Upstream Or Downstream: Determinants Of Consumer Willingness To Recommend An HMO

By: **David R. Williams,** Stephen J. O'Connor, and Richard M. Shewchuk

Abstract

Understanding the attributes that explain an HMO members' willingness to recommend a health plan is considered by many to be critical in a competitive managed care market. The study reported in this article examines the relationship between provider panel composition on overall willingness to recommend a health plan. Our results indicate that a strong association exists between an HMO member's available choice of primary care physician and recommendation of their primary care physician with overall HMO members' recommendation of the health plan. Interestingly, a member's recommendations of hospitals and specialists did not influence HMO member's willingness to recommend a health plan.

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Upstream or Downstream

Determinants of Consumer Willingness to Recommend an HMO

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Summary: Understanding the attributes that explain an HMO members' willingness to recommend a health plan is considered by many to be critical in a competitive managed care market. The study reported in this article examines the relationship between provider panel composition on overall willingness to recommend a health plan. Our results indicate that a strong association exists between an HMO member's available choice of primary care physician and recommendation of their primary care physician with overall HMO members' recommendation of the health plan. Interestingly, a member's recommendations of hospitals and specialists did not influence HMO member's willingness to recommend a health plan. **Key words:** *consumer*, *decisions*, *HMO*, *primary care*

OVER THE PAST DECADE managed care has become the dominant means of providing health care to workers (Gabel et al., 2000). Currently, approximately 90% of U.S. workers participate in some form of managed care. This is up from 48% in 1992, with 35% participating in health maintenance organizations (HMOs) (NCQHC, 2000). Despite the prevalence of enrollment in managed care plans, there is still much confusion among consumers regarding managed care. For example, the 2000 Health Confidence Survey of the Employee Benefit Research Institute found that 61% of managed care enrollees reported that they have never been enrolled in a managed care plan, and nearly 40% of respondents reported that they were not at all familiar with managed care health plans (Employee Benefit Research Institute, 2000).

Even with this confusion, there has been a proliferation in the press about the new age of "consumerism" (Haugh, 1999; Belcher, 1998), with some suggesting that the future of health plans lies in their ability to allow consumers to create their own virtual networks and health plans (Harris et al., 2000). Directly associated with this has been the rush on the part of managed care organizations to create greater choice via new products with open access directly to specialists (bypassing the primary care physician gate-keeper), and/or point-of-service products that pay for a portion of the cost if the member utilizes an out-of-network provider (Gamble et al., 2000; Wholey & Christianson, 1994). Yet to date, there have been few studies on these new products (Haugh, 1999) nor a complete explanation as to the attributes HMO members' desire. Thus insurers may be creating managed care products that may be of lesser value to HMO members.

Therefore, this study seeks to examine the gap in the literature surrounding HMO members' willingness to recommend a health plan. Specifically, we are interested in the relationship between provider panel composition and an HMO member's overall willingness to recommend a health plan.

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BACKGROUND

There have been numerous studies on HMOs and determinants of health plan selection. The majority of these studies have focused around the areas of price sensitivity (Buchmueller & Feldstein, 1996; Dowd & Feldman 1994/1995; Feldman et al., 1988; Welch, 1986), physician panel size and choice of providers (Buchmueller & Feldstein, 1996, Chernew & Scanlon, 1998; Tumlinson et al., 1997), access and convenience (Davis & Schoen, 1998; Feldman et al., 1988; Reschovsky, 1999/2000), and plan quality (Clancy, 1999; Hibbard & Jewett, 1996). The area that has received the most attention in terms of empirical studies has been price sensitivities (Chernew & Scanlon, 1998). As expected, HMO members have been found to be price sensitive.

Tumlinson et al. (1997) note that within "[s]tudies on consumer choice since 1980, consumers have consistently ranked cost, choice of providers, and a strong doctor/patient relationship as very important in choosing and remaining in a specific health plan." Additionally, physician panel size has also been equated with health plan satisfaction. Buchmueller and Feldstein (1996) found physician panel size to be a factor in health plan selection for members covered under the University of California system. They found that when there was an overlap in physician panels "the more sensitive employees will be to price." Yet, price is not the only determinant, as both Buchmueller and Feldstein (1996) and Chernew and Scanlon (1998) found members to be attracted to health plans with large provider panels; however, neither study reported the composition of these panels (i.e., the ratio of primary care to specialists).

This lack of research on the HMO members' preference related to the composition of, and satisfaction with, the provider panels within HMOs prompted us to further examine anecdotal conversations the authors' have had with HMO executives regarding primary care physicians being "upstream" of specialists and hospitals in terms of explaining HMO member satisfaction. By *upstream* we mean that HMO members' rating of choice among primary care physicians and willingness to recommend primary care physicians explains more than HMO members' recommendation of hospitals and specialists. Thus, this use of the term *upstream* is an expansion of that used by other researchers (see Porter, 1980; Conrad et al., 1988). As used here, *upstream* is not limited to describing vertical ordering along the value chain with respect to an entities core technologies (Thompson, 1967), as it has a prescriptive connotation as well (i.e., it is better to be upstream than downstream). It is in part due to this prescriptive view that health systems acquired primary care physicians (i.e., to gain access to HMO contracts). Therefore, this article takes the view that an HMO is (among other things) a vertically integrated network of providers, and that providers are also viewed as being upstream or downstream in terms of their relationship to an HMO member's recommendation of a health plan.

Hence, we posit that:

H_{1a}: HMO members' rating choice of primary care physicians will explain more than recommendation of specialists and hospitals in terms of members' overall recommendation of HMO.

H_{1b}: HMO members' willingness to recommend their primary care physician will explain more than recommendation of specialists and hospitals in terms of members' overall recommendation of HMO.

An understanding of these relationships is important as employers have traditionally turned to HMOs to assist with managing their health care costs. HMOs have been able to offer lower premiums than other health insurance products by reducing utilization of hospital and specialist services, as well as negotiating discounts from these providers (Janssen & Loubeau, 2000). HMOs have tended to focus on hospitals and specialists because they

have accounted for approximately 57% of the health care costs for the commercial managed care market, with primary care services contributing approximately 13% (Tiber Group, 1996). Without the promise of greater volume (Janssen & Loubeau, 2000), it is unknown what types of discounts the HMOs will be able to receive from hospitals and specialists, and thus pass on to the employers.

The survey instrument used in the present study included a variety of additional variables that might explain HMO members' willingness to recommend the HMO. Although initially we did not have formal theories and propositions to support their specific relationships, we believed that a positive relationship existed between these variables and the HMO members' willingness to recommend the HMO. Therefore, we included them in our analysis. They include: recommendation of emergency room/urgent care center, ease of referral, and the provision of clear written instructions.

Finally, Lurie (1997) tells us "[t]he point of all this work on access is, after all, not to bash managed care as a delivery mechanism, but to sort out which system characteristics . . . seem to matter, not only for maintaining access, but for expanding it." Without knowing these system characteristics, HMOs and other health insurance products may be creating large expensive physician panels that the HMO member views as of marginal value. It is with this in mind that the present study was undertaken.

METHOD

The data set used in this analysis was gathered by an independent polling corporation on behalf of a midwestern state. Research participants were 2,427 HMO-covered households that had obtained coverage through employment with the state. The survey was conducted by telephone, and the survey questions were directed to the household member most familiar with the health care received by all the household members covered by the plan. For the 1997 plan year there were 34 distinct health care plans that could include a member household. In 86.5% of the cases (2,099), the responses were provided by the enrolled subscriber; the remaining 13.5% (328) case responses were provided by another plan member within the household. In 29.6% (719) of the cases the member had chosen single coverage; in the other 70.4% (1,708) of the cases the member had chosen family coverage. Respondents were 28.3% (687) male, 38.1% (925) female, and 33.6% (815) did not specify. Ethnicity of participants was not evaluated. Calls were distributed randomly as respondents were available and represent 27 of the 34 health plans. Of the 27 HMOs that were represented in the survey, none represented less than 2.6% or more than 4.8% of the responses.

The independent variables used in the model were:

- primary care physician recommendation
- primary care physician choice rating
- specialist recommendation
- emergency room/urgent care center recommendation
- hospital recommendation
- rating of provision of written information related to covered services, referral, and administrative issues
- rating of ease of referral to a specialist
- years in health plan

The dependent variable used was the recommendation of the health plan. A 4-point Likert scale was used for both dependent and independent variables.

RESULTS

We began with the hypothesis that a proxy measure for a plan member's satisfaction with a plan would be the member's likelihood of recommending the plan. A simple frequency analysis of the overall satisfaction of plan members with their health care plan was undertaken, as was a frequency analysis of the overall HMO members' willingness to recommend an HMO. We found a high mean value ($M = 3.32$, $SD = .72$), suggesting high member willingness to recommend their satisfaction with the health plan.

We also had two concerns that we wanted to address: length of time enrolled in the plan

and primary care physician utilization. We first looked for differences with respect to health plan recommendation between members who had been covered in the plan for less than five years ($N = 1{,}215$, $M = 3.28$, $SD = .72$), and those members who had been covered in the plan for more than five years ($N = 1{,}170$, $M = 3.43$, $SD = .68$). We found that there was a difference, but it was not significant ($p = .737$). Thus, in all subsequent analyses the mean for all health plan members was employed. Next, we performed a one-sample t-test to evaluate whether there would be a difference in the means of members recommending a health plan based on primary care utilization. The mean of primary care visits of all members was 4.56 ($SD = 4.73$) visits. This mean was then compared to those members who utilized primary care services less than the mean to those who utilized primary care services more than the mean. The difference between the two groups was not significant ($p = .118$). Again, we are able to use the mean for all health plan members in testing our hypothesis.

As stated earlier, we wanted to test the relationship of variables such as member's recommendation of primary care physician, perception of primary care physician choice, recommendation of specialist, recommendation of emergency room/urgent care center, recommendation of hospital, rating of written information, and rating of ease of referral on the member's recommendation of health plan.

Our initial regression analysis of the above variables explained 48.2% of overall health plan recommendation. However, we were concerned with the effect of hospital recommendation ($p = .350$) and specialist recommendation ($p = .317$) on the other variables. Therefore, to test for multicollinearity we ran partial correlation analyses separately for both and found that the observed significance level was large for hospital recommendation ($p = .313$) and specialist recommendation ($p = .210$). Thus, as we detected multicollinearity, we omitted these two variables and ran a second regression analysis without the variables of hospital recommendation and specialist recommendation (see Table 1). This analysis collectively explained 42.2% of overall health plan recommendation.

DISCUSSION, LIMITATIONS, AND IMPLICATIONS

Where others have shown the importance of cost, convenience, and access in determining the satisfaction with one's health plan (Dowd & Feldman, 1994; Mummalaneni & Gopalakrishna, 1997), we sought to address the often-argued relative importance of

Table 1. Regression coefficients for the overall HMO member satisfaction, specialists and hospital excluded

Item description	Unstandardized coefficients	Standard error	Standardized coefficients beta	*t*	*p*
Primary care physician recommendation	.235	.032	.231	7.301	$p < .0001$
Emergency room/urgent care rating	.125	.027	.135	4.613	$p < .0001$
Primary care physician choice rating	.193	.030	.215	6.365	$p < .0001$
Health plan provision of information rating	.255	.027	.293	9.385	$p < .0001$
Ease of specialist referral rating	6.03	.014	.126	4.325	$p < .0001$

$R^2 = .422$

primary care physicians (as opposed to hospitals and specialists) in terms of explaining HMO member recommendation. The authors recognize that it would be fruitful to study these respondents over several years to examine any change in preferences. We also recognize that this group may be experiencing favorable selection (Hellinger, 1995), thus the relative unimportance of specialists and hospitals. However, overall we believe that in this era of rising premium costs (Gabel et al., 2000) and expanding networks (NCQHC, 2000), it is important to understand precisely what components of the provider network HMO members' value as a framework for providing efficient care, and we hope that this study might be a starting point for others to build upon.

The study found satisfaction with primary care physician and choice of primary care physician to be significant in explaining overall member satisfaction. HMOs were cognizant of this fact, with the 1980s and early 1990s seeing an abundance of group and staff-model HMOs arising (Advisory Board, 1993). Aetna's HealthWays was but one example of this foray into employing primary care physicians. Hospitals are also well aware of the importance of primary care, with 85% of hospitals initiating an integration strategy by 1996, despite losing $80,000 per physician practice (Francoer & Tompkins, 1999). In addition, as Reinhardt (2000) notes, an entire for-profit physician practice management industry was created and collapsed during the 1990s.

Nevertheless, the underlying importance of primary physicians remains in the minds of HMO members. Not only was satisfaction with the HMO member's primary care physician found to be important, but the perceived choice among primary care physicians was viewed as significant as well. This aspect may help explain why delivery models with limited primary care physician access had limited success.

In addition, a relationship was observed between HMO members' recommendation of an emergency room/urgent care center and their recommendation of a health plan. It is unknown whether HMO members view the emergency room/urgent care center as an extension of their primary care physician or hospital, but it is the authors' belief that HMO members may view these centers as an extension of their primary care physician. In this vein, it may be informative to look at access, choice, and satisfaction within other outpatient settings as a means to explain overall HMO member satisfaction.

The ability to easily receive care from a specialist was perceived to be of greater significance than the satisfaction with the specialists.

Our analysis found no significant statistical association between recommendation of specialist nor recommendation of hospital with a member's overall recommendation of health plan. This finding, while at first seeming counterintuitive to the whole notion of consumer choice and open access, may not be so. The present study does not specifically address HMO members' satisfaction with choice of specialist or hospitals, but it does include the issue of ease of referral to specialists. Our findings show that there is a correlation between ease of referral to specialists and member satisfaction with health plan. Of particular note, it is the process related to ease of specialists and not the recommendation of the specialists itself that was found to be statistically significant. Therefore, the ability to easily receive care from a specialist was perceived to be of greater significance than the satisfaction with the specialists.

The importance that the HMO members placed on the provision of written information related to covered services, administrative issues, and referral procedures may shed some light on the issue of HMO enrollee "confusion" discussed above, and also why recommendation of specialists did not help explain overall HMO recommendation. The study indicates that an association between a plan's rating on the provision of information and the likelihood that HMO member satisfaction exists. Therefore, in order to increase satisfaction, HMOs may wish to enhance their

member education process at the time of enrollment. Specifically, HMOs may wish to provide member education related to specialty and hospital network and the mechanism for referral as stated above rather than expand its network of these types of providers.

Finally, understanding the attributes that comprise a member's willingness to recommend an HMO is important to its ability to manage care and cost across a continuum of resources and time. As providers account for 80% of the health care dollars, it is important to understand the characteristics of these provider panels that members' value in order to expand access to those providers and optimize member satisfaction.

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