Does Dissatisfaction with Access to Specialists Affect the Desire to Leave a Managed Care Plan?

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Frequent changes in health plan enrollment may lead to discontinuity of care and compromise quality. Using multiple logistic regression, we investigated how four dimensions of patient satisfaction were associated with the desire to disenroll from a managed care plan. A total of 17,196 enrollees from a large health plan in California responded to a survey regarding their satisfaction with care and desire to disenroll from the plan. Nineteen percent stated that they wanted to change from the plan. Dissatisfaction with access to specialty care and convenience of care produced the highest calculated relative

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risks of desire to leave the plan (relative risk [RR] = 2.7 and 2.6, respectively), while dissatisfaction with the quality of care and with hospital care produced lower relative risks (1.8 and 1.5, respectively). Because limiting direct access to specialists is a cardinal feature of most managed care organizations, managed care organizations may need to reexamine their approaches to the specialty care referral process.

Consumer satisfaction surveys are increasingly used as a measure of quality of care in health plans and medical groups, especially those providing managed care services (Gold and Woolridge 1995). Most surveys are designed to measure several dimensions of satisfaction, such as interpersonal care, technical quality, and access to care (Ware and Hays 1988). The results of the surveys may influence physician capitation rates, employers' individual choice of health plans, consumer enrollment, and even accreditation (Gold and Woolridge 1995; Rubin et al. 1993; Consumer Reports 1992). Many surveys include a question regarding the intent to disenroll from the plan (Ware et al. 1983). Such a question might be viewed as one important measure of future plan performance because disenrollment, whether due to voluntary reasons, such as dissatisfaction, or involuntary causes, such as employment change, influences the plan's resources and profits. While there are various motivations for disenrollment, persons who are dissatisfied with care would be expected to be more likely to want to disenroll. Moreover, dissatisfaction with certain aspects of care, as opposed to others, may result in greater desire for disenrollment. For example, persons dissatisfied with their access to specialty care or with convenience of the care may be more likely to want to disenroll than persons who are dissatisfied with access to services they are less likely to use, such as hospital care. While managed care plans are often compared on their satisfaction scores, whether dissatisfaction with aspects of care influences disenrollment or a desire to disenroll has not been well studied.

Published studies have demonstrated that satisfaction with care is predictive of health care behavior. Using data from the Health Insurance Experiment (HIE), Marquis, Davies, and Ware (1983) demonstrated that the probability of changing providers increases as general satisfaction with care decreases. In this longitudinal study, satisfaction at a given point in time predicted change in the usual provider approximately 1 year later. There was no barrier to switch providers in the HIE, so the hypothesis that change was based primarily on dissatisfaction was reasonable. While this analysis included only a general satisfaction measure, Marquis, Davies, and Ware pointed out the necessity of understanding which aspects of satisfaction, and thus medical care, influence behavioral consequences such as provider change. A similar analysis was conducted using data from the Prepaid Health Research, Evaluation, and Demonstration Project, which evaluated consumer acceptance of

prepaid care under Medi-Cal, California's Medicaid program (Ware and Davies 1983). This study showed that plans with the highest average satisfaction score had the lowest rate of disenrollment. In a like manner, patient satisfaction data from the Medical Outcomes Study demonstrated that patients were less likely to stay with physicians who received lower overall visit ratings from their patients (Rubin et al. 1993).

Understanding how medical care structure influences behavioral consequences is especially important when considering what motivates persons to want to leave managed care organizations. Among the reasons may be limitations on the choice of primary care physicians, cost, practice type and size, and coverage for special services, such as chiropractic care (Rubin et al. 1993). In addition, much has been written about the limitations managed care organizations place on direct access to specialists (Iglehart 1992; Rivo et al. 1995; Emanuel and Dubler 1995; Berenson 1991). While quality of care in health maintenance organizations (HMOs) has been shown in some studies to be equal and, in some cases, superior to traditional health insurance plans (Miller and Luft 1994), the perception of lesser quality due to limited access to specialists may also motivate health plan change. In fact, the greatest concerns about managed care expressed in focus groups by seniors who were not managed care enrollees were restrictions on physician choice and perceived lower quality of care in HMOs (Henry J. Kaiser Family Foundation 1995). Because some limitations on direct access to specialists are nearly universal in managed care organizations (Kassirer 1994), understanding whether dissatisfaction with access to specialty care influences the desire to disenroll may have important implications for the policies managed care organizations establish regarding the specialty care referral process.

Using data on patient satisfaction collected by a large network model health plan in California, we investigated which dimensions of satisfaction, as well as other characteristics, predict the desire to disenroll from the plan. In particular, we investigated whether dissatisfaction with access to specialty care independently predicts the desire to leave the health plan among 17,196 enrollees responding to the plan's 1993 consumer satisfaction survey.

NEW CONTRIBUTION

While others have shown that overall dissatisfaction with care is linked to disenrollment, past studies have not demonstrated the relative importance of different dimensions of satisfaction with the desire to disenroll or actual disenrollment. Our approach examines the association between distinct dimensions of satisfaction and the desire to disenroll. Furthermore, our refinement of the traditionally global access satisfaction dimension allows managed

care plans to revise management strategies that may influence satisfaction in distinct areas of access.

CONCEPTUAL FRAMEWORK

As discussed, a great deal of controversy regarding managed care centers on restrictions managed care organizations place on access to care. Access restrictions may increase patient dissatisfaction and, in turn, disenrollment from managed care plans (Mechanic, Weiss, and Cleary 1983). The measurement of satisfaction with access to care has traditionally included multiple components, including satisfaction with the ease of making appointments, availability of office hours, access to specialty care, access to hospital and emergency room care, and convenience of the location of care (Marshall et al. 1993; Ware et al. 1983). The extent to which these different aspects of access to care influence a patient's desire to disenroll from his or her health plan is of major importance. In one study, enrollees of HMOs have been reported to be less satisfied with their access to care than persons in indemnity plans, in general, but more satisfied with office waiting times (Mark and Mueller 1996).

To improve satisfaction in specific areas, it is useful to think of three components for what has been traditionally thought of as one dimension of access: access to specialty care, access to hospital and emergency room care, and convenience of care. In the Aday and Anderson (1974) model of access to medical care, these particular access elements reflect characteristics of the health delivery system rather than characteristics of the population. Different management and cost containment strategies are more or less relevant to some components of access than others. For example, managed care organizations most often control access to specialists through gatekeeping, utilization review, and financial incentive mechanisms (Kerr et al. 1995). In contrast, organizations control access to hospital and emergency room care through precertification programs, concurrent review, and substitutions (e.g., home health care for hospital care) (Wickizer 1990). Finally, convenience of care, represented by waiting times for appointment and choice of doctors, may be controlled through limits on provider and ancillary staff supply. Therefore, health plan approaches to improving satisfaction with access to specialty care may differ greatly from those it would use to improve satisfaction with convenience.

Perceptions of interpersonal and technical quality of care may also be associated with disenrollment. Management strategies that might improve quality of care include education of providers, guidelines, and a focus on communication skills. In addition, dissatisfaction with the cost of care may be related to the desire to disenroll. This last point is likely to be less important

for managed care organizations, which traditionally have lower premiums than fee-for-service plans, low or nonexistent deductibles, and generally small copayments.

Although dissatisfaction with care is associated with the desire to disenroll, actual disenrollment among those who express a desire to leave a health plan depends on the patient's opportunity to disenroll (Hays and Arnold 1986). That is, whether the patient who desires to disenroll actually does so is dependent on a number of other factors, such as availability of alternate coverage (e.g., no preexisting conditions), cost of alternate coverage, and the opportunity to switch plans (e.g., employer-offered choices). While clearly a measure of intention rather than behavior, the desire to disenroll is an important bottom-line indicator of patient satisfaction with care. Understanding the determinants of the desire to disenroll may have significant policy implications for the management strategies managed care organizations use to control costs.

METHODS

SURVEY DESIGN AND DATA COLLECTION

The health plan from which we obtained patient satisfaction data contracted with more than 120 physician groups (medical group practices and independent practice associations) in multiple sites throughout California. Each contracting group provided medical care to an enrolled population under a capitated contract (either partial or full capitation). While we have data from one health plan only, each group provided care to enrollees from multiple health plans and also to patients covered by insurance types, such as preferred provider organizations, Medicare, and commercial indemnity insurance. The health plan conducted a telephone survey in the fall of 1993 of its enrollees age 18 and older who had used medical care at least once in the previous year. The goal was to survey at least 140 patients from each contracting group to facilitate comparisons among groups. Enrollees from each group were sampled randomly. In medical group practices with more than one site, the size of the random sample from each site was proportional to the total number of enrollees in that site. In 15 groups, fewer than 100 patients were successfully surveyed.

The survey was based on the second edition of the Group Health Association of America (GHAA) questionnaire of consumer satisfaction (Davies and Ware 1991). Twenty-four of the original 31 questions that asked respondents to rate various aspects of their care in several categories (overall, access,

finances, technical quality, communication, choice and continuity, interpersonal care, and outcomes) were retained in the health plan survey. The health plan survey omitted questions in this series regarding overall care, finances, and outcomes of care, although a question regarding overall care was included in a different format. In an effort to ease telephone administration, instead of the 5-point Likert-type scale used in the GHAA survey to rate medical care (from poor to excellent), survey participants were asked to rate their care on a scale of 1 to 10 (1 = *unacceptable*, 10 = *superior or excellent*). In addition, we added five questions to the survey about obtaining specialty care, including whether patients had wanted to see a specialist, whether they obtained specialty referral, and their satisfaction with various aspects of the specialty referral process. A single question queried, "If you had the opportunity, would you change from the health plan?" A follow-up question asked the reason for wanting to change for those who had responded affirmatively. The health plan survey also contained five items on basic demographic characteristics (race, education, income, age, and gender) and a single item about previous insurance type.

An external survey firm hired by the health plan conducted the survey. The firm completed as many telephone calls as necessary to obtain 140 respondents from each group. Of the 52,525 attempted calls, 6,403 did not meet eligibility requirements (younger than age 18 or nonuser of medical care), and 23,096 had wrong or disconnected numbers. Of those reached and eligible, 5,830 persons refused to participate in the survey, and 17,196 completed the survey, for an overall response rate of 45 percent and a completion rate of 75 percent.

ANALYSIS

We created four satisfaction scales from the 24 satisfaction items. Internal consistency reliabilities (Cronbach 1951) were adequate for each of the three multiple-item scales: access to hospital and emergency care (2 items, alpha reliability = 0.75), convenience of care (9 items, alpha reliability = 0.88), and doctor quality (including technical and interpersonal aspects of care) (12 items, alpha reliability = 0.94). A single item was used to assess access to specialty care. Items correlated more highly with the score for the scale they represented (corrected for item overlap) than they did with the other satisfaction scales, providing support for item discrimination across scales (Hays and Hayashi 1990). (Scale components are presented in the Appendix.)

Desire to change health plan ("If you had the opportunity, would you change from the health plan?") was regressed (logistic model) on the satisfaction scales and on patient characteristics. Persons who stated that they were

not sure if they would change were treated as if they would not. The patient characteristics consisted of one continuous variable (number of times the patient used medical services in the past 12 months), two multiple-category variables (household income, education), and four dichotomous variables (gender, race, having wanted to see a specialist in the previous 12 months, having had managed care insurance previously). Because age was not linearly related with the likelihood of wanting to leave the plan, we divided this variable into three categories (< 28, 28-59, > 59) using dummy variables (see Table 1 for the distribution of the age variable with respect to the desire to disenroll). Furthermore, our initial analyses indicated that gender was unexpectedly an important predictor variable. We therefore considered several multiplicative interaction terms between gender and the other independent variables and retained the one significant interaction (gender with number of visits in previous year) in the model.

We also estimated a model that included only those persons who had felt that they needed to see a specialist at least once in the previous year, even after discussing their problem with their primary care physician. This model included as an independent dichotomous variable whether they actually had seen the specialist when they felt they needed to.

For both models, we considered the possibility of a clustering effect resulting from sampling enrollees at the level of the medical group. We used Huber's formula (Huber 1967; White 1980) to provide robust estimates of standard errors under conditions of clustering. Huber has provided a scheme for correcting the standard errors to provide a more appropriate significance test when the sampling method is more complex than simple random sampling. This correction uses the intraclass correlation and would be larger with an increasing value for this correlation. Furthermore, we estimated a weighted regression model, taking into account the average number of enrollees from the health plan per group. All analyses were conducted using STATA, Release 4 (1995, College Station, Texas). Results were similar whether or not we adjusted for intracluster correlation and weighting. Therefore, we only present results from the unweighted models without Huber correction.

The majority of the variables in the analysis had fewer than 5 percent missing data. However, previous insurance type, household income, access to specialty care, and convenience of care had approximately 15 percent missing data. To reduce bias from missing data, sample means were imputed for missing values, and a dummy variable indicator of whether imputation was necessary was included in the model (Raymond 1986). The dummy variable was not significant in any of the models, indicating that there was not a systematic difference between those with and without missing data. Because

TABLE 1 Characteristics of Respondents

	<i>Frequency (percentage)</i>	<i>Proportion Wanting to Leave the Plan^a</i>
Gender (N = 17,196)		
Female	65	21
Male	35	16
Race (N = 16,846)		
White	71	19
Nonwhite	29	18
Education (N = 17,001)		
High school or less	27	14
Some college	32	19
College graduate	41	23
Previous insurance (N = 14,213)		
Managed care	50	18
Nonmanaged care	50	23
Desire to see specialist (N = 16,977)		
Yes	40	26
No	60	14
Household income (N = 14,731)		
Less than \$20,000	9	14
\$20,000-\$39,999	34	17
\$40,000-\$74,999	42	20
More than \$75,000	15	25
Age, in years (N = 16,900)		
18-27 ^b	10	13
28-40 ^c	40	21
41-59 ^d	40	21
> 59	10	13
Number of visits (N = 17,196)		
1 ^b	10	18
2-4 ^c	40	18
5-15 ^d	40	21
> 15	10	19

Note: The total number of respondents is 17,196; however, not all persons answered every question. Frequencies are calculated based on the total number of respondents to each question.

a. Proportion within each category reporting that they wanted to leave the plan.

b. Upper bound represents 10th percentile of this category.

c. Upper bound represents median of this category.

d. Upper bound represents 90th percentile of this category.

results were the same whether or not imputation was performed, we present only results for models with imputation.

Finally, we calculated the relative risk of wanting to leave the health plan by comparing the responses at the 10th versus the 90th percentiles for all nondichotomous independent variables and for the two categories of each dichotomous variable, while holding other factors constant at their medians.

RESULTS

Characteristics of respondents and the percentage of persons in each category who wanted to change from the plan are given in Table 1. Nineteen percent of patients ($N = 3,288$) stated that they would change from the health plan if given the opportunity, and 8 percent ($N = 1,377$) were unsure. Respondents had used medical services a median of four times in the past 12 months, and 40 percent of respondents had wanted to see a specialist in the past 12 months, even after discussing the problem with their primary care doctor. Thirty-two percent of the 3,288 persons who stated that they wanted to leave the plan chose dissatisfaction with the quality of care as the reason for wanting to leave, while another 32 percent cited problems with access to care as the principal reason. The remainder cited a need for additional coverage, cost, and other considerations.

Persons who wanted to leave the plan were significantly more dissatisfied in all four scales than those who did not want to leave or were not sure (see Table 2). Table 3 shows the proportion of persons who stated that they wanted to leave the plan by response intervals, with the upper bound of each response interval corresponding to the 10th percentile, median, and 90th percentile for each scale. The proportion reporting that they wanted to leave the plan is highest for those reporting the lowest scores within each dimension of satisfaction.

All independent variables in the model were predictive of wanting to leave the health plan with the exception of race and age. The highest correlation between independent variables was between the doctor quality and convenience scales ($r = 0.82$), indicating that these two scales shared 67 percent variance in common. Previous studies have consistently found high correlations among different domains of consumer satisfaction (Marshall et al. 1993). Other scales were correlated at 0.65 or lower, with the lowest correlation being between access to specialty care and access to hospital care scales (0.55). All other predictor variables had correlations of lower than 0.5. Models that retained either the doctor quality scale or the convenience scale did not differ significantly from each other or from the model retaining both. Table 4

TABLE 2 Mean Scale Values Broken Down by Response to Desire to Want to Change Health Plans

Scale	Desire to Change Plans?			
	Overall	Yes	No	Unsure
Access to specialty care (N = 14,331)	7.21 (± 2.58)	5.15 ^a (± 3.15)	8.04 ^b (± 2.29)	6.69 (± 2.71)
Convenience (N = 17,181)	7.88 (± 1.62)	6.61 ^a (± 2.75)	8.54 ^b (± 1.83)	7.74 (± 2.16)
Access to hospital care (N = 14,779)	8.11 (± 2.19)	6.61 ^a (± 1.87)	8.26 ^b (± 1.36)	7.47 (± 1.49)
Doctor quality (N = 17,174)	8.21 (± 1.66)	6.94 ^a (± 2.08)	8.59 ^b (± 1.34)	7.84 (± 1.58)

Note: Mean scale values ($\pm$ standard deviation) are presented for the overall scale, including all respondents, and for each category response to the question, "If given the opportunity, would you switch from the health plan?" Means are calculated based on possible scale values of 1 to 10, where a value of 1 = *unacceptable care* and 10 = *superior or excellent care*.

a. $p = 0.001$ for comparisons between yes versus no responses and yes versus unsure.

b. $p = 0.001$ for comparisons between no versus unsure responses.

contains the results from the main logistic regression model predicting desire to leave.

The relative risks calculated from the coefficients of significant independent variables in the regression mode are shown in Table 5. Dissatisfaction in all measured satisfaction dimensions increased the probability of wanting to change from the health plan, with the relative risk of wanting to leave being highest for those persons who rated their satisfaction with access to specialty care and convenience in the lowest 10th percentile (on a scale of 1-10, with 10 representing highest satisfaction). Based on this model, the percentage of patients wanting to leave the plan is 19 percent for those at the lowest 10th percentile on satisfaction with access to specialty care scale compared to 7 percent for those at the 90th percentile, adjusting for all other factors. This represented a relative risk (RR) of 2.7. Similarly, 17 percent of those rating their satisfaction with convenience of medical care at the 10th percentile would want to leave the plan, as compared to 7 percent at the 90th percentile (RR = 2.6). Dissatisfaction with the doctor quality dimension and with access to hospital and emergency room care yielded lower RRs. Interestingly, the RR for wanting to leave the plan for women as opposed to men was 1.7, even after controlling for the interaction term (Gender $\times$ Number of Visits) and all other demographic variables in the model.

TABLE 3 Proportion of Persons Indicating They Wanted to Leave the Plan for Specific Satisfaction Scale Intervals

<i>Scale</i>	<i>Scale Interval^a</i>	<i>Proportion Wanting to Leave the Plan^b</i>
Access to specialty care (<i>N</i> = 14,331)		
	1-3	57
	4-8	21
	9-10	7
Convenience (<i>N</i> = 17,181)		
	1-6	47
	7-8	19
	9-10	7
Access to hospital care (<i>N</i> = 14,779)		
	1-5	47
	6-9	19
	10	9
Doctor quality (<i>N</i> = 17,174)		
	1-6	51
	7-9	17
	10	8

a. The upper bound of each scale interval represents the 10th, 50th, and 90th percentile value of each scale. The values differ for each scale due to the difference in response distributions. On each scale, a value of 1 = *unacceptable care* and 10 = *superior or excellent care*.

b. The proportion of persons wanting to leave the plan for each scale interval is calculated by dividing the number of persons who rated their satisfaction to be within that interval and wanted to leave by the total number of persons who rated their satisfaction to be within that interval. These proportions are unadjusted for any other characteristic.

The model that included only those persons who felt that they had needed to see a specialist at least once in the previous year produced similar results, with all independent variables being predictive of wanting to leave other than race and age. This model also included whether the respondents actually saw the specialist when they felt they needed to as an additional independent variable. In this model, persons who were at the 10th percentile of satisfaction with access to specialty care were nearly three times more likely to want to leave the plan as those in the 90th percentile (RR = 2.9 [2.8, 3.3]) (see Table 5). In fact, 36 percent rating their satisfaction with access to specialty care at the 10th percentile would change from the plan if given the opportunity, compared to 13 percent at the 90th percentile. Persons who reported that they had not seen the specialist when they felt they needed to were 1.4 (confidence

TABLE 4 Logistic Regression Model Predicting Desire to Leave the Health Plan (N = 17,123)

<i>Variable</i>	<i>Parameter Estimate</i>	<i>SE</i>	<i>p</i>
Intercept	2.32	0.19	0.0001
Doctor quality ^a	-0.16	0.02	0.0001
Convenience ^a	-0.26	0.02	0.0001
Access to specialty care ^a	-0.16	0.01	0.0001
Access to hospital care ^a	-0.08	0.01	0.0001
Gender ^b	0.54	0.06	0.0001
Number of visits ^c	0.01	0.00	0.0059
Previous insurance ^d	0.25	0.05	0.0001
Education ^e	-0.16	0.03	0.0001
Wanted to see a specialist ^f	0.39	0.05	0.0001
Income ^g	0.05	0.02	0.0023
Race	-0.00	0.05	0.9726
Gender × Number of Visits interaction	-0.02	0.01	0.0050
Age (< 28)	0.00	0.01	0.7347
Age (28-59)	0.01	0.00	0.0620
Age (> 59)	0.00	0.00	0.8105
Imputation term	0.07	0.05	0.1264

a. Persons with higher scores (more satisfied) are less likely to want to leave.

b. Women are more likely to want to leave than men.

c. Persons with more visits are more likely to want to leave.

d. Persons previously in managed care plans are less likely to want to leave.

e. Persons with lower education are less likely to want to leave.

f. Persons who wanted to see specialist are more likely to want to leave.

g. Persons with higher income are more likely to want to leave.

interval [CI], 1.3, 1.5) times as likely to want to leave as those who had seen the specialist.

DISCUSSION

In an effort to curtail costs and improve the appropriateness of use, most managed care organizations have limited direct access to specialists. Enrollees of managed care organizations have been shown to be generally satisfied with the care they receive, but they have rated satisfaction with access to and quality of specialty care lower than overall care (Davis et al. 1995; Blendon et al. 1994). While such dissatisfaction may have quality of care implications that

TABLE 5 Relative Risk of Wanting to Leave the Health Plan for Significant Predictors for Both the Full Model ($N = 17,123$) and the Model Restricting Those Who Wanted to See Specialist in Past Year ($N = 3,288$)

<i>Variable</i>	<i>Full Model Relative Risk (95 percent confidence limits)</i>	<i>Restricted Model Relative Risk (95 percent confidence limits)</i>
Access to specialty care	2.67 (2.52, 2.82)	2.86 (2.77, 3.30)
Convenience	2.58 (2.39, 2.77)	2.22 (2.06, 2.55)
Doctor quality	1.79 (1.67, 1.91)	1.84 (1.71, 2.08)
Access to hospital care	1.46 (1.39, 1.54)	1.46 (1.37, 1.60)
Female gender	1.65 (1.56, 1.74)	1.57 (1.45, 1.69)
Wanted to see a specialist	1.41 (1.35, 1.46)	—
Did not see a specialist	—	1.42 (1.35, 1.50)
College graduate ^a	1.35 (1.28, 1.42)	1.28 (1.20, 1.40)
Previously not in managed care	1.25 (1.20, 1.31)	1.25 (1.18, 1.32)
Number of visits	0.84 (0.79, 0.90)	0.80 (0.72, 0.88)
Household income ^b	0.79 (0.74, 0.84)	0.73 (0.67, 0.79)

Note: Relative risks for continuous variables were calculated for the comparison of values at the 10th versus the 90th percentiles for each independent variable. For categorical variables, risks were calculated for the comparison of the named category (i.e., female gender or wanted to see a specialist) with the unnamed category (i.e., male gender or had not wanted to see a specialist). Confidence intervals for the relative risks were calculated with a model centered at median values for all variables.

a. Compared to high school or less.

b. Compares those stating household income is \$20,000-\$29,999 to those stating it is more than \$75,000.

need to be investigated further, this study has demonstrated that dissatisfaction with access to specialists is a significant predictor of the desire to disenroll.

This is true even when controlling for other satisfaction dimensions and demographic characteristics. In separately examining the determinants of wanting to leave the plan for only those persons who had wanted to see a specialist in the past year, we found that those persons who did not get to see the specialists were nearly 11/2 times more likely to want to change plans as those who had seen the specialist. Dissatisfaction with convenience of medical care, which included items that measured general access and choice of providers, was also strongly predictive of wanting to disenroll, while dissatisfaction with doctor quality and access to hospital and emergency care were less highly predictive.

It is important to make the distinction between the desire to disenroll and actual disenrollment. Because most insurance coverage is through an employer, all disenrollment is not voluntary. For example, persons who change jobs, or whose employer chooses a new health plan, disenroll for reasons that may not have to do with dissatisfaction. Based on a survey of 3,000 insured, employed adults in three large cities, Davis et al. (1995) reported that 23 percent of persons who had changed plans in the past 3 years did so voluntarily. Rates of disenrollment, however, do not capture persons who would like to change plans but have no options to do so. Furthermore, even if the employer offers a choice of health plans, the consumer may be limited in his or her options by differential costs or by his or her own preexisting conditions. For these reasons, actual disenrollment patterns may not accurately reflect dissatisfaction with care. The fact that we found that 19 percent of respondents wanted to leave the plan while most studies report overall disenrollment rates in the single digits (Shimshak et al. 1988) is consistent with this hypothesis. Despite the numerous motivations for disenrollment, the desire to leave a plan may therefore be more indicative of satisfaction than are actual disenrollment rates.

We were surprised that gender was highly associated with wanting to leave the plan. The multiplicative interaction term between gender and the number of visits suggested that women with more visits were more likely to want to leave the plan. One possible explanation for this finding is the limitations placed on gynecological services in managed care organizations. Another reason that women may want to disenroll more than men is that they are the main family decision makers with respect to health care (more than 70 percent of the time), especially for their children. Women are often the ones in the family who decide whether a child needs care, make the appointment, communicate with the health care provider, and are responsible for ensuring that the child adheres to prescribed treatment (Berg 1991). Because of this greater interaction with the health care system overall, women have a larger number of opportunities for dissatisfaction, which may lead to desire for plan change.

Our study has several limitations. First, these results pertain to enrollees of one plan only, although they received their medical care in more than 120 capitated medical groups. In general, the respondents were female, relatively young, white, and middle class. While the response rate to this survey is equal to or better than many consumer surveys, we do not know how the characteristics of nonrespondents compare to those of respondents. Furthermore, only persons who had used medical care at least once in the previous year were surveyed. We do not know whether nonusers of health services were, on average, more or less satisfied than users, nor do we know their feelings about wanting to leave the plan. However, users of the plan would be more likely to have experience with the issues that they are rating. In addition, we were unable to control our results for health status, as this particular version of the health plan survey did not contain a health status question. We did adjust our results for age and number of visits, which serve as imperfect proxies for health status. While health status may influence the desire to disenroll, previous research has found that mental health, but not physical health, is associated with satisfaction ratings. The association, while significant, is not large (Marshall, Hays, and Mazel 1996).

Our scale on satisfaction with access to specialty care is based on only one item. However, we did create a six-item scale that combined the single question on satisfaction with access to specialty care with five other questions on satisfaction with various aspects of the specialty referral and appointment process that were asked only of those persons who had wanted to see a specialist in the previous year. We used this multi-item scale (α reliability = 0.90) in the regression model that explored determinants of wanting to leave the plan for those who had wanted to see a specialist. This model did not differ from the model that used only the single-item access to the specialty care scale, which is reported in this article. Furthermore, our ability to examine weighted regression models was limited to a variable that reflected the average number of patients from one health plan only enrolled in each medical group. This does not necessarily reflect the true number of patients in the group because all groups had multiple health plan contracts and also cared for nonmanaged care patients. Because we could only partly examine weighted models, we cannot generalize our results to the eligible population. While both the size and the organizational structure of the group may be related to satisfaction (Barr 1995), this data set did not provide information on these factors.

While lower values on all four dimensions of satisfaction independently influenced the desire to disenroll, persons having lower satisfaction with access to specialty care and with convenience of care were most likely to want to leave the plan. Frequent changes in enrollment may lead to discontinuity

of care and compromise quality, especially for those with chronic conditions (Marshall et al. 1993). Yet, persons with chronic diseases may most require specialty care. If they are dissatisfied with their access to this care, they may be more likely to disenroll from the plan (assuming they have both the opportunity and availability of alternate choices). This potential for continuity of care disruption is especially important when a greater percentage of Medicare and Medicaid recipients will be enrolling in prepaid health plans. Because limiting direct access to specialists is a cardinal feature of most managed care organizations, the potential impact of these limitations on disenrollment needs to be given special policy consideration. Future studies on patient satisfaction should include questions on satisfaction with various aspects of access to specialty care and further explore the reasons that enrollees of managed care organizations, especially women and those with chronic diseases, have for wanting to disenroll. Ideally, a prospective longitudinal study could survey persons at the time of enrollment regarding their satisfaction with access to specialty care and other dimensions of satisfaction and resurvey them at 1 and 2 years regarding their satisfaction, reasons for dissatisfaction, desire to disenroll, and actual disenrollment. Furthermore, programs designed to educate consumers regarding managed care systems should address both the advantages and disadvantages of limiting direct access to specialists, and managed care organizations may need to reexamine their approaches to the specialty care referral process.

APPENDIX

Items Included in Satisfaction Scales

Doctor quality (includes technical quality, communication, and interpersonal factors)

- Thoroughness of examination and the efforts of your physician to determine your medical problem
- Skill, experience, and training of doctors
- Ability of physician to treat your medical problem
- Explanation of medical procedures and tests by the physician
- Attention given to what you have to say by the physician
- Advice you get about ways to avoid illness and stay healthy
- Friendliness and courtesy shown to you by doctors
- Friendliness and courtesy shown to you by staff
- Personal interest in you and your medical problems
- Respect shown to you, attention to your privacy
- Amount of time you have with doctors and staff during an appointment
- Getting the prescriptions you feel you need from your doctor

Access to hospital and emergency room care

- Access to hospital care if you need it
- Access to medical care in an emergency

Convenience of care (includes general access)

- Convenience of location of the medical group office
- Hours when office visits can be scheduled
- Access to medical care whenever you need it
- Arrangements for making appointments by phone
- Length of time you wait between making an appointment for routine care and the day of your visit
- Length of time you wait at the medical group office to see the doctor
- Arrangements for choosing a personal doctor
- Ease of seeing the doctor of your choice when you visit your medical group
- Ease of getting your prescriptions filled

Access to specialty care

- Access to specialty care if you need it
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