

Final Report on Case Mix Adjustment 2000 CAHPS[®] Medicare Disenrollment Reasons Survey

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Executive Summary

One of the analytic tasks for the Medicare CAHPS[®] Disenrollment Survey was to develop recommendations regarding case mix adjustment as a strategy for reporting the reasons beneficiaries disenrolled from plans. To our knowledge, case mix adjustment has not previously been applied to adjust the reasons given by enrollees for voluntarily leaving managed care plans. However, other CAHPS[®] measures reported to the public on the Medicare.gov web site are case-mix adjusted to facilitate comparisons between beneficiaries' ratings and reports of care provided by Medicare+Choice organizations and care provided under Original Medicare.

Case mix adjustment is a tool that adjusts for sociodemographic differences in the populations, in this case, those served by various plans. It is used in reporting information about plan performance to accommodate the fact that some plans have beneficiary members that are more difficult or complex for plans to provide with care or services, and they may be penalized by that fact. Overrepresentation of various beneficiary characteristics such as advanced age or perceived poor health status, may negatively impact on a plan when compared to other plans. Thus, the general research question for this task was to determine whether case-mix adjustment of disenrollee reasons might be able to provide information that would fairly treat all plans, thus providing better support for decision-making by beneficiaries and potentially assisting plans in targeting plan quality improvement or plan design actions.

Disenrollment reasons reported to the public are based on the most important reason for leaving a plan. Reasons are grouped into two main composites: CARE & SERVICES and COSTS & BENEFITS. Since a respondent could only cite one most important reason, the dependent variable for the analysis was the probability that a beneficiary would cite a reason within the CARE & SERVICES grouping (or the COSTS & BENEFITS grouping).

Prior CAHPS[®] and disenrollment research assisted us in determining the independent variables or potential case mix variables. The variables we included in our analysis were Age, Perceived health status, Race, Education, Gender, Proxy¹ and Ansproxy²; we also included CMS Region; and cross-product terms between all other individual level variables and CMS Region. The cross-product terms (in this case) help us to account for differences that occur in the reporting of the most important reasons given the impact of their geographic location. For example, if a particular region has a population that is more predominantly Asian than the population in the other regions, the coefficient from the cross-product would account for those regional differences.

¹ The Proxy variable indicates whether someone assisted the beneficiary in completing the survey.

² The Ansproxy variable indicates that someone else answered the questions for the beneficiary.

The analysis file consisted of completed responses to the 2000 Medicare CAHPS® Disenrollment Reasons Survey. When any of the case mix potential adjusters were missing we attempted to acquire the information through the Medicare enrollment file. However in some cases, when the information was not available in either file, these cases were then treated as missing. Because we were interested in modeling the probability that a beneficiary would cite a reason within the CARE & SERVICES grouping as a function of the independent variables (age, race, gender, perceived health status, proxy, ansproxy, region, region interactions, and health plan), we selected the logit function as the statistical tool for the analysis. We used a series of nested models and the likelihood ratio test to compare models and select our final model.

The final case mix model included dummy variables for Age, Race, Perceived Health Status, Education, Gender, CMS Region and cross-products with CMS Region. This model was a significant improvement over one that adjusted only for Age and Perceived Health Status.

While the model was significant and its capacity for prediction was beyond that of pure chance, it was not particularly robust. Other variables that might be explored as potential case mix factors include marital status, income, perceived mental health status, dual-eligibility and functional status of the individual. While there is evidence of plan variables that influence other plan outcomes, there is no evidence relating them directly to reasons for disenrollment, and they may be inappropriate for case mix analysis.

Preliminary results of this analysis were shared with the Disenrollment Survey Technical Expert Panel (TEP). TEP members had some initial concerns about “washing away the differences” between plans with a case mix adjustment, when the goal was to present differences in plans. In addition, they expressed concern about the use of perceived health status as exogenous to the plan. They thought health status might reflect plan efforts, rather than serving as a characteristic of the individual, in the models. However, the literature on “perceived health status” generally supports its inclusion as a characteristic of the individual. At least one TEP member felt that it is only appropriate to consider case mix adjustment of disenrollment reasons if the disenrollment rates are also adjusted for case mix. The Disenrollment team will investigate this option as part of its case mix analysis tasks for the coming year.

In addition, while the results of the modeling were not robust, there was some evidence that case-mix adjustment would lead to some changes in the relative standings of plans with respect to beneficiaries’ reasons for leaving if reasons were reported as a percentage of *disenrollees*. However, since reasons for disenrollment are currently publicly reported as a percentage of *enrollees* (with a far larger denominator), the potential case mix effect is significantly diminished. Consequently, only a very few plans would experience a change in relative standing as a result of case mix adjustment using the final model. This finding supports CMS’ current decision not to use case mix adjustment when reporting disenrollment reasons to the public. However, further analysis and review may suggest that it would be appropriate to case mix adjust the reasons for public reporting. This decision will be reevaluated over time after additional data are collected and further analyses are conducted.