mean adjustments of geo units may appear to be very small, ranging from 0.017 to 0.045 points on a scale with a theoretical 11-point range. This is a little deceptive, however, because small differences are important on these highly skewed scales, with means near nine. Variation in unadjusted geo unit means is also small, so that the standard deviations of these case-mix adjustments are 15 to 44 percent of the standard deviations of the unadjusted geo unit means. The largest case-mix adjustments range from 0.065 to 0.280 points, 43 to 101 percent of the standard deviations of the unadjusted geo unit means. The impact of Within-MFFS CMA is therefore moderate, but not negligible. The magnitude of these impacts has been similar from year to year.

Table 11: 2000-2003 Impact of Within-MFFS CMA, Geo Unit Reporting Entities, Base Model + MHP

	Medicare				Health Care				Doctor				Specialist			
Survey Year:	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003	2000 ^a	2001	2002	2003
Mean absolute adjustment	0.041	0.042	0.044	0.044	0.038	0.038	0.036	0.045	0.018	0.017	0.017	0.019	0.025	0.031	0.029	0.030
Largest adjustment	0.280	0.280	0.243	0.234	0.197	0.177	0.138	0.177	0.112	0.079	0.065	0.082	0.141	0.135	0.108	0.118
STD (adj)	0.052	0.054	0.056	0.055	0.046	0.047	0.045	0.055	0.022	0.022	0.021	0.023	0.031	0.039	0.036	0.038
STD (adj)/STD (unadjusted geo unit means)	0.293	0.278	0.306	0.237	0.374	0.367	0.375	0.437	0.161	0.151	0.150	0.162	0.180	0.238	0.257	0.281

^a Model excludes MHP.

IMPACT OF CASE-MIX ADJUSTMENT OF STATES WITHIN MFFS, USING PERCENTAGE SCORING

The following impact analyses examine the effect of case-mix adjustment on the percentage of best possible responses within states for MFFS data for five measures reported on *medicare.gov*: two global ratings (Medicare/Plan and Care Received) and three report composites (Care Without Waits, Doctor Communication, and Getting Needed Care). These analyses are based on the CAHPS Macro using the recommended CMA model (including MHP) for all 50 states (plus the District of Columbia and Puerto Rico) and allow examination of the impact of CMA on the measures as they are presented to consumers.

As can be seen in Table 12, the mean absolute adjustment among states in 2003 is 22-33% as large as the average (unadjusted) state deviation from the national MFFS mean. Because the states themselves do not vary much, this corresponds to an average adjustment of 0.6-1.0%. The largest adjustments are 2.0% to 3.1%. The sizes of the adjustments were similar to what was observed 2001-2002.

It should be noted that in general the impact of CMA and explanatory power of CMA variables is somewhat smaller in Within-MFFS CMA than in Within-MMC CMA because the geo units and states in MFFS are inherently less distinct from one another and more internally heterogeneous than the corresponding plans in MMC, thus lessening the potential for adjustment within MFFS²⁶.

²⁶ The impact of case-mix adjustment is a function of two factors: 1) the size of the coefficients at the individual level and 2) the extent to which the case-mix characteristics vary from reporting unit to reporting unit. MMC plans have some ability to differentiate themselves from one another in their beneficiary populations through marketing or through the features or services they provide. These provide a bit of market segmentation across MMC plans beyond the variation from geography alone. On the other hand, MFFS really varies only by geography. MFFS vs. MMC CMA has relatively large variation in case-mix characteristics because the set of MMC plans, which are relatively distinctive, varies from state to state. There really isn't a corresponding variation within MFFS, so that within MFFS CMA corrects only for the relatively subtle geographic variation in CMA variables.

Table 12: 2001-2003 Impact of Within-MFFS CMA, State Reporting Entities, Base Model + MHP, Percentage Scoring

	Care w/o Wait Composite			Doctor Communication Composite			Getting Needed Care Composite			Medicare Rating			Health Care Rating		
	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003
Survey Year:	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003	2001 ^a	2002	2003
(1) Mean absolute adjustment	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%	1.0%	0.9%	1.0%	0.9%	0.7%	0.9%
(2) Largest absolute adjustment	+3.5%	-2.9%	-3.1%	+1.8%	-1.5%	-2.0%	+3.5%	-2.8%	-2.8%	-3.4%	+2.6%	+3.1% -3.1%	-2.4%	-2.5%	-2.4%
(3) State with largest adjustment	PR	PR	PR	MS	UT	PR	PR	PR	PR	ND	ND	ND AK	ND	UT	PR
(4) Mean absolute deviation of states from National Mean, unadjusted	2.8%	2.5%	3.0%	2.0%	1.8%	1.9%	1.6%	2.2%	2.4%	4.6%	4.2%	4.5%	2.9%	2.8%	2.7%
(5) Mean absolute adjustment as a percentage of state-to-state variation in scores [(1)/(4)]	21%	24%	22%	30%	30%	31%	44%	30%	30%	22%	20%	22%	31%	25%	33%

^a Model excludes MHP

**IMPACT OF CASE-MIX ADJUSTMENT AND COMPARISON WEIGHTS
ON NATIONAL MFFS VS. MMC COMPARISON**

The following impact analyses examine the effect of case-mix adjustment on the national MFFS vs. MMC comparison of the percentage of best possible responses for the two global ratings (Medicare/Plan and Care Received) and three report composites (Care Without Waits, Doctor Communication, and Getting Needed Care) discussed in the previous section. These analyses are based on the CAHPS Macro using the recommended CMA model (including MHP) for all states with MMC.

Three versions were compared 2001-2003: unadjusted²⁷ MFFS-MMC differences, MFFS-MMC differences with comparison weights only, and MFFS-MMC differences with comparison weights and CMA. The effect of comparison weights alone was defined as the difference between the second version and the first. The effect of CMA alone was defined as the difference between the third version and the second. The combined effect of CMA and comparison weights was defined as the difference between the third version and the first. In 2002-2003 we also display raw estimates that omit design and non-response weights internal to MFFS.

As can be seen in Table 13, both comparison weights and case-mix adjustment adjusted in favor of MMC for all five measures 2001-2002. In 2003, comparison weights had small and mixed adjustments, but case-mix adjustment adjusted in favor of MFFS for all five measures. The total adjustment was small to moderate 2002-2003: 0.1% to 1.9% per measure in 2003 and 0.2% to 1.2% per measure in 2002. Adjustments were more substantial in 2001: 2.2% to 4.6% per measure. The 2001 adjustments were large enough to reverse the sign of the unadjusted difference in two instances.

In 2003, comparison weights alone adjusted by no more than 0.2% in either direction. CMA alone adjusted by 0.3-2.1% in favor of MFFS. For four of five measures, CMA accounted for 86-100% of the total adjustment. In 2002, comparison weights adjusted by 0.0-0.2% in favor of MMC and CMA adjusted by 0.1-1.0% and accounted for half to all of the adjustment. In 2001, comparison weights alone adjusted the measures by 1.4-2.7% in favor of MMC; CMA alone adjusted the measures by 0.8-1.9% in favor of MMC. For all measures, comparison weights resulted in more of the adjustment than did case-mix adjustment, which was responsible for 33-45% of the total adjustment.

Examination of the raw estimates show that the MFFS design and non-response weights adjust by 0.0-0.6%. In 2002, all such adjustments were in favor of MFFS, correcting for under-representation of beneficiaries with more positive ratings in the raw MFFS data. In 2003, these adjustments were more mixed. In terms of national mean differences between MFFS and MMC, the MFFS non-response and design weights were more important than the comparison weights, but less important than case-mix adjustment in 2002-2003.

Comparison weights have gone from moderate adjustments in favor of MMC in 2001 to very small adjustments 2002-2003. One interpretation is that MFFS sample was initially scarce in the geographic regions that had the least positive Medicare experiences among those regions with MMC penetration. The shrinking effect of the comparison weights may be attributable to the reallocation of MFFS sample into the counties with high MMC penetration but low population that were initially underrepresented, in the efforts to reduce

²⁷ "unadjusted" MFFS-MMC differences do not involve geographic equivalence weights (comparison weights), but do involve simple population weights.

the comparison weights design effect. In other words, the geographic distribution of the MFFS sample is much better matched to MMC in 2003 than it was in 2001.

Case-mix adjustment has gone from moderate adjustments in favor of MMC in 2001 to small adjustments in favor of MMC in 2002 to moderate adjustments in favor of MFFS in 2003. Adjustments favoring MMC probably correspond to MMC 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 MMC to adjustments favoring MFFS could mean that age and education selection into MMC is becoming weaker, but health selection is becoming stronger. Future research should investigate trends in MFFS vs. MMC case-mix demographics.

Table 13: 2001-2003 National Estimates of MFFS-MMC difference, Base Model + MHP, Percentage Scoring, Unadjusted, Comparison Weighted, and Comparison Weighted + Case-Mix Adjusted

	Care w/o Wait Composite			Doctor Communication Composite			Getting Needed Care Composite			Medicare Rating			Health Care Rating		
	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c
Survey Year:	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c
Raw MFFS-MMC Estimate	N/A	+1.4%	+2.2%	N/A	-0.2%	+0.7%	N/A	+6.2%	+6.3%	N/A	+3.3%	+1.8%	N/A	+1.5%	+3.0%
Unadjusted MFFS-MMC estimate	+1.6%	+2.0%	+2.7%	0.0%	+0.4%	+1.0%	+8.0%	+6.4%	+6.3%	+3.7%	+3.7%	+1.6%	+1.5%	+2.1%	+3.0%
MFFS-MMC estimate, with Comparison Weights only	-1.1%	+1.8%	+2.7%	-1.7%	+0.4%	+1.2%	+6.4%	+6.2%	+6.1%	+2.3%	+3.6%	+1.8%	-0.6%	+2.1%	+3.2%
MFFS-MMC estimate, with Comparison Weights and Case-mix Adjustment	-3.0%	+0.8%	+3.4%	-3.1%	-0.1%	+2.4%	+5.6%	+5.9%	+6.4%	+1.5%	+3.5%	+3.9%	-1.8%	+1.9%	+4.9%
Proportion of adjustment attributable to CMA²⁸	41%	83%	100%	45%	100%	86%	33%	60%	N/A	36%	50%	91%	36%	100%	89%

^a Sample of 44 States; model excludes MHP.

^b Sample of 43 States

^c Sample of 47 States

²⁸ Since the effects of CMA and Comparison weights were in the same direction in all cases but one, this is just the CMA effect divided by the combined CMA and Comparison Weights effects.

IMPACT OF CASE-MIX ADJUSTMENT ON STATE-LEVEL MFFS VS. MMC COMPARISONS, USING PERCENTAGE SCORING

The following impact analyses examine the effect of case-mix adjustment on state-level MFFS vs. MMC comparisons of the percentage of best possible responses for the five measures discussed in the previous section in 2001-2002. These analyses are based on the CAHPS Macro using the recommended CMA model (including MHP) and allow examination of the impact of CMA on the measures as they are presented to consumers. The effect of CMA was defined as in the previous section. The final rows of each section of Table 14 compare the amount of CMA to the amount of variation in the unadjusted state level effects in order to give a sense of scale to the CMA.²⁹

Case-mix adjustment had an average within-state effect of 0.9-2.0% in 2003, about twice as large as 2001-2002 effects for four of five measures. These 2003 adjustments are 23-55% of the magnitude of the state-to-state variation in the MFFS-MMC difference. The case-mix adjustment effects were in favor of MFFS in almost all cases in 2003. In 2001-2002, adjustments were in favor of MMC more often than not, although not overwhelming so. The largest adjustments were 2.1-5.6%.

²⁹ In particular, the denomination in the last row is the mean absolute deviation of state level MFFS-MMC differences from the national MFFS-MMC difference. The numerator is the mean absolute CMA of these state level estimates.

Table 14: 2001-2003 Impact of CMA on State-Level MFFS-MMC Difference, Base Model + MHP, Percentage Scoring

Survey Year:	Care w/o Wait Composite			Doctor Communication Composite			Getting Needed Care Composite			Medicare Rating			Health Care Rating		
	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c	2001 ^a	2002 ^b	2003 ^c
Mean absolute adjustment of Difference	1.2%	0.6%	0.9%	0.7%	0.5%	1.6%	0.4%	0.5%	0.9%	0.8%	0.8%	1.9%	0.8%	0.7%	2.0%
Mean adjustment, signed (in favor of)	1.2% MMC	0.6% MMC	0.8% MFFS	0.5% MMC	0.2% MMC	1.6% MFFS	0.1% MMC	0.1% MMC	0.7% FFS	0.3% MFFS	0.2% MMC	1.8% FFS	0.1% MMC	0.4% MFFS	2.0% FFS
Largest adjustment in favor of MFFS	0.3% WV	0.3% GA, NM	2.1% LA	1.3% WV	0.9% CT	3.2% NC	1.3% WV	0.9% RI	2.4% HI	3.0% WV	1.8% NM	5.6% HI	2.3% DC	2.5% CT	4.1% LA
Largest adjustment in favor of MMC	2.6% ND	1.7% MS	1.2% MS	2.1% HI	1.2% HI	0.3% MS	0.8% IN	2.4% MS	1.7% MS	2.8% VA	2.7% NH	1.3% UT	2.0% VA	1.3% NH, SD	0.7% UT
Mean Absolute Deviation of State MFFS-MMC Difference from National MFFS-MMC Difference, Unadjusted															
	4.2%	3.4%	3.6%	3.2%	2.7%	2.9%	3.7%	4.5%	3.9%	5.9%	7.3%	7.0%	4.2%	3.6%	4.4%

^a Sample of 44 States; model excluded MHP.

^b Sample of 43 States

^c Sample of 47 States

SUMMARY OF IMPACT OF CASE-MIX ADJUSTMENT

The average impact of CMA alone is moderate on between-state comparisons of MFFS, within-state comparisons of MFFS with MMC, and national comparisons of MFFS with MMC. The adjustments of within-state comparisons of MFFS with MMC were larger in 2003 than in 2001-2002. The largest adjustments for several states were quite substantial for both between-state comparisons of MFFS and within-state comparisons of MFFS with MMC. The effect of CMA has shifted from favoring MMC over MFFS strongly in 2001 to favoring MMC more mildly in 2002 to favoring MFFS in 2003.

APPENDIX A: CASE-MIX ADJUSTMENT COEFFICIENTS

Notes: All R-squares for Appendix Tables include variance attributable to the reporting entity intercept vector. Coefficients in Appendix Tables are followed by their standard errors in parentheses. The coefficients for proxy status should be interpreted as follows: the coefficient for those beneficiaries receiving no assistance is 0, the coefficient for those beneficiaries receiving some help (but answering for themselves) is represented by "PROXY", and the coefficient for those beneficiaries for whom proxy answered is represented by the sum of the "PROXY" coefficient and the "ANSPROXY" coefficient. In other words, the ANSPROXY coefficient estimates the difference between two types of proxy assistance. All tables in Appendix A include all states.

Table A1a: 2000 Case-Mix Coefficients, Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.06	0.04	0.02	0.03
AGE				
AGE64	-0.86 (0.03)	-0.26 (0.02)	-0.01 (0.02)	-0.13 (0.03)
AGE6569	-0.29 (0.02)	-0.12 (0.02)	-0.14 (0.02)	-0.07 (0.02)
AGE7579	0.19 (0.02)	0.06 (0.02)	0.07 (0.02)	0.05 (0.02)
AGE80	0.32 (0.02)	0.08 (0.02)	0.11 (0.02)	0.05 (0.02)
EDUCATION				
LESS8GRD	0.05 (0.02)	0.05 (0.02)	0.06 (0.02)	0.06 (0.03)
SOMEHIGH	0.14 (0.02)	0.08 (0.02)	0.10 (0.02)	0.11 (0.03)
SOMECOLL	-0.25 (0.02)	-0.14 (0.02)	-0.07 (0.02)	-0.10 (0.02)
COLLGRAD	-0.39 (0.02)	-0.24 (0.02)	-0.20 (0.02)	-0.17 (0.03)
COLLMORE	-0.53 (0.02)	-0.27 (0.02)	-0.20 (0.02)	-0.20 (0.03)
GHP				
EXCEL	0.34 (0.03)	0.49 (0.03)	0.38 (0.02)	0.27 (0.04)
VERYGOOD	0.14 (0.02)	0.22 (0.02)	0.16 (0.01)	0.14 (0.02)
FAIR	-0.08 (0.02)	-0.17 (0.01)	-0.08 (0.01)	-0.13 (0.02)
POOR	-0.19 (0.02)	-0.33 (0.02)	-0.10 (0.02)	-0.25 (0.03)
PROXIES				
PROXY	-0.32 (0.02)	-0.20 (0.02)	-0.15 (0.02)	-0.16 (0.03)
ANSPROXY	-0.28 (0.03)	-0.28 (0.03)	-0.31 (0.03)	-0.31 (0.04)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.03	0.03	0.04	0.02
AGE				
AGE64	-0.11 (0.01)	-0.06 (0.01)	-0.12 (0.01)	-0.08 (0.00)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	-0.05 (0.01)	-0.01 (0.00)
AGE7579	0.01 (0.01)	0.00 (0.00)	0.03 (0.01)	0.00 (0.00)
AGE80	0.02 (0.01)	-0.00 (0.00)	0.07 (0.01)	0.00 (0.00)
EDUCATION				
LESS8GRD	-0.05 (0.01)	-0.03 (0.01)	0.03 (0.01)	-0.02 (0.00)
SOMEHIGH	-0.02 (0.01)	-0.01 (0.00)	0.02 (0.01)	-0.01 (0.00)
SOMECOLL	-0.00 (0.01)	-0.01 (0.00)	-0.06 (0.01)	-0.00 (0.00)
COLLGRAD	-0.01 (0.01)	-0.01 (0.01)	-0.06 (0.01)	-0.00 (0.00)
COLLMORE	-0.04 (0.01)	-0.03 (0.01)	-0.08 (0.01)	-0.01 (0.00)
GHP				
EXCEL	0.06 (0.01)	0.03 (0.01)	0.06 (0.01)	0.01 (0.00)
VERYGOOD	0.03 (0.01)	0.02 (0.00)	0.03 (0.01)	0.00 (0.00)
FAIR	-0.05 (0.01)	-0.04 (0.00)	-0.05 (0.01)	-0.01 (0.00)
POOR	-0.12 (0.01)	-0.12 (0.01)	-0.11 (0.01)	-0.04 (0.00)
PROXIES				
PROXY	-0.03 (0.01)	-0.01 (0.00)	-0.01 (0.01)	-0.01 (0.00)
ANSPROXY	0.02 (0.01)	0.00 (0.01)	-0.02 (0.01)	0.01 (0.01)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.03	0.03	0.02	0.06
AGE				
AGE64	-0.06 (0.01)	-0.08 (0.01)	-0.06 (0.01)	-0.07 (0.01)
AGE6569	0.00 (0.01)	-0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE7579	0.02 (0.01)	0.03 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE80	0.02 (0.01)	0.04 (0.01)	0.03 (0.01)	0.02 (0.01)
EDUCATION				
LESS8GRD	0.00 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)
SOMEHIGH	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
SOMECOLL	-0.04 (0.01)	-0.03 (0.01)	-0.04 (0.01)	-0.04 (0.01)
COLLGRAD	-0.07 (0.01)	-0.02 (0.02)	-0.08 (0.01)	-0.08 (0.01)
COLLMORE	-0.10 (0.01)	-0.04 (0.01)	-0.11 (0.01)	-0.08 (0.01)
GHP				
EXCEL	0.16 (0.01)	0.11 (0.02)	0.13 (0.01)	0.29 (0.02)
VERYGOOD	0.08 (0.01)	0.05 (0.01)	0.07 (0.01)	0.14 (0.01)
FAIR	-0.07 (0.01)	-0.07 (0.01)	-0.05 (0.01)	-0.11 (0.01)
POOR	-0.09 (0.01)	-0.10 (0.01)	-0.07 (0.01)	-0.19 (0.01)
PROXIES				
PROXY	-0.05 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.04 (0.01)
ANSPROXY	-0.04 (0.02)	-0.01 (0.02)	-0.03 (0.01)	-0.04 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.03	0.03	0.03	0.03
AGE				
AGE64	-0.05 (0.01)	0.00 (0.01)	-0.06 (0.01)	-0.04 (0.01)
AGE6569	-0.02 (0.01)	-0.00 (0.01)	-0.03 (0.01)	-0.02 (0.01)
AGE7579	0.01 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.00 (0.01)
AGE80	0.02 (0.01)	-0.02 (0.01)	0.02 (0.01)	0.01 (0.01)
EDUCATION				
LESS8GRD	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	0.05 (0.01)
SOMEHIGH	0.03 (0.01)	0.03 (0.01)	0.03 (0.01)	0.04 (0.01)
SOMECOLL	-0.06 (0.01)	-0.02 (0.01)	-0.04 (0.01)	-0.05 (0.01)
COLLGRAD	-0.09 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.07 (0.01)
COLLMORE	-0.09 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.07 (0.01)
GHP				
EXCEL	0.16 (0.01)	0.20 (0.01)	0.18 (0.01)	0.23 (0.01)
VERYGOOD	0.08 (0.01)	0.10 (0.01)	0.09 (0.01)	0.11 (0.01)
FAIR	-0.07 (0.01)	-0.09 (0.01)	-0.07 (0.01)	-0.10 (0.01)
POOR	-0.11 (0.01)	-0.13 (0.01)	-0.12 (0.01)	-0.13 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	-0.05 (0.01)	-0.01 (0.01)	-0.01 (0.01)
ANSPROXY	-0.11 (0.01)	-0.12 (0.01)	-0.11 (0.01)	-0.11 (0.01)

OFFICE STAFF

	Q24	Q25
	Office staff courteous	Office staff helpful
R-SQUARE	0.02	0.03
AGE		
AGE64	-0.07 (0.01)	-0.09 (0.01)
AGE6569	-0.01 (0.00)	-0.02 (0.01)
AGE7579	0.01 (0.00)	0.02 (0.01)
AGE80	0.03 (0.00)	0.04 (0.01)
EDUCATION		
LESS8GRD	-0.01 (0.01)	0.00 (0.01)
SOMEHIGH	0.00 (0.01)	0.02 (0.01)
SOMECOLL	-0.02 (0.00)	-0.05 (0.01)
COLLGRAD	-0.04 (0.01)	-0.08 (0.01)
COLLMORE	-0.05 (0.01)	-0.10 (0.01)
GHP		
EXCEL	0.06 (0.01)	0.13 (0.01)
VERYGOOD	0.03 (0.00)	0.06 (0.01)
FAIR	-0.03 (0.00)	-0.05 (0.01)
POOR	-0.05 (0.01)	-0.08 (0.01)
PROXIES		
PROXY	-0.02 (0.01)	-0.04 (0.01)
ANSPROXY	-0.04 (0.01)	-0.08 (0.01)

CUSTOMER SERVICE, INFORMATION, AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.04	0.04
AGE			
AGE64	-0.16 (0.03)	-0.15 (0.02)	-0.13 (0.02)
AGE6569	-0.06 (0.02)	-0.03 (0.01)	-0.04 (0.02)
AGE7579	-0.00 (0.02)	0.03 (0.01)	0.01 (0.02)
AGE80	0.04 (0.02)	0.03 (0.01)	0.02 (0.02)
EDUCATION			
LESS8GRD	0.02 (0.03)	-0.07 (0.02)	-0.02 (0.02)
SOMEHIGH	0.06 (0.03)	-0.01 (0.02)	0.02 (0.02)
SOMECOLL	-0.04 (0.02)	-0.03 (0.01)	-0.04 (0.02)
COLLGRAD	-0.09 (0.03)	-0.02 (0.02)	-0.06 (0.02)
COLLMORE	-0.14 (0.03)	-0.10 (0.02)	-0.12 (0.02)
GHP			
EXCEL	0.02 (0.04)	0.07 (0.02)	0.08 (0.02)
VERYGOOD	0.02 (0.02)	0.03 (0.01)	0.04 (0.01)
FAIR	-0.01 (0.02)	-0.05 (0.01)	-0.08 (0.01)
POOR	-0.12 (0.03)	-0.09 (0.02)	-0.13 (0.02)
PROXIES			
PROXY	-0.10 (0.02)	-0.13 (0.02)	-0.09 (0.02)
ANSPROXY	-0.02 (0.04)	0.01 (0.03)	0.06 (0.03)

SINGLE REPORT OUTCOMES

	Q33 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy	Q38 Getting prescription medicines
R-SQUARE	0.05	0.09	0.07	0.06
AGE				
AGE64	-0.18 (0.02)	-0.16 (0.04)	-0.17 (0.02)	-0.21 (0.01)
AGE6569	-0.04 (0.02)	0.01 (0.04)	-0.04 (0.02)	-0.03 (0.00)
AGE7579	0.02 (0.01)	-0.00 (0.03)	0.02 (0.02)	0.02 (0.00)
AGE80	0.02 (0.01)	0.01 (0.03)	0.04 (0.02)	0.04 (0.00)
EDUCATION				
LESS8GRD	-0.01 (0.02)	-0.04 (0.03)	0.01 (0.02)	-0.04 (0.01)
SOMEHIGH	0.01 (0.01)	-0.02 (0.03)	-0.00 (0.02)	-0.02 (0.01)
SOMECOLL	-0.04 (0.01)	-0.08 (0.03)	-0.06 (0.02)	-0.02 (0.00)
COLLGRAD	-0.03 (0.02)	0.01 (0.04)	-0.05 (0.02)	-0.02 (0.01)
COLLMORE	-0.06 (0.02)	-0.11 (0.03)	-0.11 (0.02)	-0.06 (0.01)
GHP				
EXCEL	-0.01 (0.04)	0.01 (0.08)	0.06 (0.04)	0.05 (0.01)
VERYGOOD	0.02 (0.02)	0.02 (0.04)	0.04 (0.02)	0.04 (0.00)
FAIR	-0.03 (0.01)	-0.09 (0.02)	-0.05 (0.01)	-0.06 (0.00)
POOR	-0.09 (0.01)	-0.21 (0.03)	-0.17 (0.02)	-0.16 (0.01)
PROXIES				
PROXY	-0.04 (0.01)	-0.08 (0.02)	-0.06 (0.02)	-0.02 (0.01)
ANSPROXY	0.01 (0.02)	-0.04 (0.03)	-0.02 (0.02)	0.02 (0.01)

SINGLE REPORT OUTCOMES

	Q39 How often get prescription medicine	Q47 Getting good quality medical care	Q48 Getting the very best care	Q67 Providing good quality of life
R-SQUARE	0.03	0.03	0.04	0.04
AGE				
AGE64	-0.16 (0.01)	-0.22 (0.01)	-0.23 (0.01)	-0.86 (0.06)
AGE6569	-0.01 (0.00)	-0.05 (0.01)	-0.07 (0.01)	-0.36 (0.06)
AGE7579	0.00 (0.00)	0.03 (0.01)	0.03 (0.01)	0.06 (0.06)
AGE80	0.02 (0.00)	0.05 (0.01)	0.07 (0.01)	0.07 (0.06)
EDUCATION				
LESS8GRD	-0.05 (0.01)	-0.04 (0.01)	-0.00 (0.01)	-0.05 (0.06)
SOMEHIGH	-0.03 (0.01)	0.00 (0.01)	0.03 (0.01)	0.12 (0.05)
SOMECOLL	-0.01 (0.00)	-0.05 (0.01)	-0.09 (0.01)	-0.15 (0.05)
COLLGRAD	0.02 (0.01)	-0.07 (0.01)	-0.14 (0.01)	-0.09 (0.07)
COLLMORE	-0.00 (0.01)	-0.08 (0.01)	-0.20 (0.01)	-0.29 (0.07)
GHP				
EXCEL	0.01 (0.01)	0.14 (0.01)	0.21 (0.01)	-0.41 (0.20)
VERYGOOD	0.02 (0.00)	0.07 (0.01)	0.09 (0.01)	-0.10 (0.09)
FAIR	-0.03 (0.00)	-0.07 (0.01)	-0.07 (0.01)	-0.11 (0.05)
POOR	-0.07 (0.01)	-0.11 (0.01)	-0.11 (0.01)	-0.39 (0.05)
PROXIES				
PROXY	0.00 (0.01)	-0.07 (0.01)	-0.10 (0.01)	-0.12 (0.04)
ANSPROXY	0.01 (0.01)	-0.07 (0.01)	-0.11 (0.01)	-0.20 (0.06)

Table Ala_d: 2000 Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.06	0.01	0.02	0.02
AGE				
AGE64	-0.13 (0.01)	-0.02 (0.01)	0.01 (0.01)	-0.02 (0.01)
AGE6569	-0.08 (0.00)	-0.03 (0.00)	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.05 (0.00)	0.02 (0.00)	0.03 (0.00)	0.00 (0.00)
AGE80	0.09 (0.00)	0.01 (0.00)	0.04 (0.00)	-0.02 (0.00)
EDUCATION				
LESS8GRD	0.06 (0.01)	0.01 (0.01)	0.02 (0.01)	-0.04 (0.00)
SOMEHIGH	0.07 (0.01)	0.02 (0.01)	0.03 (0.01)	-0.02 (0.00)
SOMECOLL	-0.08 (0.00)	-0.03 (0.00)	-0.03 (0.00)	0.01 (0.00)
COLLGRAD	-0.15 (0.01)	-0.07 (0.01)	-0.10 (0.01)	0.01 (0.01)
COLLMORE	-0.19 (0.01)	-0.08 (0.01)	-0.11 (0.01)	0.03 (0.01)
GHP				
EXCEL	0.13 (0.01)	0.03 (0.01)	0.09 (0.01)	-0.05 (0.01)
VERYGOOD	0.03 (0.00)	0.02 (0.00)	0.03 (0.00)	-0.02 (0.00)
FAIR	-0.00 (0.00)	-0.01 (0.00)	-0.01 (0.00)	0.03 (0.00)
POOR	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.07 (0.01)
PROXIES				
PROXY	-0.08 (0.01)	-0.02 (0.01)	-0.03 (0.01)	0.00 (0.00)
ANSPROXY	-0.11 (0.01)	-0.10 (0.01)	-0.09 (0.01)	-0.05 (0.01)

Table A1b: 2001 MFFS Case-Mix Coefficients, Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.04	0.03	0.03
AGE				
AGE64	-0.80 (0.03)	-0.21 (0.02)	0.08 (0.02)	-0.13 (0.03)
AGE6569	-0.27 (0.02)	-0.09 (0.02)	-0.10 (0.02)	-0.12 (0.02)
AGE7579	0.21 (0.02)	0.05 (0.02)	0.07 (0.02)	0.01 (0.02)
AGE8084	0.34 (0.02)	0.04 (0.02)	0.09 (0.02)	-0.01 (0.03)
AGE85	0.39 (0.02)	0.05 (0.02)	0.10 (0.02)	-0.03 (0.03)
EDUCATION				
LESS8GRD	0.03 (0.02)	0.07 (0.02)	0.15 (0.02)	0.06 (0.03)
SOMEHIGH	0.11 (0.02)	0.12 (0.02)	0.14 (0.02)	0.12 (0.03)
SOMECOLL	-0.27 (0.02)	-0.18 (0.01)	-0.12 (0.01)	-0.12 (0.02)
COLLGRAD	-0.41 (0.02)	-0.24 (0.02)	-0.21 (0.02)	-0.17 (0.03)
COLLMORE	-0.53 (0.02)	-0.33 (0.02)	-0.24 (0.02)	-0.23 (0.03)
GHP				
EXCEL	0.36 (0.02)	0.55 (0.02)	0.45 (0.02)	0.46 (0.04)
VERYGOOD	0.19 (0.01)	0.27 (0.01)	0.19 (0.01)	0.21 (0.02)
FAIR	-0.11 (0.02)	-0.21 (0.01)	-0.09 (0.01)	-0.20 (0.02)
POOR	-0.29 (0.02)	-0.39 (0.02)	-0.10 (0.02)	-0.35 (0.03)
PROXIES				
PROXY	-0.32 (0.02)	-0.15 (0.02)	-0.13 (0.02)	-0.07 (0.03)
ANSPROXY	-0.25 (0.03)	-0.20 (0.03)	-0.28 (0.03)	-0.18 (0.04)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.03	0.03	0.03	0.02
AGE				
AGE64	-0.09 (0.01)	-0.07 (0.01)	-0.08 (0.01)	-0.07 (0.00)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.01 (0.00)
AGE7579	0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	0.00 (0.00)
AGE8084	-0.01 (0.01)	-0.01 (0.00)	0.02 (0.01)	-0.00 (0.00)
AGE85	-0.02 (0.01)	-0.00 (0.00)	0.03 (0.01)	0.00 (0.00)
EDUCATION				
LESS8GRD	-0.04 (0.01)	-0.03 (0.00)	0.00 (0.01)	-0.02 (0.00)
SOMEHIGH	-0.02 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.01 (0.00)
SOMECOLL	-0.02 (0.01)	-0.02 (0.00)	-0.05 (0.00)	-0.01 (0.00)
COLLGRAD	-0.01 (0.01)	-0.03 (0.00)	-0.04 (0.01)	-0.00 (0.00)
COLLMORE	-0.05 (0.01)	-0.04 (0.00)	-0.07 (0.01)	-0.01 (0.00)
GHP				
EXCEL	0.08 (0.01)	0.04 (0.01)	0.07 (0.01)	0.01 (0.00)
VERYGOOD	0.03 (0.01)	0.03 (0.00)	0.04 (0.00)	0.01 (0.00)
FAIR	-0.05 (0.01)	-0.05 (0.00)	-0.05 (0.00)	-0.02 (0.00)
POOR	-0.15 (0.01)	-0.14 (0.01)	-0.13 (0.01)	-0.04 (0.00)
PROXIES				
PROXY	0.01 (0.01)	-0.00 (0.00)	0.01 (0.01)	-0.01 (0.00)
ANSPROXY	0.02 (0.01)	0.02 (0.01)	-0.01 (0.01)	0.02 (0.01)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 min. past appt.
R-SQUARE	0.03	0.03	0.02	0.06
AGE				
AGE64	-0.07 (0.01)	-0.10 (0.01)	-0.04 (0.01)	-0.04 (0.01)
AGE6569	-0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE8084	-0.00 (0.01)	-0.02 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE85	0.00 (0.01)	-0.01 (0.01)	0.04 (0.01)	0.04 (0.01)
EDUCATION				
LESS8GRD	0.01 (0.01)	-0.03 (0.01)	-0.01 (0.01)	-0.02 (0.01)
SOMEHIGH	0.03 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.02 (0.01)
SOMECOLL	-0.04 (0.01)	-0.04 (0.01)	-0.04 (0.01)	-0.05 (0.01)
COLLGRAD	-0.05 (0.01)	-0.05 (0.01)	-0.07 (0.01)	-0.04 (0.01)
COLLMORE	-0.09 (0.01)	-0.08 (0.01)	-0.10 (0.01)	-0.07 (0.01)
GHP				
EXCEL	0.19 (0.01)	0.14 (0.02)	0.14 (0.01)	0.28 (0.01)
VERYGOOD	0.10 (0.01)	0.06 (0.01)	0.08 (0.01)	0.14 (0.01)
FAIR	-0.08 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.12 (0.01)
POOR	-0.12 (0.01)	-0.12 (0.01)	-0.09 (0.01)	-0.20 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	0.01 (0.01)	-0.03 (0.01)	-0.01 (0.01)
ANSPROXY	-0.05 (0.01)	-0.01 (0.02)	-0.00 (0.01)	-0.07 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.03	0.03	0.03	0.03
AGE				
AGE64	-0.04 (0.01)	0.01 (0.01)	-0.04 (0.01)	-0.02 (0.01)
AGE6569	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
AGE8084	0.00 (0.01)	-0.04 (0.01)	0.01 (0.01)	-0.02 (0.01)
AGE85	0.01 (0.01)	-0.04 (0.01)	0.03 (0.01)	0.01 (0.01)
EDUCATION				
LESS8GRD	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.04 (0.01)
SOMEHIGH	0.03 (0.01)	0.02 (0.01)	0.03 (0.01)	0.04 (0.01)
SOMECOLL	-0.07 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.07 (0.01)
COLLGRAD	-0.07 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.08 (0.01)
COLLMORE	-0.11 (0.01)	-0.04 (0.01)	-0.07 (0.01)	-0.11 (0.01)
GHP				
EXCEL	0.18 (0.01)	0.21 (0.01)	0.20 (0.01)	0.27 (0.01)
VERYGOOD	0.09 (0.01)	0.10 (0.01)	0.10 (0.01)	0.12 (0.01)
FAIR	-0.07 (0.01)	-0.08 (0.01)	-0.08 (0.01)	-0.08 (0.01)
POOR	-0.12 (0.01)	-0.15 (0.01)	-0.13 (0.01)	-0.14 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	-0.05 (0.01)	-0.01 (0.01)	-0.01 (0.01)
ANSPROXY	-0.08 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.08 (0.01)

OFFICE STAFF

	Q24 Office staff courteous	Q25 Office staff helpful
R-SQUARE	0.02	0.03
AGE		
AGE64	-0.07 (0.01)	-0.06 (0.01)
AGE6569	-0.01 (0.00)	-0.02 (0.01)
AGE7579	0.01 (0.00)	0.01 (0.01)
AGE8084	0.02 (0.01)	0.01 (0.01)
AGE85	0.03 (0.01)	0.02 (0.01)
EDUCATION		
LESS8GRD	-0.02 (0.01)	0.00 (0.01)
SOMEHIGH	0.00 (0.01)	0.02 (0.01)
SOMECOLL	-0.03 (0.00)	-0.06 (0.01)
COLLGRAD	-0.04 (0.01)	-0.09 (0.01)
COLLMORE	-0.05 (0.01)	-0.12 (0.01)
GHP		
EXCEL	0.07 (0.01)	0.15 (0.01)
VERYGOOD	0.04 (0.00)	0.08 (0.01)
FAIR	-0.03 (0.00)	-0.06 (0.01)
POOR	-0.06 (0.01)	-0.10 (0.01)
PROXIES		
PROXY	-0.02 (0.01)	-0.02 (0.01)
ANSPROXY	-0.02 (0.01)	-0.05 (0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.04	0.05
AGE			
AGE64	-0.11 (0.03)	-0.12 (0.02)	-0.13 (0.02)
AGE6569	-0.01 (0.02)	-0.03 (0.01)	-0.03 (0.02)
AGE7579	0.10 (0.02)	0.04 (0.01)	0.01 (0.02)
AGE8084	0.07 (0.03)	0.02 (0.02)	0.04 (0.02)
AGE85	0.02 (0.04)	0.06 (0.02)	0.06 (0.03)
EDUCATION			
LESS8GRD	-0.07 (0.04)	-0.09 (0.02)	-0.04 (0.03)
SOMEHIGH	0.00 (0.03)	-0.01 (0.01)	-0.02 (0.02)
SOMECOLL	-0.09 (0.02)	-0.03 (0.01)	-0.06 (0.02)
COLLGRAD	-0.13 (0.03)	-0.05 (0.02)	-0.09 (0.02)
COLLMORE	-0.20 (0.03)	-0.07 (0.02)	-0.14 (0.02)
GHP			
EXCEL	0.02 (0.04)	0.07 (0.02)	0.07 (0.03)
VERYGOOD	0.02 (0.02)	0.04 (0.01)	0.07 (0.02)
FAIR	-0.03 (0.02)	-0.07 (0.01)	-0.09 (0.02)
POOR	-0.15 (0.03)	-0.16 (0.02)	-0.17 (0.02)
PROXIES			
PROXY	-0.10 (0.03)	-0.10 (0.02)	-0.06 (0.02)
ANSPROXY	0.06 (0.04)	-0.02 (0.03)	0.04 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.05	0.11	0.06
AGE			
AGE64	-0.19 (0.02)	-0.24 (0.04)	-0.17 (0.02)
AGE6569	-0.03 (0.01)	-0.05 (0.04)	-0.02 (0.01)
AGE7579	0.03 (0.01)	0.00 (0.03)	0.03 (0.01)
AGE8084	0.02 (0.01)	0.01 (0.03)	0.01 (0.02)
AGE85	0.03 (0.01)	0.02 (0.03)	0.05 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	0.02 (0.03)	-0.02 (0.02)
SOMEHIGH	0.01 (0.01)	-0.01 (0.03)	-0.02 (0.02)
SOMECOLL	-0.05 (0.01)	-0.12 (0.02)	-0.08 (0.02)
COLLGRAD	-0.05 (0.02)	-0.06 (0.04)	-0.05 (0.02)
COLLMORE	-0.08 (0.02)	-0.11 (0.04)	-0.11 (0.02)
GHP			
EXCEL	0.05 (0.03)	0.07 (0.07)	0.06 (0.03)
VERYGOOD	0.05 (0.02)	0.03 (0.03)	0.04 (0.01)
FAIR	-0.01 (0.01)	-0.11 (0.02)	-0.06 (0.01)
POOR	-0.09 (0.01)	-0.28 (0.03)	-0.17 (0.02)
PROXIES			
PROXY	-0.04 (0.01)	-0.07 (0.02)	-0.04 (0.01)
ANSPROXY	0.02 (0.02)	0.00 (0.03)	0.00 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.07	0.03
AGE		
AGE64	-0.23 (0.01)	-0.20 (0.01)
AGE6569	-0.02 (0.00)	-0.03 (0.01)
AGE7579	0.02 (0.00)	0.02 (0.01)
AGE8084	0.04 (0.00)	0.01 (0.01)
AGE85	0.05 (0.01)	0.02 (0.01)
EDUCATION		
LESS8GRD	-0.04 (0.01)	-0.09 (0.01)
SOMEHIGH	-0.03 (0.00)	-0.04 (0.01)
SOMECOLL	-0.02 (0.00)	0.01 (0.01)
COLLGRAD	-0.01 (0.01)	0.03 (0.01)
COLLMORE	-0.04 (0.01)	0.04 (0.01)
GHP		
EXCEL	0.07 (0.01)	-0.08 (0.01)
VERYGOOD	0.04 (0.00)	0.01 (0.00)
FAIR	-0.07 (0.00)	-0.03 (0.00)
POOR	-0.16 (0.01)	-0.07 (0.01)
PROXIES		
PROXY	-0.00 (0.00)	0.02 (0.01)
ANSPROXY	0.02 (0.01)	0.05 (0.01)

Table Alb_d: 2001 Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.06	0.02	0.02	0.01
AGE				
AGE64	-0.12 (0.01)	-0.03 (0.01)	0.01 (0.01)	-0.00 (0.01)
AGE6569	-0.08 (0.00)	-0.04 (0.00)	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.05 (0.00)	0.01 (0.00)	0.02 (0.00)	0.01 (0.00)
AGE8084	0.09 (0.01)	0.01 (0.01)	0.02 (0.01)	-0.01 (0.00)
AGE85	0.10 (0.01)	-0.01 (0.01)	0.03 (0.01)	-0.04 (0.01)
EDUCATION				
LESS8GRD	0.06 (0.01)	0.01 (0.01)	0.02 (0.01)	-0.04 (0.00)
SOMEHIGH	0.07 (0.00)	0.03 (0.00)	0.03 (0.00)	-0.01 (0.00)
SMECOLL	-0.09 (0.00)	-0.04 (0.00)	-0.04 (0.00)	0.02 (0.00)
COLLGRAD	-0.15 (0.01)	-0.08 (0.01)	-0.09 (0.01)	0.02 (0.01)
COLLMORE	-0.19 (0.01)	-0.10 (0.01)	-0.11 (0.01)	0.01 (0.00)
GHP				
EXCEL	0.15 (0.01)	0.06 (0.01)	0.11 (0.01)	-0.03 (0.01)
VERYGOOD	0.05 (0.00)	0.03 (0.00)	0.04 (0.00)	-0.02 (0.00)
FAIR	-0.01 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.04 (0.00)
POOR	-0.01 (0.01)	-0.00 (0.01)	0.02 (0.01)	0.07 (0.01)
PROXIES				
PROXY	-0.09 (0.01)	-0.03 (0.01)	-0.02 (0.01)	0.02 (0.00)
ANSPROXY	-0.09 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.04 (0.01)

Table A1c: 2002 Case-Mix Coefficients, Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.05	0.03	0.03
AGE				
AGE44	-1.47 (0.05)	-0.62 (0.05)	0.03 (0.05)	-0.35 (0.06)
AGE4564	-0.77 (0.03)	-0.11 (0.02)	0.17 (0.02)	-0.03 (0.03)
AGE6569	-0.31 (0.02)	-0.07 (0.01)	-0.08 (0.01)	-0.06 (0.02)
AGE7579	0.24 (0.02)	0.07 (0.01)	0.09 (0.01)	0.06 (0.02)
AGE8084	0.40 (0.02)	0.11 (0.02)	0.16 (0.02)	0.09 (0.03)
AGE85	0.44 (0.02)	0.11 (0.02)	0.11 (0.02)	0.03 (0.03)
EDUCATION				
LESS8GRD	0.04 (0.02)	0.05 (0.02)	0.09 (0.02)	0.06 (0.03)
SOMEHIGH	0.10 (0.02)	0.12 (0.02)	0.14 (0.02)	0.11 (0.02)
SOMECOLL	-0.23 (0.02)	-0.13 (0.01)	-0.08 (0.01)	-0.08 (0.02)
COLLGRAD	-0.36 (0.02)	-0.21 (0.02)	-0.18 (0.02)	-0.17 (0.03)
COLLMORE	-0.51 (0.02)	-0.31 (0.02)	-0.23 (0.02)	-0.20 (0.02)
GHP				
EXCEL	0.40 (0.02)	0.55 (0.02)	0.43 (0.02)	0.44 (0.03)
VERYGOOD	0.19 (0.01)	0.25 (0.01)	0.17 (0.01)	0.19 (0.02)
FAIR	-0.21 (0.02)	-0.27 (0.01)	-0.16 (0.01)	-0.23 (0.02)
POOR	-0.52 (0.03)	-0.51 (0.02)	-0.22 (0.02)	-0.41 (0.03)
PROXIES				
PROXY	-0.29 (0.02)	-0.12 (0.02)	-0.09 (0.02)	-0.07 (0.02)
ANSProxy	-0.13 (0.03)	-0.15 (0.03)	-0.20 (0.03)	-0.10 (0.03)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.03	0.03	0.04	0.08
AGE				
AGE44	-0.21 (0.02)	-0.16 (0.01)	-0.15 (0.02)	-0.37 (0.04)
AGE4564	-0.08 (0.01)	-0.08 (0.01)	-0.07 (0.01)	-0.16 (0.02)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.02 (0.02)
AGE7579	0.00 (0.01)	0.01 (0.00)	0.01 (0.01)	0.01 (0.02)
AGE8084	0.00 (0.01)	0.00 (0.00)	0.03 (0.01)	0.01 (0.02)
AGE85	0.00 (0.01)	-0.00 (0.01)	0.04 (0.01)	0.04 (0.02)
EDUCATION				
LESS8GRD	-0.05 (0.01)	-0.04 (0.01)	0.01 (0.01)	-0.01 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	0.01 (0.02)
SOMECOLL	-0.00 (0.01)	-0.01 (0.00)	-0.04 (0.00)	-0.04 (0.02)
COLLGRAD	-0.00 (0.01)	-0.00 (0.01)	-0.02 (0.01)	-0.06 (0.02)
COLLMORE	-0.03 (0.01)	-0.03 (0.01)	-0.07 (0.01)	-0.08 (0.02)
GHP				
EXCEL	0.05 (0.01)	0.05 (0.01)	0.08 (0.01)	0.06 (0.03)
VERYGOOD	0.03 (0.01)	0.02 (0.00)	0.04 (0.00)	0.05 (0.02)
FAIR	-0.06 (0.01)	-0.04 (0.00)	-0.06 (0.00)	-0.03 (0.02)
POOR	-0.17 (0.01)	-0.14 (0.01)	-0.15 (0.01)	-0.15 (0.02)
PROXIES				
PROXY	0.01 (0.01)	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.02)
ANSPROXY	0.01 (0.01)	-0.00 (0.01)	0.02 (0.01)	-0.10 (0.03)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.04	0.05
AGE				
AGE44	-0.20 (0.02)	-0.27 (0.03)	-0.21 (0.02)	-0.08 (0.03)
AGE4564	-0.02 (0.01)	-0.08 (0.01)	-0.03 (0.01)	0.01 (0.02)
AGE6569	0.01 (0.01)	-0.02 (0.01)	0.00 (0.01)	0.00 (0.01)
AGE7579	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	0.02 (0.01)
AGE8084	0.03 (0.01)	0.04 (0.01)	0.05 (0.01)	0.03 (0.01)
AGE85	0.05 (0.01)	0.06 (0.01)	0.07 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	-0.00 (0.01)	-0.02 (0.01)	0.01 (0.01)	0.04 (0.01)
SOMEHIGH	0.03 (0.01)	0.02 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.03 (0.01)	-0.03 (0.01)	-0.06 (0.01)	-0.05 (0.01)
COLLGRAD	-0.03 (0.01)	-0.00 (0.02)	-0.09 (0.01)	-0.07 (0.01)
COLLMORE	-0.08 (0.01)	-0.07 (0.01)	-0.15 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.18 (0.01)	0.15 (0.02)	0.22 (0.01)	0.33 (0.01)
VERYGOOD	0.09 (0.01)	0.08 (0.01)	0.11 (0.01)	0.14 (0.01)
FAIR	-0.10 (0.01)	-0.09 (0.01)	-0.10 (0.01)	-0.10 (0.01)
POOR	-0.17 (0.01)	-0.16 (0.01)	-0.15 (0.01)	-0.18 (0.02)
PROXIES				
PROXY	-0.04 (0.01)	-0.00 (0.01)	-0.02 (0.01)	-0.11 (0.01)
ANSPROXY	-0.01 (0.01)	0.02 (0.02)	-0.00 (0.01)	0.04 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.03	0.04	0.03	0.04
AGE				
AGE44	-0.15 (0.02)	-0.10 (0.02)	-0.14 (0.02)	-0.14 (0.02)
AGE4564	-0.03 (0.01)	0.04 (0.01)	-0.01 (0.01)	0.01 (0.01)
AGE6569	-0.00 (0.01)	0.02 (0.01)	0.00 (0.01)	-0.00 (0.01)
AGE7579	0.02 (0.01)	0.00 (0.01)	0.02 (0.01)	0.01 (0.01)
AGE8084	0.03 (0.01)	-0.01 (0.01)	0.04 (0.01)	0.02 (0.01)
AGE85	0.03 (0.01)	-0.02 (0.01)	0.05 (0.01)	0.02 (0.01)
EDUCATION				
LESS8GRD	0.03 (0.01)	0.01 (0.01)	0.03 (0.01)	0.04 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.03 (0.01)	0.06 (0.01)
SOMECOLL	-0.05 (0.01)	-0.02 (0.01)	-0.04 (0.01)	-0.05 (0.01)
COLLGRAD	-0.06 (0.01)	-0.03 (0.01)	-0.04 (0.01)	-0.06 (0.01)
COLLMORE	-0.10 (0.01)	-0.03 (0.01)	-0.06 (0.01)	-0.11 (0.01)
GHP				
EXCEL	0.18 (0.01)	0.21 (0.01)	0.19 (0.01)	0.27 (0.01)
VERYGOOD	0.09 (0.01)	0.11 (0.01)	0.09 (0.01)	0.13 (0.01)
FAIR	-0.09 (0.01)	-0.11 (0.01)	-0.09 (0.01)	-0.11 (0.01)
POOR	-0.16 (0.01)	-0.16 (0.01)	-0.16 (0.01)	-0.19 (0.01)
PROXIES				
PROXY	-0.03 (0.01)	-0.06 (0.01)	-0.03 (0.01)	-0.01 (0.01)
ANSPROXY	-0.04 (0.01)	-0.03 (0.01)	-0.03 (0.01)	-0.02 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.03	
AGE				
AGE44	-0.22	(0.01)	-0.24	(0.02)
AGE4564	-0.06	(0.01)	-0.05	(0.01)
AGE6569	-0.01	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.03	(0.01)
AGE8084	0.03	(0.00)	0.05	(0.01)
AGE85	0.04	(0.01)	0.06	(0.01)
EDUCATION				
LESS8GRD	-0.02	(0.01)	0.00	(0.01)
SOMEHIGH	0.01	(0.00)	0.03	(0.01)
SOMECOLL	-0.03	(0.00)	-0.04	(0.01)
COLLGRAD	-0.03	(0.01)	-0.06	(0.01)
COLLMORE	-0.06	(0.01)	-0.11	(0.01)
GHP				
EXCEL	0.07	(0.01)	0.15	(0.01)
VERYGOOD	0.03	(0.00)	0.07	(0.01)
FAIR	-0.04	(0.00)	-0.07	(0.01)
POOR	-0.07	(0.01)	-0.13	(0.01)
PROXIES				
PROXY	-0.02	(0.01)	-0.03	(0.01)
ANSPROXY	-0.01	(0.01)	-0.03	(0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.06	0.08
AGE			
AGE44	-0.17 (0.05)	-0.19 (0.04)	-0.21 (0.05)
AGE4564	-0.10 (0.03)	-0.10 (0.02)	-0.14 (0.03)
AGE6569	-0.04 (0.02)	-0.06 (0.02)	-0.04 (0.02)
AGE7579	0.02 (0.02)	0.04 (0.02)	0.04 (0.02)
AGE8084	0.04 (0.03)	0.06 (0.02)	0.07 (0.02)
AGE85	0.07 (0.03)	0.06 (0.02)	0.05 (0.03)
EDUCATION			
LESS8GRD	0.01 (0.03)	-0.06 (0.02)	0.06 (0.03)
SOMEHIGH	-0.02 (0.03)	0.02 (0.02)	0.02 (0.02)
SMECOLL	-0.05 (0.02)	-0.02 (0.01)	-0.06 (0.02)
COLLGRAD	-0.10 (0.03)	-0.03 (0.02)	-0.05 (0.03)
COLLMORE	-0.14 (0.03)	-0.10 (0.02)	-0.17 (0.02)
GHP			
EXCEL	0.01 (0.03)	0.11 (0.02)	0.01 (0.03)
VERYGOOD	0.01 (0.02)	0.07 (0.01)	0.03 (0.02)
FAIR	-0.07 (0.02)	-0.08 (0.02)	-0.07 (0.02)
POOR	-0.22 (0.03)	-0.23 (0.02)	-0.22 (0.03)
PROXIES			
PROXY	-0.05 (0.03)	-0.13 (0.02)	-0.13 (0.02)
ANSPROXY	-0.10 (0.04)	-0.01 (0.03)	0.01 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.06	0.12	0.07
AGE			
AGE44	-0.34 (0.03)	-0.37 (0.07)	-0.33 (0.03)
AGE4564	-0.18 (0.01)	-0.26 (0.03)	-0.20 (0.02)
AGE6569	-0.02 (0.01)	-0.03 (0.03)	-0.04 (0.01)
AGE7579	0.01 (0.01)	0.03 (0.03)	0.01 (0.01)
AGE8084	0.04 (0.01)	0.05 (0.03)	0.02 (0.01)
AGE85	0.06 (0.01)	0.06 (0.03)	0.04 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	-0.01 (0.03)	-0.03 (0.02)
SOMEHIGH	-0.02 (0.01)	0.05 (0.02)	0.01 (0.01)
SMECOLL	-0.03 (0.01)	-0.02 (0.02)	-0.04 (0.01)
COLLGRAD	-0.04 (0.02)	-0.03 (0.03)	-0.04 (0.02)
COLLMORE	-0.08 (0.02)	-0.12 (0.03)	-0.11 (0.02)
GHP			
EXCEL	0.04 (0.03)	0.03 (0.06)	0.02 (0.02)
VERYGOOD	0.04 (0.01)	0.05 (0.03)	0.04 (0.01)
FAIR	-0.05 (0.01)	-0.11 (0.02)	-0.07 (0.01)
POOR	-0.13 (0.01)	-0.28 (0.02)	-0.17 (0.02)
PROXIES			
PROXY	-0.02 (0.01)	-0.07 (0.02)	-0.03 (0.01)
ANSPROXY	0.01 (0.01)	-0.01 (0.03)	0.01 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.03
AGE		
AGE44	-0.40 (0.01)	-0.39 (0.02)
AGE4564	-0.23 (0.01)	-0.19 (0.01)
AGE6569	-0.02 (0.00)	-0.04 (0.01)
AGE7579	0.03 (0.00)	0.01 (0.01)
AGE8084	0.05 (0.00)	0.03 (0.01)
AGE85	0.07 (0.01)	0.04 (0.01)
EDUCATION		
LESS8GRD	-0.05 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.03 (0.00)	-0.04 (0.01)
SOMECOLL	-0.03 (0.00)	0.01 (0.01)
COLLGRAD	-0.01 (0.01)	0.05 (0.01)
COLLMORE	-0.04 (0.01)	0.02 (0.01)
GHP		
EXCEL	0.07 (0.01)	-0.07 (0.01)
VERYGOOD	0.04 (0.00)	-0.00 (0.00)
FAIR	-0.08 (0.00)	-0.04 (0.01)
POOR	-0.19 (0.01)	-0.11 (0.01)
PROXIES		
PROXY	-0.01 (0.00)	0.02 (0.01)
ANSPROXY	0.02 (0.01)	0.03 (0.01)

Table Alc_d: Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.02	0.02	0.01
AGE				
AGE44	-0.17 (0.01)	-0.11 (0.01)	-0.02 (0.01)	-0.04 (0.01)
AGE4564	-0.09 (0.01)	0.00 (0.01)	0.03 (0.01)	0.02 (0.01)
AGE6569	-0.07 (0.00)	-0.03 (0.00)	-0.03 (0.00)	-0.02 (0.00)
AGE7579	0.06 (0.00)	0.02 (0.00)	0.03 (0.00)	0.02 (0.00)
AGE8084	0.11 (0.00)	0.03 (0.00)	0.04 (0.01)	0.01 (0.00)
AGE85	0.12 (0.01)	0.01 (0.01)	0.03 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.05 (0.01)	0.01 (0.01)	0.01 (0.01)	-0.04 (0.01)
SOMEHIGH	0.07 (0.00)	0.03 (0.00)	0.04 (0.00)	-0.01 (0.00)
SOMECOLL	-0.07 (0.00)	-0.03 (0.00)	-0.03 (0.00)	0.01 (0.00)
COLLGRAD	-0.15 (0.01)	-0.08 (0.01)	-0.08 (0.01)	0.00 (0.01)
COLLMORE	-0.19 (0.01)	-0.10 (0.01)	-0.10 (0.01)	0.00 (0.01)
GHP				
EXCEL	0.16 (0.01)	0.08 (0.01)	0.12 (0.01)	-0.00 (0.01)
VERYGOOD	0.05 (0.00)	0.04 (0.00)	0.04 (0.00)	-0.01 (0.00)
FAIR	-0.03 (0.00)	-0.01 (0.00)	-0.02 (0.00)	0.02 (0.00)
POOR	-0.05 (0.01)	-0.03 (0.01)	-0.01 (0.01)	0.03 (0.01)
PROXIES				
PROXY	-0.07 (0.01)	-0.01 (0.01)	0.00 (0.01)	0.03 (0.00)
ANSPROXY	-0.05 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.05 (0.01)

Table A2a: 2000 Case-Mix Coefficients, Base Model Plus MHP, With Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.06	0.06	0.03	0.04
AGE				
AGE64	-0.69 (0.02)	-0.22 (0.02)	0.01 (0.02)	-0.08 (0.03)
AGE6569	-0.28 (0.02)	-0.12 (0.02)	-0.13 (0.02)	-0.07 (0.02)
AGE7579	0.19 (0.02)	0.06 (0.02)	0.07 (0.02)	0.07 (0.02)
AGE80	0.32 (0.02)	0.10 (0.02)	0.11 (0.02)	0.08 (0.02)
EDUCATION				
LESS8GRD	0.08 (0.02)	0.10 (0.02)	0.11 (0.02)	0.09 (0.03)
SOMEHIGH	0.16 (0.02)	0.11 (0.02)	0.12 (0.02)	0.11 (0.03)
SOMECOLL	-0.27 (0.02)	-0.17 (0.02)	-0.08 (0.02)	-0.13 (0.02)
COLLGRAD	-0.41 (0.02)	-0.28 (0.02)	-0.23 (0.02)	-0.21 (0.03)
COLLMORE	-0.56 (0.02)	-0.32 (0.02)	-0.24 (0.02)	-0.25 (0.03)
GHP				
EXCEL	0.20 (0.03)	0.30 (0.03)	0.22 (0.02)	0.12 (0.04)
VERYGOOD	0.07 (0.02)	0.13 (0.02)	0.08 (0.02)	0.05 (0.02)
FAIR	-0.02 (0.02)	-0.08 (0.01)	-0.01 (0.01)	-0.05 (0.02)
POOR	-0.06 (0.02)	-0.12 (0.02)	0.02 (0.02)	-0.07 (0.03)
MHP				
MHEXCEL	0.15 (0.02)	0.23 (0.02)	0.21 (0.02)	0.21 (0.02)
MHGOOD	-0.17 (0.02)	-0.21 (0.01)	-0.13 (0.01)	-0.18 (0.02)
MHFAIR	-0.24 (0.02)	-0.36 (0.02)	-0.21 (0.02)	-0.34 (0.03)
MHPOOR	-0.40 (0.03)	-0.56 (0.03)	-0.32 (0.03)	-0.49 (0.04)
PROXIES				
PROXY	-0.30 (0.02)	-0.17 (0.02)	-0.14 (0.02)	-0.12 (0.02)
ANSPROXY	-0.25 (0.03)	-0.24 (0.03)	-0.29 (0.03)	-0.27 (0.04)
DUAL ELIG	0.31 (0.02)	0.01 (0.02)	0.09 (0.02)	0.05 (0.03)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.05	0.03
AGE				
AGE64	-0.07 (0.01)	-0.04 (0.01)	-0.11 (0.01)	-0.07 (0.00)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	-0.05 (0.01)	-0.01 (0.00)
AGE7579	0.01 (0.01)	0.00 (0.00)	0.03 (0.01)	0.00 (0.00)
AGE80	0.04 (0.01)	0.01 (0.00)	0.07 (0.01)	0.01 (0.00)
EDUCATION				
LESS8GRD	-0.04 (0.01)	-0.01 (0.00)	0.05 (0.01)	-0.01 (0.00)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.00)	0.03 (0.01)	-0.00 (0.00)
SOMECOLL	-0.01 (0.01)	-0.01 (0.00)	-0.07 (0.01)	-0.01 (0.00)
COLLGRAD	-0.02 (0.01)	-0.02 (0.01)	-0.07 (0.01)	-0.00 (0.00)
COLLMORE	-0.05 (0.01)	-0.04 (0.01)	-0.09 (0.01)	-0.01 (0.00)
GHP				
EXCEL	0.04 (0.01)	0.01 (0.01)	0.04 (0.01)	-0.00 (0.01)
VERYGOOD	0.02 (0.01)	0.01 (0.00)	0.02 (0.01)	-0.00 (0.00)
FAIR	-0.02 (0.01)	-0.03 (0.00)	-0.03 (0.01)	-0.01 (0.00)
POOR	-0.08 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.02 (0.00)
MHP				
MHEXCEL	0.02 (0.01)	0.02 (0.00)	0.03 (0.01)	0.01 (0.00)
MHGOOD	-0.04 (0.01)	-0.03 (0.00)	-0.03 (0.01)	-0.01 (0.00)
MHFAIR	-0.10 (0.01)	-0.07 (0.00)	-0.07 (0.01)	-0.02 (0.00)
MHPOOR	-0.16 (0.01)	-0.14 (0.01)	-0.11 (0.02)	-0.07 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	-0.01 (0.00)	0.00 (0.01)	-0.01 (0.00)
ANSPROXY	0.05 (0.01)	0.03 (0.01)	0.00 (0.01)	0.02 (0.00)
DUAL ELIG	-0.10 (0.01)	-0.07 (0.00)	-0.02 (0.01)	-0.04 (0.00)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.03	0.06
AGE				
AGE64	-0.05 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.05 (0.01)
AGE6569	0.00 (0.01)	-0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE7579	0.02 (0.01)	0.03 (0.01)	0.02 (0.01)	0.01 (0.01)
AGE80	0.03 (0.01)	0.06 (0.01)	0.04 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
SOMEHIGH	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)
SOMECOLL	-0.05 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.04 (0.01)
COLLGRAD	-0.08 (0.01)	-0.03 (0.02)	-0.08 (0.01)	-0.09 (0.01)
COLLMORE	-0.11 (0.01)	-0.06 (0.01)	-0.12 (0.01)	-0.08 (0.01)
GHP				
EXCEL	0.10 (0.01)	0.07 (0.02)	0.07 (0.01)	0.23 (0.02)
VERYGOOD	0.05 (0.01)	0.03 (0.01)	0.04 (0.01)	0.11 (0.01)
FAIR	-0.04 (0.01)	-0.03 (0.01)	-0.02 (0.01)	-0.08 (0.01)
POOR	-0.05 (0.01)	-0.03 (0.01)	-0.02 (0.01)	-0.13 (0.01)
MHP				
MHEXCEL	0.06 (0.01)	0.07 (0.01)	0.07 (0.01)	0.06 (0.01)
MHGOOD	-0.06 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.05 (0.01)
MHFAIR	-0.11 (0.01)	-0.13 (0.01)	-0.10 (0.01)	-0.11 (0.01)
MHPOOR	-0.13 (0.01)	-0.13 (0.02)	-0.10 (0.01)	-0.14 (0.02)
PROXIES				
PROXY	-0.04 (0.01)	-0.00 (0.01)	-0.05 (0.01)	-0.04 (0.01)
ANSPROXY	-0.03 (0.01)	-0.02 (0.02)	-0.01 (0.01)	-0.02 (0.02)
DUAL ELIG	-0.03 (0.01)	-0.06 (0.01)	-0.03 (0.01)	0.01 (0.01)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE64	-0.04 (0.01)	0.01 (0.01)	-0.06 (0.01)	-0.02 (0.01)
AGE6569	-0.02 (0.01)	-0.00 (0.01)	-0.03 (0.01)	-0.02 (0.01)
AGE7579	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE80	0.03 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.02 (0.01)
EDUCATION				
LESS8GRD	0.04 (0.01)	0.02 (0.01)	0.04 (0.01)	0.07 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.04 (0.01)	0.05 (0.01)
SOMECOLL	-0.07 (0.01)	-0.03 (0.01)	-0.04 (0.01)	-0.06 (0.01)
COLLGRAD	-0.09 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.08 (0.01)
COLLMORE	-0.11 (0.01)	-0.05 (0.01)	-0.07 (0.01)	-0.09 (0.01)
GHP				
EXCEL	0.10 (0.01)	0.12 (0.01)	0.11 (0.01)	0.14 (0.01)
VERYGOOD	0.05 (0.01)	0.06 (0.01)	0.06 (0.01)	0.07 (0.01)
FAIR	-0.04 (0.01)	-0.05 (0.01)	-0.03 (0.01)	-0.06 (0.01)
POOR	-0.05 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)
MHP				
MHEXCEL	0.08 (0.01)	0.10 (0.01)	0.09 (0.01)	0.11 (0.01)
MHGOOD	-0.06 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)
MHFAIR	-0.10 (0.01)	-0.13 (0.01)	-0.10 (0.01)	-0.13 (0.01)
MHPOOR	-0.14 (0.01)	-0.17 (0.01)	-0.14 (0.01)	-0.18 (0.01)
PROXIES				
PROXY	-0.01 (0.01)	-0.03 (0.01)	0.01 (0.01)	0.01 (0.01)
ANSPROXY	-0.09 (0.01)	-0.10 (0.01)	-0.09 (0.01)	-0.09 (0.01)
DUAL ELIG	-0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE64	-0.05	(0.01)	-0.07	(0.01)
AGE6569	-0.01	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.02	(0.01)
AGE80	0.04	(0.00)	0.04	(0.01)
EDUCATION				
LESS8GRD	-0.01	(0.01)	0.01	(0.01)
SOMEHIGH	0.01	(0.01)	0.03	(0.01)
SOMECOLL	-0.02	(0.00)	-0.06	(0.01)
COLLGRAD	-0.04	(0.01)	-0.09	(0.01)
COLLMORE	-0.06	(0.01)	-0.11	(0.01)
GHP				
EXCEL	0.03	(0.01)	0.06	(0.01)
VERYGOOD	0.02	(0.00)	0.03	(0.01)
FAIR	-0.01	(0.00)	-0.02	(0.01)
POOR	-0.01	(0.01)	-0.02	(0.01)
MHP				
MHEXCEL	0.04	(0.00)	0.08	(0.01)
MHGOOD	-0.03	(0.00)	-0.05	(0.01)
MHFAIR	-0.07	(0.01)	-0.11	(0.01)
MHPOOR	-0.10	(0.01)	-0.14	(0.01)
PROXIES				
PROXY	-0.02	(0.01)	-0.03	(0.01)
ANSPROXY	-0.02	(0.01)	-0.07	(0.01)
DUAL ELIG	-0.04	(0.01)	-0.02	(0.01)

CUSTOMER SERVICE, INFORMATION, AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.05	0.05	0.04
AGE			
AGE64	-0.12 (0.03)	-0.14 (0.02)	-0.10 (0.02)
AGE6569	-0.05 (0.02)	-0.03 (0.01)	-0.04 (0.02)
AGE7579	0.00 (0.02)	0.03 (0.01)	0.01 (0.02)
AGE80	0.03 (0.02)	0.04 (0.01)	0.03 (0.02)
EDUCATION			
LESS8GRD	-0.00 (0.03)	-0.07 (0.02)	-0.02 (0.02)
SOMEHIGH	0.07 (0.03)	-0.01 (0.01)	0.03 (0.02)
SOMECOLL	-0.05 (0.02)	-0.03 (0.01)	-0.04 (0.01)
COLLGRAD	-0.10 (0.03)	-0.02 (0.02)	-0.06 (0.02)
COLLMORE	-0.15 (0.03)	-0.12 (0.02)	-0.13 (0.02)
GHP			
EXCEL	-0.00 (0.04)	0.04 (0.02)	0.06 (0.03)
VERYGOOD	-0.00 (0.02)	0.01 (0.01)	0.02 (0.02)
FAIR	0.00 (0.02)	-0.02 (0.01)	-0.04 (0.01)
POOR	-0.07 (0.03)	-0.05 (0.02)	-0.09 (0.02)
MHP			
MHEXCEL	0.02 (0.02)	0.04 (0.01)	0.03 (0.02)
MHGOOD	-0.04 (0.02)	-0.05 (0.01)	-0.03 (0.01)
MHFAIR	-0.05 (0.02)	-0.11 (0.02)	-0.12 (0.02)
MHPOOR	-0.14 (0.04)	-0.15 (0.02)	-0.14 (0.03)
PROXIES			
PROXY	-0.09 (0.02)	-0.12 (0.01)	-0.09 (0.02)
ANSPROXY	0.00 (0.04)	0.02 (0.02)	0.09 (0.02)
DUAL ELIG	-0.03 (0.03)	0.03 (0.02)	0.03 (0.02)

SINGLE REPORT OUTCOMES

	Q33 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy	Q38 Getting prescription medicines
R-SQUARE	0.06	0.08	0.08	0.06
AGE				
AGE64	-0.16 (0.02)	-0.11 (0.03)	-0.15 (0.02)	-0.19 (0.01)
AGE6569	-0.04 (0.02)	0.04 (0.03)	-0.03 (0.02)	-0.03 (0.00)
AGE7579	0.02 (0.01)	0.02 (0.03)	0.02 (0.02)	0.02 (0.00)
AGE80	0.03 (0.01)	0.03 (0.02)	0.04 (0.02)	0.05 (0.00)
EDUCATION				
LESS8GRD	-0.00 (0.01)	-0.03 (0.02)	0.02 (0.02)	-0.03 (0.01)
SOMEHIGH	0.00 (0.01)	0.00 (0.02)	0.01 (0.02)	-0.01 (0.01)
SOMECOLL	-0.05 (0.01)	-0.09 (0.02)	-0.06 (0.02)	-0.03 (0.00)
COLLGRAD	-0.04 (0.02)	0.00 (0.03)	-0.07 (0.02)	-0.03 (0.01)
COLLMORE	-0.08 (0.02)	-0.12 (0.03)	-0.12 (0.02)	-0.07 (0.01)
GHP				
EXCEL	0.00 (0.04)	0.02 (0.07)	0.06 (0.04)	0.04 (0.01)
VERYGOOD	0.02 (0.02)	0.02 (0.03)	0.02 (0.02)	0.03 (0.00)
FAIR	-0.01 (0.01)	-0.07 (0.02)	-0.03 (0.01)	-0.05 (0.00)
POOR	-0.06 (0.01)	-0.14 (0.02)	-0.13 (0.02)	-0.13 (0.01)
MHP				
MHEXCEL	0.03 (0.02)	0.02 (0.03)	-0.01 (0.02)	0.02 (0.00)
MHGOOD	-0.02 (0.01)	-0.04 (0.02)	-0.04 (0.02)	-0.03 (0.00)
MHFAIR	-0.03 (0.01)	-0.08 (0.02)	-0.08 (0.02)	-0.06 (0.01)
MHPOOR	-0.10 (0.02)	-0.17 (0.03)	-0.16 (0.02)	-0.09 (0.01)
PROXIES				
PROXY	-0.03 (0.01)	-0.04 (0.02)	-0.05 (0.02)	-0.01 (0.01)
ANSPROXY	0.03 (0.02)	-0.03 (0.02)	-0.00 (0.02)	0.04 (0.01)
DUAL ELIG	-0.05 (0.01)	-0.01 (0.02)	-0.06 (0.02)	-0.02 (0.01)

SINGLE REPORT OUTCOMES

	Q39 How often get prescription medicine	Q47 Getting good quality medical care	Q48 Getting the very best care	Q67 Providing good quality of life
R-SQUARE	0.04	0.04	0.05	0.04
AGE				
AGE64	-0.14 (0.01)	-0.17 (0.01)	-0.18 (0.01)	-0.73 (0.05)
AGE6569	-0.02 (0.00)	-0.05 (0.01)	-0.06 (0.01)	-0.31 (0.06)
AGE7579	0.01 (0.01)	0.03 (0.01)	0.04 (0.01)	0.07 (0.06)
AGE80	0.03 (0.01)	0.05 (0.01)	0.08 (0.01)	0.08 (0.05)
EDUCATION				
LESS8GRD	-0.04 (0.01)	-0.01 (0.01)	0.02 (0.01)	-0.00 (0.05)
SOMEHIGH	-0.02 (0.01)	0.01 (0.01)	0.04 (0.01)	0.11 (0.05)
SOMECOLL	-0.01 (0.00)	-0.06 (0.01)	-0.10 (0.01)	-0.19 (0.04)
COLLGRAD	0.02 (0.01)	-0.08 (0.01)	-0.16 (0.01)	-0.12 (0.07)
COLLMORE	-0.01 (0.01)	-0.10 (0.01)	-0.21 (0.01)	-0.34 (0.07)
GHP				
EXCEL	-0.02 (0.01)	0.05 (0.01)	0.11 (0.01)	-0.15 (0.19)
VERYGOOD	0.00 (0.00)	0.03 (0.01)	0.05 (0.01)	-0.07 (0.09)
FAIR	-0.02 (0.00)	-0.02 (0.01)	-0.02 (0.01)	-0.04 (0.04)
POOR	-0.03 (0.01)	-0.03 (0.01)	-0.04 (0.01)	-0.26 (0.05)
MHP				
MHEXCEL	0.03 (0.00)	0.10 (0.01)	0.11 (0.01)	0.05 (0.07)
MHGOOD	-0.04 (0.00)	-0.09 (0.01)	-0.09 (0.01)	-0.01 (0.05)
MHFAIR	-0.08 (0.01)	-0.14 (0.01)	-0.14 (0.01)	-0.16 (0.05)
MHPOOR	-0.10 (0.01)	-0.20 (0.01)	-0.19 (0.01)	-0.40 (0.06)
PROXIES				
PROXY	0.01 (0.01)	-0.06 (0.01)	-0.09 (0.01)	-0.08 (0.04)
ANSPROXY	0.03 (0.01)	-0.05 (0.01)	-0.09 (0.01)	-0.15 (0.05)
DUAL ELIG	-0.07 (0.01)	0.04 (0.01)	0.04 (0.01)	0.36 (0.04)

Table A2b: 2001 Case-Mix Coefficients, Base Model Plus MHP, With Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.06	0.03	0.04
AGE				
AGE64	-0.68 (0.02)	-0.21 (0.02)	0.07 (0.02)	-0.13 (0.03)
AGE6569	-0.26 (0.02)	-0.09 (0.01)	-0.09 (0.01)	-0.11 (0.02)
AGE7579	0.20 (0.02)	0.05 (0.02)	0.07 (0.02)	0.00 (0.02)
AGE8084	0.34 (0.02)	0.07 (0.02)	0.10 (0.02)	0.01 (0.03)
AGE85	0.39 (0.02)	0.08 (0.02)	0.11 (0.02)	0.00 (0.03)
EDUCATION				
LESS8GRD	0.07 (0.02)	0.11 (0.02)	0.15 (0.02)	0.09 (0.03)
SOMEHIGH	0.13 (0.02)	0.13 (0.02)	0.15 (0.02)	0.14 (0.02)
SOMECOLL	-0.28 (0.02)	-0.20 (0.01)	-0.14 (0.01)	-0.13 (0.02)
COLLGRAD	-0.43 (0.02)	-0.26 (0.02)	-0.23 (0.02)	-0.18 (0.03)
COLLMORE	-0.55 (0.02)	-0.37 (0.02)	-0.27 (0.02)	-0.26 (0.03)
GHP				
EXCEL	0.20 (0.02)	0.31 (0.02)	0.25 (0.02)	0.21 (0.04)
VERYGOOD	0.11 (0.02)	0.16 (0.01)	0.09 (0.01)	0.08 (0.02)
FAIR	-0.05 (0.02)	-0.12 (0.01)	-0.04 (0.01)	-0.11 (0.02)
POOR	-0.12 (0.02)	-0.21 (0.02)	0.02 (0.02)	-0.11 (0.03)
MHP				
MHEXCEL	0.18 (0.02)	0.28 (0.01)	0.25 (0.01)	0.29 (0.02)
MHGOOD	-0.12 (0.02)	-0.15 (0.01)	-0.12 (0.01)	-0.18 (0.02)
MHFAIR	-0.19 (0.02)	-0.23 (0.02)	-0.12 (0.02)	-0.27 (0.03)
MHPOOR	-0.42 (0.03)	-0.46 (0.03)	-0.31 (0.03)	-0.52 (0.04)
PROXIES				
PROXY	-0.34 (0.02)	-0.17 (0.02)	-0.15 (0.02)	-0.07 (0.02)
ANSPROXY	-0.23 (0.03)	-0.16 (0.03)	-0.26 (0.03)	-0.12 (0.04)
DUAL ELIG	0.40 (0.02)	0.05 (0.02)	0.15 (0.02)	0.00 (0.03)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.04	0.03
AGE				
AGE64	-0.07 (0.01)	-0.05 (0.00)	-0.09 (0.01)	-0.06 (0.00)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.01 (0.00)
AGE7579	0.00 (0.01)	-0.01 (0.00)	0.01 (0.01)	0.00 (0.00)
AGE8084	-0.00 (0.01)	-0.01 (0.00)	0.02 (0.01)	0.00 (0.00)
AGE85	-0.00 (0.01)	0.00 (0.01)	0.04 (0.01)	0.01 (0.00)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.02 (0.00)	0.01 (0.01)	-0.01 (0.00)
SOMEHIGH	-0.02 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.01 (0.00)
SOMECOLL	-0.03 (0.01)	-0.02 (0.00)	-0.06 (0.00)	-0.01 (0.00)
COLLGRAD	-0.02 (0.01)	-0.03 (0.00)	-0.04 (0.01)	-0.00 (0.00)
COLLMORE	-0.05 (0.01)	-0.04 (0.00)	-0.07 (0.01)	-0.01 (0.00)
GHP				
EXCEL	0.05 (0.01)	0.03 (0.01)	0.06 (0.01)	0.00 (0.00)
VERYGOOD	0.02 (0.01)	0.02 (0.00)	0.03 (0.00)	0.01 (0.00)
FAIR	-0.04 (0.01)	-0.04 (0.00)	-0.04 (0.00)	-0.01 (0.00)
POOR	-0.09 (0.01)	-0.10 (0.01)	-0.10 (0.01)	-0.02 (0.00)
MHP				
MHEXCEL	0.02 (0.01)	0.01 (0.00)	0.02 (0.00)	0.01 (0.00)
MHGOOD	-0.03 (0.01)	-0.02 (0.00)	-0.01 (0.00)	-0.01 (0.00)
MHFAIR	-0.06 (0.01)	-0.04 (0.00)	-0.04 (0.01)	-0.02 (0.00)
MHPOOR	-0.17 (0.01)	-0.12 (0.01)	-0.08 (0.01)	-0.07 (0.01)
PROXIES				
PROXY	0.01 (0.01)	0.00 (0.00)	0.01 (0.01)	-0.01 (0.00)
ANSPROXY	0.03 (0.01)	0.03 (0.01)	-0.00 (0.01)	0.03 (0.00)
DUAL ELIG	-0.09 (0.01)	-0.07 (0.00)	-0.05 (0.01)	-0.03 (0.00)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.03	0.06
AGE				
AGE64	-0.07 (0.01)	-0.09 (0.01)	-0.04 (0.01)	-0.04 (0.01)
AGE6569	-0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.00 (0.01)
AGE7579	0.01 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.02 (0.01)
AGE8084	0.00 (0.01)	-0.00 (0.01)	0.02 (0.01)	0.02 (0.01)
AGE85	0.01 (0.01)	0.01 (0.01)	0.05 (0.01)	0.06 (0.01)
EDUCATION				
LESS8GRD	0.02 (0.01)	-0.02 (0.01)	0.00 (0.01)	-0.02 (0.01)
SOMEHIGH	0.03 (0.01)	0.01 (0.01)	0.01 (0.01)	0.02 (0.01)
SOMECOLL	-0.05 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.06 (0.01)
COLLGRAD	-0.06 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.04 (0.01)
COLLMORE	-0.10 (0.01)	-0.09 (0.01)	-0.11 (0.01)	-0.07 (0.01)
GHP				
EXCEL	0.12 (0.01)	0.08 (0.02)	0.07 (0.01)	0.24 (0.01)
VERYGOOD	0.06 (0.01)	0.03 (0.01)	0.05 (0.01)	0.12 (0.01)
FAIR	-0.05 (0.01)	-0.05 (0.01)	-0.03 (0.01)	-0.10 (0.01)
POOR	-0.05 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.16 (0.01)
MHP				
MHEXCEL	0.08 (0.01)	0.08 (0.01)	0.08 (0.01)	0.05 (0.01)
MHGOOD	-0.04 (0.01)	-0.03 (0.01)	-0.04 (0.01)	-0.02 (0.01)
MHFAIR	-0.07 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.04 (0.01)
MHPOOR	-0.16 (0.02)	-0.15 (0.02)	-0.11 (0.01)	-0.11 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	0.01 (0.01)	-0.04 (0.01)	-0.02 (0.01)
ANSPROXY	-0.03 (0.01)	0.01 (0.02)	0.02 (0.01)	-0.05 (0.02)
DUAL ELIG	-0.03 (0.01)	-0.06 (0.01)	-0.05 (0.01)	0.04 (0.01)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE64	-0.05 (0.01)	0.01 (0.01)	-0.05 (0.01)	-0.03 (0.01)
AGE6569	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
AGE8084	0.01 (0.01)	-0.03 (0.01)	0.02 (0.01)	-0.01 (0.01)
AGE85	0.01 (0.01)	-0.03 (0.01)	0.04 (0.01)	0.01 (0.01)
EDUCATION				
LESS8GRD	0.04 (0.01)	0.03 (0.01)	0.04 (0.01)	0.05 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.08 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.07 (0.01)
COLLGRAD	-0.08 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.09 (0.01)
COLLMORE	-0.12 (0.01)	-0.05 (0.01)	-0.08 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.10 (0.01)	0.11 (0.01)	0.12 (0.01)	0.17 (0.01)
VERYGOOD	0.05 (0.01)	0.06 (0.01)	0.06 (0.01)	0.08 (0.01)
FAIR	-0.05 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.06 (0.01)
POOR	-0.07 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.09 (0.01)
MHP				
MHEXCEL	0.09 (0.01)	0.11 (0.01)	0.09 (0.01)	0.12 (0.01)
MHGOOD	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.03 (0.01)
MHFAIR	-0.06 (0.01)	-0.09 (0.01)	-0.07 (0.01)	-0.06 (0.01)
MHPOOR	-0.12 (0.01)	-0.14 (0.01)	-0.12 (0.01)	-0.10 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	-0.04 (0.01)	-0.01 (0.01)	-0.02 (0.01)
ANSPROXY	-0.06 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.07 (0.01)
DUAL ELIG	0.01 (0.01)	0.02 (0.01)	0.00 (0.01)	0.02 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE64	-0.06	(0.01)	-0.06	(0.01)
AGE6569	-0.01	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.01	(0.01)
AGE8084	0.02	(0.01)	0.02	(0.01)
AGE85	0.04	(0.01)	0.03	(0.01)
EDUCATION				
LESS8GRD	-0.01	(0.01)	0.01	(0.01)
SOMEHIGH	0.01	(0.00)	0.02	(0.01)
SOMECOLL	-0.03	(0.00)	-0.06	(0.01)
COLLGRAD	-0.04	(0.01)	-0.09	(0.01)
COLLMORE	-0.06	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.03	(0.01)	0.08	(0.01)
VERYGOOD	0.02	(0.00)	0.04	(0.01)
FAIR	-0.01	(0.00)	-0.03	(0.01)
POOR	-0.01	(0.01)	-0.05	(0.01)
MHP				
MHEXCEL	0.04	(0.00)	0.09	(0.01)
MHGOOD	-0.04	(0.00)	-0.04	(0.01)
MHFAIR	-0.06	(0.01)	-0.06	(0.01)
MHPOOR	-0.12	(0.01)	-0.13	(0.01)
PROXIES				
PROXY	-0.02	(0.00)	-0.02	(0.01)
ANSPROXY	-0.01	(0.01)	-0.03	(0.01)
DUAL ELIG	-0.03	(0.01)	-0.02	(0.01)

CUSTOMER SERVICE, INFORMATION, AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.05	0.05
AGE			
AGE64	-0.10 (0.03)	-0.10 (0.02)	-0.10 (0.02)
AGE6569	-0.00 (0.02)	-0.03 (0.01)	-0.03 (0.02)
AGE7579	0.09 (0.02)	0.04 (0.01)	0.01 (0.02)
AGE8084	0.08 (0.03)	0.03 (0.01)	0.05 (0.02)
AGE85	0.02 (0.03)	0.06 (0.02)	0.07 (0.03)
EDUCATION			
LESS8GRD	-0.04 (0.03)	-0.06 (0.02)	-0.04 (0.02)
SOMEHIGH	0.00 (0.02)	-0.00 (0.01)	-0.00 (0.02)
SOMECOLL	-0.09 (0.02)	-0.03 (0.01)	-0.07 (0.02)
COLLGRAD	-0.14 (0.03)	-0.06 (0.02)	-0.09 (0.02)
COLLMORE	-0.20 (0.03)	-0.08 (0.02)	-0.15 (0.02)
GHP			
EXCEL	-0.00 (0.04)	0.02 (0.02)	0.03 (0.03)
VERYGOOD	0.01 (0.02)	0.00 (0.01)	0.05 (0.02)
FAIR	-0.03 (0.02)	-0.04 (0.01)	-0.07 (0.02)
POOR	-0.12 (0.03)	-0.10 (0.02)	-0.13 (0.02)
MHP			
MHEXCEL	0.02 (0.02)	0.04 (0.01)	0.03 (0.02)
MHGOOD	-0.03 (0.02)	-0.06 (0.01)	-0.03 (0.02)
MHFAIR	-0.03 (0.03)	-0.11 (0.02)	-0.07 (0.02)
MHPOOR	-0.16 (0.04)	-0.18 (0.02)	-0.14 (0.03)
PROXIES			
PROXY	-0.09 (0.02)	-0.10 (0.01)	-0.07 (0.02)
ANSPROXY	0.06 (0.04)	-0.01 (0.02)	0.07 (0.03)
DUAL ELIG	0.02 (0.03)	0.03 (0.01)	0.04 (0.02)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.05	0.09	0.06
AGE			
AGE64	-0.18 (0.01)	-0.19 (0.03)	-0.15 (0.02)
AGE6569	-0.03 (0.01)	-0.03 (0.03)	-0.02 (0.01)
AGE7579	0.03 (0.01)	0.01 (0.03)	0.03 (0.01)
AGE8084	0.02 (0.01)	0.03 (0.03)	0.01 (0.01)
AGE85	0.04 (0.01)	0.04 (0.02)	0.06 (0.02)
EDUCATION			
LESS8GRD	-0.02 (0.01)	0.02 (0.02)	-0.00 (0.02)
SOMEHIGH	0.01 (0.01)	-0.01 (0.02)	0.00 (0.01)
SOMECOLL	-0.06 (0.01)	-0.13 (0.02)	-0.07 (0.01)
COLLGRAD	-0.05 (0.02)	-0.08 (0.03)	-0.05 (0.02)
COLLMORE	-0.09 (0.02)	-0.13 (0.03)	-0.11 (0.02)
GHP			
EXCEL	0.03 (0.03)	0.04 (0.06)	0.04 (0.03)
VERYGOOD	0.04 (0.02)	0.02 (0.03)	0.03 (0.01)
FAIR	-0.01 (0.01)	-0.08 (0.02)	-0.04 (0.01)
POOR	-0.06 (0.01)	-0.20 (0.02)	-0.12 (0.02)
MHP			
MHEXCEL	0.01 (0.01)	0.02 (0.03)	0.05 (0.01)
MHGOOD	-0.02 (0.01)	-0.03 (0.02)	0.01 (0.01)
MHFAIR	-0.03 (0.01)	-0.06 (0.02)	-0.03 (0.02)
MHPOOR	-0.07 (0.02)	-0.14 (0.03)	-0.11 (0.02)
PROXIES			
PROXY	-0.04 (0.01)	-0.05 (0.02)	-0.03 (0.01)
ANSPROXY	0.03 (0.01)	-0.00 (0.02)	0.01 (0.02)
DUAL ELIG	-0.04 (0.01)	0.04 (0.02)	-0.02 (0.01)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.07	0.03
AGE		
AGE64	-0.21 (0.01)	-0.17 (0.01)
AGE6569	-0.03 (0.00)	-0.02 (0.01)
AGE7579	0.03 (0.00)	0.02 (0.01)
AGE8084	0.04 (0.00)	0.02 (0.01)
AGE85	0.06 (0.01)	0.04 (0.01)
EDUCATION		
LESS8GRD	-0.03 (0.00)	-0.07 (0.01)
SOMEHIGH	-0.02 (0.00)	-0.04 (0.01)
SOMECOLL	-0.03 (0.00)	0.01 (0.01)
COLLGRAD	-0.01 (0.01)	0.03 (0.01)
COLLMORE	-0.04 (0.01)	0.03 (0.01)
GHP		
EXCEL	0.05 (0.01)	-0.11 (0.01)
VERYGOOD	0.03 (0.00)	-0.01 (0.01)
FAIR	-0.06 (0.00)	-0.01 (0.01)
POOR	-0.14 (0.01)	-0.03 (0.01)
MHP		
MHEXCEL	0.02 (0.00)	0.03 (0.00)
MHGOOD	-0.02 (0.00)	-0.04 (0.01)
MHFAIR	-0.04 (0.01)	-0.07 (0.01)
MHPOOR	-0.07 (0.01)	-0.11 (0.01)
PROXIES		
PROXY	-0.00 (0.00)	0.02 (0.01)
ANSPROXY	0.03 (0.01)	0.05 (0.01)
DUAL ELIG	-0.03 (0.00)	-0.06 (0.01)

Table A2c: 2002 Case-Mix Coefficients, Base Model Plus MHP, With Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.06	0.03	0.03
AGE				
AGE44	-1.13 (0.04)	-0.56 (0.04)	-0.04 (0.04)	-0.31 (0.05)
AGE4564	-0.65 (0.02)	-0.10 (0.02)	0.15 (0.02)	-0.03 (0.03)
AGE6569	-0.31 (0.02)	-0.08 (0.01)	-0.08 (0.01)	-0.06 (0.02)
AGE7579	0.23 (0.02)	0.08 (0.02)	0.10 (0.02)	0.05 (0.02)
AGE8084	0.37 (0.02)	0.11 (0.02)	0.16 (0.02)	0.08 (0.02)
AGE85	0.41 (0.02)	0.13 (0.02)	0.12 (0.02)	0.03 (0.03)
EDUCATION				
LESS8GRD	0.06 (0.02)	0.07 (0.02)	0.11 (0.02)	0.08 (0.03)
SOMEHIGH	0.14 (0.02)	0.15 (0.02)	0.16 (0.02)	0.15 (0.02)
SOMECOLL	-0.26 (0.02)	-0.16 (0.01)	-0.09 (0.01)	-0.10 (0.02)
COLLGRAD	-0.37 (0.02)	-0.25 (0.02)	-0.19 (0.02)	-0.20 (0.03)
COLLMORE	-0.53 (0.02)	-0.34 (0.02)	-0.25 (0.02)	-0.23 (0.02)
GHP				
EXCEL	0.21 (0.03)	0.32 (0.02)	0.23 (0.02)	0.19 (0.03)
VERYGOOD	0.09 (0.02)	0.14 (0.01)	0.08 (0.01)	0.08 (0.02)
FAIR	-0.11 (0.02)	-0.15 (0.01)	-0.07 (0.01)	-0.12 (0.02)
POOR	-0.28 (0.03)	-0.29 (0.02)	-0.07 (0.02)	-0.23 (0.03)
MHP				
MHEXCEL	0.16 (0.02)	0.24 (0.01)	0.22 (0.01)	0.25 (0.02)
MHGOOD	-0.16 (0.02)	-0.16 (0.01)	-0.12 (0.01)	-0.16 (0.02)
MHFAIR	-0.30 (0.02)	-0.31 (0.02)	-0.23 (0.02)	-0.27 (0.03)
MHPOOR	-0.57 (0.04)	-0.55 (0.03)	-0.42 (0.03)	-0.49 (0.04)
PROXIES				
PROXY	-0.31 (0.02)	-0.15 (0.02)	-0.10 (0.02)	-0.09 (0.02)
ANSPROXY	-0.07 (0.03)	-0.08 (0.03)	-0.17 (0.03)	-0.05 (0.03)
DUAL ELIG	0.46 (0.02)	0.07 (0.02)	0.12 (0.02)	-0.03 (0.02)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.04	0.08
AGE				
AGE44	-0.20 (0.02)	-0.12 (0.01)	-0.14 (0.01)	-0.29 (0.03)
AGE4564	-0.07 (0.01)	-0.05 (0.01)	-0.08 (0.01)	-0.14 (0.02)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.03 (0.02)
AGE7579	0.01 (0.01)	0.01 (0.00)	0.00 (0.01)	0.01 (0.02)
AGE8084	0.01 (0.01)	0.01 (0.01)	0.02 (0.01)	0.02 (0.02)
AGE85	0.01 (0.01)	0.01 (0.01)	0.05 (0.01)	0.04 (0.02)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.04 (0.01)	0.02 (0.01)	0.01 (0.02)
SOMEHIGH	0.00 (0.01)	-0.00 (0.00)	0.02 (0.01)	0.02 (0.02)
SOMECOLL	-0.01 (0.01)	-0.01 (0.00)	-0.05 (0.01)	-0.05 (0.02)
COLLGRAD	-0.01 (0.01)	-0.01 (0.01)	-0.03 (0.01)	-0.07 (0.02)
COLLMORE	-0.03 (0.01)	-0.03 (0.01)	-0.08 (0.01)	-0.09 (0.02)
GHP				
EXCEL	0.03 (0.01)	0.03 (0.01)	0.06 (0.01)	0.06 (0.03)
VERYGOOD	0.02 (0.01)	0.02 (0.00)	0.03 (0.01)	0.04 (0.02)
FAIR	-0.04 (0.01)	-0.03 (0.00)	-0.04 (0.01)	-0.00 (0.02)
POOR	-0.10 (0.01)	-0.10 (0.01)	-0.10 (0.01)	-0.10 (0.02)
MHP				
MHEXCEL	0.01 (0.01)	0.01 (0.00)	0.02 (0.01)	0.01 (0.02)
MHGOOD	-0.02 (0.01)	-0.02 (0.00)	-0.02 (0.01)	-0.02 (0.02)
MHFAIR	-0.07 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.06 (0.02)
MHPOOR	-0.17 (0.01)	-0.13 (0.01)	-0.10 (0.01)	-0.13 (0.03)
PROXIES				
PROXY	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	-0.02 (0.02)
ANSPROXY	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	-0.08 (0.03)
DUAL ELIG	-0.08 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.08 (0.02)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regulat health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.05	0.04	0.04	0.05
AGE				
AGE44	-0.18 (0.02)	-0.26 (0.02)	-0.19 (0.02)	-0.09 (0.03)
AGE4564	-0.02 (0.01)	-0.07 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE6569	0.01 (0.01)	-0.02 (0.01)	0.00 (0.01)	-0.00 (0.01)
AGE7579	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	0.02 (0.01)
AGE8084	0.03 (0.01)	0.04 (0.01)	0.06 (0.01)	0.03 (0.01)
AGE85	0.05 (0.01)	0.07 (0.01)	0.08 (0.01)	0.04 (0.01)
EDUCATION				
LESS8GRD	-0.01 (0.01)	-0.02 (0.01)	0.02 (0.01)	0.04 (0.01)
SOMEHIGH	0.03 (0.01)	0.02 (0.01)	0.04 (0.01)	0.05 (0.01)
SOMECOLL	-0.04 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.06 (0.01)
COLLGRAD	-0.04 (0.01)	-0.01 (0.02)	-0.10 (0.01)	-0.07 (0.01)
COLLMORE	-0.09 (0.01)	-0.08 (0.01)	-0.16 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.12 (0.01)	0.10 (0.02)	0.15 (0.01)	0.30 (0.02)
VERYGOOD	0.06 (0.01)	0.06 (0.01)	0.07 (0.01)	0.12 (0.01)
FAIR	-0.06 (0.01)	-0.05 (0.01)	-0.07 (0.01)	-0.08 (0.01)
POOR	-0.10 (0.01)	-0.11 (0.01)	-0.11 (0.01)	-0.14 (0.02)
MHP				
MHEXCEL	0.06 (0.01)	0.04 (0.01)	0.07 (0.01)	0.02 (0.01)
MHGOOD	-0.06 (0.01)	-0.05 (0.01)	-0.03 (0.01)	-0.02 (0.01)
MHFAIR	-0.10 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.05 (0.01)
MHPOOR	-0.18 (0.02)	-0.13 (0.02)	-0.10 (0.02)	-0.03 (0.02)
PROXIES				
PROXY	-0.04 (0.01)	0.01 (0.01)	-0.03 (0.01)	-0.14 (0.01)
ANSPROXY	0.01 (0.01)	0.01 (0.02)	0.02 (0.01)	0.04 (0.02)
DUAL ELIG	-0.03 (0.01)	-0.00 (0.01)	0.00 (0.01)	0.02 (0.01)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE44	-0.14 (0.01)	-0.07 (0.02)	-0.13 (0.01)	-0.14 (0.02)
AGE4564	-0.02 (0.01)	0.04 (0.01)	-0.01 (0.01)	0.00 (0.01)
AGE6569	-0.00 (0.01)	0.01 (0.01)	0.00 (0.01)	-0.01 (0.01)
AGE7579	0.02 (0.01)	0.00 (0.01)	0.02 (0.01)	0.02 (0.01)
AGE8084	0.03 (0.01)	-0.01 (0.01)	0.04 (0.01)	0.01 (0.01)
AGE85	0.04 (0.01)	-0.01 (0.01)	0.06 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	0.04 (0.01)	0.02 (0.01)	0.04 (0.01)	0.05 (0.01)
SOMEHIGH	0.04 (0.01)	0.04 (0.01)	0.04 (0.01)	0.07 (0.01)
SOMECOLL	-0.06 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.06 (0.01)
COLLGRAD	-0.07 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.07 (0.01)
COLLMORE	-0.11 (0.01)	-0.04 (0.01)	-0.07 (0.01)	-0.13 (0.01)
GHP				
EXCEL	0.11 (0.01)	0.12 (0.01)	0.11 (0.01)	0.18 (0.01)
VERYGOOD	0.06 (0.01)	0.06 (0.01)	0.05 (0.01)	0.08 (0.01)
FAIR	-0.05 (0.01)	-0.07 (0.01)	-0.04 (0.01)	-0.06 (0.01)
POOR	-0.10 (0.01)	-0.09 (0.01)	-0.10 (0.01)	-0.12 (0.01)
MHP				
MHEXCEL	0.07 (0.01)	0.09 (0.01)	0.09 (0.01)	0.10 (0.01)
MHGOOD	-0.04 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.06 (0.01)
MHFAIR	-0.10 (0.01)	-0.11 (0.01)	-0.11 (0.01)	-0.12 (0.01)
MHPOOR	-0.14 (0.01)	-0.17 (0.01)	-0.15 (0.01)	-0.18 (0.02)
PROXIES				
PROXY	-0.03 (0.01)	-0.06 (0.01)	-0.02 (0.01)	-0.01 (0.01)
ANSPROXY	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.00 (0.01)
DUAL ELIG	0.01 (0.01)	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE44	-0.18	(0.01)	-0.22	(0.01)
AGE4564	-0.01	(0.01)	-0.05	(0.01)
AGE6569	-0.01	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.03	(0.01)
AGE8084	0.03	(0.01)	0.05	(0.01)
AGE85	0.04	(0.01)	0.06	(0.01)
EDUCATION				
LESS8GRD	-0.01	(0.01)	0.01	(0.01)
SOMEHIGH	0.01	(0.00)	0.04	(0.01)
SOMECOLL	-0.03	(0.00)	-0.05	(0.01)
COLLGRAD	-0.04	(0.01)	-0.07	(0.01)
COLLMORE	-0.07	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.03	(0.01)	0.09	(0.01)
VERYGOOD	0.01	(0.00)	0.04	(0.01)
FAIR	-0.01	(0.00)	-0.04	(0.01)
POOR	-0.03	(0.01)	-0.08	(0.01)
MHP				
MHEXCEL	0.03	(0.00)	0.06	(0.01)
MHGOOD	-0.03	(0.00)	-0.04	(0.01)
MHFAIR	-0.07	(0.01)	-0.08	(0.01)
MHPOOR	-0.11	(0.01)	-0.13	(0.01)
PROXIES				
PROXY	-0.02	(0.01)	-0.03	(0.01)
ANSPROXY	-0.01	(0.01)	-0.02	(0.01)
DUAL ELIG	-0.03	(0.01)	-0.01	(0.01)

CUSTOMER SERVICE, INFORMATION, AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.05	0.06	0.07
AGE			
AGE44	-0.12 (0.04)	-0.15 (0.03)	-0.19 (0.04)
AGE4564	-0.09 (0.03)	-0.08 (0.02)	-0.12 (0.03)
AGE6569	-0.04 (0.02)	-0.07 (0.02)	-0.05 (0.02)
AGE7579	0.02 (0.02)	0.04 (0.02)	0.04 (0.02)
AGE8084	0.06 (0.03)	0.07 (0.02)	0.07 (0.02)
AGE85	0.08 (0.03)	0.06 (0.02)	0.06 (0.03)
EDUCATION			
LESS8GRD	-0.00 (0.03)	-0.05 (0.02)	0.04 (0.02)
SOMEHIGH	-0.01 (0.03)	0.02 (0.02)	0.02 (0.02)
SOMECOLL	-0.07 (0.02)	-0.03 (0.01)	-0.08 (0.02)
COLLGRAD	-0.12 (0.03)	-0.04 (0.02)	-0.06 (0.03)
COLLMORE	-0.14 (0.03)	-0.10 (0.02)	-0.18 (0.02)
GHP			
EXCEL	-0.00 (0.04)	0.05 (0.03)	-0.01 (0.03)
VERYGOOD	0.02 (0.02)	0.04 (0.02)	0.03 (0.02)
FAIR	-0.07 (0.02)	-0.04 (0.02)	-0.05 (0.02)
POOR	-0.17 (0.03)	-0.15 (0.02)	-0.14 (0.03)
MHP			
MHEXCEL	0.05 (0.02)	0.08 (0.02)	0.03 (0.02)
MHGOOD	0.03 (0.02)	-0.03 (0.02)	-0.00 (0.02)
MHFAIR	0.01 (0.03)	-0.11 (0.02)	-0.06 (0.02)
MHPOOR	-0.12 (0.04)	-0.19 (0.03)	-0.10 (0.04)
PROXIES			
PROXY	-0.07 (0.03)	-0.12 (0.02)	-0.14 (0.02)
ANSPROXY	-0.08 (0.04)	0.00 (0.03)	0.00 (0.03)
DUAL ELIG	0.02 (0.03)	0.05 (0.02)	0.04 (0.02)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.07	0.10	0.08
AGE			
AGE44	-0.30 (0.02)	-0.36 (0.05)	-0.26 (0.03)
AGE4564	-0.17 (0.01)	-0.21 (0.03)	-0.18 (0.02)
AGE6569	-0.03 (0.01)	-0.06 (0.03)	-0.04 (0.01)
AGE7579	0.01 (0.01)	0.02 (0.02)	0.01 (0.01)
AGE8084	0.04 (0.01)	0.03 (0.02)	0.02 (0.01)
AGE85	0.07 (0.01)	0.05 (0.02)	0.05 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	0.03 (0.02)	-0.01 (0.02)
SOMEHIGH	-0.00 (0.01)	0.05 (0.02)	0.02 (0.01)
SMECOLL	-0.03 (0.01)	-0.06 (0.02)	-0.04 (0.01)
COLLGRAD	-0.05 (0.02)	-0.06 (0.03)	-0.05 (0.02)
COLLMORE	-0.07 (0.02)	-0.13 (0.03)	-0.11 (0.02)
GHP			
EXCEL	0.00 (0.03)	0.01 (0.05)	-0.02 (0.03)
VERYGOOD	0.04 (0.01)	0.05 (0.03)	0.02 (0.01)
FAIR	-0.04 (0.01)	-0.10 (0.02)	-0.03 (0.01)
POOR	-0.11 (0.01)	-0.22 (0.02)	-0.12 (0.02)
MHP			
MHEXCEL	0.01 (0.01)	0.05 (0.03)	0.05 (0.01)
MHGOOD	-0.01 (0.01)	0.01 (0.02)	-0.03 (0.01)
MHFAIR	-0.03 (0.01)	-0.02 (0.02)	-0.09 (0.02)
MHPOOR	-0.06 (0.02)	-0.13 (0.03)	-0.12 (0.02)
PROXIES			
PROXY	-0.02 (0.01)	-0.05 (0.02)	-0.03 (0.01)
ANSPROXY	0.02 (0.01)	-0.01 (0.02)	0.03 (0.02)
DUAL ELIG	-0.04 (0.01)	0.02 (0.02)	-0.04 (0.01)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.03
AGE		
AGE44	-0.31 (0.01)	-0.31 (0.01)
AGE4564	-0.21 (0.01)	-0.17 (0.01)
AGE6569	-0.03 (0.00)	-0.04 (0.01)
AGE7579	0.03 (0.00)	0.02 (0.01)
AGE8084	0.05 (0.00)	0.03 (0.01)
AGE85	0.07 (0.01)	0.05 (0.01)
EDUCATION		
LESS8GRD	-0.03 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.02 (0.00)	-0.03 (0.01)
SOMECOLL	-0.03 (0.00)	0.01 (0.01)
COLLGRAD	-0.02 (0.01)	0.04 (0.01)
COLLMORE	-0.05 (0.01)	0.01 (0.01)
GHP		
EXCEL	0.06 (0.01)	-0.11 (0.01)
VERYGOOD	0.04 (0.00)	-0.02 (0.01)
FAIR	-0.06 (0.00)	-0.02 (0.01)
POOR	-0.15 (0.01)	-0.06 (0.01)
MHP		
MHEXCEL	0.02 (0.00)	0.02 (0.01)
MHGOOD	-0.01 (0.00)	-0.03 (0.01)
MHFAIR	-0.05 (0.01)	-0.07 (0.01)
MHPOOR	-0.10 (0.01)	-0.11 (0.01)
PROXIES		
PROXY	-0.01 (0.00)	0.01 (0.01)
ANSPROXY	0.03 (0.01)	0.05 (0.01)
DUAL ELIG	-0.02 (0.00)	-0.05 (0.01)

Table A2d: 2003 Case-Mix Coefficients, Base Model Plus MHP, With Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.06	0.03	0.03
AGE				
AGE44	-0.99 (0.05)	-0.68 (0.04)	-0.10 (0.04)	-0.34 (0.05)
AGE4564	-0.72 (0.03)	-0.13 (0.02)	0.12 (0.02)	0.03 (0.03)
AGE6569	-0.43 (0.02)	-0.10 (0.02)	-0.09 (0.01)	-0.09 (0.02)
AGE7579	0.30 (0.02)	0.08 (0.02)	0.09 (0.02)	0.07 (0.02)
AGE8084	0.48 (0.02)	0.12 (0.02)	0.15 (0.02)	0.09 (0.02)
AGE85	0.54 (0.02)	0.13 (0.02)	0.17 (0.02)	0.05 (0.03)
EDUCATION				
LESS8GRD	0.11 (0.02)	0.02 (0.02)	0.09 (0.02)	0.01 (0.03)
SOMEHIGH	0.16 (0.02)	0.07 (0.02)	0.12 (0.02)	0.08 (0.02)
SOMECOLL	-0.26 (0.02)	-0.17 (0.01)	-0.11 (0.01)	-0.11 (0.02)
COLLGRAD	-0.37 (0.03)	-0.27 (0.02)	-0.22 (0.02)	-0.21 (0.03)
COLLMORE	-0.49 (0.02)	-0.32 (0.02)	-0.26 (0.02)	-0.25 (0.02)
GHP				
EXCEL	0.19 (0.03)	0.31 (0.03)	0.15 (0.02)	0.17 (0.04)
VERYGOOD	0.11 (0.02)	0.14 (0.02)	0.07 (0.01)	0.07 (0.02)
FAIR	-0.06 (0.02)	-0.13 (0.01)	-0.02 (0.01)	-0.07 (0.02)
POOR	-0.20 (0.03)	-0.28 (0.02)	-0.03 (0.02)	-0.15 (0.03)
MHP				
MHEXCEL	0.18 (0.02)	0.24 (0.02)	0.24 (0.01)	0.25 (0.02)
MHGOOD	-0.13 (0.02)	-0.22 (0.01)	-0.17 (0.01)	-0.22 (0.02)
MHFAIR	-0.23 (0.02)	-0.34 (0.02)	-0.26 (0.02)	-0.33 (0.02)
MHPOOR	-0.39 (0.04)	-0.61 (0.03)	-0.38 (0.03)	-0.61 (0.04)
PROXIES				
PROXY	-0.34 (0.02)	-0.14 (0.02)	-0.11 (0.02)	-0.06 (0.02)
ANSPROXY	-0.05 (0.03)	-0.09 (0.03)	-0.12 (0.03)	-0.06 (0.03)
DUAL ELIG	0.60 (0.02)	-0.00 (0.02)	0.11 (0.02)	0.02 (0.02)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.05	0.05	0.04	0.09
AGE				
AGE44	-0.20 (0.02)	-0.13 (0.01)	-0.18 (0.01)	-0.34 (0.03)
AGE4564	-0.08 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.15 (0.02)
AGE6569	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.05 (0.02)
AGE7579	0.00 (0.01)	0.00 (0.00)	0.01 (0.01)	0.02 (0.02)
AGE8084	-0.00 (0.01)	0.00 (0.01)	0.02 (0.01)	0.01 (0.02)
AGE85	0.01 (0.01)	0.01 (0.01)	0.03 (0.01)	0.04 (0.02)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.04 (0.01)	0.02 (0.01)	-0.04 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.01 (0.02)
SOMECOLL	-0.02 (0.01)	-0.02 (0.00)	-0.06 (0.00)	-0.07 (0.02)
COLLGRAD	-0.03 (0.01)	-0.01 (0.01)	-0.05 (0.01)	-0.05 (0.02)
COLLMORE	-0.05 (0.01)	-0.04 (0.01)	-0.08 (0.01)	-0.09 (0.02)
GHP				
EXCEL	0.01 (0.01)	0.01 (0.01)	0.04 (0.01)	0.04 (0.03)
VERYGOOD	0.02 (0.01)	0.02 (0.00)	0.03 (0.01)	-0.01 (0.02)
FAIR	-0.03 (0.01)	-0.02 (0.00)	-0.04 (0.00)	-0.02 (0.02)
POOR	-0.11 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.09 (0.02)
MHP				
MHEXCEL	0.02 (0.01)	0.01 (0.00)	0.01 (0.01)	0.03 (0.02)
MHGOOD	-0.03 (0.01)	-0.02 (0.00)	-0.03 (0.00)	-0.01 (0.02)
MHFAIR	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.03 (0.02)
MHPOOR	-0.13 (0.01)	-0.13 (0.01)	-0.12 (0.01)	-0.14 (0.03)
PROXIES				
PROXY	0.02 (0.01)	0.00 (0.00)	-0.00 (0.01)	-0.06 (0.02)
ANSPROXY	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	0.01 (0.03)
DUAL ELIG	-0.11 (0.01)	-0.07 (0.01)	-0.05 (0.01)	-0.13 (0.02)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regulat health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE44	-0.21 (0.02)	-0.22 (0.02)	-0.22 (0.02)	-0.18 (0.03)
AGE4564	-0.03 (0.01)	-0.06 (0.01)	-0.04 (0.01)	-0.05 (0.01)
AGE6569	0.01 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.00 (0.01)
AGE7579	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	-0.02 (0.01)
AGE8084	0.02 (0.01)	0.03 (0.01)	0.03 (0.01)	-0.04 (0.01)
AGE85	0.05 (0.01)	0.04 (0.01)	0.05 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.04 (0.01)
SOMEHIGH	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	-0.01 (0.01)
SOMECOLL	-0.04 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.02 (0.01)
COLLGRAD	-0.07 (0.01)	-0.02 (0.02)	-0.10 (0.01)	-0.05 (0.01)
COLLMORE	-0.09 (0.01)	-0.05 (0.01)	-0.13 (0.01)	-0.05 (0.01)
GHP				
EXCEL	0.10 (0.02)	0.03 (0.02)	0.11 (0.01)	0.21 (0.02)
VERYGOOD	0.05 (0.01)	0.03 (0.01)	0.05 (0.01)	0.10 (0.01)
FAIR	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.06 (0.01)
POOR	-0.09 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.08 (0.01)
MHP				
MHEXCEL	0.05 (0.01)	0.07 (0.01)	0.08 (0.01)	0.06 (0.01)
MHGOOD	-0.08 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.07 (0.01)
MHFAIR	-0.11 (0.01)	-0.10 (0.01)	-0.11 (0.01)	-0.09 (0.01)
MHPOOR	-0.18 (0.02)	-0.15 (0.02)	-0.14 (0.02)	-0.08 (0.02)
PROXIES				
PROXY	-0.03 (0.01)	0.01 (0.01)	-0.01 (0.01)	-0.05 (0.01)
ANSPROXY	0.00 (0.01)	0.01 (0.02)	0.02 (0.01)	0.09 (0.02)
DUAL ELIG	-0.03 (0.01)	-0.04 (0.01)	-0.03 (0.01)	-0.01 (0.01)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE44	-0.15 (0.02)	-0.08 (0.02)	-0.15 (0.01)	-0.17 (0.02)
AGE4564	-0.04 (0.01)	0.02 (0.01)	-0.04 (0.01)	-0.01 (0.01)
AGE6569	-0.02 (0.01)	0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
AGE8084	0.02 (0.01)	-0.01 (0.01)	0.02 (0.01)	0.01 (0.01)
AGE85	0.03 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.02 (0.01)
EDUCATION				
LESS8GRD	0.04 (0.01)	0.02 (0.01)	0.03 (0.01)	0.06 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.05 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.06 (0.01)
COLLGRAD	-0.07 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.10 (0.01)
COLLMORE	-0.11 (0.01)	-0.04 (0.01)	-0.07 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.10 (0.01)	0.11 (0.01)	0.10 (0.01)	0.16 (0.01)
VERYGOOD	0.04 (0.01)	0.06 (0.01)	0.05 (0.01)	0.08 (0.01)
FAIR	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.05 (0.01)
POOR	-0.10 (0.01)	-0.11 (0.01)	-0.09 (0.01)	-0.11 (0.01)
MHP				
MHEXCEL	0.08 (0.01)	0.09 (0.01)	0.08 (0.01)	0.10 (0.01)
MHGOOD	-0.06 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)
MHFAIR	-0.09 (0.01)	-0.11 (0.01)	-0.10 (0.01)	-0.10 (0.01)
MHPOOR	-0.14 (0.01)	-0.17 (0.01)	-0.16 (0.01)	-0.16 (0.01)
PROXIES				
PROXY	-0.02 (0.01)	-0.05 (0.01)	-0.01 (0.01)	0.01 (0.01)
ANSPROXY	-0.03 (0.01)	-0.04 (0.01)	-0.01 (0.01)	-0.02 (0.01)
DUAL ELIG	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE44	-0.18	(0.01)	-0.21	(0.01)
AGE4564	-0.06	(0.01)	-0.05	(0.01)
AGE6569	-0.02	(0.00)	-0.02	(0.01)
AGE7579	0.01	(0.00)	0.02	(0.01)
AGE8084	0.02	(0.01)	0.03	(0.01)
AGE85	0.04	(0.01)	0.05	(0.01)
EDUCATION				
LESS8GRD	-0.02	(0.01)	0.00	(0.01)
SOMEHIGH	0.01	(0.00)	0.02	(0.01)
SOMECOLL	-0.03	(0.00)	-0.05	(0.01)
COLLGRAD	-0.04	(0.01)	-0.09	(0.01)
COLLMORE	-0.05	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.01	(0.01)	0.08	(0.01)
VERYGOOD	0.01	(0.00)	0.03	(0.01)
FAIR	-0.02	(0.00)	-0.04	(0.01)
POOR	-0.04	(0.01)	-0.07	(0.01)
MHP				
MHEXCEL	0.03	(0.00)	0.07	(0.01)
MHGOOD	-0.04	(0.00)	-0.06	(0.01)
MHFAIR	-0.07	(0.01)	-0.09	(0.01)
MHPOOR	-0.11	(0.01)	-0.14	(0.01)
PROXIES				
PROXY	-0.01	(0.00)	-0.02	(0.01)
ANSPROXY	-0.01	(0.01)	-0.03	(0.01)
DUAL ELIG	-0.04	(0.01)	-0.00	(0.01)

CUSTOMER SERVICE, INFORMATION, AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.05	0.07
AGE			
AGE44	-0.09 (0.05)	-0.09 (0.04)	-0.01 (0.04)
AGE4564	-0.08 (0.03)	-0.05 (0.02)	-0.02 (0.03)
AGE6569	-0.08 (0.02)	-0.02 (0.02)	-0.01 (0.02)
AGE7579	0.01 (0.03)	0.02 (0.02)	0.05 (0.02)
AGE8084	0.03 (0.03)	0.04 (0.02)	0.07 (0.03)
AGE85	0.08 (0.04)	0.08 (0.03)	0.11 (0.03)
EDUCATION			
LESS8GRD	-0.04 (0.03)	-0.09 (0.03)	-0.02 (0.03)
SOMEHIGH	0.02 (0.03)	-0.00 (0.02)	-0.00 (0.02)
SMECOLL	-0.06 (0.02)	-0.03 (0.02)	-0.07 (0.02)
COLLGRAD	-0.04 (0.03)	-0.02 (0.02)	-0.08 (0.03)
COLLMORE	-0.14 (0.03)	-0.07 (0.02)	-0.16 (0.03)
GHP			
EXCEL	0.03 (0.04)	0.09 (0.03)	0.03 (0.04)
VERYGOOD	0.04 (0.03)	0.03 (0.02)	0.04 (0.02)
FAIR	-0.07 (0.02)	-0.03 (0.02)	-0.01 (0.02)
POOR	-0.15 (0.03)	-0.12 (0.02)	-0.08 (0.03)
MHP			
MHEXCEL	-0.03 (0.02)	0.02 (0.02)	-0.03 (0.02)
MHGOOD	0.01 (0.02)	-0.06 (0.02)	-0.04 (0.02)
MHFAIR	-0.05 (0.03)	-0.14 (0.02)	-0.12 (0.02)
MHPOOR	-0.05 (0.04)	-0.21 (0.03)	-0.26 (0.04)
PROXIES			
PROXY	-0.02 (0.03)	-0.07 (0.02)	-0.16 (0.02)
ANSPROXY	-0.04 (0.04)	0.04 (0.03)	0.03 (0.03)
DUAL ELIG	-0.05 (0.03)	0.07 (0.02)	0.06 (0.02)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.06	0.10	0.08
AGE			
AGE44	-0.32 (0.03)	-0.36 (0.04)	-0.35 (0.03)
AGE4564	-0.16 (0.01)	-0.19 (0.03)	-0.16 (0.02)
AGE6569	-0.05 (0.01)	-0.00 (0.03)	-0.02 (0.01)
AGE7579	0.01 (0.01)	0.04 (0.02)	0.03 (0.01)
AGE8084	0.03 (0.01)	0.04 (0.02)	0.03 (0.01)
AGE85	0.05 (0.01)	0.04 (0.02)	0.07 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	-0.03 (0.02)	-0.02 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.02 (0.02)	0.02 (0.01)
SOMECOLL	-0.05 (0.01)	-0.09 (0.02)	-0.07 (0.01)
COLLGRAD	-0.05 (0.02)	-0.07 (0.03)	-0.04 (0.02)
COLLMORE	-0.06 (0.02)	-0.22 (0.03)	-0.10 (0.01)
GHP			
EXCEL	0.03 (0.03)	-0.03 (0.06)	0.03 (0.03)
VERYGOOD	-0.00 (0.02)	-0.04 (0.03)	0.02 (0.01)
FAIR	-0.02 (0.01)	-0.05 (0.02)	-0.03 (0.01)
POOR	-0.07 (0.01)	-0.19 (0.02)	-0.07 (0.01)
MHP			
MHEXCEL	-0.00 (0.01)	0.04 (0.02)	0.01 (0.01)
MHGOOD	-0.03 (0.01)	-0.04 (0.02)	-0.00 (0.01)
MHFAIR	-0.04 (0.01)	-0.11 (0.02)	-0.08 (0.01)
MHPOOR	-0.09 (0.02)	-0.20 (0.03)	-0.14 (0.02)
PROXIES			
PROXY	-0.03 (0.01)	-0.04 (0.02)	-0.02 (0.01)
ANSPROXY	0.03 (0.01)	0.01 (0.02)	0.02 (0.02)
DUAL ELIG	-0.06 (0.01)	0.04 (0.02)	-0.05 (0.01)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.08
AGE		
AGE44	-0.37 (0.01)	-0.36 (0.01)
AGE4564	-0.20 (0.01)	-0.19 (0.01)
AGE6569	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.02 (0.00)	0.02 (0.00)
AGE8084	0.04 (0.01)	0.04 (0.01)
AGE85	0.07 (0.01)	0.06 (0.01)
EDUCATION		
LESS8GRD	-0.04 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.02 (0.01)	-0.04 (0.01)
SOMECOLL	-0.04 (0.00)	-0.02 (0.00)
COLLGRAD	-0.02 (0.01)	0.00 (0.01)
COLLMORE	-0.06 (0.01)	-0.02 (0.01)
GHP		
EXCEL	0.05 (0.01)	0.04 (0.01)
VERYGOOD	0.03 (0.00)	0.02 (0.00)
FAIR	-0.06 (0.00)	-0.05 (0.00)
POOR	-0.14 (0.01)	-0.11 (0.01)
MHP		
MHEXCEL	0.01 (0.00)	0.02 (0.00)
MHGOOD	-0.02 (0.00)	-0.03 (0.00)
MHFAIR	-0.07 (0.01)	-0.09 (0.01)
MHPOOR	-0.11 (0.01)	-0.15 (0.01)
PROXIES		
PROXY	-0.01 (0.01)	0.01 (0.01)
ANSPROXY	0.03 (0.01)	0.05 (0.01)
DUAL ELIG	-0.06 (0.01)	-0.08 (0.01)

**Table A3b: 2001 Case-Mix Coefficients, Base Model Plus MHP, No Dual Eligibles,
No Regional Interactions, Geo Unit Reporting Entities**

GLOBAL RATINGS

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.06	0.03	0.04
AGE				
AGE64	-0.76 (0.03)	-0.16 (0.02)	0.11 (0.02)	-0.07 (0.03)
AGE6569	-0.27 (0.02)	-0.09 (0.02)	-0.10 (0.02)	-0.12 (0.02)
AGE7579	0.22 (0.02)	0.06 (0.02)	0.08 (0.02)	0.02 (0.02)
AGE8084	0.36 (0.02)	0.07 (0.02)	0.11 (0.02)	0.02 (0.03)
AGE85	0.42 (0.02)	0.09 (0.02)	0.13 (0.02)	0.01 (0.03)
EDUCATION				
LESS8GRD	0.05 (0.02)	0.09 (0.02)	0.16 (0.02)	0.08 (0.03)
SOMEHIGH	0.12 (0.02)	0.13 (0.02)	0.15 (0.02)	0.14 (0.03)
SOMECOLL	-0.28 (0.02)	-0.20 (0.01)	-0.13 (0.01)	-0.13 (0.02)
COLLGRAD	-0.43 (0.02)	-0.26 (0.02)	-0.23 (0.02)	-0.19 (0.03)
COLLMORE	-0.55 (0.02)	-0.36 (0.02)	-0.26 (0.02)	-0.26 (0.03)
GHP				
EXCEL	0.19 (0.02)	0.31 (0.02)	0.24 (0.02)	0.22 (0.04)
VERYGOOD	0.10 (0.02)	0.16 (0.01)	0.09 (0.01)	0.08 (0.02)
FAIR	-0.06 (0.02)	-0.13 (0.01)	-0.05 (0.02)	-0.12 (0.02)
POOR	-0.13 (0.03)	-0.23 (0.02)	0.01 (0.03)	-0.16 (0.03)
MHP				
MHEXCEL	0.18 (0.02)	0.28 (0.01)	0.25 (0.01)	0.28 (0.02)
MHGOOD	-0.12 (0.02)	-0.15 (0.01)	-0.12 (0.01)	-0.18 (0.02)
MHFAIR	-0.19 (0.02)	-0.24 (0.02)	-0.12 (0.02)	-0.28 (0.03)
MHPOOR	-0.50 (0.04)	-0.48 (0.03)	-0.34 (0.04)	-0.55 (0.05)
PROXIES				
PROXY	-0.31 (0.02)	-0.13 (0.02)	-0.12 (0.02)	-0.04 (0.03)
ANSProxy	-0.19 (0.03)	-0.13 (0.03)	-0.23 (0.03)	-0.10 (0.04)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.03	0.03	0.03	0.02
AGE				
AGE64	-0.08 (0.01)	-0.06 (0.01)	-0.08 (0.01)	-0.07 (0.00)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.01 (0.00)
AGE7579	0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	0.00 (0.00)
AGE8084	-0.00 (0.01)	-0.01 (0.00)	0.02 (0.01)	-0.00 (0.00)
AGE85	-0.01 (0.01)	0.00 (0.00)	0.03 (0.01)	0.00 (0.00)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.03 (0.00)	0.00 (0.01)	-0.02 (0.00)
SOMEHIGH	-0.02 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.01 (0.00)
SOMECOLL	-0.02 (0.01)	-0.02 (0.00)	-0.05 (0.00)	-0.01 (0.00)
COLLGRAD	-0.02 (0.01)	-0.03 (0.00)	-0.04 (0.01)	-0.00 (0.00)
COLLMORE	-0.05 (0.01)	-0.04 (0.00)	-0.07 (0.01)	-0.01 (0.00)
GHP				
EXCEL	0.05 (0.01)	0.03 (0.01)	0.05 (0.01)	0.00 (0.00)
VERYGOOD	0.02 (0.01)	0.02 (0.00)	0.03 (0.00)	0.01 (0.00)
FAIR	-0.03 (0.01)	-0.04 (0.00)	-0.04 (0.01)	-0.01 (0.00)
POOR	-0.10 (0.01)	-0.11 (0.01)	-0.10 (0.01)	-0.02 (0.00)
MHP				
MHEXCEL	0.01 (0.01)	0.01 (0.00)	0.02 (0.00)	0.01 (0.00)
MHGOOD	-0.03 (0.01)	-0.02 (0.00)	-0.01 (0.00)	-0.01 (0.00)
MHFAIR	-0.06 (0.01)	-0.04 (0.00)	-0.04 (0.01)	-0.02 (0.00)
MHPOOR	-0.17 (0.01)	-0.11 (0.01)	-0.08 (0.01)	-0.06 (0.01)
PROXIES				
PROXY	0.02 (0.01)	0.00 (0.00)	0.01 (0.01)	-0.01 (0.00)
ANSPROXY	0.04 (0.01)	0.03 (0.01)	-0.00 (0.01)	0.03 (0.01)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.03	0.06
AGE				
AGE64	-0.05 (0.01)	-0.08 (0.01)	-0.03 (0.01)	-0.03 (0.01)
AGE6569	-0.00 (0.01)	-0.03 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	0.02 (0.01)
AGE8084	0.00 (0.01)	-0.01 (0.01)	0.02 (0.01)	0.02 (0.01)
AGE85	0.01 (0.01)	-0.00 (0.01)	0.05 (0.01)	0.04 (0.01)
EDUCATION				
LESS8GRD	0.02 (0.01)	-0.02 (0.01)	-0.00 (0.01)	-0.02 (0.01)
SOMEHIGH	0.03 (0.01)	0.00 (0.01)	0.02 (0.01)	0.02 (0.01)
SOMECOLL	-0.05 (0.01)	-0.04 (0.01)	-0.04 (0.01)	-0.05 (0.01)
COLLGRAD	-0.06 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.04 (0.01)
COLLMORE	-0.10 (0.01)	-0.09 (0.01)	-0.11 (0.01)	-0.07 (0.01)
GHP				
EXCEL	0.13 (0.01)	0.08 (0.02)	0.07 (0.01)	0.25 (0.01)
VERYGOOD	0.07 (0.01)	0.04 (0.01)	0.05 (0.01)	0.12 (0.01)
FAIR	-0.05 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.10 (0.01)
POOR	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.17 (0.02)
MHP				
MHEXCEL	0.08 (0.01)	0.07 (0.01)	0.08 (0.01)	0.04 (0.01)
MHGOOD	-0.05 (0.01)	-0.04 (0.01)	-0.04 (0.01)	-0.02 (0.01)
MHFAIR	-0.08 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.04 (0.01)
MHPOOR	-0.14 (0.02)	-0.14 (0.02)	-0.10 (0.02)	-0.11 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)
ANSPROXY	-0.03 (0.02)	0.02 (0.02)	0.01 (0.01)	-0.06 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE64	-0.03 (0.01)	0.03 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE6569	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.00 (0.01)
AGE8084	0.01 (0.01)	-0.03 (0.01)	0.02 (0.01)	-0.01 (0.01)
AGE85	0.02 (0.01)	-0.03 (0.01)	0.04 (0.01)	0.02 (0.01)
EDUCATION				
LESS8GRD	0.03 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.03 (0.01)	0.04 (0.01)
SOMECOLL	-0.07 (0.01)	-0.04 (0.01)	-0.06 (0.01)	-0.07 (0.01)
COLLGRAD	-0.08 (0.01)	-0.04 (0.01)	-0.05 (0.01)	-0.09 (0.01)
COLLMORE	-0.12 (0.01)	-0.06 (0.01)	-0.08 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.11 (0.01)	0.12 (0.01)	0.12 (0.01)	0.18 (0.01)
VERYGOOD	0.06 (0.01)	0.06 (0.01)	0.06 (0.01)	0.09 (0.01)
FAIR	-0.05 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.06 (0.01)
POOR	-0.08 (0.01)	-0.10 (0.01)	-0.08 (0.01)	-0.10 (0.01)
MHP				
MHEXCEL	0.09 (0.01)	0.11 (0.01)	0.09 (0.01)	0.12 (0.01)
MHGOOD	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.03 (0.01)
MHFAIR	-0.07 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.07 (0.01)
MHPOOR	-0.10 (0.01)	-0.13 (0.01)	-0.12 (0.01)	-0.09 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	-0.04 (0.01)	-0.00 (0.01)	-0.01 (0.01)
ANSPROXY	-0.06 (0.01)	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.02		0.04	
AGE				
AGE64	-0.06	(0.01)	-0.05	(0.01)
AGE6569	-0.02	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.02	(0.01)
AGE8084	0.02	(0.01)	0.02	(0.01)
AGE85	0.04	(0.01)	0.03	(0.01)
EDUCATION				
LESS8GRD	-0.02	(0.01)	0.01	(0.01)
SOMEHIGH	0.01	(0.01)	0.02	(0.01)
SOMECOLL	-0.03	(0.00)	-0.06	(0.01)
COLLGRAD	-0.04	(0.01)	-0.09	(0.01)
COLLMORE	-0.06	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.03	(0.01)	0.09	(0.01)
VERYGOOD	0.02	(0.00)	0.05	(0.01)
FAIR	-0.02	(0.00)	-0.03	(0.01)
POOR	-0.02	(0.01)	-0.06	(0.01)
MHP				
MHEXCEL	0.04	(0.00)	0.09	(0.01)
MHGOOD	-0.03	(0.00)	-0.04	(0.01)
MHFAIR	-0.06	(0.01)	-0.07	(0.01)
MHPOOR	-0.12	(0.01)	-0.13	(0.01)
PROXIES				
PROXY	-0.01	(0.01)	-0.02	(0.01)
ANSPROXY	-0.00	(0.01)	-0.04	(0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45	Q43	Q41
	Getting help from customer service	Finding/ understanding written info	Problem with Medicare paperwork
R-SQUARE	0.06	0.05	0.05
AGE			
AGE64	-0.10 (0.03)	-0.10 (0.02)	-0.12 (0.03)
AGE6569	-0.01 (0.02)	-0.03 (0.01)	-0.03 (0.02)
AGE7579	0.10 (0.02)	0.04 (0.01)	0.01 (0.02)
AGE8084	0.08 (0.03)	0.03 (0.02)	0.04 (0.02)
AGE85	0.03 (0.04)	0.06 (0.02)	0.06 (0.03)
EDUCATION			
LESS8GRD	-0.07 (0.03)	-0.08 (0.02)	-0.04 (0.03)
SOMEHIGH	0.01 (0.03)	-0.01 (0.01)	-0.02 (0.02)
SOMECOLL	-0.09 (0.02)	-0.03 (0.01)	-0.06 (0.02)
COLLGRAD	-0.13 (0.03)	-0.06 (0.02)	-0.09 (0.02)
COLLMORE	-0.20 (0.03)	-0.08 (0.02)	-0.15 (0.02)
GHP			
EXCEL	-0.00 (0.04)	0.02 (0.02)	0.04 (0.03)
VERYGOOD	0.00 (0.02)	0.01 (0.01)	0.05 (0.02)
FAIR	-0.02 (0.02)	-0.04 (0.01)	-0.07 (0.02)
POOR	-0.10 (0.03)	-0.10 (0.02)	-0.13 (0.03)
MHP			
MHEXCEL	0.02 (0.02)	0.04 (0.01)	0.03 (0.02)
MHGOOD	-0.03 (0.02)	-0.06 (0.01)	-0.03 (0.02)
MHFAIR	-0.06 (0.03)	-0.11 (0.02)	-0.07 (0.02)
MHPOOR	-0.17 (0.04)	-0.19 (0.03)	-0.13 (0.04)
PROXIES			
PROXY	-0.10 (0.03)	-0.09 (0.02)	-0.06 (0.02)
ANSPROXY	0.08 (0.04)	0.01 (0.03)	0.06 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.05	0.11	0.07
AGE			
AGE64	-0.19 (0.02)	-0.23 (0.04)	-0.16 (0.02)
AGE6569	-0.03 (0.01)	-0.05 (0.04)	-0.02 (0.01)
AGE7579	0.03 (0.01)	0.00 (0.03)	0.03 (0.01)
AGE8084	0.02 (0.01)	0.01 (0.03)	0.01 (0.02)
AGE85	0.04 (0.01)	0.02 (0.03)	0.06 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	0.02 (0.03)	-0.02 (0.02)
SOMEHIGH	0.01 (0.01)	-0.01 (0.03)	-0.01 (0.02)
SOMECOLL	-0.05 (0.01)	-0.12 (0.02)	-0.08 (0.01)
COLLGRAD	-0.05 (0.02)	-0.07 (0.04)	-0.05 (0.02)
COLLMORE	-0.08 (0.02)	-0.12 (0.04)	-0.12 (0.02)
GHP			
EXCEL	0.04 (0.03)	0.06 (0.07)	0.04 (0.03)
VERYGOOD	0.04 (0.02)	0.02 (0.03)	0.03 (0.01)
FAIR	-0.00 (0.01)	-0.09 (0.02)	-0.04 (0.01)
POOR	-0.07 (0.01)	-0.24 (0.03)	-0.13 (0.02)
MHP			
MHEXCEL	0.01 (0.01)	0.01 (0.03)	0.04 (0.01)
MHGOOD	-0.02 (0.01)	-0.03 (0.03)	0.01 (0.01)
MHFAIR	-0.05 (0.01)	-0.08 (0.03)	-0.04 (0.02)
MHPOOR	-0.07 (0.02)	-0.14 (0.03)	-0.11 (0.02)
PROXIES			
PROXY	-0.03 (0.01)	-0.06 (0.02)	-0.03 (0.01)
ANSPROXY	0.03 (0.02)	0.02 (0.03)	0.02 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.07	0.03
AGE		
AGE64	-0.22 (0.01)	-0.19 (0.01)
AGE6569	-0.02 (0.00)	-0.03 (0.01)
AGE7579	0.03 (0.00)	0.02 (0.01)
AGE8084	0.04 (0.00)	0.02 (0.01)
AGE85	0.05 (0.01)	0.03 (0.01)
EDUCATION		
LESS8GRD	-0.04 (0.01)	-0.09 (0.01)
SOMEHIGH	-0.03 (0.00)	-0.04 (0.01)
SOMECOLL	-0.02 (0.00)	0.01 (0.01)
COLLGRAD	-0.01 (0.01)	0.03 (0.01)
COLLMORE	-0.04 (0.01)	0.03 (0.01)
GHP		
EXCEL	0.05 (0.01)	-0.11 (0.01)
VERYGOOD	0.03 (0.00)	-0.01 (0.01)
FAIR	-0.06 (0.00)	-0.01 (0.01)
POOR	-0.13 (0.01)	-0.03 (0.01)
MHP		
MHEXCEL	0.02 (0.00)	0.03 (0.00)
MHGOOD	-0.02 (0.00)	-0.04 (0.01)
MHFAIR	-0.05 (0.01)	-0.07 (0.01)
MHPOOR	-0.08 (0.01)	-0.11 (0.01)
PROXIES		
PROXY	-0.00 (0.00)	0.02 (0.01)
ANSPROXY	0.03 (0.01)	0.06 (0.01)

Table A3c: 2002 Case-Mix Coefficients, Base Model Plus MHP, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.08	0.06	0.03	0.04
AGE				
AGE44	-1.39 (0.05)	-0.54 (0.05)	0.08 (0.05)	-0.28 (0.06)
AGE4564	-0.72 (0.03)	-0.06 (0.02)	0.21 (0.02)	0.02 (0.03)
AGE6569	-0.31 (0.02)	-0.07 (0.01)	-0.08 (0.01)	-0.06 (0.02)
AGE7579	0.25 (0.02)	0.08 (0.01)	0.10 (0.01)	0.07 (0.02)
AGE8084	0.41 (0.02)	0.12 (0.02)	0.17 (0.02)	0.09 (0.02)
AGE85	0.46 (0.02)	0.13 (0.02)	0.13 (0.02)	0.04 (0.03)
EDUCATION				
LESS8GRD	0.06 (0.02)	0.08 (0.02)	0.10 (0.02)	0.08 (0.03)
SOMEHIGH	0.11 (0.02)	0.13 (0.02)	0.15 (0.02)	0.12 (0.02)
SOMECOLL	-0.25 (0.02)	-0.14 (0.01)	-0.09 (0.01)	-0.10 (0.02)
COLLGRAD	-0.37 (0.02)	-0.23 (0.02)	-0.20 (0.02)	-0.19 (0.03)
COLLMORE	-0.53 (0.02)	-0.34 (0.02)	-0.25 (0.02)	-0.23 (0.02)
GHP				
EXCEL	0.21 (0.02)	0.32 (0.02)	0.22 (0.02)	0.20 (0.03)
VERYGOOD	0.08 (0.02)	0.14 (0.01)	0.08 (0.01)	0.08 (0.02)
FAIR	-0.11 (0.02)	-0.17 (0.01)	-0.09 (0.02)	-0.15 (0.02)
POOR	-0.29 (0.03)	-0.32 (0.03)	-0.07 (0.03)	-0.22 (0.03)
MHP				
MHEXCEL	0.17 (0.02)	0.24 (0.01)	0.22 (0.01)	0.26 (0.02)
MHGOOD	-0.16 (0.02)	-0.14 (0.01)	-0.12 (0.01)	-0.14 (0.02)
MHFAIR	-0.33 (0.02)	-0.32 (0.02)	-0.22 (0.02)	-0.27 (0.03)
MHPOOR	-0.67 (0.04)	-0.53 (0.04)	-0.41 (0.04)	-0.53 (0.05)
PROXIES				
PROXY	-0.27 (0.02)	-0.10 (0.02)	-0.07 (0.02)	-0.05 (0.02)
ANSPROXY	-0.06 (0.03)	-0.09 (0.03)	-0.16 (0.03)	-0.04 (0.04)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.04	0.08
AGE				
AGE44	-0.20 (0.02)	-0.15 (0.01)	-0.13 (0.02)	-0.35 (0.04)
AGE4564	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.15 (0.02)
AGE6569	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	-0.02 (0.02)
AGE7579	0.00 (0.01)	0.01 (0.00)	0.01 (0.01)	0.01 (0.02)
AGE8084	0.00 (0.01)	0.00 (0.00)	0.03 (0.01)	0.01 (0.02)
AGE85	0.01 (0.01)	0.00 (0.01)	0.04 (0.01)	0.04 (0.02)
EDUCATION				
LESS8GRD	-0.05 (0.01)	-0.04 (0.01)	0.01 (0.01)	-0.01 (0.02)
SOMEHIGH	-0.00 (0.01)	-0.01 (0.00)	0.01 (0.01)	0.02 (0.02)
SOMECOLL	-0.01 (0.01)	-0.01 (0.00)	-0.04 (0.00)	-0.04 (0.02)
COLLGRAD	-0.01 (0.01)	-0.01 (0.01)	-0.03 (0.01)	-0.06 (0.02)
COLLMORE	-0.03 (0.01)	-0.03 (0.01)	-0.07 (0.01)	-0.08 (0.02)
GHP				
EXCEL	0.03 (0.01)	0.03 (0.01)	0.06 (0.01)	0.04 (0.03)
VERYGOOD	0.02 (0.01)	0.01 (0.00)	0.03 (0.00)	0.03 (0.02)
FAIR	-0.04 (0.01)	-0.02 (0.00)	-0.04 (0.01)	-0.01 (0.02)
POOR	-0.11 (0.01)	-0.10 (0.01)	-0.10 (0.01)	-0.10 (0.02)
MHP				
MHEXCEL	0.01 (0.01)	0.01 (0.00)	0.02 (0.01)	0.02 (0.02)
MHGOOD	-0.02 (0.01)	-0.02 (0.00)	-0.01 (0.00)	-0.03 (0.02)
MHFAIR	-0.07 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.08 (0.02)
MHPOOR	-0.17 (0.01)	-0.13 (0.01)	-0.11 (0.01)	-0.14 (0.03)
PROXIES				
PROXY	0.02 (0.01)	0.01 (0.01)	-0.00 (0.01)	0.00 (0.02)
ANSPROXY	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	-0.10 (0.03)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.04	0.05
AGE				
AGE44	-0.18 (0.02)	-0.25 (0.03)	-0.19 (0.02)	-0.07 (0.03)
AGE4564	-0.01 (0.01)	-0.07 (0.01)	-0.02 (0.01)	0.01 (0.02)
AGE6569	0.01 (0.01)	-0.02 (0.01)	0.00 (0.01)	0.00 (0.01)
AGE7579	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	0.02 (0.01)
AGE8084	0.03 (0.01)	0.05 (0.01)	0.06 (0.01)	0.03 (0.01)
AGE85	0.05 (0.01)	0.06 (0.01)	0.07 (0.01)	0.04 (0.01)
EDUCATION				
LESS8GRD	0.00 (0.01)	-0.02 (0.01)	0.02 (0.01)	0.05 (0.01)
SOMEHIGH	0.03 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.04 (0.01)	-0.04 (0.01)	-0.06 (0.01)	-0.05 (0.01)
COLLGRAD	-0.04 (0.01)	-0.01 (0.02)	-0.10 (0.01)	-0.07 (0.01)
COLLMORE	-0.09 (0.01)	-0.07 (0.01)	-0.16 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.12 (0.01)	0.11 (0.02)	0.15 (0.01)	0.30 (0.02)
VERYGOOD	0.06 (0.01)	0.06 (0.01)	0.08 (0.01)	0.13 (0.01)
FAIR	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)	-0.09 (0.01)
POOR	-0.11 (0.01)	-0.12 (0.02)	-0.11 (0.01)	-0.16 (0.02)
MHP				
MHEXCEL	0.06 (0.01)	0.04 (0.01)	0.07 (0.01)	0.03 (0.01)
MHGOOD	-0.05 (0.01)	-0.04 (0.01)	-0.03 (0.01)	-0.01 (0.01)
MHFAIR	-0.10 (0.01)	-0.09 (0.01)	-0.07 (0.01)	-0.04 (0.01)
MHPOOR	-0.17 (0.02)	-0.12 (0.02)	-0.11 (0.02)	-0.02 (0.03)
PROXIES				
PROXY	-0.03 (0.01)	0.00 (0.01)	-0.01 (0.01)	-0.11 (0.01)
ANSPROXY	0.01 (0.01)	0.04 (0.02)	0.01 (0.01)	0.05 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.05	0.04	0.05
AGE				
AGE44	-0.13 (0.02)	-0.08 (0.02)	-0.12 (0.02)	-0.11 (0.02)
AGE4564	-0.01 (0.01)	0.05 (0.01)	0.00 (0.01)	0.02 (0.01)
AGE6569	-0.00 (0.01)	0.02 (0.01)	0.00 (0.01)	-0.00 (0.01)
AGE7579	0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	0.02 (0.01)
AGE8084	0.04 (0.01)	-0.01 (0.01)	0.04 (0.01)	0.02 (0.01)
AGE85	0.04 (0.01)	-0.02 (0.01)	0.06 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	0.03 (0.01)	0.02 (0.01)	0.04 (0.01)	0.05 (0.01)
SOMEHIGH	0.04 (0.01)	0.04 (0.01)	0.04 (0.01)	0.07 (0.01)
SOMECOLL	-0.06 (0.01)	-0.02 (0.01)	-0.04 (0.01)	-0.06 (0.01)
COLLGRAD	-0.06 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.07 (0.01)
COLLMORE	-0.11 (0.01)	-0.04 (0.01)	-0.07 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.11 (0.01)	0.12 (0.01)	0.11 (0.01)	0.18 (0.01)
VERYGOOD	0.06 (0.01)	0.06 (0.01)	0.05 (0.01)	0.09 (0.01)
FAIR	-0.06 (0.01)	-0.08 (0.01)	-0.06 (0.01)	-0.07 (0.01)
POOR	-0.11 (0.01)	-0.10 (0.01)	-0.11 (0.01)	-0.13 (0.01)
MHP				
MHEXCEL	0.08 (0.01)	0.09 (0.01)	0.09 (0.01)	0.10 (0.01)
MHGOOD	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.05 (0.01)
MHFAIR	-0.09 (0.01)	-0.10 (0.01)	-0.10 (0.01)	-0.11 (0.01)
MHPOOR	-0.14 (0.01)	-0.16 (0.01)	-0.14 (0.01)	-0.17 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	-0.05 (0.01)	-0.02 (0.01)	-0.00 (0.01)
ANSPROXY	-0.02 (0.01)	-0.01 (0.01)	-0.02 (0.01)	0.00 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE44	-0.21	(0.01)	-0.22	(0.02)
AGE4564	-0.05	(0.01)	-0.04	(0.01)
AGE6569	-0.01	(0.00)	-0.02	(0.01)
AGE7579	0.02	(0.00)	0.03	(0.01)
AGE8084	0.03	(0.00)	0.05	(0.01)
AGE85	0.04	(0.01)	0.06	(0.01)
EDUCATION				
LESS8GRD	-0.01	(0.01)	0.01	(0.01)
SOMEHIGH	0.01	(0.00)	0.03	(0.01)
SOMECOLL	-0.03	(0.00)	-0.04	(0.01)
COLLGRAD	-0.03	(0.01)	-0.07	(0.01)
COLLMORE	-0.07	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.04	(0.01)	0.09	(0.01)
VERYGOOD	0.01	(0.00)	0.04	(0.01)
FAIR	-0.02	(0.00)	-0.05	(0.01)
POOR	-0.04	(0.01)	-0.08	(0.01)
MHP				
MHEXCEL	0.03	(0.00)	0.07	(0.01)
MHGOOD	-0.03	(0.00)	-0.03	(0.01)
MHFAIR	-0.07	(0.01)	-0.08	(0.01)
MHPOOR	-0.10	(0.01)	-0.12	(0.01)
PROXIES				
PROXY	-0.01	(0.01)	-0.03	(0.01)
ANSPROXY	0.00	(0.01)	-0.02	(0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.06	0.08
AGE			
AGE44	-0.16 (0.05)	-0.16 (0.04)	-0.20 (0.05)
AGE4564	-0.09 (0.03)	-0.08 (0.02)	-0.12 (0.03)
AGE6569	-0.04 (0.02)	-0.06 (0.02)	-0.04 (0.02)
AGE7579	0.02 (0.02)	0.04 (0.02)	0.04 (0.02)
AGE8084	0.04 (0.03)	0.06 (0.02)	0.08 (0.02)
AGE85	0.07 (0.03)	0.07 (0.02)	0.05 (0.03)
EDUCATION			
LESS8GRD	0.02 (0.03)	-0.05 (0.02)	0.07 (0.03)
SOMEHIGH	-0.02 (0.03)	0.02 (0.02)	0.03 (0.02)
SOMECOLL	-0.05 (0.02)	-0.03 (0.01)	-0.07 (0.02)
COLLGRAD	-0.11 (0.03)	-0.04 (0.02)	-0.05 (0.03)
COLLMORE	-0.14 (0.03)	-0.10 (0.02)	-0.18 (0.02)
GHP			
EXCEL	-0.02 (0.04)	0.05 (0.03)	-0.01 (0.03)
VERYGOOD	0.01 (0.02)	0.04 (0.02)	0.03 (0.02)
FAIR	-0.06 (0.02)	-0.04 (0.02)	-0.05 (0.02)
POOR	-0.17 (0.03)	-0.16 (0.03)	-0.17 (0.03)
MHP			
MHEXCEL	0.06 (0.02)	0.07 (0.02)	0.02 (0.02)
MHGOOD	0.02 (0.02)	-0.04 (0.02)	-0.01 (0.02)
MHFAIR	-0.01 (0.03)	-0.12 (0.02)	-0.07 (0.03)
MHPOOR	-0.14 (0.05)	-0.19 (0.04)	-0.12 (0.04)
PROXIES			
PROXY	-0.05 (0.03)	-0.13 (0.02)	-0.13 (0.02)
ANSPROXY	-0.08 (0.04)	0.01 (0.03)	0.03 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.06	0.12	0.08
AGE			
AGE44	-0.34 (0.03)	-0.36 (0.06)	-0.31 (0.03)
AGE4564	-0.17 (0.01)	-0.25 (0.03)	-0.19 (0.02)
AGE6569	-0.02 (0.01)	-0.03 (0.03)	-0.04 (0.01)
AGE7579	0.01 (0.01)	0.03 (0.03)	0.02 (0.01)
AGE8084	0.04 (0.01)	0.05 (0.03)	0.03 (0.01)
AGE85	0.06 (0.01)	0.06 (0.03)	0.05 (0.02)
EDUCATION			
LESS8GRD	-0.04 (0.01)	-0.01 (0.03)	-0.02 (0.02)
SOMEHIGH	-0.02 (0.01)	0.04 (0.02)	0.01 (0.01)
SOMECOLL	-0.03 (0.01)	-0.03 (0.02)	-0.04 (0.01)
COLLGRAD	-0.04 (0.02)	-0.03 (0.03)	-0.05 (0.02)
COLLMORE	-0.09 (0.02)	-0.13 (0.03)	-0.11 (0.02)
GHP			
EXCEL	0.04 (0.03)	0.02 (0.06)	-0.03 (0.03)
VERYGOOD	0.03 (0.01)	0.05 (0.03)	0.01 (0.01)
FAIR	-0.04 (0.01)	-0.10 (0.02)	-0.04 (0.01)
POOR	-0.10 (0.01)	-0.22 (0.03)	-0.12 (0.02)
MHP			
MHEXCEL	0.01 (0.01)	0.03 (0.03)	0.05 (0.01)
MHGOOD	-0.01 (0.01)	0.02 (0.02)	-0.04 (0.01)
MHFAIR	-0.04 (0.01)	-0.03 (0.03)	-0.10 (0.02)
MHPOOR	-0.08 (0.02)	-0.15 (0.03)	-0.13 (0.02)
PROXIES			
PROXY	-0.01 (0.01)	-0.07 (0.02)	-0.02 (0.01)
ANSPROXY	0.02 (0.02)	0.01 (0.03)	0.03 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.03
AGE		
AGE44	-0.39 (0.01)	-0.38 (0.02)
AGE4564	-0.22 (0.01)	-0.18 (0.01)
AGE6569	-0.02 (0.00)	-0.04 (0.01)
AGE7579	0.03 (0.00)	0.01 (0.01)
AGE8084	0.05 (0.00)	0.03 (0.01)
AGE85	0.07 (0.01)	0.04 (0.01)
EDUCATION		
LESS8GRD	-0.04 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.03 (0.00)	-0.04 (0.01)
SOMECOLL	-0.03 (0.00)	0.01 (0.01)
COLLGRAD	-0.01 (0.01)	0.04 (0.01)
COLLMORE	-0.04 (0.01)	0.01 (0.01)
GHP		
EXCEL	0.06 (0.01)	-0.10 (0.01)
VERYGOOD	0.04 (0.00)	-0.02 (0.01)
FAIR	-0.06 (0.00)	-0.02 (0.01)
POOR	-0.15 (0.01)	-0.06 (0.01)
MHP		
MHEXCEL	0.01 (0.00)	0.02 (0.01)
MHGOOD	-0.01 (0.00)	-0.03 (0.01)
MHFAIR	-0.05 (0.01)	-0.07 (0.01)
MHPOOR	-0.11 (0.01)	-0.12 (0.01)
PROXIES		
PROXY	-0.01 (0.00)	0.02 (0.01)
ANSPROXY	0.03 (0.01)	0.05 (0.01)

Table A3d: 2003 Case-Mix Coefficients, Base Model Plus MHP, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.08	0.06	0.03	0.04
AGE				
AGE44	-1.21 (0.06)	-0.61 (0.05)	0.07 (0.05)	-0.28 (0.06)
AGE4564	-0.83 (0.03)	-0.12 (0.02)	0.14 (0.02)	0.07 (0.03)
AGE6569	-0.44 (0.02)	-0.11 (0.01)	-0.09 (0.01)	-0.10 (0.02)
AGE7579	0.33 (0.02)	0.08 (0.02)	0.11 (0.02)	0.09 (0.02)
AGE8084	0.51 (0.02)	0.11 (0.02)	0.16 (0.02)	0.10 (0.02)
AGE85	0.60 (0.02)	0.12 (0.02)	0.18 (0.02)	0.03 (0.03)
EDUCATION				
LESS8GRD	0.07 (0.02)	-0.01 (0.02)	0.09 (0.02)	-0.01 (0.03)
SOMEHIGH	0.15 (0.02)	0.08 (0.02)	0.12 (0.02)	0.08 (0.02)
SOMECOLL	-0.24 (0.02)	-0.17 (0.01)	-0.11 (0.01)	-0.11 (0.02)
COLLGRAD	-0.37 (0.02)	-0.29 (0.02)	-0.23 (0.02)	-0.23 (0.02)
COLLMORE	-0.49 (0.02)	-0.32 (0.02)	-0.26 (0.02)	-0.25 (0.02)
GHP				
EXCEL	0.17 (0.03)	0.29 (0.03)	0.15 (0.02)	0.14 (0.03)
VERYGOOD	0.12 (0.02)	0.14 (0.01)	0.07 (0.01)	0.07 (0.02)
FAIR	-0.05 (0.02)	-0.12 (0.01)	-0.01 (0.01)	-0.06 (0.02)
POOR	-0.19 (0.03)	-0.28 (0.02)	-0.02 (0.02)	-0.16 (0.03)
MHP				
MHEXCEL	0.19 (0.02)	0.25 (0.01)	0.25 (0.01)	0.26 (0.02)
MHGOOD	-0.15 (0.02)	-0.22 (0.01)	-0.17 (0.01)	-0.22 (0.02)
MHFAIR	-0.29 (0.02)	-0.38 (0.02)	-0.30 (0.02)	-0.36 (0.03)
MHPOOR	-0.41 (0.04)	-0.59 (0.03)	-0.37 (0.04)	-0.59 (0.04)
PROXIES				
PROXY	-0.31 (0.02)	-0.10 (0.02)	-0.09 (0.02)	-0.04 (0.02)
ANSPROXY	-0.04 (0.03)	-0.06 (0.03)	-0.10 (0.03)	-0.06 (0.03)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.04	0.08
AGE				
AGE44	-0.25 (0.02)	-0.19 (0.01)	-0.16 (0.02)	-0.34 (0.04)
AGE4564	-0.07 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.11 (0.02)
AGE6569	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.02 (0.02)
AGE7579	0.00 (0.01)	0.00 (0.00)	0.01 (0.01)	0.05 (0.02)
AGE8084	-0.01 (0.01)	-0.00 (0.00)	0.02 (0.01)	0.05 (0.02)
AGE85	-0.00 (0.01)	0.01 (0.01)	0.03 (0.01)	0.06 (0.02)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.04 (0.01)	0.01 (0.01)	-0.07 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.01 (0.02)
SOMECOLL	-0.02 (0.01)	-0.02 (0.00)	-0.05 (0.00)	-0.06 (0.02)
COLLGRAD	-0.03 (0.01)	-0.01 (0.01)	-0.05 (0.01)	-0.06 (0.02)
COLLMORE	-0.05 (0.01)	-0.03 (0.00)	-0.07 (0.01)	-0.09 (0.02)
GHP				
EXCEL	0.02 (0.01)	0.01 (0.01)	0.04 (0.01)	0.03 (0.03)
VERYGOOD	0.02 (0.01)	0.01 (0.00)	0.03 (0.00)	0.01 (0.02)
FAIR	-0.03 (0.01)	-0.02 (0.00)	-0.04 (0.00)	-0.01 (0.01)
POOR	-0.11 (0.01)	-0.09 (0.01)	-0.08 (0.01)	-0.07 (0.02)
MHP				
MHEXCEL	0.02 (0.01)	0.01 (0.00)	0.01 (0.00)	0.01 (0.02)
MHGOOD	-0.03 (0.01)	-0.02 (0.00)	-0.03 (0.00)	-0.02 (0.02)
MHFAIR	-0.08 (0.01)	-0.06 (0.01)	-0.08 (0.01)	-0.06 (0.02)
MHPOOR	-0.13 (0.01)	-0.14 (0.01)	-0.12 (0.01)	-0.21 (0.03)
PROXIES				
PROXY	0.02 (0.01)	0.01 (0.00)	0.00 (0.01)	-0.04 (0.02)
ANSPROXY	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	0.01 (0.03)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.04	0.04	0.03	0.05
AGE				
AGE44	-0.23 (0.02)	-0.20 (0.03)	-0.23 (0.02)	-0.17 (0.03)
AGE4564	-0.03 (0.01)	-0.05 (0.01)	-0.03 (0.01)	-0.02 (0.02)
AGE6569	0.00 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.00 (0.01)
AGE7579	0.02 (0.01)	0.02 (0.01)	0.02 (0.01)	-0.01 (0.01)
AGE8084	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	-0.04 (0.01)
AGE85	0.03 (0.01)	0.03 (0.01)	0.04 (0.01)	-0.04 (0.01)
EDUCATION				
LESS8GRD	0.00 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.06 (0.01)
SOMEHIGH	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	-0.01 (0.01)
SOMECOLL	-0.04 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.01 (0.01)
COLLGRAD	-0.07 (0.01)	-0.02 (0.01)	-0.10 (0.01)	-0.06 (0.01)
COLLMORE	-0.09 (0.01)	-0.05 (0.01)	-0.12 (0.01)	-0.06 (0.01)
GHP				
EXCEL	0.09 (0.01)	0.02 (0.02)	0.11 (0.01)	0.21 (0.02)
VERYGOOD	0.04 (0.01)	0.03 (0.01)	0.05 (0.01)	0.10 (0.01)
FAIR	-0.04 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.07 (0.01)
POOR	-0.10 (0.01)	-0.09 (0.01)	-0.07 (0.01)	-0.09 (0.01)
MHP				
MHEXCEL	0.05 (0.01)	0.08 (0.01)	0.09 (0.01)	0.07 (0.01)
MHGOOD	-0.07 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.08 (0.01)
MHFAIR	-0.12 (0.01)	-0.11 (0.01)	-0.11 (0.01)	-0.10 (0.01)
MHPOOR	-0.17 (0.02)	-0.14 (0.02)	-0.12 (0.02)	-0.08 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	0.01 (0.01)	0.00 (0.01)	-0.04 (0.01)
ANSPROXY	-0.00 (0.01)	0.02 (0.02)	0.01 (0.01)	0.09 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.04	0.04	0.04
AGE				
AGE44	-0.13 (0.02)	-0.06 (0.02)	-0.13 (0.02)	-0.11 (0.02)
AGE4564	-0.03 (0.01)	0.04 (0.01)	-0.02 (0.01)	0.01 (0.01)
AGE6569	-0.02 (0.01)	0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE8084	0.02 (0.01)	-0.02 (0.01)	0.02 (0.01)	0.01 (0.01)
AGE85	0.03 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	0.03 (0.01)	0.02 (0.01)	0.02 (0.01)	0.05 (0.01)
SOMEHIGH	0.04 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.05 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.06 (0.01)
COLLGRAD	-0.07 (0.01)	-0.05 (0.01)	-0.06 (0.01)	-0.10 (0.01)
COLLMORE	-0.11 (0.01)	-0.05 (0.01)	-0.07 (0.01)	-0.12 (0.01)
GHP				
EXCEL	0.10 (0.01)	0.11 (0.01)	0.09 (0.01)	0.17 (0.01)
VERYGOOD	0.04 (0.01)	0.06 (0.01)	0.04 (0.01)	0.08 (0.01)
FAIR	-0.05 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.06 (0.01)
POOR	-0.10 (0.01)	-0.11 (0.01)	-0.09 (0.01)	-0.10 (0.01)
MHP				
MHEXCEL	0.08 (0.01)	0.09 (0.01)	0.08 (0.01)	0.10 (0.01)
MHGOOD	-0.06 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.07 (0.01)
MHFAIR	-0.09 (0.01)	-0.12 (0.01)	-0.10 (0.01)	-0.11 (0.01)
MHPOOR	-0.12 (0.01)	-0.16 (0.01)	-0.15 (0.01)	-0.15 (0.02)
PROXIES				
PROXY	-0.01 (0.01)	-0.05 (0.01)	-0.02 (0.01)	0.01 (0.01)
ANSPROXY	-0.02 (0.01)	-0.03 (0.01)	0.00 (0.01)	-0.01 (0.01)

OFFICE STAFF

	Q24		Q25	
	Office staff		Office staff	
	courteous		helpful	
R-SQUARE	0.03		0.04	
AGE				
AGE44	-0.18	(0.01)	-0.20	(0.02)
AGE4564	-0.05	(0.01)	-0.05	(0.01)
AGE6569	-0.02	(0.00)	-0.02	(0.01)
AGE7579	0.01	(0.00)	0.02	(0.01)
AGE8084	0.02	(0.00)	0.03	(0.01)
AGE85	0.04	(0.01)	0.05	(0.01)
EDUCATION				
LESS8GRD	-0.02	(0.01)	0.00	(0.01)
SOMEHIGH	0.00	(0.00)	0.02	(0.01)
SOMECOLL	-0.03	(0.00)	-0.05	(0.01)
COLLGRAD	-0.04	(0.01)	-0.09	(0.01)
COLLMORE	-0.05	(0.01)	-0.12	(0.01)
GHP				
EXCEL	0.02	(0.01)	0.09	(0.01)
VERYGOOD	0.01	(0.00)	0.03	(0.01)
FAIR	-0.02	(0.00)	-0.04	(0.01)
POOR	-0.04	(0.01)	-0.07	(0.01)
MHP				
MHEXCEL	0.03	(0.00)	0.07	(0.01)
MHGOOD	-0.04	(0.00)	-0.05	(0.01)
MHFAIR	-0.07	(0.01)	-0.09	(0.01)
MHPOOR	-0.10	(0.01)	-0.13	(0.01)
PROXIES				
PROXY	0.00	(0.01)	-0.01	(0.01)
ANSPROXY	-0.02	(0.01)	-0.03	(0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.05	0.08
AGE			
AGE44	-0.08 (0.06)	-0.12 (0.05)	-0.05 (0.05)
AGE4564	-0.06 (0.03)	-0.06 (0.02)	-0.01 (0.03)
AGE6569	-0.06 (0.02)	-0.02 (0.02)	0.01 (0.02)
AGE7579	0.02 (0.03)	0.02 (0.02)	0.06 (0.02)
AGE8084	0.04 (0.03)	0.02 (0.02)	0.08 (0.03)
AGE85	0.07 (0.04)	0.08 (0.03)	0.09 (0.03)
EDUCATION			
LESS8GRD	-0.06 (0.04)	-0.11 (0.03)	-0.04 (0.03)
SOMEHIGH	0.03 (0.03)	-0.01 (0.02)	-0.01 (0.03)
SOMECOLL	-0.04 (0.02)	-0.03 (0.02)	-0.08 (0.02)
COLLGRAD	-0.06 (0.03)	-0.02 (0.02)	-0.09 (0.03)
COLLMORE	-0.14 (0.03)	-0.07 (0.02)	-0.16 (0.02)
GHP			
EXCEL	0.04 (0.04)	0.08 (0.03)	0.03 (0.04)
VERYGOOD	0.05 (0.02)	0.03 (0.02)	0.06 (0.02)
FAIR	-0.05 (0.02)	-0.04 (0.02)	0.00 (0.02)
POOR	-0.15 (0.03)	-0.12 (0.02)	-0.08 (0.03)
MHP			
MHEXCEL	-0.02 (0.02)	0.03 (0.02)	-0.02 (0.02)
MHGOOD	0.02 (0.02)	-0.05 (0.02)	-0.03 (0.02)
MHFAIR	-0.07 (0.03)	-0.15 (0.02)	-0.13 (0.03)
MHPOOR	-0.04 (0.05)	-0.18 (0.04)	-0.24 (0.04)
PROXIES			
PROXY	-0.01 (0.03)	-0.06 (0.02)	-0.14 (0.02)
ANSPROXY	-0.05 (0.04)	0.05 (0.03)	0.02 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.06	0.12	0.08
AGE			
AGE44	-0.31 (0.03)	-0.37 (0.06)	-0.35 (0.04)
AGE4564	-0.17 (0.01)	-0.21 (0.03)	-0.18 (0.02)
AGE6569	-0.04 (0.01)	0.04 (0.03)	-0.01 (0.01)
AGE7579	0.02 (0.01)	0.05 (0.03)	0.03 (0.01)
AGE8084	0.04 (0.01)	0.05 (0.03)	0.04 (0.01)
AGE85	0.05 (0.01)	0.04 (0.03)	0.07 (0.02)
EDUCATION			
LESS8GRD	-0.03 (0.01)	-0.04 (0.03)	-0.04 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.02)	0.00 (0.01)
SOMECOLL	-0.04 (0.01)	-0.06 (0.02)	-0.06 (0.01)
COLLGRAD	-0.05 (0.02)	-0.03 (0.03)	-0.03 (0.02)
COLLMORE	-0.05 (0.01)	-0.17 (0.03)	-0.08 (0.01)
GHP			
EXCEL	0.01 (0.03)	-0.14 (0.07)	0.02 (0.03)
VERYGOOD	0.00 (0.02)	-0.05 (0.03)	0.03 (0.01)
FAIR	-0.03 (0.01)	-0.05 (0.02)	-0.03 (0.01)
POOR	-0.07 (0.01)	-0.19 (0.02)	-0.08 (0.01)
MHP			
MHEXCEL	0.00 (0.01)	0.04 (0.03)	0.00 (0.01)
MHGOOD	-0.03 (0.01)	-0.05 (0.02)	-0.01 (0.01)
MHFAIR	-0.05 (0.01)	-0.13 (0.02)	-0.09 (0.01)
MHPOOR	-0.08 (0.02)	-0.21 (0.03)	-0.13 (0.02)
PROXIES			
PROXY	-0.02 (0.01)	-0.06 (0.02)	-0.00 (0.01)
ANSPROXY	0.02 (0.01)	0.04 (0.02)	-0.00 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.08
AGE		
AGE44	-0.48 (0.02)	-0.48 (0.01)
AGE4564	-0.21 (0.01)	-0.19 (0.01)
AGE6569	-0.04 (0.00)	-0.02 (0.00)
AGE7579	0.02 (0.00)	0.02 (0.00)
AGE8084	0.03 (0.01)	0.03 (0.01)
AGE85	0.05 (0.01)	0.05 (0.01)
EDUCATION		
LESS8GRD	-0.05 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.02 (0.00)	-0.04 (0.00)
SOMECOLL	-0.03 (0.00)	-0.01 (0.00)
COLLGRAD	-0.02 (0.01)	0.00 (0.01)
COLLMORE	-0.06 (0.01)	-0.01 (0.01)
GHP		
EXCEL	0.05 (0.01)	0.03 (0.01)
VERYGOOD	0.02 (0.00)	0.02 (0.00)
FAIR	-0.05 (0.00)	-0.04 (0.00)
POOR	-0.14 (0.01)	-0.11 (0.01)
MHP		
MHEXCEL	0.02 (0.00)	0.02 (0.00)
MHGOOD	-0.03 (0.00)	-0.03 (0.00)
MHFAIR	-0.09 (0.01)	-0.10 (0.01)
MHPOOR	-0.12 (0.01)	-0.14 (0.01)
PROXIES		
PROXY	-0.01 (0.01)	0.00 (0.01)
ANSPROXY	0.03 (0.01)	0.06 (0.01)

**Table A3b_d: 2001 Case-Mix Coefficients for Global Ratings
(Dichotomized 10 vs. 0-9), Base Model Plus MHP, No Dual Eligibles, No
Regional Interactions, Geo Unit Reporting Entities**

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11
Specialist				
R-SQUARE	0.07	0.03	0.03	0.02
AGE				
AGE64	-0.11 (0.01)	-0.02 (0.01)	0.02 (0.01)	0.01 (0.01)
AGE6569	-0.08 (0.00)	-0.04 (0.00)	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.05 (0.00)	0.02 (0.00)	0.03 (0.00)	0.01 (0.00)
AGE8084	0.09 (0.01)	0.02 (0.01)	0.03 (0.01)	-0.00 (0.00)
AGE85	0.11 (0.01)	0.00 (0.01)	0.04 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.06 (0.01)	0.02 (0.01)	0.02 (0.01)	-0.03 (0.00)
SOMEHIGH	0.07 (0.00)	0.03 (0.00)	0.04 (0.00)	-0.01 (0.00)
SOMECOLL	-0.09 (0.00)	-0.05 (0.00)	-0.04 (0.00)	0.01 (0.00)
COLLGRAD	-0.16 (0.01)	-0.09 (0.01)	-0.10 (0.01)	0.01 (0.01)
COLLMORE	-0.20 (0.01)	-0.11 (0.01)	-0.12 (0.01)	0.00 (0.00)
GHP				
EXCEL	0.08 (0.01)	-0.03 (0.01)	0.04 (0.01)	-0.10 (0.01)
VERYGOOD	0.03 (0.00)	-0.01 (0.00)	0.01 (0.00)	-0.05 (0.00)
FAIR	0.00 (0.00)	0.01 (0.00)	0.01 (0.00)	0.05 (0.00)
POOR	0.01 (0.01)	0.03 (0.01)	0.04 (0.01)	0.09 (0.01)
MHP				
MHEXCEL	0.09 (0.00)	0.11 (0.00)	0.10 (0.00)	0.08 (0.00)
MHGOOD	-0.02 (0.00)	-0.04 (0.00)	-0.02 (0.00)	-0.04 (0.00)
MHFAIR	-0.02 (0.01)	-0.05 (0.01)	-0.03 (0.01)	-0.06 (0.01)
MHPOOR	-0.04 (0.01)	-0.08 (0.01)	-0.06 (0.01)	-0.08 (0.01)
PROXIES				
PROXY	-0.08 (0.01)	-0.03 (0.01)	-0.02 (0.01)	0.02 (0.00)
ANSPROXY	-0.08 (0.01)	-0.06 (0.01)	-0.04 (0.01)	-0.03 (0.01)

Table A3c_d: Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model Plus MHP, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.03	0.03	0.02
AGE				
AGE44	-0.16 (0.01)	-0.09 (0.01)	-0.01 (0.01)	-0.03 (0.01)
AGE4564	-0.08 (0.01)	0.01 (0.01)	0.04 (0.01)	0.03 (0.01)
AGE6569	-0.07 (0.00)	-0.03 (0.00)	-0.03 (0.00)	-0.02 (0.00)
AGE7579	0.07 (0.00)	0.03 (0.00)	0.03 (0.00)	0.02 (0.00)
AGE8084	0.11 (0.00)	0.03 (0.00)	0.05 (0.01)	0.01 (0.00)
AGE85	0.12 (0.01)	0.02 (0.01)	0.04 (0.01)	-0.02 (0.01)
EDUCATION				
LESS8GRD	0.05 (0.01)	0.02 (0.01)	0.01 (0.01)	-0.03 (0.01)
SOMEHIGH	0.07 (0.00)	0.03 (0.00)	0.04 (0.00)	-0.00 (0.00)
SOMECOLL	-0.08 (0.00)	-0.03 (0.00)	-0.03 (0.00)	0.01 (0.00)
COLLGRAD	-0.16 (0.01)	-0.08 (0.01)	-0.09 (0.01)	-0.01 (0.01)
COLLMORE	-0.20 (0.01)	-0.11 (0.01)	-0.11 (0.01)	-0.01 (0.01)
GHP				
EXCEL	0.09 (0.01)	-0.01 (0.01)	0.05 (0.01)	-0.08 (0.01)
VERYGOOD	0.02 (0.00)	0.00 (0.00)	0.01 (0.00)	-0.04 (0.00)
FAIR	-0.01 (0.00)	0.01 (0.00)	0.00 (0.00)	0.04 (0.00)
POOR	-0.02 (0.01)	0.01 (0.01)	0.02 (0.01)	0.07 (0.01)
MHP				
MHEXCEL	0.08 (0.00)	0.10 (0.00)	0.09 (0.00)	0.09 (0.00)
MHGOOD	-0.03 (0.00)	-0.03 (0.00)	-0.03 (0.00)	-0.04 (0.00)
MHFAIR	-0.05 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.06 (0.01)
MHPOOR	-0.08 (0.01)	-0.08 (0.01)	-0.07 (0.01)	-0.09 (0.01)
PROXIES				
PROXY	-0.06 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.03 (0.00)
ANSPROXY	-0.04 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.04 (0.01)

Table A3d_d: 2003 Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model Plus MHP, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.03	0.03	0.03
AGE				
AGE44	-0.11 (0.01)	-0.10 (0.01)	-0.03 (0.01)	-0.04 (0.01)
AGE4564	-0.09 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.02 (0.01)
AGE6569	-0.08 (0.00)	-0.03 (0.00)	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.07 (0.00)	0.02 (0.00)	0.03 (0.00)	0.02 (0.00)
AGE8084	0.11 (0.00)	0.03 (0.00)	0.05 (0.01)	0.01 (0.00)
AGE85	0.14 (0.01)	0.02 (0.01)	0.06 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.07 (0.01)	-0.00 (0.01)	0.01 (0.01)	-0.03 (0.01)
SOMEHIGH	0.08 (0.00)	0.02 (0.00)	0.03 (0.00)	-0.01 (0.00)
SOMECOLL	-0.08 (0.00)	-0.04 (0.00)	-0.04 (0.00)	0.01 (0.00)
COLLGRAD	-0.14 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.01 (0.01)
COLLMORE	-0.17 (0.01)	-0.10 (0.01)	-0.11 (0.01)	0.00 (0.01)
GHP				
EXCEL	0.08 (0.01)	-0.06 (0.01)	0.00 (0.01)	-0.11 (0.01)
VERYGOOD	0.03 (0.00)	-0.01 (0.00)	0.00 (0.00)	-0.04 (0.00)
FAIR	0.01 (0.00)	0.02 (0.00)	0.01 (0.00)	0.05 (0.00)
POOR	0.00 (0.01)	0.02 (0.01)	0.04 (0.01)	0.08 (0.01)
MHP				
MHEXCEL	0.08 (0.00)	0.12 (0.00)	0.11 (0.00)	0.09 (0.00)
MHGOOD	-0.02 (0.00)	-0.06 (0.00)	-0.05 (0.00)	-0.05 (0.00)
MHFAIR	-0.03 (0.01)	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)
MHPOOR	-0.03 (0.01)	-0.11 (0.01)	-0.09 (0.01)	-0.10 (0.01)
PROXIES				
PROXY	-0.08 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.03 (0.00)
ANSPROXY	-0.04 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.05 (0.01)

Table A4d: 2003 Case-Mix Coefficients, Base Model Plus MHP, Plus Life Satisfaction, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

GLOBAL RATINGS				
	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.08	0.07	0.04	0.04
AGE				
AGE44	-1.17 (0.06)	-0.55 (0.05)	0.11 (0.05)	-0.23 (0.06)
AGE4564	-0.78 (0.03)	-0.07 (0.02)	0.17 (0.02)	0.11 (0.03)
AGE6569	-0.44 (0.02)	-0.11 (0.01)	-0.10 (0.01)	-0.10 (0.02)
AGE7579	0.34 (0.02)	0.09 (0.02)	0.11 (0.02)	0.09 (0.02)
AGE8084	0.52 (0.02)	0.12 (0.02)	0.17 (0.02)	0.11 (0.02)
AGE85	0.61 (0.02)	0.14 (0.02)	0.19 (0.02)	0.04 (0.03)
EDUCATION				
LESS8GRD	0.08 (0.02)	0.00 (0.02)	0.09 (0.02)	-0.01 (0.03)
SOMEHIGH	0.16 (0.02)	0.08 (0.02)	0.13 (0.02)	0.08 (0.02)
SOMECOLL	-0.25 (0.02)	-0.17 (0.01)	-0.12 (0.01)	-0.12 (0.02)
COLLGRAD	-0.39 (0.02)	-0.30 (0.02)	-0.25 (0.02)	-0.24 (0.02)
COLLMORE	-0.51 (0.02)	-0.35 (0.02)	-0.28 (0.02)	-0.27 (0.02)
GHP				
EXCEL	0.06 (0.03)	0.16 (0.03)	0.02 (0.02)	0.03 (0.04)
VERYGOOD	0.05 (0.02)	0.07 (0.01)	0.01 (0.01)	0.01 (0.02)
FAIR	0.03 (0.02)	-0.02 (0.01)	0.05 (0.01)	0.01 (0.02)
POOR	-0.04 (0.03)	-0.07 (0.02)	0.10 (0.02)	-0.01 (0.03)
MHP				
MHEXCEL	0.13 (0.02)	0.18 (0.01)	0.19 (0.01)	0.20 (0.02)
MHGOOD	-0.09 (0.02)	-0.16 (0.01)	-0.13 (0.01)	-0.17 (0.02)
MHFAIR	-0.18 (0.03)	-0.25 (0.02)	-0.22 (0.02)	-0.27 (0.03)
MHPOOR	-0.27 (0.04)	-0.39 (0.04)	-0.25 (0.04)	-0.44 (0.05)
LIFESAT				
LSEXCEL	0.38 (0.02)	0.42 (0.02)	0.38 (0.02)	0.36 (0.03)
LSVERYGD	0.19 (0.02)	0.22 (0.01)	0.17 (0.01)	0.17 (0.02)
LSFAIR	-0.15 (0.02)	-0.20 (0.02)	-0.10 (0.02)	-0.13 (0.02)
LSPOOR	-0.23 (0.04)	-0.39 (0.03)	-0.19 (0.03)	-0.28 (0.04)
PROXIES				
PROXY	-0.30 (0.02)	-0.10 (0.02)	-0.08 (0.02)	-0.03 (0.02)
ANSPROXY	-0.03 (0.03)	-0.04 (0.03)	-0.08 (0.03)	-0.04 (0.03)

COMPOSITE REPORT OUTCOMES

GETTING NEEDED CARE

	Q9 Problem seeing a specialist	Q21 Problem getting necessary care	Q4 Problem finding a doctor/nurse	Q22 Problem with delays in health care
R-SQUARE	0.04	0.04	0.04	0.08
AGE				
AGE44	-0.24 (0.02)	-0.18 (0.01)	-0.15 (0.02)	-0.33 (0.04)
AGE4564	-0.06 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.10 (0.02)
AGE6569	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.02 (0.02)
AGE7579	0.01 (0.01)	0.00 (0.00)	0.01 (0.01)	0.05 (0.02)
AGE8084	-0.00 (0.01)	-0.00 (0.00)	0.02 (0.01)	0.05 (0.02)
AGE85	0.00 (0.01)	0.01 (0.01)	0.03 (0.01)	0.06 (0.02)
EDUCATION				
LESS8GRD	-0.03 (0.01)	-0.04 (0.01)	0.01 (0.01)	-0.06 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.00)	0.01 (0.01)	-0.01 (0.02)
SOMECOLL	-0.02 (0.01)	-0.02 (0.00)	-0.05 (0.00)	-0.06 (0.02)
COLLGRAD	-0.03 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.07 (0.02)
COLLMORE	-0.05 (0.01)	-0.03 (0.00)	-0.08 (0.01)	-0.09 (0.02)
GHP				
EXCEL	0.01 (0.01)	0.01 (0.01)	0.02 (0.01)	0.01 (0.03)
VERYGOOD	0.02 (0.01)	0.01 (0.00)	0.02 (0.00)	-0.00 (0.02)
FAIR	-0.01 (0.01)	-0.01 (0.00)	-0.02 (0.00)	0.01 (0.02)
POOR	-0.07 (0.01)	-0.06 (0.01)	-0.04 (0.01)	-0.03 (0.02)
MHP				
MHEXCEL	0.01 (0.01)	0.01 (0.00)	0.00 (0.00)	0.00 (0.02)
MHGOOD	-0.02 (0.01)	-0.01 (0.00)	-0.02 (0.00)	-0.00 (0.02)
MHFAIR	-0.06 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.03 (0.02)
MHPOOR	-0.08 (0.01)	-0.10 (0.01)	-0.08 (0.01)	-0.15 (0.03)
LIFESAT				
LSEXCEL	0.04 (0.01)	0.03 (0.01)	0.07 (0.01)	0.07 (0.02)
LSVERYGD	0.03 (0.01)	0.03 (0.00)	0.04 (0.00)	0.05 (0.02)
LSFAIR	-0.04 (0.01)	-0.03 (0.00)	-0.04 (0.01)	-0.03 (0.02)
LSPOOR	-0.11 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.12 (0.03)
PROXIES				
PROXY	0.02 (0.01)	0.02 (0.00)	0.00 (0.01)	-0.04 (0.02)
ANSPROXY	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	0.01 (0.03)

GETTING CARE QUICKLY

	Q14 Getting help during regular hrs.	Q18 Getting immediate care	Q16 Getting regular health care appt.	Q23 Waiting 15 minutes past appt.
R-SQUARE	0.05	0.05	0.04	0.05
AGE				
AGE44	-0.21 (0.02)	-0.19 (0.03)	-0.22 (0.02)	-0.15 (0.03)
AGE4564	-0.02 (0.01)	-0.04 (0.01)	-0.02 (0.01)	-0.01 (0.02)
AGE6569	0.00 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.00 (0.01)
AGE7579	0.02 (0.01)	0.03 (0.01)	0.02 (0.01)	-0.01 (0.01)
AGE8084	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	-0.04 (0.01)
AGE85	0.04 (0.01)	0.03 (0.01)	0.05 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.01 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.05 (0.01)
SOMEHIGH	0.02 (0.01)	0.02 (0.01)	0.03 (0.01)	-0.01 (0.01)
SOMECOLL	-0.04 (0.01)	-0.03 (0.01)	-0.05 (0.01)	-0.01 (0.01)
COLLGRAD	-0.08 (0.01)	-0.03 (0.01)	-0.11 (0.01)	-0.06 (0.01)
COLLMORE	-0.10 (0.01)	-0.05 (0.01)	-0.13 (0.01)	-0.07 (0.01)
GHP				
EXCEL	0.05 (0.01)	-0.01 (0.02)	0.07 (0.01)	0.16 (0.02)
VERYGOOD	0.02 (0.01)	0.01 (0.01)	0.03 (0.01)	0.07 (0.01)
FAIR	-0.01 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.03 (0.01)
POOR	-0.04 (0.01)	-0.03 (0.01)	-0.02 (0.01)	-0.04 (0.02)
MHP				
MHEXCEL	0.03 (0.01)	0.06 (0.01)	0.06 (0.01)	0.04 (0.01)
MHGOOD	-0.05 (0.01)	-0.04 (0.01)	-0.04 (0.01)	-0.06 (0.01)
MHFAIR	-0.08 (0.01)	-0.07 (0.01)	-0.08 (0.01)	-0.06 (0.01)
MHPOOR	-0.11 (0.02)	-0.10 (0.02)	-0.07 (0.02)	-0.03 (0.02)
LIFESAT				
LSEXCEL	0.12 (0.01)	0.12 (0.01)	0.14 (0.01)	0.15 (0.01)
LSVERYGD	0.07 (0.01)	0.07 (0.01)	0.07 (0.01)	0.08 (0.01)
LSFAIR	-0.06 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.06 (0.01)
LSPOOR	-0.11 (0.02)	-0.09 (0.02)	-0.07 (0.02)	-0.06 (0.02)
PROXIES				
PROXY	-0.02 (0.01)	0.01 (0.01)	0.00 (0.01)	-0.03 (0.01)
ANSPROXY	0.00 (0.01)	0.02 (0.02)	0.02 (0.01)	0.10 (0.02)

DOCTOR COMMUNICATION

	Q26 Provider listen to you	Q27 Provider explain things	Q28 Provider show respect	Q29 Provider spend enough time
R-SQUARE	0.04	0.05	0.04	0.05
AGE				
AGE44	-0.11 (0.02)	-0.04 (0.02)	-0.12 (0.02)	-0.09 (0.02)
AGE4564	-0.02 (0.01)	0.06 (0.01)	-0.00 (0.01)	0.03 (0.01)
AGE6569	-0.02 (0.01)	0.00 (0.01)	-0.02 (0.01)	-0.01 (0.01)
AGE7579	0.01 (0.01)	-0.00 (0.01)	0.01 (0.01)	0.01 (0.01)
AGE8084	0.02 (0.01)	-0.01 (0.01)	0.03 (0.01)	0.01 (0.01)
AGE85	0.04 (0.01)	-0.00 (0.01)	0.04 (0.01)	0.03 (0.01)
EDUCATION				
LESS8GRD	0.04 (0.01)	0.02 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMEHIGH	0.05 (0.01)	0.03 (0.01)	0.03 (0.01)	0.05 (0.01)
SOMECOLL	-0.05 (0.01)	-0.02 (0.01)	-0.05 (0.01)	-0.06 (0.01)
COLLGRAD	-0.08 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.11 (0.01)
COLLMORE	-0.12 (0.01)	-0.05 (0.01)	-0.08 (0.01)	-0.13 (0.01)
GHP				
EXCEL	0.06 (0.01)	0.07 (0.01)	0.05 (0.01)	0.11 (0.01)
VERYGOOD	0.01 (0.01)	0.04 (0.01)	0.02 (0.01)	0.05 (0.01)
FAIR	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.02 (0.01)
POOR	-0.03 (0.01)	-0.05 (0.01)	-0.02 (0.01)	-0.03 (0.01)
MHP				
MHEXCEL	0.06 (0.01)	0.07 (0.01)	0.06 (0.01)	0.08 (0.01)
MHGOOD	-0.04 (0.01)	-0.05 (0.01)	-0.04 (0.01)	-0.05 (0.01)
MHFAIR	-0.05 (0.01)	-0.08 (0.01)	-0.06 (0.01)	-0.06 (0.01)
MHPOOR	-0.06 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.08 (0.02)
LIFESAT				
LSEXCEL	0.14 (0.01)	0.13 (0.01)	0.12 (0.01)	0.18 (0.01)
LSVERYGD	0.07 (0.01)	0.07 (0.01)	0.07 (0.01)	0.08 (0.01)
LSFAIR	-0.06 (0.01)	-0.06 (0.01)	-0.08 (0.01)	-0.09 (0.01)
LSPOOR	-0.11 (0.01)	-0.13 (0.01)	-0.13 (0.01)	-0.14 (0.01)
PROXIES				
PROXY	-0.01 (0.01)	-0.05 (0.01)	-0.01 (0.01)	0.01 (0.01)
ANSPROXY	-0.02 (0.01)	-0.03 (0.01)	0.01 (0.01)	-0.00 (0.01)

OFFICE STAFF

	Q24	Q25
	Office staff courteous	Office staff helpful

R-SQUARE 0.03 0.04

AGE

AGE44	-0.17 (0.01)	-0.18 (0.02)
AGE4564	-0.04 (0.01)	-0.03 (0.01)
AGE6569	-0.02 (0.00)	-0.02 (0.01)
AGE7579	0.01 (0.00)	0.02 (0.01)
AGE8084	0.02 (0.00)	0.04 (0.01)
AGE85	0.04 (0.01)	0.05 (0.01)

EDUCATION

LESS8GRD	-0.02 (0.01)	0.00 (0.01)
SOMEHIGH	0.01 (0.00)	0.02 (0.01)
SOMECOLL	-0.03 (0.00)	-0.05 (0.01)
COLLGRAD	-0.04 (0.01)	-0.10 (0.01)
COLLMORE	-0.06 (0.01)	-0.13 (0.01)

GHP

EXCEL	-0.00 (0.01)	0.05 (0.01)
VERYGOOD	0.00 (0.00)	0.01 (0.01)
FAIR	-0.00 (0.00)	-0.01 (0.01)
POOR	-0.00 (0.01)	-0.02 (0.01)

MHP

MHEXCEL	0.02 (0.00)	0.05 (0.01)
MHGOOD	-0.03 (0.00)	-0.04 (0.01)
MHFAIR	-0.05 (0.01)	-0.06 (0.01)
MHPOOR	-0.06 (0.01)	-0.08 (0.01)

LIFESAT

LSEXCEL	0.07 (0.01)	0.12 (0.01)
LSVERYGD	0.03 (0.00)	0.06 (0.01)
LSFAIR	-0.04 (0.01)	-0.05 (0.01)
LSPOOR	-0.08 (0.01)	-0.09 (0.01)

PROXIES

PROXY	0.00 (0.01)	-0.01 (0.01)
ANSPROXY	-0.01 (0.01)	-0.03 (0.01)

CUSTOMER SERVICE, INFORMATION AND PAPERWORK

	Q45 Getting help from customer service	Q43 Finding/ understanding written info	Q41 Problem with Medicare paperwork
R-SQUARE	0.06	0.05	0.08
AGE			
AGE44	-0.06 (0.06)	-0.11 (0.05)	-0.03 (0.05)
AGE4564	-0.05 (0.03)	-0.05 (0.02)	0.00 (0.03)
AGE6569	-0.06 (0.02)	-0.02 (0.02)	0.01 (0.02)
AGE7579	0.02 (0.03)	0.02 (0.02)	0.07 (0.02)
AGE8084	0.04 (0.03)	0.03 (0.02)	0.08 (0.03)
AGE85	0.08 (0.04)	0.08 (0.03)	0.10 (0.03)
EDUCATION			
LESS8GRD	-0.05 (0.04)	-0.11 (0.03)	-0.04 (0.03)
SOMEHIGH	0.03 (0.03)	-0.01 (0.02)	-0.00 (0.03)
SOMECOLL	-0.04 (0.02)	-0.03 (0.02)	-0.08 (0.02)
COLLGRAD	-0.07 (0.03)	-0.03 (0.02)	-0.09 (0.03)
COLLMORE	-0.14 (0.03)	-0.08 (0.02)	-0.17 (0.02)
GHP			
EXCEL	0.02 (0.04)	0.05 (0.03)	0.01 (0.04)
VERYGOOD	0.03 (0.03)	0.01 (0.02)	0.05 (0.02)
FAIR	-0.02 (0.02)	-0.02 (0.02)	0.02 (0.02)
POOR	-0.08 (0.03)	-0.08 (0.03)	-0.03 (0.03)
MHP			
MHEXCEL	-0.03 (0.02)	0.01 (0.02)	-0.03 (0.02)
MHGOOD	0.03 (0.02)	-0.03 (0.02)	-0.02 (0.02)
MHFAIR	-0.03 (0.03)	-0.12 (0.02)	-0.10 (0.03)
MHPOOR	0.05 (0.05)	-0.14 (0.04)	-0.20 (0.04)
LIFESAT			
LSEXCEL	0.07 (0.03)	0.12 (0.02)	0.06 (0.03)
LSVERYGD	0.06 (0.02)	0.07 (0.02)	0.03 (0.02)
LSFAIR	-0.06 (0.03)	-0.02 (0.02)	-0.06 (0.02)
LSPOOR	-0.19 (0.04)	-0.05 (0.03)	-0.10 (0.04)
PROXIES			
PROXY	-0.01 (0.03)	-0.06 (0.02)	-0.14 (0.02)
ANSPROXY	-0.04 (0.04)	0.05 (0.03)	0.03 (0.03)

SINGLE REPORT OUTCOMES

	Q32 Getting special equipment	Q34 Getting home health care	Q36 Getting special therapy
R-SQUARE	0.06	0.13	0.08
AGE			
AGE44	-0.31 (0.03)	-0.36 (0.06)	-0.34 (0.04)
AGE4564	-0.16 (0.01)	-0.20 (0.03)	-0.17 (0.02)
AGE6569	-0.04 (0.01)	0.04 (0.03)	-0.01 (0.01)
AGE7579	0.02 (0.01)	0.05 (0.03)	0.03 (0.01)
AGE8084	0.04 (0.01)	0.05 (0.03)	0.04 (0.01)
AGE85	0.05 (0.01)	0.04 (0.03)	0.08 (0.02)
EDUCATION			
LESS8GRD	-0.03 (0.01)	-0.04 (0.03)	-0.04 (0.02)
SOMEHIGH	-0.01 (0.01)	-0.01 (0.02)	0.00 (0.01)
SOMECOLL	-0.04 (0.01)	-0.06 (0.02)	-0.06 (0.01)
COLLGRAD	-0.05 (0.02)	-0.03 (0.03)	-0.03 (0.02)
COLLMORE	-0.06 (0.01)	-0.17 (0.03)	-0.09 (0.01)
GHP			
EXCEL	0.01 (0.03)	-0.15 (0.07)	0.01 (0.03)
VERYGOOD	-0.00 (0.02)	-0.05 (0.03)	0.03 (0.01)
FAIR	-0.01 (0.01)	-0.03 (0.02)	-0.02 (0.01)
POOR	-0.04 (0.01)	-0.12 (0.03)	-0.03 (0.02)
MHP			
MHEXCEL	-0.00 (0.01)	0.03 (0.03)	-0.00 (0.01)
MHGOOD	-0.02 (0.01)	-0.04 (0.02)	-0.00 (0.01)
MHFAIR	-0.03 (0.01)	-0.10 (0.02)	-0.06 (0.01)
MHPOOR	-0.05 (0.02)	-0.15 (0.03)	-0.07 (0.02)
LIFESAT			
LSEXCEL	0.02 (0.02)	0.03 (0.04)	0.03 (0.02)
LSVERYGD	0.02 (0.01)	0.03 (0.02)	0.01 (0.01)
LSFAIR	-0.03 (0.01)	-0.06 (0.02)	-0.04 (0.01)
LSPOOR	-0.08 (0.02)	-0.16 (0.03)	-0.15 (0.02)
PROXIES			
PROXY	-0.01 (0.01)	-0.05 (0.02)	0.00 (0.01)
ANSPROXY	0.02 (0.01)	0.05 (0.02)	0.01 (0.02)

SINGLE REPORT OUTCOMES

	Q38 Getting prescription medicines	Q39 How often get prescription medicine
R-SQUARE	0.08	0.08
AGE		
AGE44	-0.47 (0.02)	-0.47 (0.01)
AGE4564	-0.20 (0.01)	-0.18 (0.01)
AGE6569	-0.04 (0.00)	-0.02 (0.00)
AGE7579	0.03 (0.00)	0.02 (0.00)
AGE8084	0.04 (0.01)	0.03 (0.01)
AGE85	0.06 (0.01)	0.06 (0.01)
EDUCATION		
LESS8GRD	-0.05 (0.01)	-0.08 (0.01)
SOMEHIGH	-0.02 (0.00)	-0.04 (0.00)
SOMECOLL	-0.03 (0.00)	-0.02 (0.00)
COLLGRAD	-0.03 (0.01)	-0.00 (0.01)
COLLMORE	-0.06 (0.01)	-0.02 (0.01)
GHP		
EXCEL	0.03 (0.01)	0.02 (0.01)
VERYGOOD	0.02 (0.00)	0.01 (0.00)
FAIR	-0.03 (0.00)	-0.02 (0.00)
POOR	-0.10 (0.01)	-0.07 (0.01)
MHP		
MHEXCEL	0.01 (0.00)	0.01 (0.00)
MHGOOD	-0.02 (0.00)	-0.02 (0.00)
MHFAIR	-0.06 (0.01)	-0.07 (0.01)
MHPOOR	-0.08 (0.01)	-0.10 (0.01)
LIFESAT		
LSEXCEL	0.05 (0.01)	0.04 (0.01)
LSVERYGD	0.03 (0.00)	0.03 (0.00)
LSFAIR	-0.05 (0.01)	-0.06 (0.01)
LSPOOR	-0.08 (0.01)	-0.10 (0.01)
PROXIES		
PROXY	-0.00 (0.01)	0.00 (0.01)
ANSPROXY	0.04 (0.01)	0.06 (0.01)

Table A4c_d: 2002 Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model Plus MHP, Plus Life Satisfaction, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.07	0.03	0.03	0.02
AGE				
AGE44	-0.16 (0.01)	-0.09 (0.01)	-0.01 (0.01)	-0.03 (0.01)
AGE4564	-0.08 (0.01)	0.01 (0.01)	0.04 (0.01)	0.03 (0.01)
AGE6569	-0.07 (0.00)	-0.03 (0.00)	-0.03 (0.00)	-0.02 (0.00)
AGE7579	0.07 (0.00)	0.03 (0.00)	0.03 (0.00)	0.02 (0.00)
AGE8084	0.11 (0.00)	0.03 (0.00)	0.05 (0.01)	0.01 (0.00)
AGE85	0.13 (0.01)	0.02 (0.01)	0.04 (0.01)	-0.02 (0.01)
EDUCATION				
LESS8GRD	0.05 (0.01)	0.02 (0.01)	0.01 (0.01)	-0.03 (0.01)
SOMEHIGH	0.07 (0.00)	0.04 (0.00)	0.04 (0.00)	-0.00 (0.00)
SOMECOLL	-0.08 (0.00)	-0.03 (0.00)	-0.03 (0.00)	0.01 (0.00)
COLLGRAD	-0.16 (0.01)	-0.09 (0.01)	-0.09 (0.01)	-0.01 (0.01)
COLLMORE	-0.21 (0.01)	-0.11 (0.01)	-0.12 (0.01)	-0.01 (0.01)
GHP				
EXCEL	0.02 (0.01)	-0.06 (0.01)	-0.02 (0.01)	-0.11 (0.01)
VERYGOOD	-0.00 (0.00)	-0.01 (0.00)	-0.00 (0.00)	-0.05 (0.00)
FAIR	-0.00 (0.00)	0.01 (0.00)	0.01 (0.01)	0.04 (0.00)
POOR	-0.01 (0.01)	0.02 (0.01)	0.04 (0.01)	0.07 (0.01)
MHP				
MHEXCEL	0.07 (0.00)	0.09 (0.00)	0.08 (0.00)	0.08 (0.00)
MHGOOD	-0.03 (0.00)	-0.03 (0.00)	-0.02 (0.00)	-0.04 (0.00)
MHFAIR	-0.04 (0.01)	-0.06 (0.01)	-0.04 (0.01)	-0.06 (0.01)
MHPOOR	-0.07 (0.01)	-0.07 (0.01)	-0.06 (0.01)	-0.09 (0.01)
LIFESAT				
LSEXCEL	0.13 (0.01)	0.10 (0.01)	0.11 (0.01)	0.05 (0.01)
LSVERYGD	0.03 (0.00)	0.03 (0.00)	0.03 (0.00)	0.01 (0.00)
LSFAIR	-0.00 (0.01)	-0.00 (0.01)	-0.01 (0.01)	0.01 (0.00)
LSPOOR	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)
PROXIES				
PROXY	-0.07 (0.01)	-0.01 (0.01)	0.01 (0.01)	0.03 (0.00)
ANSPROXY	-0.04 (0.01)	-0.06 (0.01)	-0.06 (0.01)	-0.04 (0.01)

Table A4d_d: 2003 Case-Mix Coefficients for Global Ratings (Dichotomized 10 vs. 0-9), Base Model Plus MHP, Plus Life Satisfaction, No Dual Eligibles, No Regional Interactions, Geo Unit Reporting Entities

	Q46 Medicare	Q30 Health Care	Q7 Personal Dr	Q11 Specialist
R-SQUARE	0.08	0.04	0.04	0.03
AGE				
AGE44	-0.11 (0.01)	-0.09 (0.01)	-0.02 (0.01)	-0.04 (0.01)
AGE4564	-0.09 (0.01)	0.00 (0.01)	0.03 (0.01)	0.03 (0.01)
AGE6569	-0.08 (0.00)	-0.04 (0.00)	-0.04 (0.00)	-0.03 (0.00)
AGE7579	0.07 (0.00)	0.02 (0.00)	0.03 (0.00)	0.02 (0.00)
AGE8084	0.11 (0.00)	0.03 (0.00)	0.05 (0.01)	0.01 (0.00)
AGE85	0.14 (0.01)	0.02 (0.01)	0.06 (0.01)	-0.03 (0.01)
EDUCATION				
LESS8GRD	0.07 (0.01)	-0.00 (0.01)	0.01 (0.01)	-0.03 (0.01)
SOMEHIGH	0.08 (0.00)	0.02 (0.00)	0.03 (0.00)	-0.01 (0.00)
SOMECOLL	-0.08 (0.00)	-0.04 (0.00)	-0.04 (0.00)	0.01 (0.00)
COLLGRAD	-0.14 (0.01)	-0.09 (0.01)	-0.10 (0.01)	-0.01 (0.01)
COLLMORE	-0.18 (0.01)	-0.10 (0.01)	-0.12 (0.01)	-0.00 (0.01)
GHP				
EXCEL	0.04 (0.01)	-0.10 (0.01)	-0.04 (0.01)	-0.14 (0.01)
VERYGOOD	0.01 (0.00)	-0.03 (0.00)	-0.02 (0.00)	-0.06 (0.00)
FAIR	0.02 (0.00)	0.04 (0.00)	0.03 (0.00)	0.06 (0.00)
POOR	0.02 (0.01)	0.05 (0.01)	0.06 (0.01)	0.10 (0.01)
MHP				
MHEXCEL	0.07 (0.00)	0.10 (0.00)	0.09 (0.00)	0.08 (0.00)
MHGOOD	-0.02 (0.00)	-0.05 (0.00)	-0.03 (0.00)	-0.04 (0.00)
MHFAIR	-0.02 (0.01)	-0.05 (0.01)	-0.05 (0.01)	-0.05 (0.01)
MHPOOR	-0.02 (0.01)	-0.09 (0.01)	-0.07 (0.01)	-0.08 (0.01)
LIFESAT				
LSEXCEL	0.10 (0.01)	0.12 (0.01)	0.13 (0.01)	0.09 (0.01)
LSVERYGD	0.03 (0.00)	0.05 (0.00)	0.05 (0.00)	0.03 (0.00)
LSFAIR	-0.01 (0.01)	-0.02 (0.01)	-0.01 (0.01)	-0.01 (0.00)
LSPOOR	-0.00 (0.01)	-0.04 (0.01)	-0.03 (0.01)	-0.02 (0.01)
PROXIES				
PROXY	-0.07 (0.01)	-0.00 (0.01)	-0.01 (0.01)	0.03 (0.00)
ANSPROXY	-0.04 (0.01)	-0.06 (0.01)	-0.05 (0.01)	-0.05 (0.01)

APPENDIX B: CONSTRUCTION OF GEOGRAPHIC EQUIVALENCE WEIGHTS (GEWS)

In comparing MFFS and MMC, there was concern that underlying geographic factors not captured in a case-mix model might inappropriately influence MFFS-vs.-MMC comparisons. In order to ensure geographic equivalence of state-level comparisons, a team led by Alan Zaslavsky at Harvard and Marc Elliott at RAND created county-based "geographic equivalence weights" (GEW) in the 43 "states" (including the District of Columbia) where MMC exists.

The creation of GEW began with the creation of within-MFFS and within-MMC weights. Within MFFS, non-response weights were created by RTI to account for differential non-response within the MFFS sample, as described in the corresponding MFFS Task Report. These weights were not particularly variable, with an average within-state design effect of approximately 5%. Within MMC, MMC plans were weighted proportionately to their enrollments within each state. The application of these weights within MFFS and MMC resulted in somewhat reduced precision but less biased representation of the experiences of the underlying populations. An effective sample size (ESS), which downwardly adjusts from the nominal sample size to account for this loss of precision, was calculated for MFFS and MMC within each state.

County-level weights were then devised in order to be directly proportionate to the harmonic mean of the MFFS and MMC ESS's, $1/(1/f + 1/m)$, where f and m are the MFFS ESS and MMC ESS, respectively. Thus, each county would have representation proportional to the statistical "power" it could contribute to the state MFFS-vs.-MMC comparison. This is a compromise between matching to the MFFS distribution and matching to the MMC distribution which downweights counties that are sparse in either type of beneficiary.

2000 GEW

In four states (Maine, New Mexico, North Dakota, and West Virginia) application of these county-level weights resulted in insufficient statistical power³⁰ for comparison of MFFS and MMC, but similarly applied MFFS geo unit-level weights did provide sufficient statistical power. Geo unit-level GEWs were used in those cases. In a further four states (Delaware, Idaho, Nebraska, and New Hampshire), neither county-level nor geo unit-level GEWs allowed sufficient statistical power, so no such equivalence weights were constructed.

2001 GEW

The targeted addition of 10,000 surveys to specific geo units in the eight states that did not allow county-level matching in 2000, in combination with an increased MFFS response rate in 2001, improved the specificity of 2001 GEWs and the resultant power for MFFS vs. MMC comparisons. Rather than four states with geo-unit-level matching and four with state-level matching, five states fell into the first category (North Dakota, South Dakota, New Hampshire, Nebraska, and Mississippi), and none fell into the least-desirable third category. 2001 MFFS Subgroup Report findings (Bernard, Uhrig, et. al., 2002) that areas with

³⁰ According to a criterion of ESS of comparison ≥ 225 that was selected to provide precision that is equivalent to the typical precision of between-MMC plan comparison.

higher MMC penetration had lower ratings and reports suggest that in the absence of the GEWs, the performance of MMC might have been underestimated relative to MFFS.

2002 GEW

The 2002 MFFS design relocated approximately 2300 surveys from the five states within the best effective sample size for comparison to MMC (California, Florida, New York, Pennsylvania, and Ohio) to specific counties within geo units in the five states that did not permit county-level GEWs. The weighting approach changed somewhat in that the new plan comparison identifies plans (including MFFS) that are at or below the state mean. For this reason, the effective sample size of the weighted MFFS "plan" became more important than the effective sample size of the overall MFFS vs. MMC state-level comparison. This year we selected a threshold of 400 for the former, rather than a threshold of 225³¹ for the latter.

With this new criterion, nine states did not meet the threshold for county-level weighting: Iowa, Kansas, Kentucky, New Mexico, North Dakota, Rhode Island, South Dakota, Virginia, and West Virginia. This year we introduced a new first alternative when county-level matching was not possible: equal weighting within geo units. When this also did not achieve the threshold, geo-unit matching and state matching were tried in succession.

2003 GEW

The 2003 MFFS design benefits from advance notice of MMC closures, and permitted a county-level reallocation of 2175 surveys to better match the changing and in some cases very localized MMC presence within some states. The eight states that were identified as presenting potential obstacles to county-level matching were Iowa, Kansas, Kentucky, New Mexico, North Dakota, Rhode Island, Virginia, and West Virginia. Sample was transferred within geo units or from geo units with at least 330 completes in the five states with the best ESS for comparison to MMC (Ohio, Pennsylvania, New York, California, and Florida). This advanced notice resulted in by far the best precision to date, with all but two states meeting the threshold of 400 ESS for county-level weighting: Idaho and Kentucky.

2004 GEW

The 2004 MFFS design benefits from advance notice of MMC closures, and permitted a county-level reallocation of 735 surveys to better match the changing and in some cases very localized MMC presence within some states. It appears that Idaho and Kentucky are the two states that need more surveys in some counties. 105 surveys were reallocated within Idaho, and 620 surveys total were donated to Idaho and Kentucky from external sources: 300 from Puerto Rico and 320 from geo units with at least 330 completes in the five states with the best ESS for comparison to MMC (Ohio, Pennsylvania, New York, California, and Florida).

³¹ Equivalent to effective sample sizes of 450 for both MMC and MFFS.

APPENDIX C: NOTES ON CASE-MIX ADJUSTMENT OF THOSE UNDER AGE 65 (2000 DATA)

Note: This analysis has been summarized in a journal submission for 2004; if it is accepted for publication, this appendix will not appear in the Year 5 report.

DO THE EFFECTS OF SELF-REPORTED HEALTH DIFFER FOR BENEFICIARIES YOUNGER THAN 65?

Following up on a suggestion by 2001 MFFS TEP member Marsha Gold that the five-point measure of self-rated health (GHP) might behave differently for the disabled group under age 65 than for others, we investigated whether CMA should allow different slopes for GHP in this special group, using the four global ratings from the 2000 MFFS and MMC. These analyses were performed on the 2000 data that were used for MFFS vs. MMC comparison- the 43 states with managed care, excluding the dually eligible³².

For reference, 7.6% of this MFFS sample and 6.4% of this MMC sample is under 65 years of age. On average, those under 65 rate their health approximately one unit lower than those 65 or over on the five-level GHP item. The median and modal GHP category is "GOOD" for those 65 and older and "FAIR" for those under 65. Among those 65 and over, 87.6% of MFFS and 86.7% of MMC rate their health as "VERY GOOD," "GOOD," or "FAIR;" among those under 65, 94.7% of MFFS and 90.3% of MMC rate their health as "GOOD," "FAIR," or "POOR."

Although the pattern was stronger in MMC than FFS, both showed a consistent "sub-additivity" of poorer health and being under 65. In other words, being both younger than 65 and in poorer health does not result in ratings as negative as the sum of the two effects independently would suggest. This suggests that CMA that neglects this interaction may overcompensate plans or FFS entities with high proportions of these "double vulnerables." In other words, although those under 65 have markedly lower ratings and reports than the non-disabled, the slope of health status on ratings and reports within the under 65 is less steep than in those 65 and over.

The first set of models described in Table C1a adds interaction terms between self-rated health (GHP) dummies and an under 65 (AGE < 65) indicator. The highlighted coefficients reflect the difference between the GHP coefficients for those under 65 and the corresponding GHP coefficients for those 65 and over. The partial-F tests below assess the overall statistical significance of these sets of four terms for each outcome against the null hypothesis that GHP coefficients are the same for those over and under 65 years of age.

As can be seen in the first set of models, there is a trend for the interactions to increase from negative for 'AGE<65'xEXCELLENT to positive for 'AGE<65'xPOOR for each of the four global ratings for both MFFS and MMC. This trend opposes the general pattern of increasing ratings with higher GHP, and thus reflects a less steep slope for GHP among those under 65 than those over 65. When tested as 4df (dummy) interactions, these differences are significant for three of four MMC measures and one of four MFFS measures. Because the trends are nearly linear across levels of GHP, the dummy interactions are less efficient than a single degree of freedom interaction of linear GHP with and 'AGE<65' dummy. The t-test of this term, unlike the partial F test of the 4df parameterization, also considers the linear trend.

³² Dually eligibles are 8.5% of MFFS beneficiaries 65 and older, but 33% of MFFS beneficiaries under 65.

The second set of models uses the single degree of freedom (linear GHP x 'AGE<65') interaction described above. This parameterization is significant at $p=.05$ (rounding) for three of four global measures for both MFFS and MMC. The magnitudes are such that the GHP slope is only 1/3 to 2/3 as steep under 65 as over 65 among the three significant MMC measures and only 5/9 to $\frac{1}{4}$ as steep under 65 as over 65 among the three significant MFFS measures.

Table C2a projects the coefficients for the dummy GHP version of Table C1a into adjusted means, compared to a reference group of 70-74 year olds in "good" health, in order to illustrate the magnitude of these effects. Adjustments are relative to this group within both MFFS and MMC individually. Figure C1 plots the entries from Table C2a.

Analyses by Paul Cleary and Alan Zavlavsky at Harvard suggest that there is little variation in the proportion of beneficiaries under 65 from one Medicare Managed Care plan to another, and hence little effect of such an interaction on the relative case-mix adjustments to MMC plans. These proportions also do not vary much among MFFS geographical units. For these reasons, the impact on CMA scores of such an approach would likely be small. Table 8b of the current report formally analyzes the explanatory power of this parameterization within MFFS.

There are, however, other contexts in which CMA that considered age under 65 might have a substantial impact, including reporting on the dual eligibles. Currently dual eligibles are not included in MFFS vs. MMC comparisons. Among the many reasons, the comparison focuses on beneficiaries who have a choice between MMC and MFFS in their geographic area, and this does not apply to many dually eligible beneficiaries. If it were of interest, CMA-adjusted reports comparing dually eligible MFFS and MMC beneficiaries within CMA regions might be possible. Second, these findings, and those that follow, may be helpful in parameterizing and interpreting subgroup analyses.

AGE EFFECTS UNDER 65

It is well known that CAHPS scores increase strongly with respondent age across a wide range of ages, as established in commercial settings. While the most salient characteristic of Medicare beneficiaries under 65 may be the disability that resulted in early eligibility, this is also the age category with the greatest variation in age among MFFS beneficiaries. In other words, some of what has been interpreted as an effect of disability may actually be age-related response tendencies, as noted in the 2000 MFFS CMA report.

Although the survey instrument did not specify any subdivisions of age under 65, it is possible to construct subcategories using administrative DOB information. This information unfortunately does not always agree with survey responses; following the precedent that has been set, we gave the survey information priority in cases of disagreement. Here, we divide those under 65 on the survey into subcategories of 18-39, 40-54, and 55-64, imputing the last category for those few (2%) with DOBs indicating age over 64. By this definition 54% of beneficiaries under 65 are 55-64, 39% are 40-54, and 7% are 18-39.

As can be seen in Table C1b, those 18-39 have much less favorable ratings than those 55-64, with those 40-54 falling in between. Figure C2 plots the age trends, by comparing ratings to the mean age within each subcategory across the full age range. The "Rate Medicare" item appears to be linearly increasing in age, whereas the other three ratings appear to be linear in age except for a downward displacement at 65 years of age. As can be seen in Table C2b, the ratings of doctors and specialists by those 55-64 are very similar to the ratings of doctors and specialists by those 70-74, but not similar to the ratings of doctors and specialists by those 18-54. The

ratings of health care and Medicare by those 55-64 are less favorable than similar ratings by those 70-74, but they are still much more similar to the ratings of this older group than to the ratings of those 18-54.

This pattern could be attributed to 1) pure age-related response patterns, 2) greater disability in the youngest beneficiaries. The latter explanation is somewhat inconsistent with the higher levels of self-rated health in the youngest age groups. As can be seen in Table C2b, only 22% of beneficiaries 55-64 rate their health as good or better, versus 25% of those 44-54 and 43% of those 18-39. Given that self-rated health is generally stable across age ranges, this does not support the hypothesis of greater disability in the youngest group of beneficiaries. Additionally, the rate of proxy responses is essentially identical for the three under 65 age subgroups (26.5%, 26.6%, and 24.3% for 18-39, 40-54, and 55-64 respectively).

Finally, we can ask what happens when we consider age under 65 and the age<65 x GHP interaction simultaneously. The second model in Table C1b examines this information for MFFS (DOB information was not available on the joint file for MMC). By comparing these results to the first model in Table C1b, we can see that the interaction barely alters the pronounced age pattern under 65. By comparing these results to the second model in Table C1a, we can observe that the magnitude of the interaction is unchanged for the rating of the personal doctor, but is lessened for the other three ratings.

Finally, it should be noted that, as with age under 65 by health status interactions, the impact of age subcategories within the under 65 group on CMA is likely to be small. As detailed in Table 8b of this report, the small variation in the proportion of beneficiaries under 65 across units limits the impact of this variable on general CMA. On the other hand, this parameterization adds very little survey burden and may assist in interpreting CMA and subgroup analyses reports and may be useful in CMA of subgroups such as the under 65 population.

Table Cla: Differential Response of the Disabled Population (age < 65) on the GHP Item, CMA analysis, 2000, 43 States with MMC, Excluding Dual Eligibles

Variable	MMC								FFS							
	Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.		Para-P-value meter Est.	
	How would you rate your personal Doctor	How would you rate your specialist	Rate overall healthcare	Rate all experience with health plan	How would you rate your personal Doctor	How would you rate your specialist	Rate overall healthcare	Rate all experience with health plan								
	INTERACTION TERMS: AGE 64 BY GHP DUMMIES															
Age < 65	-0.12	0.0017 *	-0.21	0.0000 *	-0.27	0.0000 *	-0.48	0.0000 *	0.03	0.5404	-0.12	0.0999	-0.34	0.0000 *	-0.91	0.0000 *
Age 65-69	-0.09	0.0000 *	-0.08	0.0000 *	-0.08	0.0000 *	-0.17	0.0000 *	-0.11	0.0000 *	-0.06	0.0121 *	-0.12	0.0000 *	-0.30	0.0000 *
Age 75-79	0.11	0.0000 *	0.07	0.0001 *	0.07	0.0000 *	0.15	0.0000 *	0.05	0.0009 *	0.06	0.0095 *	0.06	0.0001 *	0.18	0.0000 *
Age > 79	0.17	0.0000 *	0.07	0.0001 *	0.11	0.0000 *	0.23	0.0000 *	0.10	0.0000 *	0.07	0.0058 *	0.09	0.0000 *	0.32	0.0000 *
GHP: excellent	0.45	0.0000 *	0.37	0.0000 *	0.53	0.0000 *	0.58	0.0000 *	0.51	0.0000 *	0.29	0.0000 *	0.51	0.0000 *	0.37	0.0000 *
GHP: very good	0.20	0.0000 *	0.18	0.0000 *	0.26	0.0000 *	0.30	0.0000 *	0.20	0.0000 *	0.15	0.0000 *	0.23	0.0000 *	0.15	0.0000 *
GHP: fair	-0.18	0.0000 *	-0.21	0.0000 *	-0.26	0.0000 *	-0.26	0.0000 *	-0.10	0.0000 *	-0.12	0.0000 *	-0.17	0.0000 *	-0.07	0.0001 *
GHP: poor	-0.34	0.0000 *	-0.46	0.0000 *	-0.61	0.0000 *	-0.66	0.0000 *	-0.15	0.0000 *	-0.25	0.0000 *	-0.35	0.0000 *	-0.20	0.0000 *
(Age<65)*excellent	-0.06	0.5895	-0.15	0.3605	-0.14	0.2368	-0.11	0.3767	-0.14	0.4722	-0.18	0.6450	-0.02	0.9228	-0.56	0.0128 *
(Age<65)*very good	0.02	0.7564	-0.17	0.0980	0.03	0.7185	-0.10	0.2325	-0.15	0.1805	-0.10	0.5765	0.04	0.7647	0.03	0.8195
(Age<65)*fair	0.06	0.1974	0.11	0.0680	0.08	0.0674	-0.03	0.5028	-0.01	0.8133	-0.08	0.3393	0.04	0.4678	-0.03	0.6720
(Age<65)*poor	0.22	0.0001 *	0.29	0.0000 *	0.18	0.0004 *	0.04	0.5272	0.07	0.2974	0.02	0.7993	0.14	0.0222 *	0.08	0.2501
Partial F test	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value	F-stat	P-value
	4.69	0.0009 *	7.68	0.0000 *	4.25	0.0019 *	0.99	0.4109	1.37	0.2407	0.68	0.6062	1.6	0.1723	2.57	0.0362 *
	INTERACTION TERMS: AGE 64 BY GHP LINEAR															
Age < 65	-0.32	0.0000 *	-0.62	0.0000 *	-0.46	0.0000 *	-0.60	0.0000 *	-0.16	0.1082	-0.28	0.0755	-0.50	0.0000 *	-1.11	0.0000 *
Age 65-69	-0.09	0.0000 *	-0.08	0.0000 *	-0.08	0.0000 *	-0.17	0.0000 *	-0.11	0.0000 *	-0.06	0.0121 *	-0.12	0.0000 *	-0.30	0.0000 *
Age 75-79	0.11	0.0000 *	0.07	0.0001 *	0.07	0.0000 *	0.15	0.0000 *	0.05	0.0009 *	0.06	0.0092 *	0.06	0.0001 *	0.18	0.0000 *
Age > 79	0.17	0.0000 *	0.07	0.0001 *	0.11	0.0000 *	0.23	0.0000 *	0.10	0.0000 *	0.07	0.0056 *	0.09	0.0000 *	0.32	0.0000 *
GHP: excellent	0.45	0.0000 *	0.38	0.0000 *	0.53	0.0000 *	0.58	0.0000 *	0.51	0.0000 *	0.29	0.0000 *	0.51	0.0000 *	0.36	0.0000 *
GHP: very good	0.20	0.0000 *	0.18	0.0000 *	0.26	0.0000 *	0.30	0.0000 *	0.19	0.0000 *	0.15	0.0000 *	0.23	0.0000 *	0.15	0.0000 *
GHP: fair	-0.18	0.0000 *	-0.21	0.0000 *	-0.26	0.0000 *	-0.27	0.0000 *	-0.10	0.0000 *	-0.13	0.0000 *	-0.17	0.0000 *	-0.07	0.0000 *
GHP: poor	-0.33	0.0000 *	-0.46	0.0000 *	-0.60	0.0000 *	-0.66	0.0000 *	-0.15	0.0000 *	-0.25	0.0000 *	-0.34	0.0000 *	-0.19	0.0000 *
(Age<65)*GHP	0.07	0.0002 *	0.13	0.0000 *	0.07	0.0001 *	0.03	0.1529	0.05	0.0469 *	0.03	0.4444	0.05	0.0287 *	0.05	0.0548

Table Clb: Differential Response of the Disabled Population (age < 65) on the Health Survey Item, CMA analysis with Additional Age Categories, Year 2000, 43 States with MMC, No Dual Eligibles

	FFS							
	Parameter Estimate	P-value	Parameter Estimate	P-value	Parameter Estimate	P-value	Parameter Estimate	P-value
	How would you rate your personal Doctor		How would you rate your specialist		Rate overall healthcare		Rate all experience with health plan	
ADDITIONAL AGE CATEGORIES: 18-39 AND 40-54								
Age 18-39	-0.35	0.0001 *	-0.56	0.0000 *	-0.72	0.0000 *	-0.84	0.0000 *
Age 40-54	-0.21	0.0000 *	-0.25	0.0000 *	-0.36	0.0000 *	-0.55	0.0000 *
Age < 65	0.10	0.0020 *	-0.02	0.6770	-0.08	0.0076 *	-0.62	0.0000 *
Age 65-69	-0.14	0.0000 *	-0.06	0.0115 *	-0.12	0.0000 *	-0.30	0.0000 *
Age 75-79	0.07	0.0000 *	0.06	0.0223 *	0.06	0.0001 *	0.18	0.0000 *
Age > 79	0.11	0.0000 *	0.06	0.0228 *	0.08	0.0000 *	0.31	0.0000 *
GHP: excellent	0.39	0.0000 *	0.27	0.0000 *	0.50	0.0000 *	0.36	0.0000 *
GHP: very good	0.17	0.0000 *	0.15	0.0000 *	0.23	0.0000 *	0.15	0.0000 *
GHP: fair	-0.08	0.0000 *	-0.13	0.0000 *	-0.17	0.0000 *	-0.07	0.0000 *
GHP: poor	-0.11	0.0000 *	-0.26	0.0000 *	-0.34	0.0000 *	-0.20	0.0000 *
ADDITIONAL AGE CATEGORIES: 18-39 AND 40-54; INTERACTION TERM: AGE 64 BY GHP (linear)								
Age 18-39	-0.33	0.0002 *	-0.55	0.0000 *	-0.71	0.0000 *	-0.84	0.0000 *
Age 40-54	-0.21	0.0000 *	-0.25	0.0000 *	-0.36	0.0000 *	-0.55	0.0000 *
Age < 65	-0.12	0.2643	-0.08	0.5964	-0.22	0.0393 *	-0.69	0.0000 *
Age 65-69	-0.14	0.0000 *	-0.06	0.0114 *	-0.12	0.0000 *	-0.30	0.0000 *
Age 75-79	0.07	0.0000 *	0.06	0.0221 *	0.06	0.0001 *	0.18	0.0000 *
Age > 79	0.11	0.0000 *	0.06	0.0223 *	0.08	0.0000 *	0.31	0.0000 *
GHP: excellent	0.39	0.0000 *	0.27	0.0000 *	0.50	0.0000 *	0.36	0.0000 *
GHP: very good	0.17	0.0000 *	0.15	0.0000 *	0.23	0.0000 *	0.15	0.0000 *
GHP: fair	-0.08	0.0000 *	-0.14	0.0000 *	-0.18	0.0000 *	-0.08	0.0000 *
GHP: poor	-0.13	0.0000 *	-0.26	0.0000 *	-0.35	0.0000 *	-0.20	0.0000 *
(Age<65)*GHP	0.05	0.0335 *	0.02	0.6659	0.03	0.1763	0.02	0.5626

Note: The models also contain two dummy variables for proxy status and five for education as well as intercepts for geographical unit.

Table C2a: 2000 Comparison of Global Ratings by those under 65 to those 70-74 and in Good Health

		MMC					FFS				
AGE	HEALTH STATUS	Percent in MMC Sample	How would you rate your personal Doctor	How would you rate your specialist	Rate overall healthcare	Rate all experience with health plan	Percent in FFS Sample	How would you rate your personal Doctor	How would you rate your Specialist	Rate overall healthcare	Rate all experience with health plan
				Excellent	2.76	0.26		0.01	0.12	0.00	1.16
Age < 65	Very Good	6.92	0.10	-0.21	0.02	-0.27	4.16	0.08	-0.07	-0.08	-0.73
	Good	23.41	-0.12	-0.21	-0.27	-0.48	20.27	0.03	-0.12	-0.34	-0.91
	Fair	43.18	-0.24	-0.31	-0.45	-0.77	42.01	-0.08	-0.33	-0.47	-1.00
	Poor	23.72	-0.25	-0.39	-0.69	-1.10	32.41	-0.05	-0.36	-0.54	-1.02
	Excellent	8.17	0.45	0.37	0.53	0.58	7.81	0.51	0.29	0.51	0.37
Age 70-74	Very Good	25.63	0.20	0.18	0.26	0.30	27.00	0.20	0.15	0.23	0.15
	Good	41.36	0.00	0.00	0.00	0.00	38.55	0.00	0.00	0.00	0.00
	Fair	20.99	-0.18	-0.21	-0.26	-0.26	21.71	-0.10	-0.12	-0.17	-0.07
	Poor	3.85	-0.34	-0.46	-0.61	-0.66	4.93	-0.15	-0.25	-0.35	-0.20

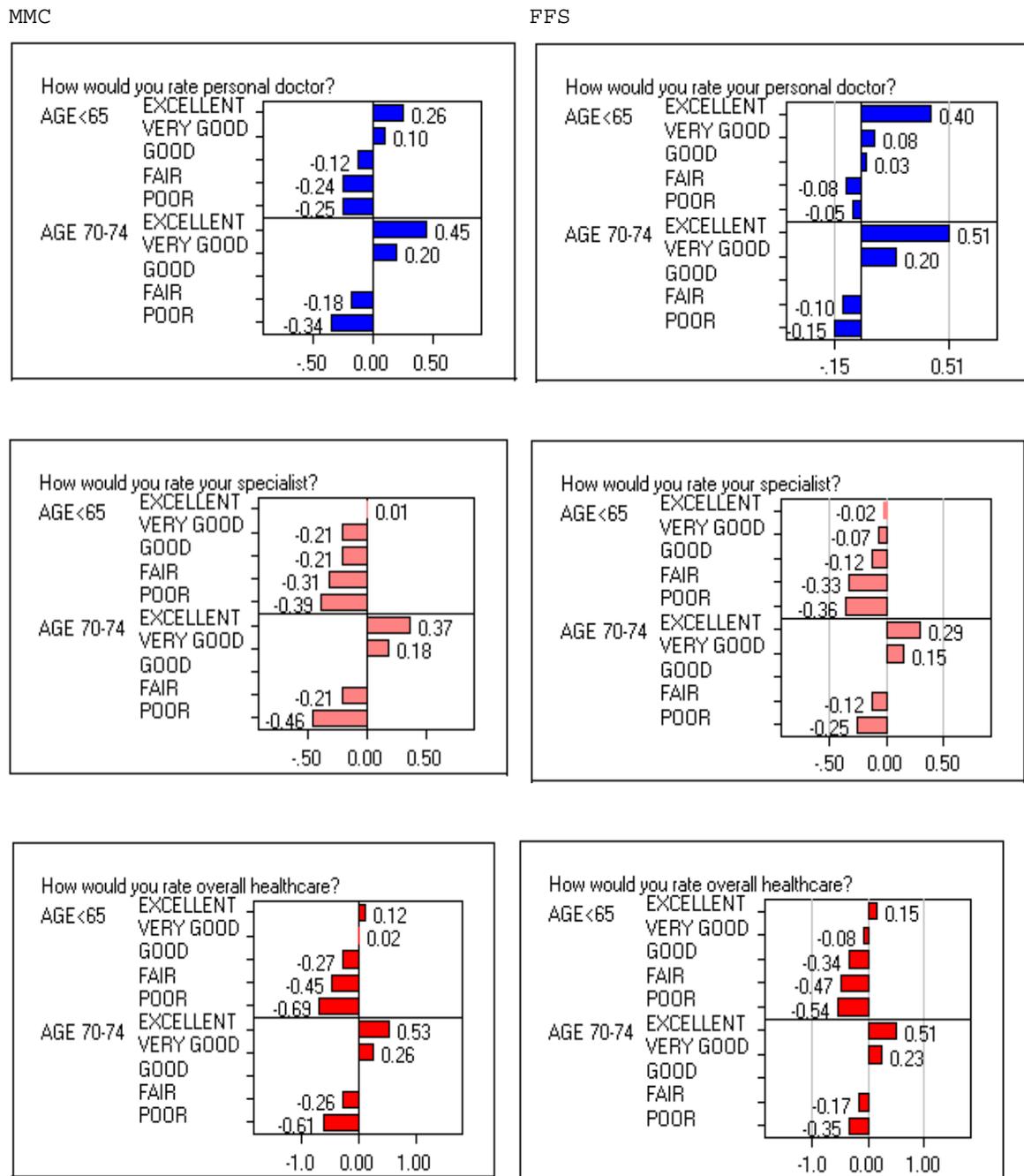
Note: This table is based on results presented in the upper portion of Table C1a with dummy coded GHP and 'age<65' interaction terms. Each cell in the table represents the sum of the coefficients of relevant age, health status, and their interaction dummy variables. The reference point is within survey type, MMC or FFS.

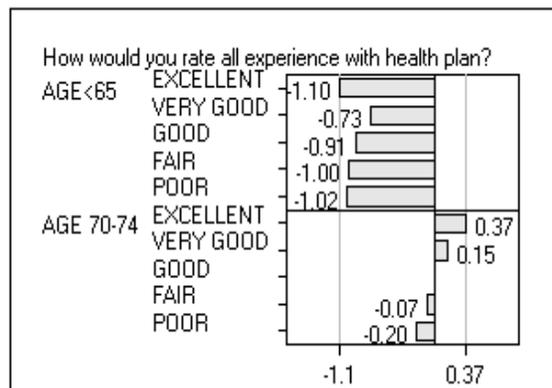
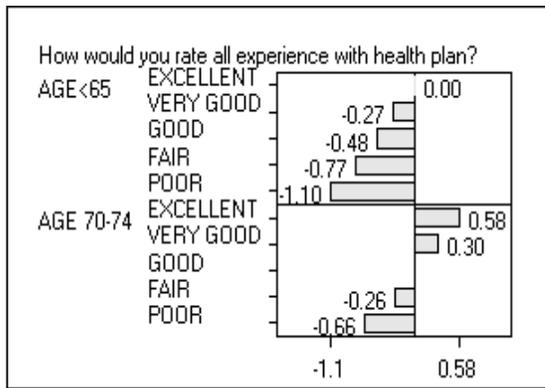
Table C2b. 2000 Comparison of Global Ratings by three age categories under age 65 to those 70-74 and in Good Health (model includes GHP by 'Age<65' interaction)

AGE	HEALTH STATUS	FFS				
		Percent in FFS Sample	How would you rate your personal Doctor	How would you rate your Specialist	Rate overall healthcare	Rate all experience with health plan
Age 18-39	Excellent	4.46	0.00	-0.35	-0.39	-1.15
	Very Good	9.15	-0.17	-0.46	-0.63	-1.34
	Good	29.34	-0.28	-0.59	-0.82	-1.47
	Fair	37.79	-0.31	-0.71	-0.97	-1.53
	Poor	19.25	-0.31	-0.82	-1.11	-1.64
Age 40-54	Excellent	0.80	0.12	-0.04	-0.04	-0.86
	Very Good	4.17	-0.05	-0.15	-0.28	-1.06
	Good	19.74	-0.17	-0.28	-0.47	-1.19
	Fair	41.89	-0.20	-0.40	-0.61	-1.24
	Poor	33.39	-0.19	-0.52	-0.76	-1.36
Age 55-64	Excellent	0.84	0.33	0.21	0.32	-0.31
	Very Good	3.22	0.16	0.09	0.08	-0.51
	Good	17.82	0.04	-0.04	-0.11	-0.64
	Fair	43.43	0.02	-0.15	-0.26	-0.70
	Poor	34.69	0.02	-0.27	-0.40	-0.81
Age70-74	Excellent	7.84	0.39	0.27	0.50	0.36
	Very Good	27.11	0.17	0.15	0.23	0.15
	Good	38.32	0.00	0.00	0.00	0.00
	Fair	21.68	-0.08	-0.14	-0.18	-0.08
	Poor	5.06	-0.13	-0.26	-0.35	-0.20

Note: This table is based on results presented in Table C1b labeled 'ADDITIONAL AGE CATEGORIES: 18-39 AND 40-54; INTERACTION TERM: AGE 64 BY GHP (linear)'. Each cell in the table represents the sum of the coefficients of relevant age and health status categories.

Figure C1: 2000 Comparison of Global Ratings by Those under 65 to Those 70-74 and in Good Health

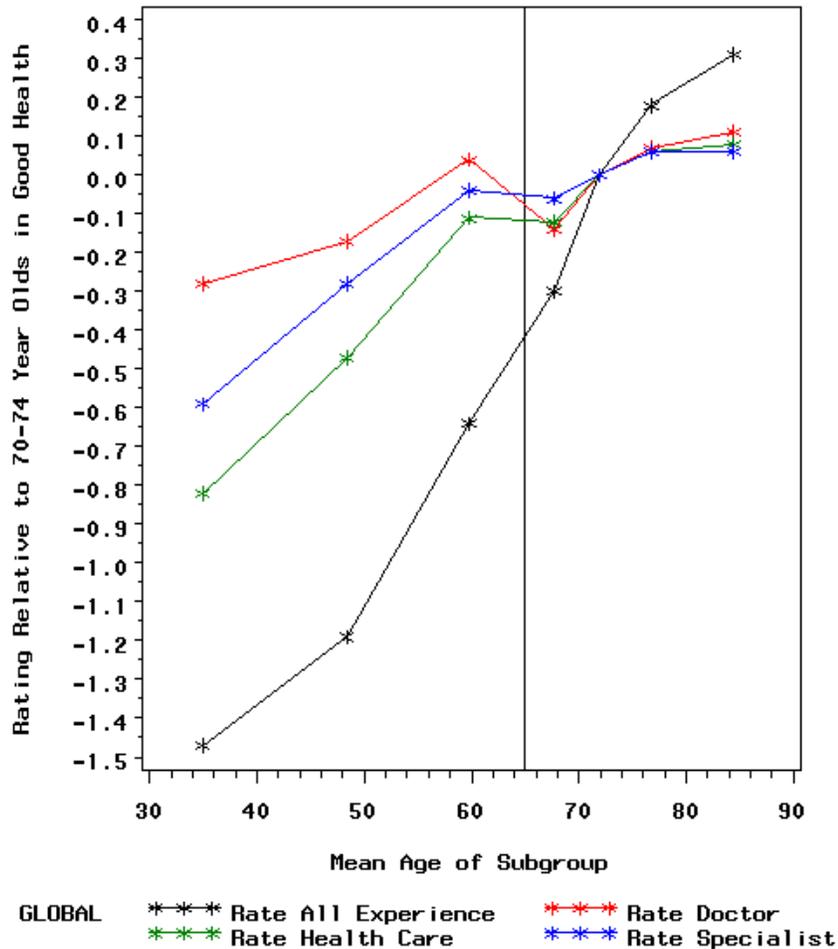




Note: Results based on Table C2a.

Figure C2: 2000 Illustration of Linear Pattern in Age among Beneficiaries under 65, 43 States with MMC, No Dual Eligibles

Comparison of Age Categories Relative to Age 70–74 and in Good Health



Note: This is a comparison of various age categories to age 70-74 and in Good Health. Here the 'good health' category of GHP is plotted. The regression model includes GHP by 'Age<65' interaction in addition to two dummy variables for proxy status and five for education as well as intercepts for geographical units. This figure is based on results presented in Tables C1b and Q2b.

APPENDIX D: EXPLORATORY ANALYSIS OF CURRENT LIFE SATISFACTION ITEM ON 2002 AND 2003 MFFS SURVEYS

PURPOSE

A new item asking respondents to rate their overall current life satisfaction (CLS) as being "poor," "fair," "good," "very good," or "excellent" was added to the 2002 MFFS survey but not the 2002 MMC survey. This item was designed to enhance the Case-Mix Adjustment (CMA) model, both for adjustment within MFFS and ultimately (if added to the MMC survey), MFFS vs. MMC CMA.

THE NON-EMPIRICAL CASE FOR CLS

One desirable property about this CLS item is that, on the face of it, it attempts to directly measure response bias/response tendencies, rather than measuring such tendencies indirectly through demographic variables and health status measures, which may measure a combination of both response tendencies and actual differences in care (see Elliott, Swartz et al. (2001) for an extended treatment of this argument). Because of this property, this CLS measure may be "cleaner" and more defensible than other adjusters of equal empirical power. It should also be noted that the current GHP item is the one current CMA adjuster with the undesirable property of substantially different slopes for MFFS and MMC, at least for global ratings, although this tendency may be diminishing over time. If CLS did not have this property (which could only be assessed after inclusion of CLS on the MMC survey), it might better allow us to separate the case-mix adjustment and subgroup analysis aspects of the GHP by MFFS/MMC interactions. In other words, it might make it clearer whether GHP as health status, controlling for response tendencies, truly interacts with the MFFS/MMC distinction.

THE NON-EMPIRICAL CASE AGAINST CLS

Some have argued that the nature of the CLS item might result in some criticism of CAHPS and CMS by interested third parties unfamiliar with case-mix adjustment of self-reported survey data. Case-mix adjustment of survey data resembles the more familiar case-mix adjustment of outcomes data in that it attempts to correct for differences in patient characteristics that contribute to outcomes in ways that beyond the control of the providers being compared. When medical outcomes are the outcomes in question, one usually adjusts for factors such as severity of illness that directly contribute to poorer outcomes. In the case of self-reported survey data, it is systematic response tendencies on the part of respondents that similarly contribute to poorer evaluations. While CMA for self-reported data is no less valid or useful than CMA for traditional medical outcomes, some feel that the use of items such as CLS, which more clearly measure response tendencies than do variables such as self-rated health or education, may fuel perception of CAHPS data as subjective and unreliable among those already skeptical of self-reported data.

EMPIRICAL ASSESSMENT OF CLS

The rest of this memo address the empirical properties of the CLS item in 2002 MFFS data. First, the item has a fairly symmetric, unimodal distribution without ceiling or floor effects: 12% excellent, 30% very good, 32% good, 20% fair, and 6% poor. It most strongly correlates with self-rated

general health (GHP), at $r=+0.77$, followed by a correlation of $r=+0.65$ with self-rated mental health (MHP). All other correlations with case-mix adjusters in the current model (education, age, proxy status) are below 0.3 in absolute value. For comparison the highest correlation among current CMA variables is $r=+0.66$ between GHP and MHP. It appears that most of the correlation of MHP, education, age, and proxy status with CLS is through their correlations with GHP, since the multiple correlation of all current case-mix adjusters with CLS is $r=+0.79$.

When CLS is added to current CMA models for the four global ratings, it takes on large and statistically significant positive coefficients in all cases (higher life satisfaction associated with better care). The coefficients of MHP, education, age, and proxy status are affected very little, but the effects of GHP are substantially attenuated, becoming essentially negligible. The "spacing" of dummy coefficients is very nearly linear (each unit of CLS has an equal effect of outcomes).

2003 UPDATE

Exploratory 2003 analyses looked for demographic or other characteristics strongly correlated with CLS in order to assess the potential for CLS to clarify subgroup patterns. No especially strong patterns of this time were found. This implies that the primary value of CLS would be as a case-mix adjuster. Empirically, it would probably be about the third most important CMA if implement.

APPENDIX E: SUPPLEMENTARY TABLES FROM EARLIER REPORTING YEARS

Table E1a: Comparison of Magnitude of CMA Coefficients, FFS vs. MMC (2000)

	Standard Deviation of AGE (5 levels)		Outcome per level of EDUCATION (6 levels)		Ordinal Adjustor General Health (5 levels)	
	FFS	MMC	FFS	MMC	FFS	MMC
GLOBAL (scale 0=worst - 10=best)						
How would you rate your personal Doctor	0.03	0.05 *	-0.05	-0.06	-0.08	-0.11 *
How would you rate your specialist	0.03	0.03	-0.04	-0.05	-0.08	-0.11 *
Rate overall healthcare	0.05	0.05	-0.05	-0.07 *	-0.13	-0.17 *
Rate all experience with health plan	0.13	0.08 *	-0.07	-0.08	-0.08	-0.16 *
GETTING NEEDED CARE (scale 1-4)						
Problem getting your choice of Doctor	0.07	0.06	-0.05	-0.06	-0.08	-0.11
Problem getting referral to specialist	0.04	0.04	-0.01	-0.03	-0.10	-0.08
Problem getting care needed	0.02	0.03	-0.01	-0.02	-0.10	-0.13 *
Problem waiting for plan approval	0.03	0.05 *	0.00	-0.04 *	-0.04	-0.14 *
CONSUMER SERVICE, INFORMATION, AND PAPERWORK (scale 1-4)						
Customer service, problem getting help	0.10	0.06	-0.09	-0.07	-0.04	-0.08
Problem understanding materials	0.07	0.06	-0.03	-0.02	-0.07	-0.10
Paperwork problems	0.05	0.08	-0.06	-0.09 *	-0.08	-0.08
GETTING CARE QUICKLY (scale 1-5)						
Got help/advice needed	0.02	0.03	-0.04	-0.03	-0.10	-0.12
For routine care, saw Doctor wanted	0.03	0.04	-0.04	-0.05	-0.08	-0.11 *
Got care as soon as wanted	0.04	0.04	-0.02	-0.02	-0.09	-0.11
^a How often waited more than 15 minutes	0.01	0.02	-0.02	-0.02	-0.13	-0.13
DOCTOR COMMUNICATION (scale 1-5)						
Doctor listened carefully	0.02	0.03	-0.05	-0.05	-0.12	-0.14 *
Doctor explained well	-0.01	0.00	-0.02	-0.02	-0.14	-0.16
Doctor showed respect to you	0.03	0.04	-0.03	-0.04	-0.13	-0.15
Doctor spent enough time with you	0.01	0.02	-0.04	-0.05	-0.14	-0.16 *

^a The scale for this variable has been reversed so that 1=Always and 4=Never (5=No visit)

|MMC Coefficient| > |FFS Coefficient|, p < 0.05
|FFS Coefficient| > |MMC Coefficient|, p < 0.05

Table E1b: Comparison of Magnitude of CMA Coefficients for the global ratings, FFS vs. MMC (2001)

	STANDARDIZED COEFFICIENTS							
	AGE		EDUCATION		GHP		MHP	
	(6 levels)		(6 levels)		(5 levels)		(5 levels)	
	FFS	MMC	FFS	MMC	FFS	MMC	FFS	MMC
GLOBAL (scale 0=worst - 10=best)								
How would you rate your personal Dr. now	0.02	0.04 *	-0.06	-0.07	-0.03	-0.07 *	-0.08	-0.08
How would you rate your spec. now	0.02	0.01	-0.05	-0.06	-0.05	-0.05	-0.11	-0.10
6 mo, rate overall healthcare	0.03	0.04	-0.07	-0.08	-0.09	-0.12 *	-0.12	-0.11
Rate all experience with health plan	0.11	0.08 *	-0.08	-0.09	-0.05	-0.12 *	-0.08	-0.08
GETTING NEEDED CARE (scale 1-4)								
Was it a prob getting your choice of Dr.	0.02	0.04 *	-0.03	-0.07 *	-0.07	-0.12 *	-0.04	-0.04
6 mo: prob getting referral to spec.	0.02	0.03	-0.01	-0.03 *	-0.07	-0.08	-0.06	-0.04
6 mo; prob getting care needed	0.01	0.03	-0.02	-0.03 *	-0.08	-0.10	-0.05	-0.07
6 mo; prob waiting for plan approval	0.03	0.05 *	0.00	-0.04 *	-0.03	-0.11 *	-0.04	-0.06
CONSUMER SERVICE, INFORMATION, AND PAPERWORK (scale 1-4)								
6 mo, customer serv, prob getting help	0.05	0.05	-0.06	-0.07	-0.03	-0.07	-0.05	-0.03
6 mo, prob understanding materials	0.05	0.04	-0.02	-0.01	-0.05	-0.07	-0.09	-0.07
6 mo, Paperwork probs	0.04	0.09 *	-0.04	-0.11 *	-0.07	-0.06	-0.05	-0.02
GETTING CARE QUICKLY (scale 1-5)								
6 mo; got help/advice needed	0.01	0.02	-0.04	-0.04	-0.08	-0.09	-0.08	-0.08
6 mo; for routine care, saw Dr wanted	0.02	0.03	-0.04	-0.04	-0.05	-0.08 *	-0.07	-0.08
6 mo; got care as soon as wanted	0.02	0.03	-0.03	-0.04	-0.06	-0.08	-0.08	-0.08
^a 6 mo; how often waited > 15 mins	0.01	0.02	-0.02	-0.02	-0.12	-0.12	-0.03	-0.03
DOCTOR COMMUNICATION (scale 1-5)								
6 mo, Dr. listened carefully	0.01	0.03	-0.06	-0.06	-0.08	-0.10	-0.09	-0.09
6 mo, Dr. explained well	-0.02	-0.01	-0.03	-0.03	-0.09	-0.11 *	-0.10	-0.11
6 mo, Dr. showed respect to you	0.02	0.03	-0.04	-0.05	-0.09	-0.11	-0.10	-0.09
6 mo, Dr. spent enough time with you	0.00	0.01	-0.06	-0.06	-0.10	-0.12	-0.08	-0.09
if mmc beta > ffs beta								
if ffs beta > mmc beta								

^a The scale for this variable has been reversed so that 1=Always and 4=Never (5=No visit)

Table E1c: Comparison of Magnitude of CMA Coefficients for the global ratings, FFS vs. MMC (2002)

	STANDARDIZED COEFFICIENTS							
	AGE		EDUCATION		GHP		MHP	
	(7 levels)		(6 levels)		(5 levels)		(5 levels)	
	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>	<u>FFS</u>	<u>MMC</u>
GLOBAL (scale 0=worst - 10=best)								
How would you rate your personal Dr. now	0.02	0.04 *	-0.05	-0.06	-0.04	-0.07 *	-0.09	-0.08
How would you rate your spec. now	0.02	0.03	-0.04	-0.05	-0.06	-0.05	-0.11	-0.11
6 mo, rate overall healthcare	0.04	0.04	-0.06	-0.07	-0.10	-0.12 *	-0.12	-0.11
Rate all experience with health plan	0.14	0.09 *	-0.07	-0.07	-0.06	-0.12 *	-0.09	-0.08
GETTING NEEDED CARE (scale 1-4)								
Was it a prob getting your choice of Dr.	0.02	0.04	-0.03	-0.06 *	-0.07	-0.12 *	-0.05	-0.03
6 mo: prob getting referral to spec.	0.03	0.04	-0.00	-0.03 *	-0.07	-0.09	-0.06	-0.06
6 mo; prob getting care needed	0.03	0.04	-0.00	-0.02	-0.07	-0.10	-0.06	-0.06
6 mo; prob waiting for plan approval	0.08	0.07	-0.04	-0.05	-0.07	-0.09	-0.07	-0.05
CONSUMER SERVICE, INFORMATION, AND PAPERWORK (scale 1-4)								
6 mo, customer serv, prob getting help	0.06	0.06	-0.05	-0.07	-0.06	-0.07	-0.04	-0.03
6 mo, prob understanding materials	0.07	0.06	-0.03	-0.04	-0.06	-0.09	-0.09	-0.07
6 mo, Paperwork probs	0.07	0.09	-0.07	-0.10	-0.06	-0.06	-0.04	-0.03
GETTING CARE QUICKLY (scale 1-5)								
6 mo; got help/advice needed	0.02	0.03	-0.03	-0.03	-0.09	-0.09	-0.08	-0.07
6 mo; for routine care, saw Dr wanted	0.03	0.04	-0.06	-0.05	-0.10	-0.10	-0.07	-0.07
6 mo; got care as soon as wanted	0.04	0.05	-0.02	-0.03	-0.08	-0.10	-0.06	-0.06
^b 6 mo; how often waited less than 15 mins	0.01	0.01	-0.03	-0.03	-0.11	-0.09	-0.02	-0.03
DOCTOR COMMUNICATION (scale 1-5)								
6 mo, Dr. listened carefully	0.03	0.03	-0.06	-0.05	-0.09	-0.11	-0.09	-0.09
6 mo, Dr. explained well	-0.01	-0.01	-0.03	-0.02	-0.10	-0.12	-0.11	-0.10
6 mo, Dr. showed respect to you	0.03	0.03	-0.04	-0.04	-0.09	-0.11	-0.10	-0.10
6 mo, Dr. spent enough time with you	0.01	0.01	-0.06	-0.05	-0.11	-0.12	-0.10	-0.09
if mmc beta > ffs beta								
if ffs beta > mmc beta								
^b the scale for this variable has not been reversed since the question was changed: 1=Never - 4=Always (5=no visit)								

Table E2a: Explanatory Power of Group 1 (Base Model) Case-Mix Adjusters, Geo Unit Reporting Entities, Years 2000 - 2001

Case-Mix Adjusters	Change in R-square		Var(Geo Unit) /Var(Error)		E.P.*1000	
	2000 ^{1,3}	2001 ²	2000 ^{1,3}	2001 ²	2000 ^{1,3}	2001 ²
Medicare						
AGE	0.0279	0.0265	0.0156	0.0138	0.4354	0.3650
GHP	0.0065	0.0098	0.0222	0.0251	0.1435	0.2457
EDUC	0.0098	0.0097	0.0575	0.0592	0.5624	0.5728
PROXY	0.0038	0.0041	0.0165	0.0094	0.0629	0.0385
ANSPROXY	0.0009	0.0005	0.0049	0.0038	0.0043	0.0018
Health Care						
AGE	0.0041	0.0017	0.0156	0.0138	0.0644	0.0231
GHP	0.0185	0.0247	0.0222	0.0251	0.4123	0.6190
EDUC	0.0046	0.0070	0.0575	0.0592	0.2626	0.4142
PROXY	0.0020	0.0012	0.0165	0.0094	0.0331	0.0112
ANSPROXY	0.0012	0.0005	0.0049	0.0038	0.0057	0.0017
Specialist						
AGE	0.0013	0.0005	0.0156	0.0138	0.0203	0.0074
GHP	0.0067	0.0137	0.0222	0.0251	0.1484	0.3434
EDUC	0.0025	0.0031	0.0575	0.0592	0.1438	0.1861
PROXY	0.0010	0.0003	0.0165	0.0094	0.0164	0.0024
ANSPROXY	0.0013	0.0004	0.0049	0.0038	0.0066	0.0014
Personal Doctor						
AGE	0.0020	0.0006	0.0156	0.0138	0.0313	0.0085
GHP	0.0047	0.0062	0.0222	0.0251	0.1035	0.1550
EDUC	0.0029	0.0050	0.0575	0.0592	0.1679	0.2957
PROXY	0.0007	0.0005	0.0165	0.0094	0.0115	0.0046
ANSPROXY	0.0014	0.0008	0.0049	0.0038	0.0069	0.0030

¹ Sample of 43 states common to MMC and MFFS; excluding dually eligible beneficiaries.

² Sample of 44 states common to MMC and MFFS; excluding dually eligible beneficiaries.

³ The corresponding Table 8 in the Year 1 MFFS CMA Report used the sample of 50 states excluding the Dual Eligible cases, and hence does not correspond exactly to Table 8a of the present report.

Table E2b: Explanatory Power of Group 2 (Prospective) Case-Mix Adjusters, Geo Unit Reporting Entities, Excluding Dually Eligible Beneficiaries, Years 2000 - 2001

Case-Mix Adjusters	Change in R-square		Var(Geo Unit) /Var(Error)		E.P.*1000	
	2000 ^{1,3}	2001 ²	2000 ^{1,3}	2001 ²	2000 ^{1,3}	2001 ²
Medicare						
MHP	0.0054	0.0050	0.0156	0.0182	0.0848	0.0908
RPCS12	0.0012	NA	0.0160	NA	0.0190	NA
RMCS12	0.0094	NA	0.0121	NA	0.1130	NA
UNDER AGE 65	NA	0.0047	NA	0.0069	NA	0.0326
AGE 64 * GHP	NA	0.0020	NA	0.0145	NA	0.0285
Health Care						
MHP	0.0153	0.0116	0.0156	0.0182	0.2389	0.2116
RPCS12	0.0017	NA	0.0160	NA	0.0272	NA
RMCS12	0.0216	NA	0.0121	NA	0.2600	NA
UNDER AGE 65	NA	0.0015	NA	0.0069	NA	0.0101
AGE 64 * GHP	NA	0.0001	NA	0.0145	NA	0.0015
Specialist						
MHP	0.0102	0.0115	0.0156	0.0182	0.1593	0.2100
RPCS12	0.0011	NA	0.0160	NA	0.0182	NA
RMCS12	0.0119	NA	0.0121	NA	0.1431	NA
UNDER AGE 65	NA	0.0005	NA	0.0069	NA	0.0034
AGE 64 * GHP	NA	0.0000	NA	0.0145	NA	0.0001
Personal Doctor						
MHP	0.0065	0.0058	0.0156	0.0182	0.1009	0.1065
RPCS12	0.0003	NA	0.0160	NA	0.0054	NA
RMCS12	0.0069	NA	0.0121	NA	0.0828	NA
UNDER AGE 65	NA	0.0001	NA	0.0069	NA	0.0007
AGE 64 * GHP	NA	0.0012	NA	0.0145	NA	0.0177

¹ Sample of 43 states common to MMC and MFFS.

² Sample of 44 states common to MMC and MFFS.

³ The corresponding Table 8 in the Year 1 MFFS CMA Report used the sample of 50 states excluding the Dual Eligible cases, and hence does not correspond exactly to Table 8a of the present report.

Note: 'UNDER AGE 65' is a linear coding of the following three age categories: 18 to 39, 40-54, and 55-64. 'AGE 64 * GHP' is the interaction of an indicator of age under 65 with a linear coding of GHP.

Table E3: Comparison of 2000- 2002 MFFS CMA Coefficients for the 2000-2001 Base Model (no MHP), 43/44 States Common with MMC, Excluding Dually Eligible Beneficiaries, Geo Unit Dummies

	Rate Doctor				Rate Specialist				Rate Medicare				Rate health Care			
Years:	2000 ¹	2001 ²	2002 ³		2000 ¹	2001 ²	2002 ³		2000 ¹	2001 ²	2002 ³		2000 ¹	2001 ²	2002 ³	
AGE																
AGE44			0.03				-0.35				-0.64				-1.48	
AGE64	-0.01	0.09		*	-0.15	-0.13			-0.27	-0.20		*	-0.90	-0.80		*
AGE4564			0.19				-0.02				-0.10				-0.76	
AGE6569	-0.14	-0.11	-0.07	*	-0.06	-0.12	-0.05		-0.12	-0.09	-0.07		-0.30	-0.27	-0.31	
AGE80	0.07	0.07	0.09		0.06	0.01	0.06		0.06	0.05	0.08		0.18	0.21	0.24	*
AGE7579	0.11				0.06				0.08				0.31			
AGE8084		0.09	0.15			-0.01	0.08			0.04	0.10			0.34	0.39	
AGE85		0.09	0.12			-0.04	0.02			0.04	0.11	*		0.38	0.43	
EDUCATION																
LESS8GRD	0.07	0.15	0.08	*	0.05	0.06	0.05		0.04	0.07	0.05		0.05	0.03	0.04	
SOMEHIGH	0.10	0.14	0.13		0.10	0.13	0.12		0.07	0.12	0.12		0.14	0.11	0.11	
SOMECOLL	-0.06	-0.12	-0.08	*	-0.10	-0.12	-0.08		-0.14	-0.18	-0.13	*	-0.25	-0.27	-0.24	
COLLGRAD	-0.21	-0.22	-0.17		-0.17	-0.17	-0.17		-0.25	-0.24	-0.21		-0.40	-0.41	-0.35	
COLLMORE	-0.20	-0.23	-0.22		-0.19	-0.23	-0.19		-0.27	-0.33	-0.30		-0.53	-0.53	-0.50	
GHP																
EXCEL	0.39	0.45	0.43		0.28	0.46	0.43	*	0.50	0.55	0.55		0.36	0.36	0.40	
VERYGOOD	0.17	0.19	0.18		0.15	0.22	0.19		0.23	0.28	0.25	*	0.15	0.19	0.19	
FAIR	-0.08	-0.09	-0.16	*	-0.13	-0.19	-0.24	*	-0.17	-0.20	-0.27	*	-0.07	-0.10	-0.21	*
POOR	-0.11	-0.10	-0.23	*	-0.26	-0.36	-0.42	*	-0.34	-0.38	-0.51	*	-0.19	-0.28	-0.53	*

PROXY																
PROXY	-0.16	-0.14	-0.09	*	-0.16	-0.07	-0.08		-0.20	-0.16	-0.13	*	-0.33	-0.33	-0.30	
ANSPROXY	-0.26	-0.26	-0.21		-0.30	-0.18	-0.10	*	-0.25	-0.19	-0.15		-0.20	-0.23	-0.13	

¹ Sample of 43 States

² Sample of 44 States

³ Sample of 43 States

- p-val <0.05

APPENDIX F: ISSUES REGARDING CASE-MIX ADJUSTMENT FOR HOME (2002 DATA)

Phone mode of administration has a compelling large empirical estimated effect. Its explanatory power may be equal to that of any case-mix adjustor currently employed. In addition, the tendency for more positive responses on the phone is consistent with the well-established finding that socially desirable response bias (such as rating health care or Medicare positively) is stronger in survey modes that involve more social interaction (face-to-face, telephone) than in more anonymous modes (computer assisted, written). Vince Ianaccione at RTI led the investigation of this pattern in the MFFS survey.

Rates of telephone completion are notably higher in MMC (17.2%) than in MFFS (15.3%); in eight states the phone rate is higher in MMC than in MFFS by 4% or more, including Mississippi (29.4% phone in MMC, 17.9% in MFFS). Only Hawaii (8.8% phone for MMC, 13.0% phone for MFFS) shows a strong reversal of this trend. This pattern suggests the possibility that MMC has benefited from socially desirable response bias in a systematic manner to a greater extent than MFFS, and that the comparisons might be more equitable with an adjustment for mode. Because the state-level variance in phone-completion rates is 2.1 times as high in MMC than in MFFS, the potential for high explanatory power for phone mode is perhaps even greater in MFFS-vs.-MMC CMA than the large effects already observed in within-MFFS CMA.

Unfortunately, there are several theoretical and empirical difficulties in implementing mode as a case-mix adjustor. First, the current approach assumes that the mode effects observed among MFFS late-responders hold equally for early responders. This assumption should probably be empirically verified through a mode experiment in MFFS that involves random assignment of some beneficiaries from the start of the process. Second, for pure mode effects to be estimated within MMC, a mode experiment involving random assignment would have to take place within the MMC survey. Furthermore, because this adjustment involves estimation of coefficients effects within randomly assigned subpopulations followed by projection of these coefficients to the larger population of all phone respondents (self-selected as well), this could not be implemented in the current CAHPS Macro without further modification. Likewise, the use of this approach in subgroup and other regressions could not be accomplished by the simple use of dummy variables in a single step. Finally, unless the mode experiments were sufficiently large, the mode coefficients could be subject to larger standard errors than other CMA coefficients.

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