Assessing Medicare Health Plan Performance in Serving Beneficiary Subpopulations

Donald F. Cox, Ph.D., Kathryn M. Langwell, M.A., and Benjamin Eckert

In this analysis, the authors examined differences in managed care health plan performance ratings between selected subgroups of the Medicare population who may have exceptional health care needs (EHCNs) or may require special plan efforts to facilitate effective service use compared with the residual enrolled population. Findings indicated that disabled enrollees have lower plan ratings across all dimensions of performance than do other enrollees. Aged enrollees in self-reported fair/poor health and those with limited independence have lower ratings for most dimensions of performance. Finally, although Hispanic persons and persons other than white were more satisfied with their health plans, overall, they had lower ratings for dimensions of the process of care and access to services.

INTRODUCTION

The objective of this research was to identify differences in satisfaction and ratings of managed care health plan performance between selected subgroups of the Medicare population who may have EHCN or who may require special efforts by plans to facilitate effective use of services, and the residual enrolled population. In addition, this analysis attempted to identify the extent to which variations in plan ratings for these subgroups were associated with differences in plan and market area characteristics.

Although an increasing amount of attention is being directed to the measurement of health plan performance, this attention, for the most part, has not been focused on plan enrollment subpopulations. Past studies have suggested that the frail elderly and the chronically ill with special health needs may experience worse health outcomes in managed care settings. In addition, other subgroups, such as ethnic or racial minorities, might be prone to having more difficulties accessing health services because of cultural differences, language barriers, or other factors.

The analysis reported in this article focuses on four subgroups: (1) plan enrollees who may have EHCN; (2) enrollees of Hispanic or Latino origin; (3) enrollees other than white; and (4) enrollees with less than a ninth grade education. The primary data source for the analysis was the Medicare Managed Care (MMC) Consumer Assessment of Health Plans (CAHPS®), which provides a unique data set for examining the plan performance ratings of members of these subgroups. Because these subgroups are a relatively small share of the Medicare managed care population, most standard surveys are unable to provide sufficient observations to conduct meaningful analyses of these subgroups. With approximately 125,000 survey respondents, the 1997

The authors are with the Barents Group of KPMG Consulting, Inc. Research for this article was supported by the Health Care Financing Administration (HCFA) under Contract Number 500-95-0057-TO#9 with the Barents Group of KPMG Consulting, Inc. in affiliation with Harvard Medical School, the MEDSTAT Group, and Westat. The views expressed in this article are those of the authors and do not necessarily reflect the views of the Barents Group of KPMG Consulting, Inc., Harvard Medical School, the MEDSTAT Group, Westat, or HCFA.

MMC-CAHPS®, however, contains enough members of these subgroups to permit such an analysis.

Three types of plan performance ratings were examined, including overall satisfaction, ratings of process of care, and ratings of access to care. Overall satisfaction measures consisted of overall satisfaction with the plan, satisfaction with personal physician or nurse, satisfaction with specialists, and satisfaction with all providers. Process-of-care ratings covered such measures as office staff and physician respect, wait time, and whether the physician spent enough time with the enrollee. Access ratings included such measures as ease of getting referrals, difficulty in getting equipment, and difficulty in getting therapy.

The results of this study provide:

- Evidence on the performance of health plans in serving these population subgroups.
- Information for conducting focused additional studies that are designed to identify "best practices" for serving these subgroups and for the development of approaches for monitoring and improving plan performance.

EVIDENCE FROM THE LITERATURE

Most of the evidence on Medicare enrollee satisfaction with health maintenance organizations (HMOs) is broad-brushed in that it covers all HMO enrollees. In brief, this evidence indicates that for access to care, with the exception of access to home health services, the majority of HMO enrollees report the same level of satisfaction as fee-for-service (FFS) beneficiaries. In terms of perceived quality of care, HMO enrollees are generally satisfied with their plans but rate their plans slightly lower than their FFS counterparts.

Little information, however, is available on the satisfaction of members of various subgroups, especially those who may be expected to have exceptional needs for health care, such as the frail and the chronically ill. The limited number of existing studies suggests that chronically ill seniors are less satisfied with managed care plans. As discussed in the following section, there is not a consensus in the literature on a tractable definition of frailty. Because of this, there are currently no studies that have explicitly assessed the satisfaction of members of this subgroup.

Further, although it is reasonably well documented that minorities receive relatively lower quality care compared with white persons, there is little or no correlation between race/ethnicity and dissatisfaction with managed care. In fact, some studies have found that minorities are prone to report higher levels of plan satisfaction.

Satisfaction of the Chronically Ill and Frail

Chronic illnesses such as heart disease, cancer, and stroke are the predominant causes of disease, disability, and death in the United States. This has led to heightened concern about the quality of care received by this growing, elderly population. With its emphasis on prevention, quality, cost control, and utilization management, managed care provides many potential advantages and possible barriers to the care of this subgroup. Current research efforts, however, have not fully explored the satisfaction of chronically ill seniors with their health plans.

Managed care has the potential of benefitting those with chronic illness in a variety of ways, including: integrating fragmented care; working with other health providers to provide care in a patient's contextual setting;

and allocating resources as a function of patient needs (Sandy and Gibson, 1996). A study of 16,200 chronically ill seniors in managed care found that they were equally or more satisfied than their Medicare counterparts in FFS care (Meng et al., 1997). Possible explanations offered for the heightened satisfaction among chronically ill HMO enrollees include simplified administrative paperwork; lower deductibles that decrease the costs of seeing a physician, thereby prompting timely doctor visits; and good prescription drug coverage. Further, in a California-based HMO, Medicare beneficiaries with chronic diseases such as asthma, diabetes mellitus, hypercholesterolemia, or high blood pressure had similar levels of satisfaction as other HMO members without chronic disease (Wholey, Burns, and Lavizzo-Mourey, 1998).

In contrast, other studies of the satisfaction of chronically ill seniors have noted a negative association between those with chronic illness and their overall satisfaction with managed care. A survey of recent studies on managed care plan performance indicated that, in several instances, Medicare HMO enrollees with chronic conditions showed worse quality of care (Miller and Luft, 1997). This finding correlates with the Medical Outcomes Study, which compared the physical and mental health outcomes of chronically ill adults and found that elderly and poor chronically ill patients had worse physical health outcomes in HMOs relative to FFS systems (Ware et al., 1996). Also, a 1996 survey (Nelson et al., 1997) of managed care Medicare beneficiaries revealed that one in four beneficiaries would not recommend their plan to someone with a serious or chronic health problem. Findings suggest that HMOs need to address the needs of the elderly and more vulnerable Medicare beneficiaries more effectively. Finally, in a 1993 analysis of the Medicare Current Beneficiary Survey (MCBS), Medicare enrollees utilizing HMOs as their usual source of care appeared to have lower levels of satisfaction (Adler, 1995).

Of particular importance in this overview are the satisfaction and experiences in managed care of a special subgroup of chronically ill seniors referred to as the "frail elderly." It is important to note, however, that the literature review found no studies assessing the satisfaction experiences of this particular subgroup. In fact, researchers have not reached consensus on an acceptable definition for classifying this diverse subgroup, and as a result, satisfaction studies of the frail elderly are non-existent.

The relationship between health status and satisfaction and experiences with managed care is more clearly delineated in the research literature. Several studies have drawn correlations between better health and greater satisfaction with managed care. Analysis of a large HMO population in Rhode Island revealed that, among older patients in an HMO, the more satisfied had better physical and psychosocial health status. The study added that the most strongly related factors to satisfaction were those of self-rated overall health and level of emotional distress. The next-strongest relations were the levels of physical function and social activity. Finally, a survey funded by the Physician Payment Review Commission found that, in general, HMO beneficiaries with serious health problems were more likely than their FFS counterparts to report problems obtaining the inpatient hospital and nursing home care they thought they needed (Nelson et al., 1996).

Experiences of Other Selected Population Subgroups

As previously noted, although much literature has been developed under the rubric of consumer satisfaction with managed

care, there is comparably less information pertaining to satisfaction and experiences with managed care among certain subgroups within the general population. These include groups such as the frail elderly, racial minority populations, and individuals of Hispanic origin. Additionally, few studies have examined the relationship between health status, income, age, education, and geographic location (rural versus urban) and subgroups of experiences with managed care. In this section, we highlight current studies that have attempted to tease out the satisfaction and experiences of these less studied groups within managed care, as well as to document issues and challenges facing these subgroups that ultimately may lead to lower satisfaction and poorer health outcomes.

Satisfaction Differences by Race/Hispanic Origin

Disparities in health care access and health outcomes among racial minorities and populations of Hispanic origin when compared with white persons of similar socioeconomic status are well established in the literature. The most prevalent of these studies are the cross-comparisons made between black persons and white persons, examining both mortality and morbidity rates. For example, the Secretary's Task Force on Black and Minority Health documented differences in mortality rates for other racial and ethnic populations when compared with white persons. The report noted that "excess deaths" of those under 70 years were 42 percent of deaths among black persons, 14 percent for the Spanish-surnamed population of Texas, 2 percent among Cuban-born persons, 7 percent for those Mexican-born, and 25 percent for Native Americans (U.S. Department of Health and Human Services, 1993). (Excess deaths are defined as the difference between the actual number of deaths in a minority population and the number of deaths that would have occurred if the mortality experience of that group were the same as that of the white population.) The differences between mortality rates are consistent with disparities among minorities and white persons related to access to health care services. National data have also shown that black and Hispanic persons are disadvantaged when compared with white people on indicators of both access to medical care and the quality of care received (Blendon et al., 1989). Inequities between black and white people are also apparent in the utilization of services as documented in studies citing differences in use of coronary angiography, bypass surgery, hemodialysis, intensive care for pneumonia, and kidney transplants (Anderson, Giacehllo, and Aday, 1986).

Many factors may contribute to such racial and ethnic disparities. Some of the most commonly offered explanations include inequities in insurance coverage, differing abilities to pay out-of-pocket costs for services, and unfamiliarity with available resources, which inhibit early intervention and treatment (Smith, 1998).

Differences may also be reflected in the nature of physician-patient interactions during the discussion of treatment options (Horner, Odone, and Matchar, 1995). At the regional level, another observation has been the continuing pattern of segregation in the use of health services providers, which corresponds to patterns of residential segregation (Rosenbaum et al., 1997). Smith (1998) noted that a few studies reporting inequities alluded to racial discrimination by providers as a plausible explanation.

Despite the growing body of literature suggesting that minorities and those of Hispanic origin receive worse, or less, care

when compared with white persons, current research comparing satisfaction and experiences with managed care for these groups has generally found little or no correlation between race/ethnicity and dissatisfaction with managed care. In fact, some studies have even found that black persons and other minority groups are equally, if not more, satisfied with their HMOs than white persons. For example, an analysis of the 1993 MCBS found that satisfaction scores for Hispanic persons and black persons were uniformly high compared with white persons. Even more striking is the finding that black persons' satisfaction scores exceeded those of white persons by a small amount (Adler, 1995). A similar study found that HMOs have a greater effect for black persons and Hispanic persons than for white persons on the use of health care (Freiman, 1998).

There are some studies that suggest no satisfaction differences between minority populations and white persons. An analysis of 1994 MCBS data did not find any significant differences in levels of satisfaction by race (Ingber, Riley, and Tudor, 1998). Along similar lines, another study found that race was not a major influence on changes in source of community long-term care when other variables were held constant (Miller, McFall, and Campbell, 1994).

Analysis of disenrollment from managed care plans by minorities may help to achieve a greater understanding of the satisfaction levels of minorities within managed care. In one such study, disenrollment varied by race, with higher rates for black enrollees and other races than for white enrollees (Riley, Ingber, and Tudor, 1997).

A sample study of HCFA's Group Health Plan file indicated similar levels of health care access in HMOs. Black people with low incomes and those in fair or poor health were also more likely to report access problems under FFS Medicare as opposed to risk HMO Medicare. Black persons were no more likely than white persons to report problems obtaining specialty referrals, inpatient care, and home health care they thought they needed. This finding is noteworthy given the evidence that black persons are more likely to experience access problems in FFS Medicare versus HMOs (Nelson et al., 1996).

EVIDENCE FROM THE 1997 MMC-CAHPS®

Differences in the reported experiences of Medicare HMO enrollee subgroups and the general HMO enrollee population were examined using data from the 1997 MMC-CAHPS® survey. The main goal of the MMC-CAHPS® is to provide consumer reports for informed decisionmaking on the selection of a managed care plan. In addition, this survey provides information that can be used by HCFA to help monitor the quality of care received by Medicare HMO enrollees and provides information to health plans on their own performance, relative to the performance of other plans.

The two primary objectives of this analysis were:

- To determine whether there were differences in enrollee-reported plan ratings, both overall and for specific dimensions of HMO performance, between selected subgroups and the residual HMO enrollee population.
- To the extent possible, to identify variations among HMOs, by market and organizational characteristics that may be associated with differences in ratings reported by selected subgroups.

METHODOLOGY

Definitions of Subgroups

Two types of subgroup categories were identified for analysis. The first category consisted of enrollees who have health care needs that differ from those of the general enrollee population. These enrollees include those with chronic conditions, mobility limitations, or other attributes indicative of individuals with EHCN.

For this analysis, the following four definitions for the "exceptional health care needs" category subgroups were used:

- The Medicare disabled population under age 65.
- The Medicare aged population reporting self-assessed health status as "fair" or "poor."
- The Medicare aged population reporting "limited independence."
- The Medicare aged population reporting self-assessed health status as "fair" or "poor" and reporting "limited independence."

The second category of subgroups included those with cultural differences, language barriers, or limited formal education, which may be associated with difficulty understanding and negotiating managed systems. The following three additional subgroups were examined:

- Enrollees who completed eighth grade or less.
- Enrollees who were of Hispanic/Latino ethnicity.
- Enrollees other than white.

Data

The primary data source for this analysis was the 1997 MMC-CAHPS® survey, which included the responses of approximately 125,000 Medicare managed care enrollees that were enrolled in 199 Medicare plans in 1997. These data included information on overall plan ratings, ratings with the process of care, and access to care. In addition, the survey collected information on a limited set of demographic variables and measures of health status. These data were augmented with HCFA public use file information on the plans and the markets within which they operated.

Analytic Approach

The analysis was conducted in two stages. The first stage consisted of a series of descriptive statistical tabulations with tests for statistically significant differences in plan ratings between each selected subgroup and all other HMO enrollees. These tabulations were developed for all combinations of subgroup definitions and plan ratings examined.

The second stage involved estimating a series of multivariate regression models to control for the effects of confounding factors on any estimated cross-group differences in plan ratings. A number of factors, besides subgroup membership, could explain variation in observed ratings of plan satisfaction. These factors could include beneficiary attributes, subgroup membership, plan attributes, and the attributes of the market within which the plan operates and competes for business.

RESULTS

Descriptive Analysis

The CAHPS® questionnaire collects information on 15 measures of plan performance, covering satisfaction with overall plan performance, ratings on the process of care, and ratings of access to care. For interpretive ease, these tabulations are presented according to question metric rather than by topic area.

For all of the four EHCN subgroup definitions, these tabulations indicate that there are small but consistently lower plan ratings compared with general HMO enrollee population, in the mean reported plan rating (Table 1). Depending on the specific performance question, the mean ratings for the members of aged subgroups (i.e., the non-disabled), were generally about 2 to 6 percent lower than the mean ratings for the overall sample. One exception, however, was access to home health care, where subgroup member ratings were between 12.5 and 18.7 percent lower than those of the entire enrollee population.

The ratings for disabled enrollees were generally lower than those of the other three EHCN subgroups. This was especially true for measures of access, where disabled enrollees reported ratings that were between 10.8 percent (for ease of referral) to 26.7 percent (ease of getting therapy) lower than the general plan population.

For the other subgroups (Hispanic/Latino, other than white, and low education), examination of differences in reported plan ratings indicate that overall plan and provider ratings differ little for subgroup members from those of the rest of the enrollee population but are (with few exceptions) lower for measures of access and process (Table 2). Subgroup members are more likely to have problems getting tests, wait 30 minutes or more for an appointment, and spend more time and energy to get payment approval and equipment, therapeutic, and home health services. These differences are more pronounced for Hispanic/Latino people and persons other than white than for those enrollees with less than a ninth grade education.

Multivariate Analysis

To control for differences in other characteristics across the selected subgroups of the population examined in this study, multivariate regression analysis was conducted. These regressions also allowed us to examine other factors that may influence the reported plan ratings for these subgroups of the population. Table 3 presents the specific beneficiary characteristics, health plan characteristics, and market area characteristics included in the equations that were estimated. This model was then used to examine the 15 separate measures of plan performance.

Results of these 15 estimations are available from the authors. It should be noted that the most restrictive definition of the EHCN subgroup over age 65 (i.e., those enrollees both in fair or poor health and with limited independence) was used for the estimates reported in this table. This was done both out of concern about the high degree of correlation between this and the other definitions and because enrollees captured under this definition are hypothesized to be most prone to problems accessing health care.

Overall Satisfaction with Health Plan

Disabled Medicare HMO enrollees and those age 65 or over in fair or poor health with limited independence are significantly less satisfied with their health plans than are other HMO enrollees. There is no significant difference in overall satisfaction with health plan between Hispanic persons and persons other than white and all other HMO enrollees, when other characteristics of beneficiaries, health plans, and market areas are taken into account. In contrast, less educated enrollees are significantly more satisfied with their HMOs than are most educated enrollees (i.e., those with some post-high school education).

Results indicate that older enrollees have higher ratings of their health plan than do younger enrollees and that the longer beneficiaries have been enrolled in

Table 1

Estimated Mean Plan Ratings for Selected Questions, by Exceptional Health Care Needs Subgroup Definition

Survey Question	Disabled Under Age 65		Age 65 or Over in Fair or Poor Health		Age 65 or Over with Limited Independence		Age 65 or Over in Fair or Poor Health with Limited Independence		Overall Across Entire Sample
	Mean	Percent Difference[1]	Mean	Percent Difference[1]	Mean	Percent Difference[1]	Mean	Percent Difference[1]	Mean
Question Rating 0 (Worst) to 10 (Best)									
Overall Rating of Health Plan	8.1	*-7.6	8.5	*-4.2	8.4	*-4.2	8.3	*-5.8	8.7
Rating of Personal Doctor or Nurse	8.6	*-3.2	8.6	*-3.6	8.6	*-2.8	8.5	*-4.2	8.8
Rating of Specialist	8.4	*-3.6	8.5	*-4.1	8.5	*-3.3	8.4	*-4.3	8.7
Rating of All Doctors and Other Health Professionals	8.3	*-6.2	8.5	*-5.2	8.5	*-4.7	8.4	*-5.9	8.8
Question Rating 1 (Never) to 4 (Always)									
Wait More than 30 Minutes 1 (Always) to 4 (Never)	3.3	*-4.5	3.3	*-6.4	3.2	*-6.7	3.2	*-7.4	3.4
Rating of Office Staff Courtesy and Respect	3.7	*-2.7	3.8	*-1.6	3.8	*-1.4	3.8	*-1.8	3.8
Rating of Doctor Respect	3.5	*-4.8	3.6	*-4.1	3.5	*-4.0	3.5	*-5.0	3.7
Rating of Amount of Time Spent by Providers	3.4	*-3.7	3.4	*-5.6	3.4	*-5.0	3.3	*-6.3	3.5
Getting Tests or Treatment Without Time and Energy	3.4	*-7.0	3.5	*-5.7	3.5	*-5.1	3.4	*-5.7	3.6
Getting Approval for Payments Without Time and Energy	3.0	*-3.7	3.0	*-3.6	3.1	*-1.9	3.1	*-2.1	3.1
Getting Information from Customer Service Without Time and Energy	3.1	*-7.0	3.2	*-3.4	3.2	*-5.6	3.2	*-5.7	3.3
Question Rating 1 (Yes) and 0 (No)	Percent Yes		Percent Yes		Percent Yes		Percent Yes		Percent Yes
Ease of Getting Referral	0.81	*-10.8	0.87	*-5.3	0.85	*-6.5	0.84	*-7.4	0.90
Getting Equipment Without Time and Energy	0.65	*-21.0	0.81	-0.002	0.81	0.009	0.81	-0.007	0.81
Getting Therapy Without Time and Energy	0.62	*-26.7	0.81	*-5.0	0.82	*-4.0	0.80	*-6.3	0.83
Getting Home Health Care Without Time and Energy	0.56	*-21.4	0.67	*-12.5	0.66	*-18.2	0.63	*-18.7	0.71

* Significantly different from non-subgroup values at the 0.05 level.

[1] Percent difference is between mean rating/percent for those not in subgroup and those in subgroup.

SOURCE: Data from the Medicare Managed Care Consumer Assessment of Health Plans®, Health Care Financing Administration; data analysis by the authors.

Table 2

Estimated Mean Plan Ratings for Selected Questions, by Hispanic/Latino Origin, Race, and Education-Level Subgroups

Survey Question	Subgroup Hispanic/Latino		Other than White		Eighth Grade Education		Overall Across Entire Sample
	Mean	Percent Difference[1]	Mean	Percent Difference[1]	Mean	Percent Difference[1]	Mean
Question Rating 0 (Worst) to 10 (Best)							
Overall Rating of Health Plan	8.8	0.70	8.7	-0.20	8.9	1.60	*8.7
Rating of Personal Doctor or Nurse	8.8	0.20	9.0	1.70	*8.9	1.50	*8.8
Rating of Specialist	8.6	-1.30	*8.6	-1.50	*8.7	-1.10	8.7
Rating of All Doctors and Other Health Professionals	8.8	-0.70	8.8	-0.20	8.8	0.20	8.8
Question Rating 1 (Never) to 4 (Always)							
Wait More than 30 Minutes 1 (Always) to 4 (Never)	3.2	-6.90	*3.3	-3.30	*3.3	-3.80	*3.4
Rating of Office Staff Courtesy and Respect	3.8	-1.10	*3.8	-1.60	*3.8	-0.60	*3.8
Rating of Doctor Respect	3.7	0.10	3.7	-0.50	3.7	0.50	3.7
Rating of Amount of Time Spent by Providers	3.5	-1.30	3.5	-0.50	3.5	0.80	3.5
Getting Tests or Treatment Without Time and Energy	3.5	-4.70	*3.5	-4.40	*3.5	-2.90	*3.6
Getting Approval for Payments Without Time and Energy	2.8	-9.90	*2.7	-15.40	*2.8	-10.10	*3.1
Getting Information from Customer Service Without Time and Energy	3.2	-3.00	*3.2	-3.80	*3.4	0.80	3.3
Question Rating 1 (Yes) and 0 (No)	Percent Yes		Percent Yes		Percent Yes		Percent Yes
Ease of Getting Referral	0.87	-3.90	*0.87	-4.00	*0.88	-2.10	*0.90
Getting Equipment Without Time and Energy	0.76	-7.00	*0.75	-8.90	*0.77	-5.30	0.81
Getting Therapy Without Time and Energy	0.72	-15.3	*0.76	-11.50	*0.82	-2.30	0.83
Getting Home Health Care Without Time and Energy	0.69	-3.40	0.61	-18.00	*0.68	-5.70	0.71

* Significantly different from non-subgroup values at the 0.05 level.

[1] Percent difference between mean rating/percent "yes" for those not in subgroup and those in subgroup.

SOURCE: Data from the Medicare Managed Care Consumer Assessment of Health Plans®, Health Care Financing Administration; data analysis by the authors.

Table 3

Definitions of Regression Analysis Explanatory Variables

Variable Name	Definition
Plan Attributes	
Plan Characteristics	
HMOAGE97	Years in Medicare as of 12/31/1997
PROFIT	Whether plan is for-profit or non-profit
DRUGS97	Whether the plan offered prescription drug benefits in 1997
PREM97	Whether the plan charged a supplemental premium in 1997
Model Type	
IPAMOD	Whether plan follows the IPA model (default category)
STAFFMOD	Whether plan follows the staff model
GRPMOD	Whether plan follows the group model
Market Attributes	
NUMHMO97	The weighted average number of Medicare plans (excluding HCPPs) in the plan's service area
AAPCC97	The plan's weighted average AAPCC rate across its service area
Beneficiary Attributes	
Age	
AGE6569	Beneficiary age 65-69 (default category)
AGE7074	Beneficiary age 70-75
AGE7579	Beneficiary age 75-80
AGE80	Beneficiary age 80 or over
GENDER	Sex (1 = male)
Education	
SOMEHS	The respondent had some high school education
HSGRAD	The respondent was a high school graduate
ANYCOL	The respondent had any college education[1] (default category)
Time in Plan	
T12TO23	Respondent has been in present plan between 12 and 23 months (default category)
T2TO5YR	Respondent has been in present plan between 2 and 5 years
T6TO10YR	Respondent has been in present plan between 6 and 10 years
OVER10YR	Respondent has been in present plan for more than 10 years

[1] Includes some college, graduate of college, and postgraduate education.

NOTE: IPA is independent practice association. HCPP is health care prepayment plan. AAPCC is adjusted average per capita cost.

SOURCE: Cox, D., Langwell, K., and Eckert, B., Barents Group of KPMG Consulting, Inc., McLean, Virginia, 2000.

a health plan, the higher their ratings of plan performance. These results are consistent with previous findings in the literature and with prior expectations.

Health plan characteristics, generally, were not significantly associated with overall health plan satisfaction, with two exceptions. Enrollees in group-model HMOs were significantly less satisfied than enrollees in independent-practice-association-model HMOs. And, somewhat surprisingly, enrollees in health plans that offered a prescription drug benefit were significantly less satisfied than enrollees in plans that did not offer a prescription drug benefit.

The explanation for this result is not evident. It may be that enrollees who join an HMO that offers a prescription drug benefit may be dissatisfied with the HMO because of limits placed by the HMO on that benefit (e.g., drug formularies, annual caps on the benefit). Or it is possible that the prescription drug benefit may be correlated with some other factor that has not been controlled for in our specifications. The number of Medicare HMOs in the market was found to be significantly negatively associated with overall satisfaction with health plans, whereas the adjusted average per capita cost rates were not found to have a significant effect. This lack

of significance might be attributable to correlation between these two variables. Alternatively, it might indicate that, when faced with competitive pressures, plans focus more on the majority of their enrolled populations to maintain, or perhaps increase, their relative market shares.

Satisfaction with Providers

Again, disabled Medicare aged beneficiaries in fair or poor health and with limited dependence were significantly less satisfied with their providers within the HMO than were other HMO enrollees. Persons other than white and enrollees with less education were significantly more likely to be satisfied with their personal providers than other enrollees. Interestingly, there were almost no significant differences in satisfaction with providers for enrollees, by time enrolled in plan. Only those who had been enrolled for more than 10 years in their health plan reported significantly more satisfaction with "all doctors and other health professionals" than other HMO enrollees.

HMO characteristics did not exhibit any consistent pattern of significant effects on satisfaction with providers. However, in markets with larger numbers of Medicare HMOs, there was a consistent and negative association with satisfaction with providers.

Ratings of the Process of Care

Process of care encompasses a wide variety of experiences that may affect the time and the energy it takes to obtain services. The EHCN subgroups have consistently lower ratings of these dimensions of process of care than do other HMO enrollees. These enrollees are likely to have more interactions with the HMO health care system and, as a result of those interactions, to have greater experience on which to base their assessment of these processes than are healthier enrollees.

Interestingly, Hispanic persons and persons other than white also have lower ratings of the process of care, across several measures, than do other HMO enrollees. In particular, these groups are more likely to report wait times greater than 30 minutes, less satisfaction with their ability to get tests or treatments, and lower ratings of their ability to get approval for payments without time or energy.

Enrollees with eighth grade education levels or less have higher ratings of the respect that they get from doctors, with the amount of time doctors spend with them, and with their ability to get information from customer service representatives. However, enrollees in these groups have significantly lower ratings than do enrollees with some post-high school education about their ability to get approvals without time or energy.

No consistent patterns of association between process of care and health plan characteristics or market area characteristics is evident in these findings.

Ratings of Access to Care

HMOs impose a variety of controls and requirements on approval for utilization of health services other than visits to primary care providers. These limits may include primary care providers' written approval of referrals to specialists and for obtaining other services and equipment. There may also be limits on the number of specialist visits, therapy visits, and home health visits, for example, that may be authorized. Once the authorized number of visits has been obtained, the patient must return to the primary care provider for further evaluation and continued

authorization. These controls on utilization may be particularly burdensome for enrollees with conditions that involve ongoing, longer term needs for these services.

Across all plan ratings of access to care, disabled Medicare enrollees have significantly lower ratings than do other HMO enrollees. Aged enrollees in fair or poor health with limited independence have significantly lower ratings across all measures except their ability to get equipment without time and energy.

Enrollees other than white also have significantly lower ratings than do other enrollees with ease of obtaining referrals, ability to get equipment without time and energy, and ability to get home health care without time and energy. Although Hispanic enrollees exhibit negative coefficients on the access measures, this relationship is only significant for ability to get therapy without time and energy.

Enrollees with an eighth-grade education or less are not significantly different from enrollees with some post-high school education in their ratings of these access measures. Interestingly, those enrollees with more than an eighth grade education, but no post-high school education, have significantly higher ratings of access to these services than do either the more educated or less educated groups.

No consistent pattern of associations between health plan characteristics and ratings of access to services is evident, with one exception. Enrollees in for-profit HMOs have lower ratings of access than do enrollees in non-profit HMOs, and this association is significant for the ability to obtain equipment and therapy without time and energy.

DISCUSSION

This initial analysis of the plan performance ratings of selected subgroups of the Medicare HMO enrollee population with dimensions of HMO performance indicates that there are differences among subgroups in their assessment of how well they are served by HMOs, relative to other HMO enrollees. There are several key findings.

Enrollees who are eligible for Medicare as a result of disability, rather than age, have lower ratings of HMO performance across all dimensions of performance than do other HMO enrollees.

Aged enrollees who are in self-reported fair or poor health who have limited independence also have lower ratings for most dimensions of HMO performance than do other enrollees.

These subgroups are likely to have greater need for health services and to interact more frequently with the HMO system than are other beneficiaries. HMO utilization management and utilization controls may be more burdensome and pose a greater problem for those who have more complex and frequent health care requirements than for enrollees who are in excellent or good health and/or have only routine and infrequent contact with the health care system.

HMOs offer a system of care that should provide better coordination and integration of services for those with EHCN. The analyses presented in this article suggest that these beneficiaries are significantly less satisfied with the process of care and with ease of access to services in HMOs. These findings may indicate that HMOs, on average, may not be providing the coordination and integration of care that would be expected. It also may be that the utilization management and controls imposed by HMOs impose burdens on those with EHCN that require excessive amounts of time and energy from these individuals in order to obtain the services they require or want.

In this study, we also examined the experiences of selected other subgroups of the population that, it was hypothesized, may

require special efforts by HMOs to ensure that these groups are able to make effective use of HMO services. These special efforts may need to be directed to assisting these enrollees to overcome cultural, language, or other factors that may pose barriers to understanding and negotiating HMO systems of care. Overall, each of these groups was found to be more satisfied with their health plans than were other HMO enrollees. However, when specific dimensions of HMO performance were examined, both Hispanic people and HMO enrollees other than white had lower ratings than did other HMO enrollees with dimensions of the process of care and with their ability to obtain access to services.

The lower ratings of the process of care and ability to obtain access to services of Hispanic persons and of HMO enrollees other than white may be the result of the prior experience with HMOs, cultural differences that would require special efforts by HMOs to explain and assist these groups to make effective use of HMO systems, or to other factors.

Finally, the findings in this article may be useful for expanding and focusing HCFA's current outreach efforts. HCFA is engaged in a range of activities aimed at increasing beneficiary awareness and knowledge of the Medicare program, including the Medicare+Choice program. Some of these activities are directed specifically toward beneficiary subpopulations, such as Hispanic/Latino persons, American Indians, Asian-Americans, and dually eligible beneficiaries. The findings in this article suggest that beneficiaries with EHCN might also benefit from these activities.

Further Research

Although it is useful to identify differences in perceptions and satisfaction with plan performance, the goals of the MMC-CAHPS® project are to attempt to explain these differences and to identify means by which HCFA can monitor and guide health plans to improve their services to enrollee subgroups. To further address these goals, this initial analysis could be expanded along several dimensions. First, this analysis could be replicated using the MMC-CAHPS® Round 2 data in order to assess whether the findings are consistent and stable across the 2 years of data. In addition, a number of related issues and areas could be explored using these data, including:

Analysis of the distribution of satisfaction responses within each subgroup. It is possible that the majority of members of each of the subgroups examined are equally satisfied with HMO performance as are other HMO enrollees but that a minority are very dissatisfied. If so, then the greater level of dissatisfaction of some of the members of the group could account for the overall lower levels of satisfaction reported.

Analysis of the "most dissatisfied" within each subgroup. Within each subgroup, those who report lowest levels of satisfaction could be identified and the characteristics of these beneficiaries, their health plans, and market areas examined in order to determine the role these factors may play in explaining the low levels of plan ratings reported.

Examination of health plans with disproportionate numbers of members who belong to each subgroup. There is considerable variation among health plans in the proportion of their enrollees that are members of the EHCN subgroups and racial/ethnic minority subgroups that we have examined. Health plans that have disproportionately more (e.g., twice the expected proportion) and disproportionately fewer (e.g., less than one-half the expected proportion) enrollees with EHCN could be identified. Comparisons of the characteristics

(e.g., profit status, years in Medicare, model type) of health plans with disproportionately more or fewer enrollees in these subgroups could be conducted to attempt to assess whether specific types of health plans are more or less likely to enroll individuals in these subgroups.

Case studies of health plans that are most successful in enrolling and serving selected subgroups. The examination of health plans with disproportionate numbers of members who belong to each subgroup would identify plans that appear to be successfully meeting the needs of these enrollees and those that are less successful in meeting these needs. An extension would be to conduct site visits to obtain information on HMO organizational structure, utilization management and control practices, case management approaches, cultural competency (e.g., language capabilities, outreach, and education activities), and special programs that are designed to serve the needs of specific subgroups of the Medicare population. This information could then be used, in combination with information obtained from a review of the literature on HMO practices to serve special populations, to document best practices and other factors that may be important to effectively serving special populations.

In conclusion, the results presented in this article reflect an initial step in understanding differences among specific subpopulations of Medicare managed enrollees in ratings of their health plans. Additional analysis, such as the steps suggested previously, would assist in obtaining a more complete understanding of the factors underlying these differences. In addition, the identification (and subsequent dissemination) of plan activities (e.g., best practices) that are successful in addressing the special needs of these beneficiaries will be important in improving the overall quality and access to care for these individuals.

REFERENCES

Adler, G.S., Medicare Beneficiaries Rate Their Medical Care: New Data from the Medicare Current Beneficiary Survey. *Health Care Financing Review* 16(4):175-187, Summer 1995.

Anderson, R.M., Giacehllo, A.L., and Aday, L.A.: Access of Hispanics to Health Care and Cuts in Services: A State-of-the-Art Overview. *Public Health Reports* 101:238-252, 1986.

Blendon, R.J., Aiken, L.H., Freeman, H.E., and Corey, C.R.: Access to Medical Care for Black and White Americans. *Journal of the American Medical Association* 261:278-281, 1989.

Freiman, M.P.: Demand for Healthcare Among Racial/Ethnic Subpopulations. *Health Services Research* 33(4):867-890, 1998.

Horner, R.W., Odone, E., and Matchar, D.: Theories Explaining Racial Differences in the Utilization of Diagnostic and Therapeutic Procedures for Cerebrovascular Disease. *Milbank Quarterly* 73(3):443-462, 1995.

Ingber, M., Riley, G., and Tudor, C.G.: Satisfaction with Care: Do Medicare HMOs Make a Difference? *Health Affairs* 17(2):165-176, 1998.

Meng, Y., Jatulis, D.E., et al.: Satisfaction with Access to and Quality of Health Care Among Medicare Enrollees in an HMO. *Western Journal of Medicine* 4(166):242, 1997.

Miller, B., McFall, S., and Campbell, R.T.: Changes in Sources of Community Long-Term Care Among African American and White Frail Older Persons. *Journal of Gerontology* 49(1):14-24, 1994.

Miller, R.H., and Luft, H.S.: Does Managed Care Lead to Better or Worse Quality of Care? *Health Affairs* 16(5):7-25, September/October 1997.

Nelson, L., Brown, R.S., Gold, M., et al.: Access to Care in Medicare HMOs. *Health Affairs* 19(2):148-156, March/April 1997.

Nelson, L., Gold, M., Brown, R., et al.: *Access to Care in Medicare Managed Care: Results from a 1996 Survey of Enrollees and Disenrollees*. Prepared for Physician Payment Review Commission. Mathematica Policy Research, Inc. Washington, DC. November 1996.

Riley, G.F., Ingber, M.J., and Tudor, C.G.: Disenrollment of Medicare Beneficiaries from HMOs. *Health Affairs* 16(5):117-124, 1997.

Rosenbaum, S., Sarrano, R., Magar, M., and Stern, G.: Civil Rights in a Changing Health Care System. *Health Affairs* 16(1):90-103, 1997.

Sandy, L.G., and Gibson, R.: Managed Care and Chronic Care: Challenges and Opportunities. *Managed Care Quarterly* 4(2):5-11, Spring 1996.

Smith, D.B.: Addressing Racial Inequities in Health Care: Civil Rights Monitoring and Report Cards. *Journal of Health Politics, Policy and Law* 23(1):75-105, 1998.

U.S. Department of Health and Human Services: *Report of the Secretary's Task Force on Black and Minority Health*. U.S. Government Printing Office. Washington, DC. 1993.

Ware, J.E., Bayless, M.S., Rogers, W.H., et al.: Differences in Four-Year Health Outcomes for Elderly and Poor, Chronically Ill Patients Treated in HMO and Fee-for-Service Systems: Results from the Medical Outcomes Study. *Journal of the American Medical Association* 276(13):1039-1047, 1996.

Wholey, D.R., Burns, L.R., and Lavizzo-Mourey, R.: Managed Care and the Delivery of Primary Care to the Elderly and the Chronically Ill. *Health Services Research* (33)2:322-353, 1998.

Reprint Requests: Donald F. Cox, Ph.D., Senior Manager, Barents Group of KPMG Consulting, Inc., 1676 International Drive, McLean, VA 22102-4828. E-mail: dcox@kpmg.com