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Are Managed Care Medicare Beneficiaries With Chronic Conditions Satisfied With Their Care?

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Objectives: This article compares patient experiences of chronically ill older people in health maintenance organizations (HMOs) with other forms of Medicare supplemental coverage. **Method:** Using data from the 1996 Medicare Current Beneficiaries Survey, the authors analyzed the experiences of chronically ill elderly with overall quality, access to care, and physicians' technical, interpersonal, and information-giving skills. Logistic models controlled for prevalent chronic conditions, functioning, perceived health status, sociodemographics, region of residence, and county-level Medicare HMO penetration. **Results:** Satisfaction with quality of overall care and physicians' skills was more likely for many conditions for those with private fee for service and Medicaid supplemental coverage, compared to Medicare HMO population. No insurance effects were found among elders who had none of the examined conditions. **Discussion:** Managed care may have negatively affected patients' perceptions of overall quality of care and doctor-patient interaction. Including additional and supplementary services to the delivery of care may improve satisfaction rates.

Keywords: *patient experiences; satisfaction; chronically ill; elderly; HMO*

Discussions of Medicare reform often include proposals for increasing the reliance on managed care (Enthoven, 2004; U.S. General Accounting Office, 2000). Most of these discussions focus on the pos-

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sible cost savings that managed care could generate, and a few also mention improved disease management and other issues relating to the treatment of chronic illnesses. What appears to attract older persons to Medicare health maintenance organizations (HMOs) are the extra benefits they offer, particularly prescription medications and lower copayments. However, despite these attractions, managed care enrollment nationally remains lower than policy makers had anticipated. Comparing the satisfaction with the care provided under HMOs and other payment types is needed to better understand the factors that influence the selection of different health plans under Medicare.

Satisfaction and patient experiences with care are frequently used as key outcome measures of performance for HMOs and other providers of care. Many studies have found HMO enrollees and specific subgroups to be less satisfied than fee for service (FFS) patients (Coughlin & Long, 2000; Ipsen et al., 2000; Jha, Patrick, MacLehose, Doctor, & Chan, 2002; Phillips, Mayer, & Aday, 2000; Safran, Wilson, Rogers, Montgomery, & Chang, 2002; Wallace & Enriquez-Haass, 2001; Wyn, Collins, & Brown, 1997; Zaslavsky & Cleary, 2002). A few have found HMO enrollees to have equal or higher rates of satisfaction compared to FFS patients (Roberts & Birch, 1997; Tudor, Riley, & Ingber, 1998), especially in areas related to costs and paperwork (Landon, Zaslavsky, Bernard, Cioffi, & Cleary, 2004).

The experiences of the generally healthy average member, however, may not be representative of performance problems experienced by those who have the most experience with the plans. Chronically ill older persons are typically heavy users of care, have more health care needs, and may have more unmet needs. HMO users may experience different obstacles to care than those in FFS, including utilization restrictions and high out-of-pocket costs for out-of-plan care. Alternatively, they may have special benefits, including optional benefits coverage, special care coordination, or disease management programs. Chronically ill older persons are more likely than healthy younger persons to experience and be sensitive to the distinctive features of HMOs (Mason, Scammon, & Huefner, 2002).

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Existing research on the satisfaction of chronically ill elderly with different types of coverage is limited. One study of California Medicare HMO enrollees found a higher rate of complaints about denial or delays in care than among FFS enrollees (Harrington, Weinberg, Merrill, & Newman, 2000). One HMO that specializes in elders with both Medicare and Medicaid reported higher satisfaction than FFS dual eligibles in access to care but lower satisfaction in interpersonal skills (Burton et al., 2001). Many chronically ill elderly avoid HMOs because of the restricted choice of providers and service restrictions (Hellinger & Wong, 2000; Riley, Tudor, Chiang, & Ingber, 1996; Riley, Ingber, & Tudor, 1997), although selective disenrollment by those with some illnesses, such as cancer, is not observed (Riley et al., 1997). Elderly HMO patients with joint or chest pain were found to have reduced access to specialists compared to FFS, less frequent follow-up care, and less regular monitoring (Clement, Retchin, Brown, & Stegall, 1994). The high rates of HMO disenrollment by Medicare beneficiaries who are dissatisfied with care indicate a link between dissatisfaction and disenrollment (Nelson, Brown, Gold, Ciemnecki, & Docteur, 1997; Riley et al., 1996).

No consensus has been reached on whether elderly persons with chronic conditions who are enrolled in HMOs are as satisfied with their care or have similar experiences as those with FFS Medicare. Yet policy makers continue to look to HMOs as a way of potentially saving spending on Medicare and continue to pass legislation designed to encourage seniors to enroll in managed care plans (Gellene, 2004). Most existing research does not directly compare managed care with FFS, involves the nonelderly, or includes the general elderly populations. Furthermore, understanding the kinds of chronic conditions that fare better under these different systems of care and coverage is critical to understanding disease-specific strengths and weaknesses of each system.

To address the gaps in our understanding of this issue, we asked the following questions: Do satisfaction rates vary by Medicare coverage type, including HMO, FFS with private supplement, Medicaid, and FFS Medicare only? Among elderly persons with specific conditions, are those enrolled in Medicare HMOs less likely to be satisfied with their care than those with private FFS coverage?

Methods

We used a sample of 14,060 community-dwelling individuals age 65 and older from the 1996 Medicare Current Beneficiary Survey (MCBS), a stratified, multistage, longitudinal survey of elderly and disabled current Medicare beneficiaries and an oversample of individuals 85 and older and of the disabled. The MCBS has been conducted by the Centers for Medicare and Medicaid Services since the early 1990s. The 1996 survey contained an oversample of Medicare beneficiaries in HMO plans, which increased the reliability of the findings on managed care enrollees and allowed for more detailed analyses than possible with smaller samples of HMO enrollees.

Ten questions on satisfaction with the overall care received in the past year and 12 questions on the patients' experiences or perceptions of the care received from their regular physicians were used to create the dependent variables (Table 1). Following Lee and Kasper's (1998) seminal work, we grouped the 10 questions on overall care into two dimensions, overall quality and overall access. The responses to these questions ranged from *very dissatisfied* to *very satisfied* on a 4-point scale (Lee & Kasper, 1998). Also following Lee and Kasper, the 12 questions on beneficiaries' experiences with their usual physicians were divided along three dimensions of technical, interpersonal, and information-giving skills of these physicians. These responses ranged from *strongly agree* to *strongly disagree* on a 4-point scale. Those reporting no experiences with care and missing responses (7.7%) were excluded.

The relevant questions for each scale were summed with all items equally weighted. All scales were highly and positively skewed and would not return a normal or symmetrical distribution, despite transformations (Lee & Kasper, 1998). Consequently, we dichotomized the summed scales into those with an overall score below the 10th percentile of the total sample as highly dissatisfied versus others. This classification allowed us to identify potential areas most in need of performance improvement and is mostly consistent with the distribution of individual item responses of *highly dissatisfied* or *strongly disagree*. However, because of the skewed nature of responses to these questions, some individuals with *dissatisfied* responses were also captured in the lower 10th percentile. Sensitivity analysis using lower and

Table 1
Satisfaction With Overall Care and Ratings of Physician's Skills Scales

Category	α	Criteria
Satisfaction with overall care ^a	0.86	<ol style="list-style-type: none"> 1. Overall quality of medical services received last year 2. Information given about what was wrong with respondent 3. Follow-up care received after initial treatment or operation 4. Concern of doctor for respondent's overall health rather than for an isolated symptom or disease 5. Capability of taking care of all respondent's medical care needs at the same location
Access	0.77	<ol style="list-style-type: none"> 1. Availability of medical services at nights and on weekends 2. Ease and convenience of getting to a doctor from where respondent lives 3. Out-of-pocket costs respondent paid for medical services 4. Ease of obtaining answers to questions on the telephone about respondent's treatment or prescriptions 5. Availability of care by specialist when respondent feels he or she needs it
Ratings of physician's skills ^b	0.91	<ol style="list-style-type: none"> 1. Physician is careful to check everything while examining respondent 2. Doctor is competent and well trained 3. Doctor has a complete understanding of things that are wrong with respondent 4. Respondent has great confidence in doctor
Interpersonal	0.86	<ol style="list-style-type: none"> 1. Doctor often seems to be in a hurry^c 2. Doctor often does not explain medical problems to respondent^c 3. Respondent often has health problems that should be discussed but are not^c 4. Doctor often acts as if doing respondent a favor by talking to him or her^c
Information giving	0.85	<ol style="list-style-type: none"> 1. Doctor has a good understanding of respondent's medical history 2. Doctor answers all respondent's questions 3. Doctor often tells all respondent wants to know about condition and treatment 4. Respondent depends on doctor to feel better physically and emotionally

a. Response choices were *very satisfied, satisfied, dissatisfied, and very dissatisfied*.

b. Response choices were *strongly agree, agree, disagree, strongly disagree, and no experience*.

c. Responses to these four negative criteria were reversed to remain consistent with the other positive criteria.

higher scores than those in the 10th percentile did not substantively change the results of the analyses. Additional sensitivity analysis was conducted, categorizing respondents into high, medium, and low levels of satisfaction. The results were consistent with the dichotomous classification of the dependent variables into *highly dissatisfied* versus other. In the following sections, the term *satisfaction* refers to those with an overall score at or above the 10th percentile (mostly those satisfied or highly satisfied with their care) compared with those below the 10th percentile (mostly those highly dissatisfied or dissatisfied with their care).

The satisfaction scales were not significantly correlated. The reliability of each scale was measured by obtaining the Cronbach's alpha and ranged from .77 to .91 (Table 1). The validity of each scale was evaluated by examining each scale among various subgroups, such as those with heart disease, cancer, or diabetes, and the results remained consistent across all analyses. Other research has shown the validity of these scales in diverse elderly populations (Lee & Kasper, 1998).

The key independent variable is insurance coverage. Although other variables in this analysis are self-reported, the insurance coverage data in the MCBS comes from administrative records, improving the accuracy of this variable versus self-reporting. Of the 3,495 HMO-enrolled beneficiaries in the sample, 87% had been enrolled for the full year (HMO enrollees). The rest were enrolled for varying lengths of time. Because of their heterogeneity and small sample sizes, the data on these enrollees were difficult to interpret and were not displayed. However, they were included in the regression models because their exclusion would have led to loss of sample size, particularly among the less frequently reported conditions. Exclusion of the part-year enrollees did not perceptibly change the magnitude or direction of the coefficients. Those without HMO coverage were separated into job-based or privately purchased Medigap supplemental coverage (private), Medicaid or other public supplemental coverage, and no supplemental coverage (FFS Medicare only). Medicaid is a means-tested public program that pays the deductibles and cost sharing for eligible beneficiaries and includes additional services not covered by Medicare, therefore acting as a supplement to Medicare.

To ensure HMO enrollment was not a function of insurance market characteristics, we controlled for geographic variation by including

county-level HMO market penetration and region of residence in the United States (Miller & Luft, 2002; Zaslavsky, Landon, Beaulieu, & Cleary, 2000). We calculated market penetration as the ratio of the number of Medicare HMO enrollees to the total number of Medicare beneficiaries within a county, excluding counties with less than 10 HMO enrollees.

Separate analyses were conducted on subsamples of those who reported arthritis, stroke, diabetes, heart disease, cancer, at least two activities of daily living (ADL) difficulty, those in fair or poor health, and those who were without any of these conditions or difficulties. Heart disease was a combination of myocardial infarction, angina pectoris or chronic heart disease, other heart conditions, and hardening of arteries or atherosclerosis. ADLs included difficulties with bathing, dressing, transferring from bed to chair, eating, walking, and using the toilet.

The differences in satisfaction scores between insurance types were compared using pairwise chi-square tests, and only significant differences are discussed. We used logistic regression models to calculate the likelihood of being satisfied with each of the four dimensions of care for subsamples with each specified health condition or difficulty (and for those without any). Each model examined the type of supplemental Medicare coverage and controlled for the other chronic conditions or difficulties, age, race, gender, marital status, college education, income, county-level Medicare HMO penetration, and region of residence. Independent variables were not collinear. All analyses were weighted with normalized cross-sectional weights in MCBS. We corrected for the design effects of MCBS using Stata (Version 7, Stata Corporation, 2001).

Results

Two thirds of the respondents had Medicare FFS with private supplemental coverage, followed by 11% HMO enrollees (full year) and 9% Medicaid or other public sources. Ten percent had Medicare FFS with no supplemental coverage. High blood pressure (52%) and arthritis (53%) were the most prevalent conditions (Table 2). The demographic profile of HMO enrollees differed significantly from all

other groups. HMO enrollees had fewer chronic conditions in several instances and were more often non-White, unmarried, low income, and lived in the western United States.

HMO enrollees also differed in their satisfaction and physician ratings, given different forms of coverage and different health conditions (Table 3). HMO enrollees had the same satisfaction rates in overall quality as those with or without other forms of coverage but were more often satisfied with their access, compared to those with Medicaid supplemental coverage and those without supplemental coverage. However, HMO enrollees frequently rated their physician's skills lower than did those with private supplemental coverage. Satisfaction and ratings by chronic illness varied greatly. Significantly fewer individuals with each of the conditions examined were satisfied with overall care or rated their physician's skills highly, compared to those with none of the examined chronic conditions.

Multivariate analysis revealed several patterns in satisfaction levels and ratings of physician skills for different insurance types among those with chronic conditions. Satisfaction with the quality of overall care varied among insurance types for all conditions examined except stroke (Table 4). Those most commonly satisfied with quality were the group with both Medicare and Medicaid who reported heart disease, arthritis, diabetes, cancer, two or more ADLs, or fair or poor health. Those with a private FFS supplement were more satisfied with quality than those with HMO coverage among those with heart disease or arthritis, whereas Medicare-only FFS patients were more satisfied overall among those with diabetes or two or more ADLs. There were fewer differences in satisfaction with access to care. Those served by HMOs were more satisfied with their access than were those with Medicare-only FFS if they reported arthritis or diabetes but less satisfied with their access if they had two or more ADLs. Technical skills of physicians were rated higher across all conditions for at least one insurance type compared to HMO. Those with both Medicaid and Medicare were, once again, more likely to rate technical skills higher than were those with HMOs, with more reporting higher rates when they also reported heart disease, arthritis, cancer, two or more ADLs, or fair or poor health. Those with a private FFS supplement were more likely to rate technical skills higher than were those with HMO cover-

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Table 2
 Characteristics of the Sample

Variable	Coverage Source													
	Total ^a (N = 14,060; Weighted N = 29,974,061)			Job-Based, Medigap, or Private FFS (n = 8,024; Weighted n = 19,976,522)			Medicaid or Other Public Coverage (n = 1,356; Weighted n = 2,802,871)			Medicare-Only FFS (n = 1,185; Weighted n = 2,889,599)			Full-Year HMO (n = 3,044; Weighted n = 3,325,844)	
	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Type of insurance														
Chronic conditions														
Heart disease ^b	40	0.5	67	0.8	9	0.5	10	0.3	11	0.5				
Cancer (other than skin cancer)	17	0.4	40**	1.0	49**	2.0	34	2.0	35	1.0				
Stroke	10	0.2	19**	0.5	16	1.2	15	1.3	16	0.7				
High blood pressure	52	0.5	51	0.6	15	0.9	10	1.0	9	0.6				
Arthritis	53	0.6	54**	0.7	64**	1.4	52	1.9	50	1				
Diabetes	15	0.4	14	0.4	63**	1.5	45*	1.9	49	1.0				
Two or more ADLs ^c	15	0.6	13	0.6	23**	1.1	17**	1.5	13	0.7				
Fair or poor health status	22	0.5	19	0.6	31**	1.3	16**	1.2	12	0.6				
None of the above conditions ^d	15	0.4	15*	0.5	44**	1.6	30**	1.5	17	0.8				
Other characteristics ^e														
White	85	0.7	93**	0.4	7**	0.9	18	1.6	17	0.9				
Female	58	0.5	57	0.5	51**	2.2	68**	2.1	81	1.3				
Married	56	0.6	61**	0.7	70**	1.5	51**	1.7	57	0.9				
College education	30	0.8	34	1.0	25**	1.4	46**	1.7	57	1.1				
Less than \$10,000 annual income	22	0.7	12**	0.5	9**	0.9	19**	1.5	32	1.4				
					82**	1.4	38**	1.6	18	0.8				

Average Medicare HMO penetration in the county of residence	12	0.5	9**	0.5	11**	0.7	10**	0.6	30	0.8
Region of residence										
North	39	1.8	43**	2.4	32**	2.3	33**	2.3	22	1.7
Central	23	3.0	23	3.4	18	3.8	27	4.4	24	1.9
West	13	1.3	8**	1.5	16**	2.0	9**	1.4	41	2.6
South	25	2.2	25**	2.5	34**	3.1	31**	3.9	13	1.0

Note. FFS = fee for service; HMO = health maintenance organization; ADL = activity of daily living.

a. Total includes part-year HMO enrollees (3% of the sample), who are not displayed.

b. Heart disease includes myocardial infarction, angina pectoris or chronic heart disease, other heart conditions, and hardening of arteries or arteriosclerosis.

c. ADLs includes bathing, dressing, transferring from bed to chair, eating, walking, and using the toilet.

d. These individuals did not report having heart disease, stroke, high blood pressure, arthritis, diabetes, any ADLs, or fair or poor health.

e. Average ages were as follows: 75 (*SE* = 0.1%) for total sample; 75** (*SE* = 0.1%) for those with job-based, Medigap, or private FFS; 76** (*SE* = 0.2%) for those with Medicaid or other public coverage; 74** (*SE* = 0.2%) for those with Medicare-only FFS; and 75 (*SE* = 0.1%) for full-year HMO enrollees.

p* < .05 (from full-year HMO enrollees). *p* < .001 (from full-year HMO enrollees).

Table 3
Proportion Satisfied With Overall Care and Ratings of Physician's Skills by Type of Medicare Supplemental Coverage and Chronic Conditions

Variable	Satisfied With Overall Care				Physician's Skills Rated Highly					
	Quality (n = 13,594)		Access (n = 13,678)		Technical (n = 13,082)		Interpersonal (n = 13,082)		Information Giving (n = 13,076)	
	%	SE	%	SE	%	SE	%	SE	%	SE
Medicare supplemental coverage ^a	93	0.4	64	1.3	92**	0.5	83*	0.8	87**	0.6
Job-based and Medigap FFS	92	0.9	54**	2.0	91	1.2	78	1.9	86*	1.7
Medicaid or other public coverage	91	1.0	58**	2.2	90	1.1	78	1.6	82	1.3
Medicare-only FFS	92	0.5	65	1.4	89	0.8	80	1.0	82	0.8
Full-year HMO										
Chronic conditions										
Heart disease ^b	91	0.5	58	1.4	90	0.6	80	0.9	86	0.8
Cancer (other than skin cancer) ^b	92	0.7	62	1.5	90	0.8	81	1.3	86	1.0
Stroke ^b	91	1.1	58	1.9	90	1.0	79	1.5	87	1.2
High blood pressure ^b	92	0.4	60	1.2	91	0.5	81	0.9	86	0.6
Arthritis ^b	92	0.4	60	1.4	91	0.5	81	0.9	86	0.6
Diabetes ^b	91	0.8	58	1.7	91	0.8	80	1.2	86	1.1
Fair or poor health status ^b	87	0.8	49	1.5	88	0.8	76	1.1	85	0.9
Two or more ADL difficulties ^b	87	0.8	53	1.6	88	1.0	75	1.2	83	1.0
None of the above conditions	96	1.4	71	1.9	95	0.6	87	1.1	85	1.2

Note. Standard errors are weighted and corrected for the survey design effect. *Satisfied* refers to those with an overall score at or above the 10th percentile (mostly those satisfied or highly satisfied with their care) compared with those below the 10th percentile (mostly those highly dissatisfied or dissatisfied with their care). FFS = fee for service; HMO = health maintenance organization; ADL = activity of daily living.

a. Part-year HMO enrollee data are not provided here.

b. Significantly different from beneficiaries with none of the above conditions in quality, access, technical, interpersonal, and information-giving scales.

* $p < .05$ (from full-year HMO enrollees). ** $p < .001$ (from full-year HMO enrollees).

age when they had heart disease, arthritis, or cancer. Those with Medicare-only FFS rated the doctor's technical skills higher than did those who were HMO insured when they reported a stroke but less when they had arthritis. Higher rating of interpersonal skills was more common by those with private FFS supplement than by those with HMO coverage among respondents with heart disease, arthritis, cancer, or fair or poor health. Medicaid recipients had higher rates than did HMO recipients for heart disease, cancer, and fair or poor health. Information giving was rated higher by those with a private FFS supplement than by those with HMO coverage who reported heart disease, stroke, and arthritis. The only other difference was higher ratings in information giving by those with heart disease who had Medicaid versus HMO coverage. Overall, the greatest differences among insurance types are in the dimensions of satisfaction with overall care and in ratings of physician technical skills and physician interpersonal skills. There are fewer differences in satisfaction with access and in rating of information giving.

If we examine the pattern by chronic condition rather than by dimension of satisfaction, we observe the least variation for stroke and the greatest for heart disease and arthritis. For those with no chronic conditions in Table 4, satisfaction and rating across all dimensions were similar for all insurance types, compared to HMOs. Although the sample size of those with no conditions was the smallest, the confidence intervals were relatively narrow, and lack of statistically significant patterns was probably not the result of the power of the sample.

Discussion

When we examine five different dimensions of older patients' satisfaction with and rating of their medical care, we find a pattern of those with HMO coverage being less satisfied than those with one or more other types of coverage, with the exception of satisfaction with access. This pattern exists to varying degrees across several major chronic conditions, disability, and fair or poor self-assessed health. Among those with none of these health problems, only type of coverage is not associated with satisfaction or rating. An unexpected finding is that older adults with both Medicaid and Medicare present the best overall

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Table 4
Odds Ratios of Being Satisfied With Overall Care and High Ratings of Physician's Skills for Those With Specific Chronic Conditions by Type of Medicare Supplemental Coverage Versus Full-Year HMO Enrollees

Variable	Satisfaction With Overall Care					
	Quality			Access		
	n	OR	CI	n	OR	CI
Heart disease ^a	5,523			5,547		
Job-based and Medigap FFS		1.38*	1.03-1.84		1.08	0.90-1.32
Medicare-only FFS		1.08	0.74-1.58		0.79	0.60-1.05
Medicaid or other public coverage		1.76**	1.17-2.65		1.02	0.79-1.34
Stroke	1,499			1,503		
Job-based and Medigap FFS		1.66	0.99-2.80		1.11	0.80-1.55
Medicare-only FFS		1.99	0.85-4.66		0.96	0.58-1.55
Medicaid or other public coverage		1.45	0.64-3.29		1.00	0.61-1.62
Arthritis	7,344			7,384		
Job-based and Medigap FFS		1.39*	1.02-1.88		0.88	0.74-1.04
Medicare-only FFS		1.09	0.74-1.63		0.66*	0.51-0.87
Medicaid or other public coverage		1.67*	1.10-2.50		0.82	0.62-1.08
Diabetes	1,996			1,999		
Job-based and Medigap FFS		1.17	0.65-2.13		0.72	0.52-1.01
Medicare-only FFS		2.00*	1.01-3.95		0.61*	0.41-0.92
Medicaid or other public coverage		2.33*	1.08-5.03		0.79	0.52-1.19
Cancer (other than skin cancer)	2,402			2,410		
Job-based and Medigap FFS		1.10	0.64-1.90		0.96	0.71-1.31
Medicare-only FFS		1.61	0.69-3.75		0.91	0.55-1.51
Medicaid or other public coverage		2.66*	1.03-6.91		0.82	0.52-1.29
Two or more ADLs	2,204			2,217		

Variable	Technical		Interpersonal		Information Giving	
	n	OR	CI	n	OR	CI
Job-based and Medigap FFS	3,079	1.42	0.93-2.16	3,086	1.24	0.89-1.74
Medicare-only FFS		1.78*	1.10-2.89		1.56*	1.07-2.29
Medicaid or other public coverage		2.00*	1.17-3.44		1.28	0.88-1.85
Fair or poor health						
Job-based and Medigap FFS	1,665	1.28	0.93-1.75	1,731	1.16	0.88-1.54
Medicare-only FFS		1.02	0.68-1.57		1.07	0.73-1.57
Medicaid or other public coverage		1.62*	1.08-2.45		1.11	0.81-1.52
None of the above conditions						
Job-based and Medigap FFS		1.23	0.57-2.64		0.89	0.63-1.25
Medicare-only FFS		0.58	0.22-1.50		0.75	0.44-1.28
Medicaid or other public coverage		1.19	0.26-5.52		0.72	0.35-1.47

High Ratings of Physician's Skills

Variable	Technical		Interpersonal		Information Giving	
	n	OR	CI	n	OR	CI
Heart disease ^a	5,397	1.47*	1.07-2.01	5,400	1.50**	1.16-1.94
Job-based and Medigap FFS		1.27	0.81-1.98		1.31	0.94-1.82
Medicare-only FFS		2.58***	1.52-4.37		1.54*	1.10-2.15
Medicaid or other public coverage						
Stroke	1,468	1.85	1.00-3.43	1,467	1.20	0.79-1.82
Job-based and Medigap FFS		3.20*	1.21-8.70		0.95	0.59-1.82
Medicare-only FFS		2.19	0.97-4.95		0.90	0.50-1.60
Medicaid or other public coverage						
Arthritis	7,154	1.64***	1.23-2.21	7,155	1.44***	1.17-1.77
Job-based and Medigap FFS		0.64*	1.04-2.57		0.99	0.72-1.37
Medicare-only FFS						

(continued)

Table 4 (continued)

Variable	High Ratings of Physician's Skills											
	Technical				Interpersonal				Information Giving			
	n	OR	CI	n	OR	CI	n	OR	CI	n	OR	CI
Medicaid or other public coverage		1.85*	1.12-3.06		1.27	0.94-1.72		1.24	0.87-1.78			
Diabetes	1,944			1,945			1,945			1,945		
Job-based and Medigap FFS		1.56	0.92-2.63		1.32	0.86-2.03		1.18	0.81-1.71			
Medicare-only FFS		1.21	0.58-2.51		1.04	0.67-1.63		0.92	0.54-1.58			
Medicaid or other public coverage		1.70	0.75-3.87		1.14	0.69-1.89		0.85	0.47-1.53			
Cancer (other than skin cancer)	2,334			2,334			2,334			2,334		
Job-based and Medigap FFS		1.62*	1.05-2.5		2.03***	1.36-3.02		1.09	0.35-1.58			
Medicare-only FFS		1.42	0.72-2.82		1.42	0.80-2.54		0.65	0.36-1.17			
Medicaid or other public coverage		3.86***	1.73-8.61		2.60***	1.48-4.57		1.84	0.75-1.58			
Two or more ADLs	2,138			2,138			2,137			2,137		
Job-based and Medigap FFS		1.46	0.94-2.27		1.27	0.90-1.79		1.29	0.86-1.92			
Medicare-only FFS		1.47	0.82-2.64		1.15	0.68-1.95		0.87	0.49-1.54			
Medicaid or other public coverage		3.11***	1.62-5.95		1.57	0.99-2.49		1.45	0.83-1.20			
Fair or poor health	2,986			2,986			2,985			2,985		
Job-based and Medigap FFS		1.34	0.90-2.07		1.44*	1.05-1.96		1.24	0.86-1.78			
Medicare-only FFS		1.16	0.70-1.91		1.25	0.88-1.77		0.90	0.59-1.38			
Medicaid or other public coverage		1.85*	1.07-3.13		1.59**	1.17-2.26		1.48	0.49-1.61			

None of the above conditions	1,530	1,527	1,527	0.92	0.58-1.47
Job-based and Medigap FFS	1.67	0.74-3.76	1.19	0.72-1.96	0.87
Medicare-only FFS	1.38	0.45-4.28	1.23	0.49-3.06	1.47
Medicaid or other public coverage	1.74	0.41-7.44	1.37	0.48-3.93	0.50-4.36

Note. Satisfaction refers to those with an overall score at or above the 10th percentile (mostly those satisfied or highly satisfied with their care) compared with those below the 10th percentile (mostly those highly dissatisfied or dissatisfied with their care). The probability of satisfaction or high rating was predicted in separate logistic regression models for each chronic condition. Each model controlled for specified chronic illness, functional status, and self-assessed health as well as for age, gender, marital status, education, income, region, and Medicare HMO penetration in the county of residence. Part-year HMO members are not displayed. OR = odds ratio; CI = confidence interval; FFS = fee for service; HMO = health maintenance organization; ADL = activity of daily living.

a. Heart disease includes myocardial infarction, angina pectoris or chronic heart disease, other heart conditions, and hardening of arteries or arteriosclerosis. * $p < .05$. ** $p < .01$. *** $p < .001$.

profile. It is important to emphasize that our satisfaction and rating indicator is dichotomized at the 90%-10% breaks, meaning that the analysis distinguishes a large group with any satisfaction or rating from a small group of the most dissatisfied or with the lowest ratings. It is this smaller group that is most likely to be experiencing severe problems and to be affected by its lack of satisfaction.

Why would older HMO enrollees with chronic conditions express less satisfaction or rate their physicians lower than those with Medicaid or private supplemental coverage? The higher satisfaction levels and ratings of individuals with Medicaid supplemental coverage may be the result of uninsured low-income adults obtaining health insurance on reaching age 65 and becoming eligible for Medicare along with Medicaid (Wallace, Enriquez-Haass, & Markides, 1998). These elderly may be comparing their recent experiences with earlier uninsured experiences, contributing to high levels of current satisfaction or of rating of physicians. This would also explain why those with Medicaid are often as satisfied as, or more satisfied than, those with a private FFS supplement. The lower satisfaction and ratings of older HMO patients compared to FFS patients may be because HMO patients may have spent less time with and interacted less with their physicians than they perceive as needed or because they have fewer options available for conditions that can be very disabling (Mechanic, McAlpine, & Rosenthal, 2001). In addition, more than half of FFS and less than one third of HMO patients in 1996 had seen the same physician for 5 or more years, and the longer term relationship among those with FFS may contribute to higher levels of satisfaction and ratings.

Perceptions of lower satisfaction with overall care quality for some conditions may lie in the nature of care they require. For example, those with heart disease may require ongoing care across a long period of time by both the primary care physician and a mix of specialists, so that problems with referrals for follow-up care and a limited selection of specialists might have a greater impact on the rating of overall quality. Similarly, patients with arthritis may remain symptomatic or deteriorate despite treatment across long periods of time. In contrast, those with a stroke may require highly skilled care but for a relatively short duration, and those with diabetes may be relatively asymptomatic, so net of other conditions, these illness may not be as sensitive to experiences that shape general patient satisfaction. There is no reason to

believe that HMOs use less friendly doctors, so the finding that older Medicare recipients with some chronic conditions rate the interpersonal and information-giving skills of their physicians lower when they are in HMOs suggests that the constraints of managed care impair the quality of doctor-patient interaction. This may be because of the restriction on the choice of primary care physicians, the requirement to use primary care physicians rather than specialists, shorter visit times (Mechanic et al., 2001), or having to switch physicians and the potential loss of continuity of care because of contractual changes. Continuity of care is particularly important for persons with chronic conditions who have continual interaction with their physician (Safran et al., 2000). In addition, chronic conditions often require more time to manage medically than do simple acute conditions, leaving less time to devote to the interpersonal and information-giving aspects of care.

Lower ratings of physician technical skills by HMO enrollees among those with heart disease, arthritis, and cancer may represent patient expectations that cannot be met by treating physicians. The management of certain chronic illness among the elderly may require pain management, physical and vocational therapy, and a variety of other nonmedical services that are complicated, costly, and time-consuming. These patients are less likely to be capable of coordinating their own care without additional assistance by professionals, such as social workers or family caregivers, and may feel more frustrated with the inability of the physicians to cure their illness. The elderly beneficiaries with private supplemental coverage have the same needs, yet physicians serving that population may have more flexibility with referrals to a wider variety of service providers, may care for the patient longer, and are not bound by the same financial restrictions of HMO physicians.

Satisfaction with access to care is the area where HMO enrollees with chronic conditions consistently fared as well as or better than those with private and those with Medicaid supplemental coverage across almost all chronic condition categories. The importance of having some type of supplement to Medicare is highlighted by those with only Medicare FFS being the most dissatisfied in the access dimension.

Our study includes several limitations. There is a selection bias among the HMO enrollees because of voluntary HMO disenrollment. Our results may therefore be biased toward higher HMO satisfaction

rates because almost two fifths of those who disenrolled from an HMO returned to FFS (Riley et al., 1997). In addition, although the MCBS is useful data for comparing satisfaction levels of HMO enrollees with FFS, it lags behind Consumer Assessment of Health Plans Survey in its detail about patient experiences with care. Finally, our data are from 1996, and the type of care provided under each type of insurance has undoubtedly changed some. Perhaps most important, HMOs have left a number of unprofitable Medicare markets around the country and are moving away from narrowly defined provider networks and strict gatekeeping (Hurley, Grossman, & Strunk, 2003; Mays, Hurley, & Grossman, 2003). The underlying practice styles of physicians in HMOs and FFS are unlikely to have changed much, however, so the findings of this analysis should still be relevant.

Our findings stress the need for inclusion of additional and supplementary approaches to delivery of care to elderly enrollees above and beyond current efforts, which may improve their satisfaction rates. Efforts such as cooperative team care, geriatric consultation services, disease management, and physician education are essential to the treatment of chronically ill elderly and have improved satisfaction levels in some cases (Fox, Etheredge, & Jones, 1998; Gaumer, Moore, Friedman, & Bix, 1999; Morishita, Boulton, Boulton, Smith, & Pacala, 1998). However, the lack of clinical expertise in chronic illness and the lack of incentives for such comprehensive care have acted as barriers to providing appropriate care within HMOs (Wagner, 1997). HMOs may not be motivated to excel in the care of very sick or costly patients because the financial health of the organization may be at stake (Miller & Luft, 2002). Although Medicare is beginning to risk-adjust its payments to HMOs, the method is primarily based on hospital use. Creating an environment where older persons with chronic conditions are as satisfied with HMO care as with other systems will require attention to more than the aggregate spending by Medicare.

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