The Effects of Method of Presenting Health Plan Information on HMO Enrollment by Medicaid Beneficiaries

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Marketing strategies are critical for enhancing HMO enrollments among Medicaid beneficiaries when they are provided a choice of health plans. This study examined one component of marketing HMOs—the method of communicating the HMO's attributes. The purpose of the analysis was to determine if characteristics of Medicaid beneficiaries who enroll in HMOs vary by method of communicating information about health plan options. Data were analyzed from the marketing component of California's Prepaid Health Research, Evaluation, and Demonstration (PHRED) project. Five communication methods are examined in the article: brochure, film, county eligibility worker presentation, state representative presentation, and HMO representative presentation. The analysis reveals that each communication method is most effective with a different type of beneficiary. No single consumer characteristic is related to HMO enrollment across all five methods, although lack of a private physician and dissatisfaction with a current provider are associated with choice in four methods. Film is the best method for attracting persons who have an ongoing relationship with a provider.

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Health maintenance organizations (HMOs) and other prepaid health plans are being addressed as an alternative to traditional fee-for-service (FFS) care because they encourage competition in the health care market and because HMOs are generally regarded as a less expensive option than FFS care. States and the federal government, which share the costs of the Medicaid program, are seeking to increase enrollments of Medicaid beneficiaries in HMOs and other prepaid health plans to take advantage of potential savings.

One approach available to states is to require beneficiaries to enroll in an HMO. The Omnibus Budget Reconciliation Act (OBRA) of 1981 allows states to request waivers of the freedom of choice requirement provided in the initial Medicaid laws, thus allowing the states to require Medicaid beneficiaries to join HMOs. However, in many states there is enormously strong political opposition to limiting freedom of choice. There is also a concern that Medicaid beneficiaries will be dissatisfied with their health care if their choice is severely limited (DesHarnais 1985; Curbow 1986). So, despite the availability of waivers, many states continue to provide Medicaid beneficiaries with the freedom to choose between HMO and FFS care. Even in the mandatory enrollment situations, a degree of choice exists, in that the beneficiary may choose among HMOs, or among different types of alternative delivery systems (e.g., between an HMO and case management).

When states offer Medicaid beneficiaries the choice to enroll in an HMO, marketing strategies are critical for enhancing HMO enrollments. HMOs must develop a benefit package and a health care delivery system attractive to potential clients. Effective methods for communicating the HMO's attributes must also be designed (Goldsmith 1979; Ullman 1981; Haldeman 1979). In addition, since disenrollment from HMOs has been found to be related to initial misunderstandings of the HMO benefits and operations (Mechanic, Weiss, and Cleary 1983), and—specifically for Medicaid beneficiaries—to pressure to enroll (Ware, Owen, Curbow, et al. 1983), effective methods of communicating information about HMOs are not only important for enrolling Medicaid beneficiaries but also for retaining them.

Research focusing on HMO marketing strategies is scarce, particularly research concerning marketing to Medicaid populations. HMO enrollment studies have focused primarily on characteristics of the enrollees, especially characteristics related to the enrollees' financial or health risks. To a lesser extent, the research has examined characteristics of the health care delivery system (particularly continuity of an established provider relationship) and characteristics of the benefits

plan (premiums, copayments, and service coverage). Little research has examined the methods of communicating the HMO's attributes to consumers.

This article examines both the method of communicating health plan information and the characteristics of those who enroll in an HMO within a Medicaid population. The purpose of the study is to determine if the characteristics of the Medicaid beneficiaries who enroll in HMOs vary by method of presenting information. The study examines data collected by the Prepaid Health Research, Evaluation, and Demonstration (PHRED) project, which tested methods of marketing HMOs to Medicaid beneficiaries in California. Five communication methods are examined: (1) a printed brochure only, and a printed brochure combined with (2) a film presentation or with a presentation by a (3) county eligibility worker, (4) state representative, or (5) HMO representative.

Before describing our analysis of the data, we summarize previous research on HMO enrollment decisions and we describe the PHRED marketing study.

HMO ENROLLMENT LITERATURE

In an extensive review of the research on factors affecting HMO enrollment decisions, Berki and Ashcraft (1980) found mixed results across studies for most variables investigated because of a lack of consistency in methods, instruments, and populations. Only a few central variables are important across studies. In general, HMOs attract consumers when they offer a broad range of services that can be obtained with little out-of-pocket cost and with guaranteed access. The major barrier to enrollment found in the Berki and Ashcraft review is the termination of a satisfactory ongoing relationship with a provider. Luft, in his review of studies during the same time period, concludes that people are unwilling to sever their preexisting physician relationships (Luft 1981). Studies done since these reviews have generally shown that HMOs enroll healthier individuals than FFS plans. This appears to stem from the greater likelihood that younger and healthier persons lack a regular provider for whom they are motivated to remain in FFS plans (Wilensky and Rossiter 1986). These recent findings contradict the early risk vulnerability hypothesis, which postulates that persons with an increased need for health care are more likely to join an HMO because of its cost savings. The recent studies suggest that maintaining a relationship with an established provider outweighs the financial motivation for those at economic risk.

Two initial inquiries into the effects of communication of HMO information on enrollment have yielded limited information. Wolfson, Bell, and Newbery (1984) provided a description of HMO marketing and communication techniques and their success rates among Medicare beneficiaries. However, the relative effectiveness of the techniques was not directly tested; different techniques were used on different types of Medicare groups. A more rigorous analysis was conducted by Ullman (1981), who examined the extent of access marketers had to their potential clients within an employment setting. He found no relationship between on-site marketing access (in terms of marketing presentations given) and HMO enrollments. However, he suggests that these findings are inconclusive because the variables used to measure marketing access were poor.

Because previous studies on HMO enrollment have primarily involved employed populations, their findings may be only partially applicable to Medicaid beneficiaries. Medicaid beneficiaries will not be influenced by financial risks because the Medicaid program assumes financial responsibility for their care (Bice 1975). It is likely that access and provider relationships are more important in the decisions made by Medicaid beneficiaries than decisions made by employed groups. Recent research by DesHarnais (1985) supports this supposition. Analyzing utilization patterns and physician contacts of Medicaid beneficiaries in Wayne County, Michigan, DesHarnais found that low utilization was associated with joining an HMO, while high levels of utilization were associated with not joining. For example, 90 percent of families with no physician contact over the observed time period (ranging from three months to two years) joined an HMO when given the choice. In contrast, fewer than 10 percent of the families who had high monthly levels of utilization joined HMOs. DesHarnais reasons that the low utilizers may decide to join HMOs to gain access to an organized group of physicians. This would provide them with the opportunity to establish an ongoing relationship with a provider. Having similar motivations concerning the desirability of an ongoing relationship with a provider, high utilizers decide not to join, to avoid severing their already existing provider relationships.

PHRED MARKETING STUDY

In response to problems with prepaid health plan contracting for Medicaid services in California in the early 1970s (Spitz 1979; Dept. of Health and Human Services 1982), the Health Care Financing Administration provided a grant to the California State Department of

Health Services to conduct the PHRED project. The PHRED project investigated issues related to rate-setting methods, quality of care evaluation, and member satisfaction measurement in California's prepaid health plans. A major purpose of the PHRED project was to develop and test viable alternatives to door-to-door marketing, the method generally employed by HMOs to enroll Medicaid beneficiaries in California at the time (Dept. of Health and Human Services 1982; Owen and Hanretty 1981). Alternatives to door-to-door solicitation were sought because such marketing is difficult to monitor. States have been reluctant to allow unmonitored marketing to Medicaid beneficiaries because of the potential for misrepresentation and even fraud in marketing practices, a problem that occurred in California in the early 1970s (Spitz 1979; Dept. of Health and Human Services 1982).

The PHRED marketing study was an extensive demonstration comparing door-to-door solicitation and six alternative strategies. Five of the strategies were applied within welfare offices, and the sixth alternative strategy consisted of mailing information packets and enrollment forms to beneficiaries served by the target offices. The marketing strategies were implemented and data were collected at seven sites in California from April 1979 through May 1980. Each site employed each method for a comparable period of time. (In a few instances the period was extended to collect a minimal number of cases.)

Our analysis focuses on the five strategies applied in the welfare office. As a marketing location, the welfare office presents two advantages: (1) all Aid to Families with Dependent Children (AFDC) cash assistance beneficiaries go there at some point during the year, and (2) marketing can be monitored. The five welfare office strategies involved different methods of presenting information about the HMO and traditional FFS options. The content of the presentations was standardized across all methods. Oral presentations were monitored to ensure that content changes did not occur.

The five methods were a printed brochure as the only source of information, and a printed brochure along with one of the following: a film presentation, a presentation by an HMO representative, a presentation by a special state employee, and a presentation by a county welfare office (eligibility) worker. While the last three methods are similar in that they are personal presentations, the presenters in each of these methods bring different approaches, motivations, and expectations to the presentation based on their occupational roles. The three types of presenters were included in the study to detect whether differences in their responsibilities to their employers affected the Medicaid

beneficiaries' enrollment decisions. The HMO representative, unlike the other two types of presenters, was by training and occupation oriented toward a sales approach. Moreover, although required to present specified information on the FFS and HMO options and not working on commission in this study, the HMO representative would have an obvious bias regarding the preferred choice made by the Medicaid enrollees. The state workers were specially trained for the position as their primary job and appeared to be committed to the importance of the study itself and to providing a balanced presentation. The eligibility workers had to add this task to their other responsibilities, and for some workers the extra burden resulted in a negative attitude toward the task of providing health plan information. In addition, because the health plan information was included among many other topics discussed by the eligibility worker during the eligibility process, the Medicaid beneficiary's reaction to the information and the choice situation may have been diminished.

The Medicaid beneficiaries in the welfare office study were residents of the seven welfare office service areas. These individuals were undergoing either the eligibility determination process, if they were new applicants for assistance under the AFDC program, or their annual redetermination of eligibility if they were "old" AFDC eligibles. Each participant was given information through one of the strategies and then asked to make a choice between the FFS delivery system and the available HMOs. Demographic information (e.g., age, ethnicity, education) and information concerning participants' current source of health care were collected through a written questionnaire prior to the presentation of information. A follow-up telephone interview was conducted approximately two months after the presentation. All of those who opted for an HMO and a 10 percent randomly selected sample of those who chose FFS were included in the follow-up. The follow-up interview collected information concerning (1) the beneficiary's choice, (2) recent health care utilization, (3) satisfaction with care, (4) attitudes toward HMOs, and (5) comprehension of the presentation.

The effectiveness of each information presentation method and a profile of the HMO choosers have been reported previously (Owen and Hanretty 1981). The overall HMO enrollment rate was 17 percent, with the HMO representative producing the highest rate (27 percent). The enrollment rates for the other methods were: 22 percent for state worker, 16 percent for film, 12 percent for eligibility worker, and 10 percent for brochure.

Medicaid beneficiaries who chose to enroll in an HMO had different demographic characteristics than those who chose FFS care in

terms of ethnicity, education, marital status, and number of children in the family. Whites chose HMOs at a higher rate than blacks or Hispanics, and those with over nine years of education had a higher rate than those with less education. The widowed and single were less likely to choose the HMO option than those who were married, separated, or divorced. The greater the number of children the more likely the beneficiary was to choose an HMO. The HMO choosers were less likely to have a private doctor or a regular source of care, and they reported fewer doctor visits in the previous year. Furthermore, HMO choosers were more likely to be dissatisfied with their present source of care, to believe an HMO would be better, and to have greater comprehension of the presentation material than those who chose FFS.

Since there are no economic costs to Medicaid beneficiaries for either FFS or HMO, the demographic differences between HMO and FFS choosers are not related to financial incentives as they might be in employed groups. For example, in employed populations HMOs might be a cheaper alternative for large families, but among Medicaid beneficiaries with large families, the greater tendency to choose HMOs must be motivated by other considerations, such as convenient access.

ANALYTIC APPROACH

This article uses the data collected for the PHRED marketing study. It takes the analysis of the PHRED data one step further than the previously reported findings by asking: Do the characteristics of HMO choosers vary by marketing strategy? The analysis includes participants in the five welfare office marketing methods who were not missing data on basic variables and who completed the follow-up interview. The screen used for the first criterion was the presence of data for the following basic variables: (1) demographic characteristics (as indicated by sex and ethnicity), (2) method of presentation, and (3) choice of system (HMO or FFS). We determined that the person had completed the follow-up interview, the second criterion for inclusion in the study, if there were data on at least one of three key items from the interview: reasons for choosing an HMO or FFS, whether it is important to keep one's own doctor, and verification of the choice. These criteria resulted in our sample consisting of 1,565 persons (597 HMO choosers and 968 FFS choosers) of the total 1,933 Medicaid beneficiaries (633 HMO choosers and 1,300 FFS choosers) in the follow-up sample.

Despite the original design, the presentation methods were not applied to equal numbers of persons in each site. So that differences

Table 1: Characteristics of Sample of PHRED Participants

	Mean	*Standard Deviation*
Age (in years)	27.98	10.65
Education (in years)	11.71	1.93
Number of children at home	1.69	1.09
Age of oldest child (in years)	6.58	5.72
Dissatisfaction (1 = very satisfied, 2 = satisfied, 3 = so so, 4 = dissatisfied, 5 = very dissatisfied)	1.80	0.89
Number of doctor visits last year	6.96	9.50
Comprehension score (maximum = 10)	7.45	1.85
	Percent Distribution	
Marital Status		
Married (1)	80	
Single, divorced, separated, widowed (0)	20	
Regular Source of Care		
Yes (1)	46	
No (0)	64	
Has Private Doctor		
Yes (1)	48	
No (0)	52	
Currently Needs Care		
Yes (1)	52	
No (0)	48	
Choice		
HMO (1)	38	
FFS (0)	62	

due to site were not confounded with differences due to presentation method, each variable of interest was tested using a one-way analysis of variance (ANOVA) to see if it differed across sites. Those variables that were significantly different across sites were excluded from subsequent analyses. (A noteworthy variable excluded from subsequent analyses was ethnicity.)

Table 1 presents the descriptive statistics and coding strategies for the variables used in this study. Education is the only demographic characteristic that is markedly different in this study sample compared to nationwide statistics on AFDC adults in Medicaid. The National Medical Care Utilization and Expenditure Survey (NMCUES) found that the nationwide mean for education for AFDC adults in Medicaid is 10.65 years (O'Brien, Mauskopf, Andrews, et al. 1985), which is lower than our study sample's mean of 11.71 years.

Education, number of children, number of doctor visits, and com-

prehension are analyzed as interval data. Dissatisfaction was measured on a five-point Likert-type scale and is analyzed as interval data (Abelson and Tukey 1970; Labovitz 1970). Marital status, regular source of care, private doctor, needs care now, and choice are coded as dichotomous variables and were used as dummy variables in the analysis. (Sex of the participant was not included as a variable in this analysis because it had little variability—only about 7 percent of the study participants were male.)

The analysis was conducted in two steps. First, we conducted a series of two-way ANOVAs to examine whether the characteristics of HMO and FFS choosers varied by presentation method on the variables listed in Table 1. The variables displayed in Table 1, with the exception of choice, were the dependent variables, and the method of information presentation and choice (FFS or HMO) were the independent variables. If the ANOVA yielded a statistically significant interaction between presentation method and choice, it indicated that the difference between HMO and FFS choosers, for that variable, changed as a function of presentation method. Where significant interactions were found, individual cell means were tested for significant differences using the Dunn test for multiple comparisons (Keppel 1973).

The second step of the analysis was a multivariate analysis of the data to examine the relative importance of the characteristics associated with HMO enrollment in each of the presentation methods. Six multiple regressions predicting probability of HMO enrollment were conducted—one for each of the five presentation methods and one for the total sample. The dependent variable was a dichotomous classification of choice (FFS = 0, HMO = 1). For the independent variables, we included each variable for which a significant interaction between choice and presentation method was found in the ANOVA analyses described above. We also included variables that were reported in previous analyses to yield an overall difference between HMO and FFS choosers (Owen and Hanretty 1981).

The preferred statistical technique for multivariate analyses involving a dichotomous dependent variable is logistic regression or logit analysis. In practice, however, linear multiple regression and logistic regression have been shown to yield identical sets of significant independent variables within certain limitations, that is, when the proportion of cases falling into either group represented by the values of the dependent variable ranges between 25 and 75 percent (Cleary and Angel 1983; Knoke 1975). As will be shown later (in Table 4), the dependent variables in each of our six regression models are within this range.

We chose linear multiple regression over logistic regression so that we could compare the coefficients for each independent variable across the six regression models tested. Such a comparison would be problematic with logistic regressions because, unlike linear regression coefficients, the coefficients for the independent variables in a logistic regression vary with the size of the probability in the population of the characteristic represented by the dependent variable (Cleary and Angel 1983)—in this case, the proportion of the population choosing an HMO. Because the proportion of people who chose the HMO option varied by presentation method, we would obtain different size coefficients for variables across methods using logistic regression, even if these variables were equally significant across methods. No such problem would occur for linear regression coefficients.

FINDINGS

Two of the dependent variables yield a significant interaction between choice and method—currently needs care ($F = 3.66$, $df = 4, 1515$, $p < .01$) and regular source of care ($F = 3.72$, $df = 4, 1494$, $p < .005$). In addition, a demographic variable—number of children at home—has a marginally significant interaction ($F = 2.15$, $df = 4, 1519$, $p < .08$). These results indicate that the difference between HMO and FFS choosers, for these variables, is a function of the presentation method.

Table 2 presents the means associated with these significant interactions. HMO choosers in four of the five methods are not significantly different from FFS choosers with regard to their current need for care; however, the HMO choosers report less need for care than FFS choosers in the brochure method (Dunn test $p < .05$). In contrast to this finding in the brochure method, there is a tendency (not reaching significance) for HMO choosers to report more need for care than FFS choosers in the eligibility worker and film methods.

Table 2 also indicates that in the eligibility worker, HMO representative, and state worker methods, HMO choosers are less likely than FFS choosers to have a regular source of care. There are no significant differences between HMO and FFS choosers in the brochure and film methods in terms of regular source of care. This finding is surprising: having a regular source of care was one of the few variables consistently found in previous studies to have been a strong barrier to HMO enrollment (Berki and Ashcraft 1980; Luft 1981). To explore this further, Table 3 presents the percentage who choose an

Table 2: Means of Variables with Significant Choice by Method Interaction

Significant Variables	*Presentation Method*				
	Brochure	*Eligibility Worker*	*HMO Representative*	*Film*	*State Worker*
*Number of Children**					
FFS	1.59	1.79	1.50	1.89	1.72
HMO	1.71	1.65	1.75	1.66	1.81
Regular Source					
FFS	.45	.58†	.56†	.37	.65†
HMO	.43	.35	.34	.32	.39
Needs Care					
FFS	.59†	.46	.55	.49	.53
HMO	.42	.59	.52	.58	.46

*ANOVA interaction marginally significant ($p < .08$).

†FFS significantly different from HMO ($p < .05$).

Table 3: Percent Choosing HMO as a Function of Presentation Method and Report of a Regular Source of Care

Regular Source of Care	*Presentation Method*				
	Brochure	*Eligibility Worker*	*HMO Representative*	*Film*	*State Worker*
Yes	25.0	21.8*	36.0*	44.6	31.8*
No	25.8	42.8	58.2	50.0	57.0

*"Yes" is significantly different from "No" ($p < .05$).

HMO by presentation method and regular source of care. Except in the brochure and film methods, those without a regular source of care choose HMOs 20 percent more often than those with a regular source of care.

One difference between the brochure and film methods and the other methods is that the first two do not rely on a personal presentation. For those who lack an ongoing relationship with a provider, the personal contact in the other presentation methods may provide the trust needed for acceptance of an innovative approach to health care.

Examination of the data also suggests that since the brochure by itself produces such a low level of HMO choice, the lack of relationship between regular source of care and choice in the brochure may be the result of a "floor" effect. The nonpersonal nature of the brochure may

not command the chooser's attention or guarantee that the chooser is exposed to all of the choice information (i.e., the chooser may simply set the brochure aside without reading it). Indeed, previous analyses of the PHRED data indicate that the brochure produces the lowest average level of comprehension of the five methods (7.08 of 10 items correct as compared to the high of 7.72 for the eligibility worker method) (Owen and Hanretty 1981). The resulting ability of the brochure to persuade may be so low that being without a regular source of care cannot enhance HMO enrollments.

On the other hand, the lack of a relationship between regular source of care and choice in the film condition appears to stem from film's high success with the group that is hardest to attract to HMOs—those with a regular source of care. Film is the method closest to television—the medium likely to be the primary source of general information for the Medicaid population, as well as other groups. Familiarity with audio-video presentations through television may be the reason why film surpasses the other methods in attracting those with a regular source of care.

Multivariate Analyses

Table 4 presents the results of the multiple regressions in predicting the probability of choosing the HMO option for all participants as well as the results broken down by method of presentation. The table presents the estimated standardized coefficients (beta weights), the multiple correlation value (R), and the percent of variance accounted for (R^2) for each prediction equation. The standardized coefficient can be interpreted as the change in the probability of HMO choice per unit of change in the independent variable, for continuous variables, and as the increase or decrease in probability of HMO choice if the independent variable equals 1, for dichotomous variables.

As with the ANOVA findings, the results presented in Table 4 indicate that the methods appeal to different categories of Medicaid beneficiaries. Indeed, no single variable is associated with choosing an HMO across all five methods, although dissatisfaction with current provider and not having a private doctor are related to choice in four of the methods. Many of the variables are related to choice in only one or two methods. For example, education is significantly related to choice in the HMO-representative method but not in the other methods (although it almost reaches significance in the film method). Comprehension of the information presented is an important contributor to

Table 4: Multiple Regression Beta Weights for the Equations Predicting HMO Choice in Each Method

		Method				
Variable	*Total Sample*	*Brochure*	*Eligibility Worker*	*HMO Representative*	*Film*	*State Worker*
Married	-.07*	-.04	-.12	-.07	.04	-.04
Education	.03	-.09	.03	.14*	.10	-.01
Number of children	.03	-.07	.03	.12	-.01	.04
Regular source	-.07*	.01	-.02	-.16*	-.02	-.15*
Private doctor	-.19‡	-.17†	-.15*	-.33‡	-.23†	-.08
Needs care	-.03	-.15*	.13	-.05	-.03	-.03
Dissatisfaction	.18‡	.13*	.23†	.16*	.09	.25‡
Number of doctor visits	-.06	-.05	-.07	.01	-.08	-.06
Comprehension	.09†	.20†	.07	-.07	.13	.14*
R	.35	.38	.41	.50	.33	.38
R^2	.12	.14	.17	.25	.11	.15
N	992	239	179	223	147	200
Dependent Variable Proportions						
Y = 1: HMO Choice	.38	.25	.32	.48	.48	.43
Y = 0: FFS Choice	.62	.75	.68	.52	.52	.57

*$p < .05$.

†$p < .01$.

‡$p < .001$.

predicting choice only in the brochure and state worker methods. A regular source of care is important in the HMO-representative and state worker methods—those without a regular source of care tend to choose HMOs.

Listed profiles of the HMO choosers in each condition are based on the results presented in Table 4:

- —*Brochure*. HMO choosers are less likely to have a private doctor, to need care now, and to be satisfied with their present health care provider, but are more likely to have a higher level of comprehension of the choice information than the FFS choosers.
- —*Eligibility worker*. HMO choosers are less likely to have a private doctor and to be satisfied with their present source of care than FFS choosers.
- —*HMO representative*. HMO choosers are likely to have more years of education, to be without both a regular source of

care and a private doctor, and to be less satisfied with their present source of care than FFS choosers.

- —*Film.* HMO choosers are less likely to have a private doctor than FFS choosers.
- —*State worker.* HMO choosers are less likely to have a regular source of care and to be satisfied with their present source of care, but are more likely to have a higher level of comprehension of the choice information than FFS choosers.

DISCUSSION

The findings from the PHRED study provide some of the first information available on marketing HMOs to Medicaid beneficiaries. Previous analyses of the PHRED study data indicated that different methods of presenting health plan information vary in their effectiveness to enroll Medicaid beneficiaries (Owen and Hanretty 1981). This analysis demonstrated that each method of information presentation is most effective with different types of beneficiaries.

These findings have significance for state agencies and HMOs that are interested in increasing HMO enrollment of Medicaid beneficiaries while providing for beneficiary freedom of choice. In selecting a method for presenting choice information, the findings from this study suggest that, in addition to the overall enrollment rate resulting from use of each method (and the method's cost effectiveness), the success of the method with particular types of beneficiaries should also be considered.

It may not usually be possible to target the method to the characteristics of the Medicaid audience. The characteristics of the audience may not be known, for example, or it may be logistically or economically infeasible to match each beneficiary with the ideal presentation method. But occasions may arise when it is possible to select presentation methods based on the known characteristics of a targetable audience. For example, Medicaid beneficiaries in a particular geographic area may be known to have a higher level of education than those in other areas. Since the HMO-representative presentation was the only method where education level was related to choosing an HMO, this might be the ideal method in this situation.

A way around the problems of targeting methods for certain types of Medicaid beneficiaries is to combine methods to enroll a broad range of people; those not responding to one method might respond to

the second. The use of film, for example, with a presentation by a state worker might do well in attracting those with a regular source of care (since film is the best method with those who have a regular source of care) and those without a regular source of care (since the state worker method does particularly well with this group). Combining these methods may result in enrolling more of those with a regular source of care than if the state worker method is used alone, and it may enroll more of those without a regular source of care than the film method alone.

Using film as one of the methods in a multimethod presentation offers several advantages. First, film results in high rates of HMO enrollment even among one of the hardest groups to enroll, those with an ongoing relationship with a provider. Second, a film (or videotape presentation) can provide objective and consistent information, and thus resolve concerns of government payers who want to ensure that no misleading information is presented. Third, film or videotape provides a relatively inexpensive means of presenting information to a large number of individuals (Owen and Hanretty 1981), and this would defray some of the additional costs associated with a multimethod presentation.

In attempting to apply our findings, the specific relationships we found between Medicaid beneficiary characteristics and choice in each method should only be considered a preliminary list. There are undoubtedly other characteristics of Medicaid beneficiaries not studied here but important to consider in choosing a presentation method. Our purpose was not to develop a definitive list of important beneficiary characteristics to consider when choosing a presentation method, but rather to show that, in general, some methods are effective with beneficiaries having certain characteristics, while other methods are effective with other beneficiaries.

This study focused on the decision to enroll in an HMO. The decision to stay enrolled is also an important topic. As mentioned earlier, it has been found that understanding an HMO's benefits and operations is associated with continued enrollment in it (Mechanic, Weiss, and Cleary 1983; Ware, Owen, Curbow, et al. 1983). In two of the methods, brochure and state worker, level of comprehension was associated with choosing an HMO. Since those with higher comprehension are more likely to be enrolled under these methods, perhaps enrollees recruited via these two methods will have lower disenrollment rates.

Research that provides additional understanding of the marketing factors affecting enrollment decisions can assist HMOs and state Medicaid agencies in implementing the most effective methods of marketing to Medicaid beneficiaries. Examining the effect on enrollment

rates of combining presentation methods and the cost effectiveness of combining methods is one such area of research. Investigation of a set of beneficiary characteristics broader than the one used in this study can provide a more complete picture of ways to target methods best for a positive audience response. As a final example, the long-term effects of marketing strategies can be ascertained by looking at the relationship between the presentation method and future disenrollment from the HMO.

The present findings suggest that attention to the effect of a communication medium can improve marketing efforts toward Medicaid beneficiaries and, to some extent, can increase voluntary HMO enrollment and thus decrease Medicaid costs.

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