

## Information as a Key Determinant of Medicaid Managed Care Health Plan Enrollment

Aid to Families with Dependent Children (AFDC) Medicaid recipients in two rural Upstate New York counties were surveyed to identify factors which influenced their enrollment choice between two managed care health plans and the traditional Medicaid fee-for-service plan. Bivariate and discriminant statistical analysis give evidence that the Medicaid client who actively engages in discussions about their health plan choices will be more likely to enroll in a managed care plan. There is also evidence that the information environment, including the Department of Social Services and insurance company representatives influence this decision. Forty-one percent of the Medicaid individuals who choose the traditional Medicaid fee-for-service plan reported that they didn't understand what managed care was.

Lois Wright Morton, Cornell University<sup>1</sup>

Consumer decision making about health insurance and health provider choice, once a set of two independent decisions, has become under managed care structures a simultaneous decision. Market restructuring in health insurance and health provider systems require consumers readjust and reevaluate how they make their personal health decisions.

Asymmetric information in health care decision making has been a historical and continuing issue for consumers. Consumers are frequently the group with the least information despite a high stake in the outcome. This is evident when consumers choose health care providers, in patient-physician relationships, in prescription drug purchase and use, and in alternative technology decisions about treatments for diagnosed conditions. Consumers often do not have and/or are not motivated to access and use available information to make health care decisions. The health care market shift to managed care has intensified the information gap between individuals as purchasers of health insurance plans (and the resulting services) and those providing health services.

### Models of Managed Care Enrollment Choice

In this study of Medicaid managed care enrollment, I examine the factors which influence the choice of a particular type of health plan: either a fee-for-service or managed care plan. The following questions are asked: Are there barriers that prevent the Medicaid individual from knowing he/she has a choice? Once the Medicaid individual knows that choice is available, are there factors within his/her

environment or personal characteristics that predispose him or her to a particular type of plan? Does the enrollment environment, the institutions that provide information and administrative enrollment, affect the individual's decision? Why do some individuals choose to remain in the traditional fee-for-service Medicaid health care plan and others choose to enroll in one of several Medicaid managed care plans?

Three conceptual models from the literature on managed care enrollment choice provide a framework for the development of a Medicaid managed care enrollment choice model. The first model of managed care enrollment choice was developed by Acito (1978). He identified two sets of variables: 1) consumer characteristics including demographic attributes, attitudes and beliefs about health; and 2) characteristics of the delivery system such as cost, services covered by insurance, access and convenience.

A second model of enrollment choice was developed by Berki and Ashcraft (1980). Their rational choice model of HMO enrollment choice postulated that consumers trade off between insurance characteristics and delivery system characteristic to achieve the best mix to meet individual or family needs. Their model specified financial vulnerability and health risk perceptions as major intervening variables. They reported that within the middle income range there was a trade-off between the insurance and delivery characteristics of plans, i.e., between expenditures (cost) and access to a familiar provider.

A third model by Klinkman (1991) broadened the concept of enrollment choice and environmental constraints by recognizing that the set of plans offered

to the consumer are constrained by the contracts between employers and insurance companies. It is only after a set of plans are negotiated and financed by employer-insurance company agreement that the employee is presented with a menu of health plan choices. Klinkman's two-stage model uses a rational choice model with the second stage, the consumer's choice of health plan, consisting of three steps: 1) consumer identifies an ideal health plan, 2) consumer identifies the set of available choices and chooses a plan based on economics of the decision and service characteristics of the plan, and then 3) through a feedback loop asks, "How satisfied are we?" Klinkman suggests that this process is overlaid by consumer information processing but he does not operationalize it.

All three models of managed care enrollment suffer from two fundamental problems: they are rational choice models which assume an optimum decision without specifying information variables and they model employer-employee relationships. Although consumer information processing is acknowledged by both Acito and Klinkman, little attempt has been made to fully conceptualize or operationalize information processing as it occurs in health plan decision making. Sofaer and Hurwicz (1993) comment on this inadequacy and propose a model that explicitly includes level of knowledge of available insurance options and sources of influential information. Many economists have identified informed consumer choice as not only a benefit to the individual consumer but also as a pre-requisite to better functioning health care markets (Sangl and Wolf 1996). However, Sainfort and Bookse write that "little is known about how consumers will use information and what impact, if any, the information will have on their health plan selections (Sainfort and Booske 1996 p. 31).

Berki and Ashcraft's rational choice model assumes consumers' maximize their utility. There is substantial literature that indicates that consumers do not maximize their utility and often make decisions that are not "best" decisions. Behavioral economists call this "bounded rationality;" that is consumers often seek a satisfactory decision not a perfect one (Simon and Newell 1971). Consumers frequently do not invest the time or energy that is necessary to identify options, collect and evaluate information, and make optimal decisions. The economist Stigler (1961) found that consumers do not have perfect information to make decisions because different individuals place different values on the cost and benefit of collecting information to make a decision. In their study of selection of health

care providers for children, Stewart et al. (1987) reported that parents used simple heuristics for decision making rather than engaging in extensive search activity postulated by a rational choice model. J. Edward Russo (1988) concluded that consumers use product information only when its perceived benefits exceed its costs. These costs include nonmonetary considerations of processing effort, level of annoyance or tediousness of process, and hospitableness of the environment.

The second problem with the three models discussed above is specific to Medicaid managed care enrollment choice. Most previous studies of managed care enrollment choice are based on employee decisions about employer offered health plans. Few have examined how the Medicaid recipient responds to government paid plans. In a Medicaid model, consumer financial vulnerability, particularly ability to pay health plan premiums and out-of-pocket expenses, plays little to no role; the insurance and delivery system dominate the decision making process. Although a public insurance program, Medicare health care enrollment has financial incentives to trade costs and other plan attributes, making it in many ways more similar to employer offered plans than Medicaid plans. Berki and Ashcraft's (1980) examination of HMO enrollment research found that there is "support (for) Brice's contention that where no financial vulnerability for care exists, the health risk factors that are usually predictive of enrollment become less salient to the enrollment decision than the characteristics of the delivery setting."

While the Medicaid consumer doesn't have financial vulnerability, the government does, and it is the policies of the Departments of Health and Social Services at local, state, and national levels about Medicaid benefit packages and delivery systems that structure the enrollment decision presented to the Medicaid client. A modification of Klinkman's two-stage model substitutes the government-insurance company contract relationship (stage one) for the employer-insurance company with the same results: a pre-chosen set of health plans offered to the Medicaid individual. This study focuses on the second stage, the relationship between different government chosen plans and the Medicaid recipient enrollment choice.

#### A Medicaid Managed Care Enrollment Model

A Medicaid managed care enrollment conceptual model can be constructed by combining Medicaid consumer characteristics with the enrollment

environment to create points of information integration and processing.

Consumer characteristics include demographics, perceived and objective health risks, and information seeking behaviors. The enrollment environment contains health insurance and the health care delivery system as well as information supply. Experience and satisfaction with the insurance plan and the delivery system, mediated by consumer and enrollment environment characteristics, provide a continuous feedback loop. Choice occurs when the organizations within the environment provide a decision opportunity. If the individual does not take advantage of the decision opportunity, choice has been made by default. The larger environment, that is the organizations which determine which plans will be offered and how often enrollment and disenrollment can occur, pre-structures this decision for the Medicaid individual. Thus the choice of a health care plan is determined by the interaction that occurs between consumer characteristics, the enrollment environment, and continuous feedback from experiences and satisfaction.

### **Testing the Model**

#### Study Population and Research Procedures

Two rural upstate New York counties who offered managed care plan options to AFDC Medicaid individuals for the first time in Fall, 1994 were chosen as the site for this study. Permission-to-contact for research slips were systematically placed in certification and recertification file packages by the Departments of Social Services, beginning in January, 1995 through June 30, 1995 for one county and March 1-August 31, 1995 for the second county. All Medicaid persons who completed the permission-to-contact slips and marked "yes, you may contact me to participate in this project" were contacted by telephone or in person at their listed address.

A questionnaire was developed for a telephone interview of about thirty minutes. The survey included both closed-end and open-end questions about the Medicaid individual and the enrollment environment based on the conceptual model. A pre-test questionnaire was given in-person to five Medicaid individuals from a different county. Questions were revised for clarity and retested on three additional individuals in person and eight telephone interviews. Medicaid individuals selected for the sample who could not be reached by telephone were contacted in person at their place of residence. A training manual was

developed for training telephone interviewers and in-person interviewers to provide consistent data collection. Telephone interviewers were monitored for adherence to the questionnaire and consistent interview behaviors.

A total of 303 people agreed (28 persons marked "no") to be contacted for participation in the project. Two hundred and one persons successfully completed the interview by telephone and twenty people were successfully located and interviewed in person for a total of 221 interviews. Reasons for incomplete interviews included 14 refusals, 26 people with wrong or disconnected numbers, 8 persons not eligible for Medicaid any longer, 8 persons who moved out of county and 26 who could not be located in person or by telephone due to incomplete information. Two groups were identified for analysis: one consisting of those who had enrolled in a Medicaid managed care plan and a second group consisting of those who enrolled with the traditional fee-for-service Medicaid health plan. Two Medicaid individuals reported that they did not know what kind of Medicaid plan they were enrolled in and interviewers were unable to discern based on interview information. Sample analysis was conducted on 219 cases for a response rate of 75.8% (331-42 not eligible =289, 219/289=.758).

The Medicaid enrollment process in these two counties was very similar. Medicaid individuals eligible for recertification were mailed a re-enrollment packet which included Medicaid managed care plan information. During their in-person visit with the Department of Social Services (DSS), individuals were given an opportunity to talk with a DSS worker who explained the managed care plans. During this visit or after, the Medicaid individual could also call and talk to a managed care company representative. There was no direct marketing of managed care companies to Medicaid individuals through door-to-door or direct sales. However, managed care companies in this region actively advertised managed care health services through billboards, radio, and other media to the commercial market and potentially had name recognition to some Medicaid individuals.

#### Results

Sixty-seven percent of the Medicaid sample reported enrollment in a Medicaid managed care plan. Thirty-three percent reported that they were in the traditional fee-for-service Medicaid plan.

The fee-for-service and managed care groups were similar in their demographic characteristics. This

was not unexpected since those eligible for AFDC and Medicaid benefits are in their childbearing years and comprise the lowest income distribution of the population with many of the accompanying traits relating to employment and marital status. The sample was predominantly female, 31 years (mean) old with two children (managed care=2.19 children; fee-for-service=2.08). Family size did not significantly differ between the two groups. Eighty-five percent of the fee-for-service group were single parents compared to 79 percent of the managed care group. The most frequent occupation for both groups was homemaker.

Medicaid health risk variables representing health status and health care utilization were not significantly different between groups. Approximately one-third of both groups reported themselves in fair or poor health. The managed care group reported a mean 1.68 medical conditions; similarly the fee-for-service group reported 1.66 conditions. The mean number of self-reported doctor visits for the respondents and children was 20 or about 6.6 per person per year. Self-reported emergency room usage averaged about two and half visits per year per household, with the fee-for-service group using the emergency room slightly more (2.73), but not significantly, than the managed care group (2.27).

Although it was expected that health beliefs and behaviors would be associated with enrollment choice, there was very little difference between the two groups. Two exceptions were related to smoking and drinking. The fee-for-service group thought smoking affected a person's health more than the managed care group, even though both groups self-reported smoking about the same. Although a little less than half of both groups report drinking (46 percent of managed care group and 48 percent of fee-for-service group), the fee-for-service group reported on average a greater number of drinks at one sitting.

The last group of consumer characteristic variables is information seeking behaviors. The proxy for ability to seek out information, education, was not significantly different between the two groups. Both groups reported a mean education level of high school/GED. Motivation to seek out information however did display significant differences between the managed care and the fee-for-service group. The managed care group was more likely to actively engage in information seeking behaviors. Eighty-two percent of the managed care group reported having read managed care materials given to them compared to 57.5 percent of the fee-for-service group. Twenty-nine percent of the managed care group brought DSS mailed

managed care information with them to the Medicaid enrollment meeting compared to 14 percent of the fee-for-service group.

While the consumer characteristics of the fee-for-service group and the managed care group are similar, enrollment environment variables identify group difference. Individuals were asked to give reasons why they chose to enroll in a Medicaid managed care plan. Respondents could choose none, one, some, or all of the categories. As part of the enrollment environment, the existence of a list of physicians to choose from and the information supply about managed care and the health care delivery system were important influences towards managed care. The largest number of those enrolled in managed care selected it because they felt that it offered better quality of care (81.5 percent) than their old Medicaid plan. Access to a doctor was the second greatest factor for choosing managed care, including finding a doctor and getting an appointment with him/her (65.8 percent). Sixty-two percent of those enrolled in a Medicaid managed care plan reported that they did not have a regular doctor. Recommendations from health professionals (42.5 percent) and advertising (34.9 percent) were considered by a great number of the sample to have influenced them.

Those who didn't sign up for Medicaid managed care most often cited lack of understanding about managed care (41.1 percent) as the reason for not enrolling. Almost a quarter of the fee-for-service group reported that they didn't know they could enroll in a managed care plan. One-third of the fee-for-service group did not change because the current way their Medicaid plan was working seemed to be fine and they saw no reason to change. Nineteen percent said their current doctor was not in managed care so they didn't want to change.

Information from the environment, both internally and externally supplied information, was significantly different between the two groups. Most respondents in the managed care group (95 percent) remembered the managed care option, only 68.5 percent of the fee-for-service group remembered the offer. More than three-quarters of the managed care group discussed their health plan sign up with someone, most frequently someone from DSS or a DSS managed care worker. In contrast, only 37 percent of the fee-for-service group had discussed the decision with someone. During the enrollment process, the Department of Social Services (DSS) played an important role as a formal structure providing medical health plan benefit information. Those who enrolled in

managed care twice as often mentioned a DSS managed care worker (68.5 percent) as a person they talked with compared to 33 percent of the fee-for-service group. Almost one-third of the managed care group talked with a managed care company representative, less than 7 percent of the fee-for-service group talked to a company person.

More than two-thirds of both groups remembered seeing public advertising through the television or newspapers about HMO's and managed care. Many were yet unclear about it. One-fourth of the managed care group and one-third of the fee-for-service group admitted they either didn't know if there was a difference between fee-for-service and managed care plans or said there was no difference. Number of years in the Medicaid system, the proxy for experience and satisfaction that provided evaluative feedback information for the enrollment decision, did not differ significantly between the two groups. Both groups entered the decision process after being on Medicaid fee-for-service an average (mean) of 4.65 years. The fee-for-service group was enrolled in Medicaid on average (mean) six months longer than the managed care group.

#### Discriminant analysis

To identify a parsimonious set of factors related to Medicaid enrollment choice, variables representing consumer characteristics and the enrollment environment were entered into discriminant analysis. Discriminant analysis is used to study the differences between two or more groups with respect to several variables simultaneous contribution and to classify cases into the groups (Klecka 1980). We were interested in how fee-for-service and managed care groups differed based on some set of characteristics and wanted to identify a combination of these groups characteristics (called the discriminant functions) to predict enrollment in a managed care and fee-for-service plan.

Twenty variables were included in the discriminant analysis. Consumer variables were married or living with a partner, homemaker, general health, number of medical conditions, number of doctor visits, number of emergency room visits, current smokers, frequency of alcohol consumption, exercise, number of hours of sleep, education, did you read Medicaid enrollment materials, did you bring managed care enrollment materials to your DSS visit? Environment variables were did you discuss managed care with a DSS person, did you discuss managed care with family or friends, did you discuss managed care

with company representative, no one discussed managed care with you, were you offered a chance to enroll in a Medicaid managed care health plan, have you seen any advertising about managed care? Number of years enrolled in Medicaid was used to represent experience with Medicaid.

Seven discriminating variables (marital [.25444], current smoker [.33872], frequency of alcohol consumption [-.29709], discussion with DSS [.56829], discussion with managed care representative [.50215], were you offered a chance to enroll [.54885], and no one talked to me [-.28307]) were found to be significant and were combined to form the discriminant function. The canonical correlation for this function was .5283. This correlation is a measure of association which summarizes the degree of relatedness between the managed care and fee-for-service groups and the discriminant function. The question we are asking is "how useful is the discriminant function? Are the two groups really different on these combined variables?" Our answer is modestly so. Chi square is significant and indicates that results do come from differences between groups. Group centroids are used to measure how distinct these two groups are in space. They provide a summary of each group position through the "group mean" (ffs= -1.045 mc=.5262). From examining these centroids we can say that they are distinct and in different locations in space.

#### **Conclusion**

Bivariate and discriminant analysis give evidence that environmental variables relating to information sources about Medicaid and managed care plan enrollment options are important determinants of voluntary Medicaid managed care enrollment. Medicaid health behaviors, smoking and frequency of alcohol consumption, also influence enrollment choice. Smoking is associated with Medicaid managed care choice, increasing frequency of alcohol consumption is associated with fee-for-service Medicaid choice. Married or living with a partner is associated with managed care enrollment.

Although, some consumer characteristic differences are evident between Medicaid managed care and fee-for-service enrollees, the strongest findings of this research is the role of the information environment in influencing the choice of health plan. The Department of Social Service enrollment process strongly affects Medicaid individuals. Discussion with DSS workers and company representative were important indicator of managed care enrollment. As

state Medicaid plans move from voluntary to mandated managed care, the information process will continue to be a critical component of the Medicaid enrollment program. Our results support the active engagement of Medicaid individuals in discussions about managed care and the attributes of each plan. I would like to note a couple of limitations of this study. Information processing is a iterative process of collecting and reformulating information. Although information seeking behaviors and information supply have been separated out conceptually, this is an artificial construct. Even with cognitive testing, it is hard to differentiate which comes from within the consumer and which is due to external environmental influences. Secondly, information supply has focused on information source. This is a narrow definition and misses the detail of form and type. Andrews et al. (1989) examined the effects of five communication methods for Medicaid HMO health plan enrollment information and found that each method was most effective with a different type of beneficiary. Additional research in this area will help tailor educational efforts to meet information needs of Medicaid individuals.

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### Endnotes

1. Senior Extension Associate, Department of Policy Analysis and Management.