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The Effect of Utilization Controls on HMO Enrollees' Health, Satisfaction with Care, and Disenrollment

Barbara Stewart Brown

School of Allied Health Professions
Virginia Commonwealth University

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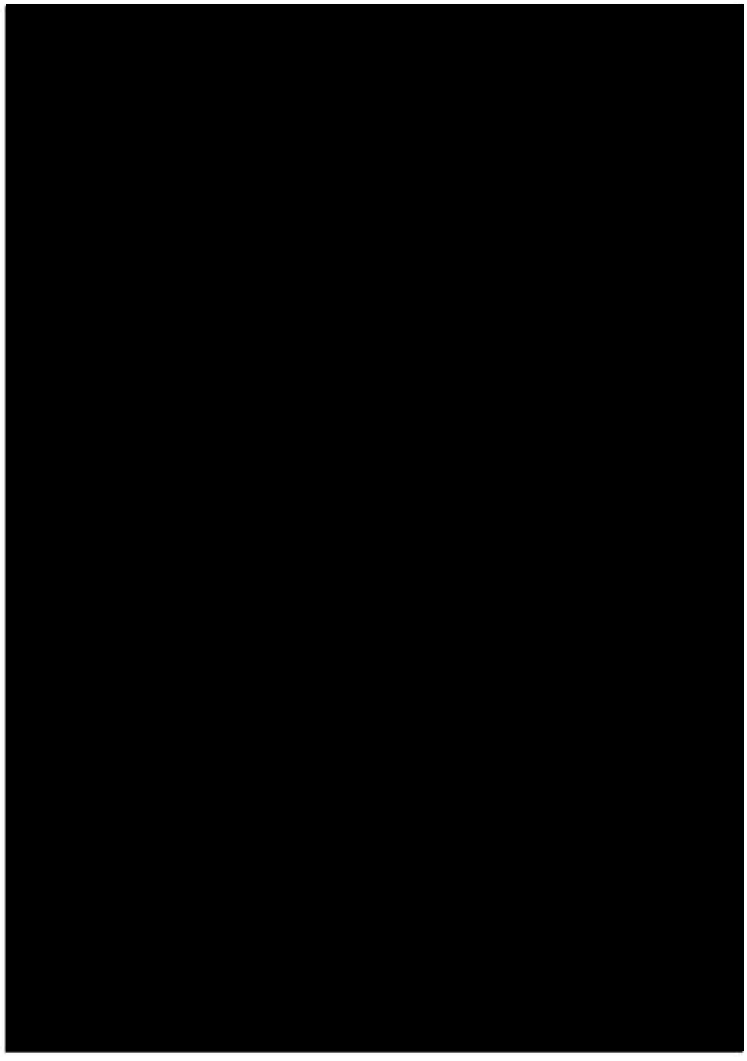

The Effect of Utilization Controls on HMO Enrollees' Health, Satisfaction with Care, and Disenrollment

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

By

Barbara Stewart Brown, M.S.
1973, M.S., University of Pennsylvania
1970, B.S.N., Virginia Commonwealth University

Director: Louis F. Rossiter, Ph.D.
Associate Professor and Director
The David G. Williamson, Jr.,
Institute for Health Studies
Department of Health Administration

Virginia Commonwealth University
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ABSTRACT

THE EFFECT OF UTILIZATION CONTROLS ON HMO ENROLLEES' HEALTH, SATISFACTION WITH CARE, AND DISENROLLMENT
Barbara Stewart Brown, Ph.D.
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Major Director: Louis F. Rossiter, Ph.D.

The purpose of this prospective study is to examine the effects of differences in utilization controls on HMO enrollees' health, satisfaction with quality of care and access, and disenrollment. Previous studies of alternative care systems have shown that they are able to decrease costs (Luft, 1981; Anderson, Herald, Butler, Kohrman, & Morrison, 1985), but have not examined the organizational structure within the organization that oversees utilization. No prior studies have examined the effects of different types and degrees of utilization controls on the health, satisfaction, and access of enrollees.

For this investigation, Williamson's (1975) theory of organizations, transaction costs economics, is used as the analytic framework. It is applicable to a study of utilization controls because it explains the organizational design or "governance structure" adopted to promote economic efficiency.

Data for this study comes from the National Medicare Competition Evaluation's (NMCE) initial and follow-up beneficiary surveys and was merged with data about the plans. Data on the

utilization controls to which the enrollees were exposed comes from the NMCE case studies prepared about six months after the plans started enrolling Medicare patients. Data on health, satisfaction, and access measures comes from the beneficiary surveys. The surveys were conducted about a year apart; the first one occurring upon enrollment in the HMOs.

Separate analyses using ordinary least squares and logit regression techniques were performed for 1,175 continuous enrollees and 376 disenrollees using the merged data. The disenrollees were treated as a distinct group because their leaving the HMO may have been motivated by dissatisfaction with utilization control.

The analysis found that exposure to different types and stringency of utilization controls was not associated with changes in enrollees' health. They did affect satisfaction with quality of care and appointment convenience.

Disenrollment was significant; 18% of the enrollees left the plans during the study. Utilization controls accounted for 49.2% of the variance in disenrollment from the plans.

CHAPTER 1

SCOPE AND PURPOSE OF THE STUDY

The primary health care issue in the 1960s was to make health care accessible to everyone in the United States. In the seventies the issues focused on the quality of care and using high tech modalities for diagnosis and treatment. For the eighties the issue has become cost. Now the challenge is to develop health care systems that are cost efficient as well as being accessible and high quality.

To this end, alternative health care systems have been promoted to circumvent costs stemming from incentives underlying fee-for-service payment and widespread indemnity health care insurance. One of these alternatives is prepaid health plans such as health maintenance organizations (HMOs) and similar kinds of comprehensive health care providers called competitive medical plans (CMPs). Health maintenance organizations and CMPs differ from traditional fee-for-service: Providers are under contract to deliver specific health services to enrolled members for a prepaid fixed payment. Thus, in an HMO or CMP, the insuring organization and the provider organization are merged so that they become a single entity.

The merging of the two organizations provides opportunities not found when they are separate. First, by eliminating fee-for-service reimbursement, provider incentives to prescribe and/or patient incentives to seek more services than are justified given a person's medical problem are eliminated. At the same time, the single organization has the ability to stipulate the conditions under which certain types of services will be prescribed and for how long.

Health maintenance organizations and CMPs are built on the idea of "managed care" (Schlag & Piktalis, 1987). Under managed care, patient access to services is channeled via procedures called utilization controls. Utilization controls stipulate conditions for access to care and provider payments as well as serving as monitoring mechanisms for the organization. They form an infrastructure for the organization that contains costs by reducing unnecessary and costly duplication of services. Commonly used utilization controls are: (a) financial risk sharing arrangements with providers, (b) preauthorizing hospital care and specialists' services or having primary care physicians act as gatekeepers to other services, and (c) reviewing hospital and ambulatory care records. Utilization controls are the governance structure that oversees the exchange of services between the physician and patients for which the HMO/CMP is financially liable.

Applying a control structure to the production of health care is intended to standardize the product and eliminate unnecessary costs arising from inefficient production or opportunism. However, health care is a dynamic product, not a widget. An illness may

present itself in many ways. Uncontrollable factors such as time and concomitant conditions influence its urgency and treatment. To confine it to decision tree sequences with bureaucratic rules as decision points may not be without hazard.

Too many rules or too many limits on service use may prevent timely interventions and increase health care costs in the long run. As the financial incentives found in HMOs and CMPs operate to limit service use, concerns about providing too little service arise. If a utilization control structure to safeguard costs is specified to a point where the well-being of a patient population is compromised, then the structure has control beyond which is optimal because of the social costs imposed.

Among the many possible outcomes, four that may occur when utilization controls are employed are listed here. The first is that health may improve because services are coordinated. The second consequence is no change in health occurs as a result of exposure to utilization controls. Either of these alternatives is acceptable; the governance structure decreases costs to the firm but does not decrease patient welfare. The third possibility is that health indicators decline when enrollees are in a channelled access system. A fourth possibility is that the patient disenrolls from the HMO/CMP because of dissatisfaction with the control structure.

Purpose of the Study

The purpose of this study is to examine the effects of differences in utilization controls on enrollee health and satisfaction with quality of care and access. It considers the

specific organizational component, the governance structure, that differentiates HMOs and CMPs. Previous studies of alternative care systems have shown that they are able to decrease costs (Luft, 1981; Anderson, Herald, Butler, Kohrman, & Morrison, 1985), but have not examined the organizational structure within the organization that oversees utilization. No studies exist on the effects of different types and degrees of utilization controls on the health, satisfaction and access of enrollees. Since utilization controls influence entry and exit from the health care system, a prospective approach that compares health, satisfaction and access prior to or at enrollment and at some subsequent point after joining an HMO is proposed.

Research Questions and Hypotheses

The research questions being investigated by this study are:

1. Are differences in utilization controls associated with decreased enrollee health after enrollment?

2. Are differences in utilization controls associated with decreased enrollee satisfaction with the quality of care over their previous source of care?

3. Are differences in utilization controls associated with decreased enrollee access to care over their previous source of care?

4. Are differences in utilization controls associated with disenrollment from HMOs and CMPs?

The following hypotheses will be tested:

1. Utilization controls do not produce a decrease in enrollee health.

2. Utilization controls do not produce a decrease in enrollee satisfaction with care.

3. Utilization controls do not produce a decrease in enrollee access to care.

4. Utilization controls do not influence disenrollment from HMOs and CMPs.

Definition of Terms

Health Maintenance Organization (HMO)

An HMO is a health plan that employs physicians or contracts with a physician group who agrees to provide in exchange for fixed fee a wide and contractually specified range of medical service to an enrolled population. Regardless of the contractual arrangements with providers, the essential characteristic of an HMO is it vertically integrates the service delivery and insurance functions that are separated in the fee-for-service sector. The HMO rather than a separate insurer, assumes the risk of providing needed care for the premium paid. The health plan loses money if the cost of care exceeds the premium, it gains if the cost of care is less than the premium. HMOs have, therefore, an incentive to deliver care in a cost-effective manner, providing no more than professional standards require and the least intensive service which will manage the health condition while minimizing future expenditures (Luft, 1981).

Utilization Controls

Utilization controls form an internal governance structure used by health plans to channel access to care so that the cost of care

stays within the fixed prepayment. They are procedures or rules that set the conditions under which patients receive different types of care, from whom that care is received, in what setting, and for how long. Contractual arrangements between the providers and health plan act as utilization controls to the degree that they hold providers financially liable for health care costs incurred by plan members.

Health

For this study, health is defined to encompass the individual's ability to function, the presence or absence of symptoms, and his or her feelings about his or her health (Binstock & Shanas, 1977). It includes the ability to do instrumental activities of daily living (shopping, fixing meals, showering, toileting, etc.), self-perceived health (excellent to poor rating), and number and type of symptoms such as sight, coughing, fainting, joint pain and so forth that are related to major organ system functioning as well as measures of disability such as number of restricted activity days.

Satisfaction

Like health, satisfaction with health care is multifaceted. It represents the degree of fit between the patient and the health system with regard to the individual's perceived satisfaction with the quality and access of services (Thomas & Penchansky, 1984; Zapka, Stanek, & Raitt, 1986).

Access

Access to care represents the ease with which patients are able to get care and is a component of patient satisfaction. It most often is measured by availability of caretakers when symptoms are reported. It is examined separate from satisfaction because utilization controls influence access.

Disenrollment

Disenrollment occurs when an enrollee chooses to leave the HMO. The association between disenrollment and exposure to different types of utilization controls found in HMOs/CMPs will be examined.

Significance of the Study

In the health care delivery and finance arena, there is general agreement that the current system functions in suboptimal ways because of the lack of incentives and mechanisms to constrain costs and utilization (Schramm, 1986).

One way to realign incentives in fee-for-service care and slow the rising costs of health care is to change the way providers are organized and the conditions under which patients get health care (Evans, 1981; Enthoven, 1980; Feldstein, 1981). However, reorganizing the system's structure may also affect health care quality, satisfaction, and access (Luft, 1982; Mechanic, 1985; Hammons, Brook, & Newhouse, 1986). Such changes cannot be promoted if they erode access and appropriate care in exchange for reduced costs. For example, critics of HMOs are quick to point out that the

HMOs have an incentive to underserve enrollees because of the need to stay within the premium paid.

To study the effects of a governance structure on a nonstandardized process such as health care, one can apply organization theory. Crganization theory and transaction cost economics, in particular, can be used to investigate what kind of HMO utilization control structure is most likely to produce the optimal outcome of healthy and satisfied enrollees.

Limitations

The limitations of this investigation are related to sample and data collection. The population used is a self-selected group of enrollees in 17 HMOs throughout the United States. The information from the enrollees about their health, i.e., perceived health status, ability to do activities of daily living and numbers and types of symptoms is extracted from interview data rather than medical chart reviews. This eliminates considering clinical mismanagement as contributing to negative changes in health at follow-up.

Another limitation is that the time span between the baseline interview and the follow-up interview is only one year. This time frame may be too short for changes in health to occur. Thus, the findings of the study may underestimate the effect of utilization controls on health.

A third limitation is that the number of HMOs included in the study is small as well as being self selected. Thus, they do not represent the entire HMO/CMP industry in the United States.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

For this investigation, Williamson's (1975) theory of organizations, transaction costs economics, is used as the analytic framework. Williamson's theory is applicable to a study of utilization controls because it explains why utilization controls are adopted and how they promote economic efficiency. It does not theorize about the impact of such controls on health, satisfaction, or access. These hypotheses must be derived from the relevant health services research.

The chapter is arranged in three parts. First, Williamson's theory of transaction costs economics is described and differentiated from other theories on organizational structure and design. Second, it relates the theory to HMO utilization control structures. Third, three categories of utilization controls are described along with the research findings on the positive and negative effects of utilization controls on health, satisfaction and access.

Transaction Costs Economics

Derived from institutional economics, the transaction costs or market failures approach adopts an efficiency-seeking view of

organization design and presence. Organizations emerge as an alternative to buyers and sellers conducting transactions solely through markets (Pfeffer, 1982). "Markets" are supplanted by "hierarchies" when markets cease to function properly because of "information impactedness." That is, the buyers cannot get a good or service at a fair price because environmental and human factors limit (a) their having full knowledge of their options, (b) their being able to get the service from many sellers, or (3) their being able to control the outcome of the exchange.

Unlike other organizational theorists, Williamson (1973) bases his theory on observations that occur at micro level of analysis. Transactions are the basic unit of analysis. A transaction occurs when a good or service is exchanged between a buyer or seller. There are two mechanisms for mediating transactions: markets and bureaucracies. The mechanism preferred by parties to the exchange depends on which is more efficient.

Transaction costs occur when it is difficult to determine the value of goods or services. That is, the buyer must contend with factors that limit his ability to get enough information about the exchange so that he can determine if he is getting a "fair" price. Transaction costs are the economic equivalent of friction in physical systems.

> In mechanical systems we look for frictions: Do the gears mesh, are the parts lubricated, is there needless slippage or other loss of energy...[In economics] Do the parties to the exchange operate harmoniously, or are there frequent misunderstandings and conflicts that lead to delays, breakdowns, and other malfunctions? (Williamson, 1985, p. 2).

In a market economy, prices are supposed to convey all the information that is necessary for the efficient allocation of goods and services. If transaction costs are negligible, the organization of economic activity is irrelevant because there are no advantages of one mode of organizing over another.

If one focuses on the exchange or transaction as the issue around which organizations are developed, it follows that bureaucracies arise because they allow the exchange to occur in a more efficient manner than can be done by individuals' haggling in the marketplace.

Under some conditions, known as market failures, prices fail to accurately convey the necessary information. When this occurs a hierarchy or internal organization may be a superior mode of resource allocation (Williamson, 1985). Thus, markets and formal organizations are alternate methods of achieving efficient exchange. Market failures are failures only in the limited sense that they involve transaction costs that can be attenuated by substituting internal organization for market exchange (Williamson, 1975). An organization's superior monitoring and control capabilities overcome the market failure problem: They reduce "transaction costs" and restore efficiency.

From this viewpoint, informational efficiency rather than technology is central to the development of firms. This is contrary to traditional organization theories (Thompson, 1967; Woodward, 1970; Child, 1973) that state formal organizations exist because technology demands integration or because of large size. According to Williamson (1971) the influence of technology and size are causal

only in so far as they influence the informational demands which must be met by a market or an organization. "Transaction costs analysis supplants the usual preoccupation with technology and steady-state production (or distribution) expenses with an examination of the comparative costs of planning, adapting, and monitoring task completion under alternative governance structures" (Williamson, 1985, p. 2).

Behavioral Assumptions of Transaction Cost Economics

Organizations are a means of achieving the benefits of collective action when the price system fails (Arrow, 1974). The price system fails when confronted with a great complexity of interrelations of personnel and resources to production tasks or with uncertainty concerning future conditions. As complexity and uncertainty increases, a greater need for information arises: More information needs to be processed in order for contracts to be negotiated and transactions conducted. Both Arrow (1974) and Williamson (1981) conclude that the specific way in which organizations are superior to markets in managing complex and uncertain economic transaction is that organizations reduce the costs of such transactions.

Williamson (1975) elaborates the argument by developing a simple model to identify the conditions under which markets tend to give way to organizations. The basic elements of the model appear in Figure 1. Williamson uses the concept of bounded rationality simply to refer to the limitations of individuals as information processors. Parties are unable to foresee all the contingencies

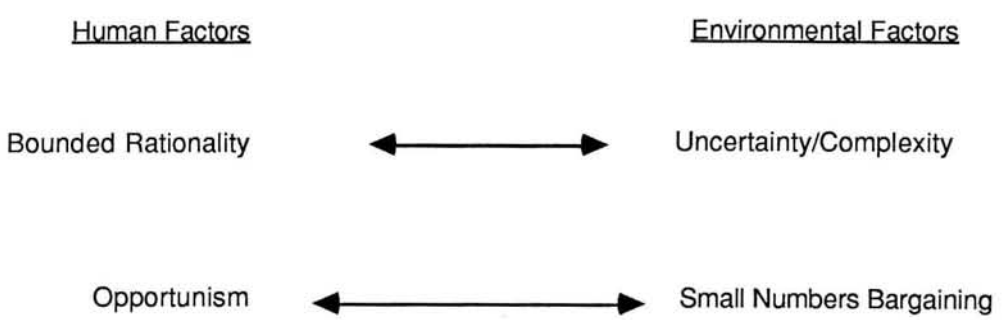

Figure 1. Market Failures Framework

Note. From Scott (1981), p. 145.

that affect the price of a good or service. As environments become more complex or uncertain, these limitations are quickly reached. Hence it is only when individuals are confronted with excessive environmental demands that their own information-processing capacities become insufficient and alternative arrangements are required. Firms replace market transactions because organization permits problem subdivision, simplifies choices, channels information and restricts alternatives. Goal specificity and formalization function to overcome the cognitive limitations of individual actors.

Williamson's second pair of concepts -- opportunism and small numbers -- are used to develop a different argument regarding the relative advantages of markets and organizations. The concept of opportunism is used to note that individual actors are capable of "self-interest seeking with guile" (Williamson, 1975, p. 96). Opportunism on the part of human agents involves subtle forms of deceit. People lie and cheat. A buyer may be unable to avoid deceitful transactions if there are few available sellers. This is the "small numbers" problem. Creating an organization helps solve the problem of opportunism among exchange partners. By bringing economic transactions under a hierarchial structure, better auditing and surveillance systems can be constructed. Also incentive systems within an organization can be arranged so that individual participants are discouraged from behaving opportunistically.

Williamson (1979) considers opportunism the more important variable than bounded rationality because it is amenable to manipulation. Bounded rationality is not. It is a constant. Firms

may be able to reduce the effects of uncertainty and complexity surrounding the exchange but they cannot remove them.

Dimensions of an Exchange

Another difference between the ability of markets and organizations to conduct transactions is related to the nature of transactions. Transactions differ with respect to asset specificity, uncertainty, and frequency. Of the three, asset specificity is more critical because it hinders the ability of competition to operate because the seller has more information than the buyer or is the only source of the good. Asset specificity occurs when one party has more control over the exchange and allows small numbers bargaining (Pfeffer, 1982; Williamson, 1985). That is, the seller is not easily replaced making the buyer unable to shop for a better price. Opportunism reins in the presence of asset specificity. If such exchanges are frequent then the buyer will quickly look for alternatives to market exchange to control the effects of his having limited influence over the transactions.

The influence of uncertainty on economic organization is conditional. It is of little consequence for transactions not limited by small numbers or asset specificity because new trading relations are easily arranged. Continuity between the buyer and seller has little value because either party is easily replaced. Organizations provide improved efficiencies over markets in terms of information processing and transaction costs, under conditions of complexity and uncertainty.

When parties are constrained by bounded rationality, opportunism, and asset specificity, contract execution problems for the buyer occur because not all possible outcomes to the exchange can be specified or a market-generated price set for the service or good. Removing transactions from the market and placing them under the canopy of organizational control is a means of reducing uncertainty and increasing the buyers' security because governance over the exchange can occur.

Governance structures or rules to govern the transaction arise to attenuate opportunism, infuse confidence and supplant costly haggling. They bring transaction costs under control. These safeguards are imposed by the buyer. First, the safeguard can realign incentives so that opportunism is not supported. The safeguard can also set the standards to which rights in the exchange or disputes over price are referred and resolved.

Organizational Responses to Uncontrolled Transaction Costs

As human and physical assets involved in the transaction become more specialized to a single use, it can be more efficient for the buyer to produce the good or service than to purchase it in the marketplace (Williamson, 1975). Under such conditions, vertical integration is likely to occur. Within Williamson's framework, vertical integration occurs when organizations engaged in related functions, but at different stages in the production process, merge with one another (Scott, 1981). Vertical integration involves the merging of exchange partners of organizations that are symbiotically related. In the health care market this occurs when a company

underwriting health insurance merges with physician groups selling medical services and produces an HMO or CMP. However, unlike when the term is used in strictly an economic sense, such organizational mergers do not produce intermediate products. Instead, one partner takes control over the other.

Benefits of Vertical Integration

The advantage of vertical integration is that adaptations can be made in a sequential way without the need to consult, complete, or revise interfirm agreements among buyers and sellers. Sequential adaptations become an occasion for cooperative adjustment rather than opportunistic bargaining and time consuming haggling; risks may be attenuated. Differences among the parties at successive stages of the exchange can be more easily resolved by the internal control machinery when it spans both sides of the exchange (Jones, 1983; Coase, 1960).

Advantages and Disadvantages of Governance Structure

Governance structures come at great cost and their cost must be justified (Williamson, 1985). The benefits of specialized governance structures are greatest for transactions supported by noncompetitive market influences because they offset the hazards of opportunism. The cost of organizational governance is more easily recovered when transactions are frequent and of a significant price to the buyer, and occur under uncertain conditions.

The governance structure that is placed as a consequence of vertical integration, however, is part of the optimization problem

for the firm. A shift from one structure to another may permit a simultaneous reduction in both the expense of writing a complex contract (which economizes on bounded rationality) and the expense of executing it effectively in an adaptive sequential way (which attenuates opportunism).

The specification of rules for the exchange beyond some optimum point, however,is subject to diminishing marginal returns, i.e., more is not always increasingly better. The development of a governance structure will proceed to the point at which the marginal benefits from increased specificity equal the marginal costs (Jones, 1983; Demsetz, 1967; Coase, 1960).

HMOs: An Organizational Response to Health Care Market Failure

Williamson's schema applies to a wide variety of contracting issues operating in the health care market as well as other markets. Williamson's approach can be used to explain the emergence of alternative delivery systems because its concepts capture the conditions surrounding the actual exchange between a patient and a physician but paid for by an insurer after the fact. The major selective force driving the rapid growth of this type of organization is efficiency rather than coordination of or adaptation to technology (Maitland, Bryson, & Van de Ven, 1985).

Health care services are not available from many suppliers who are easily replaced by the patient. They are purchased from licensed physicians who are more knowledgeable about a medical care option than the patient. The physician acts as the patient's agent and directs the consumption of services. Because of the widespread

presence of health insurance, the care is usually paid for by the insurer not the patient. The buyer, in fact, is largely the insurer although the patient may pay a portion of the bill. But, under traditional indemnity insurance, the cost of the transaction between the patient and provider becomes uncontrollable because the insurer is removed from the exchanged. The insurer has no way to mitigate the effects: (a) of opportunism on part of the patient and/or provider to consume more services than necessary, (b) of uncertainty as to the types of services to be prescribed or frequency of the services, and (c) of small numbers because the patient cannot get care from nonphysicians and has no incentive to seek care from physicians and hospitals that are less expensive.

Health maintenance organizations realign incentives in the health care market that increase transaction costs for the insurer. Efficient consumption of health services is achieved by applying a governance structure to oversee the exchange between providers and patients. The organizational procedures that provide this oversight are utilization controls. Efficiency through utilization controls is achieved primarily in two ways.

First, risk-sharing contracts with providers decrease opportunism stemming from physician-initiated demand or patients' overinsurance. Opportunism, uncertainty and frequency cannot increase insurers' costs for physician services because the total amount to be paid for all patient services is stipulated upfront. While HMOs are frequently differentiated in the literature as to their model type such as staff, group, or independent practice association (IPA), this differentiation represents only one

dimension of the control structure when Williamson's framework is applied.

The contract also provides agreement by providers and enrollees prior to an episode of care that access will be channelled from generalist to specialist care under the dictates of organizational procedures. Costly services such as hospital and specialist physician care are prescribed and covered only under specific conditions. Thus, by combining the provision and insuring of services, one contract gives the HMO control over pricing practices and the demand for costly services.

Second, the organization's formalized rules and standardized procedures also mitigate opportunism, uncertainty, and asset specificity by reducing lack of knowledge about the circumstances leading to the service. Unlike the fee-for-service sector, in HMOs, all patient records, both ambulatory and hospital, are available for review. Not only can the insurer review the conditions under which care is received, it can stipulate standards of behavior based on the reviews that reduce the effect of small numbers bargaining, and bounded rationality on costs and types of care prescribed for enrollees.

Thus, the utilization controls found in HMOs promise to introduce predictability, rationality, and control into an otherwise fragmented, decentralized and economically nonresponsive (opportunistic) process.

Utilization Controls' Effectiveness as Governance Structures

Research on utilization control demonstrates that outside a prepaid plan, the procedures do not significantly reduce unnecessary utilization (and consequently costs), because the payer has little direct control over physicians and staff providing the oversight (Stuart & Stockdon, 1973). Utilization review guidelines under Medicare were found to be largely ignored by a number of sampled hospitals in the early 1970s (Grimes, 1970; Stuart & Stockton, 1973). When utilization control procedures are not within an HMO system, the payer has no mechanism for settling disputes stemming from physicians' inability to agree on appropriate treatments, and getting necessary records or controlling the quality of information in them. Within the HMO structure, utilization controls do reduce costs (Luft, 1981), but at the expense of what is largely conjecture (Harkins & Brown, 1986).

No studies exist on the effects of different types and degrees of utilization controls on health, satisfaction, and access of enrollees. Their influence on these variables is usually inferred from studies on HMOs in general. For example, a common source of dissatisfaction in HMOs is having to wait longer to get an appointment, yet several different utilization control procedures can affect organizational performance on access measures. In addition, the comparisons tend to be between enrollees in an HMO and fee-for-service patients rather than multi-plan studies.

The effect of utilization control on health is usually inferred from studies reporting no differences in treatment patterns for specific diseases once the disease is diagnosed, and morbidity and

mortality statistics consistent with the fee-for-service sector (Lubeck, Brown, & Holman, 1986; Yelin, Shern, & Epstein, 1986; Francis, Polissar, & Lorenz, 1984; McFarland, Freeborn, Mullooly, & Pope, 1986). A recent study by Sloss, Keeler, Brook, Operskalski, Goldberg and Newhouse (1987) found no difference in health status measures between persons in a large HMO in the Northwest and fee-for-service system. The same study found enrollees in the HMO to be less satisfied with care than those in the fee-for-service sector.

Satisfaction with HMOs is usually measured by disenrollment rates. People disenroll from HMOs for reasons of access, technical quality of the care and other service satisfactions such as location of the facilities (Zapka, Stanek, & Rait, 1986). Mechanic, Weiss, and Cleary (1983) found disenrollment associated with: difficulty getting appointments, inconvenience in getting to the facility, inability to see physician of their choice, and physician unwillingness to make referrals. Wrightson, Genuardi, and Stephens' (1987) study supports these findings. In their study, disenrollment was also associated with low outpatient use.

The interpersonal aspects of quality such as patient physician communication in HMOs have been more widely studied than patients' perceptions of technical aspects of quality in HMOs. Mechanic, Weiss, and Cleary (1983) indicated that physicians' concern and interest and the amount of information given to members were possible predictors of voluntary disenrollment. Difficulty in establishing a relationship with a plan doctor, along with the perceived importance of such a relationship, were also cited as important satisfaction variables that influence disenrollment.

However, Pope (1978) did not find these factors to predict disenrollment although they did predict satisfaction.

Sorensen and Wersinger (1981) found disenrollees indicated dissatisfaction with various aspects of medical service, such as perceived "quality of care" (thoroughness of treatment, as one example), was a reported reason for leaving the HMO. Hennelly and Boxerman (1983) found the perception of overall quality, as well as quality of paraprofessional care and pediatric services influenced disenrollment.

Only one study (Wrightson, Genuardi, & Stephens, 1987) of HMO disenrollment was a multi-plan study that included IPAs. All other citations come from studies of federally qualified group or staff model HMOs. None of the studies relate disenrollment to utilization controls, yet different model types vary greatly in the number and types of controls used (Brown, 1987). Staff model HMOs tend to have the fewest utilization controls while group HMOs tend to have the most stringent utilization control programs (Brown, 1987).

Thus, the impact of different types of utilization control remains unclear, because no studies have focused on these organizational variables.

Utilization Controls

The utilization control structure within an HMO serves several functions. It stipulates patients' "rights" as to the physician from whom they may seek care and the types of care they will receive given their presenting symptoms. It provides ex ante and ex post access to relevant data about the episode of care so that nonprice

controls in the form of authorizations and sanctions can be imposed to control service use. Through the contract with physicians, it realigns the incentives in the exchange so that physicians share varying degrees of the financial burden of providing care for enrollees. Together these functions reduce the transaction costs associated with health care delivery because they reduce the effects of opportunism and lack of information about the exchange.

These three functions translate into three types of utilization controls found in HMOs: authorization procedures, review mechanisms, and financial incentives. Their characteristics are summarized in Table 1. Each of these is discussed below.

Authorization Requirements

Authorization is a controversial control because it limits access to services (antecedent control). Access to care in an HMO is channeled along a hierarchy of specialization. A plan that insists on using ambulatory, generalist care unless need for more specialized care is established expects to service its members with lower costs than a fee-for-service system that permits unlimited access to specialists and allows hospitalization for minor as well as for major procedures (Brown, 1983).

Early studies of the effect of authorization in managed care systems were done on the Medi-Cal programs in the early 1970s. Despite a 23% increase in eligibility, the Medi-Cal program paid for only 3.5 million patient days in 1970 as opposed to 3.6 million in 1969 (Brian, 1971; Gordon, 1972).

Table 1

Utilization Control Categories Found in HMOs/CMPs

Category of Control	Type of Control	Time Applied	Designed To Regulate	Regulated By
Authorization Requirements	- Prior authorization of hospital or specialist services	Antecedent to care given	Provider	Provider or Insurer
	- Gatekeepers		Patients	
Review Mechanisms	- Claims review	Retro-spective to care given	Patient/ Provider	Provider or Insurer
	- Medical audit		Provider	
	- Utilization review		Provider	
Financial Incentives	- Risk-sharing	Antecedent to care given	Provider	Insurer

Health maintenance organizations use several authorization procedures to control access. Perhaps the surest way to guarantee that a particular medical service will not be over used is to limit the physical availability of the service. Health maintenance organizations limit supply by a "lock-in" provision in the contract with the patient that refuses to cover out-of-plan services or physician charges. The enrollee must limit his choice of physician and hospital to those affiliated with the HMO if he wants their services to be covered by the HMO.

If restrictions on choice of physician create shortages, the increased waiting times and difficulty in making appointments, in effect, rations health services. But, queues and waiting lists do not necessarily represent a superior approach to utilization control because they introduce distortions which may curtail appropriate as well as inappropriate use.

The plan may also require each enrollee to select a plan-approved physician to be primary provider. This doctor becomes a managing physician or "gatekeeper" through whom all treatment is then channeled. Not only does the managing physician make and/or approve all specialist referrals, but each specialist is expected to report on any treatment provided and to consult with the gatekeeper regarding treatment regimens. Care provided by nonaffiliated physicians or specialists customarily requires the written approval of the gatekeeper. In some HMOs, the medical director rather than the primary physician is the only physician authorized to approve non-HMO physician services. Requiring that all services be channeled through a designated primary physician is referred to as

case management because it systematizes delivery and prevents duplicative services by physicians unaware they are treating the same patient (Schlag & Piktialis, 1987).

One problem with the case management approach is how the primary physician adopts the gatekeeper role. Once a patient is referred, primary physician may not be comfortable monitoring specialists' diagnostic and treatment methods. A gatekeeper's reticence in assuming the role can have cost consequences to the health plan. Specialists' outpatient services are typically more expensive. More importantly, inpatient services are primarily controlled by specialists. In a study of the effect of gatekeeping versus no control, the plan with gatekeepers had significantly lower outpatient costs but inpatient costs in the two plans were similar (Martin, Ehreth, & Geving, 1985).

Case management requires input from the patient and careful communication from the provider (Beatrice, 1981; Marcus & Stone, 1984). Doctor-patient communication is perhaps the single aspect of the care delivery process that HMOs perform most poorly, relative to the fee-for-service sector (Luft, 1981). In a prepaid setting, there are few incentives for the provider to maintain contact with patients.

Common authorization procedures in HMOs include certifying hospital admission, and less frequently, referral services (usually for those specialists outside the HMO's panel of physicians). A problem with physicians' certifying these services is that it violates an intrinsic rule of regulation: the physician providing the treatment is also responsible for attesting to its necessity.

To circumvent physician biases in authorizing care, an HMO may have an administrative body (review panel) that decides before treatment is given whether the attending physician's regimen is both medically sound and economically efficient. Such panels usually review preadmittance screening for hospital admissions and all elective hospital admissions as well as set hospital length of stay (LOS).

At least theoretically, such mechanisms can eliminate both unnecessary treatments and instances in which expensive care (such as hospitalization) is given when less costly alternatives (outpatient or home care) are in keeping with sound medical practice. There are, however, practical impediments to this approach to utilization control. The effectiveness of the control may depend on the composition of the authorizing body. Domination by any one body -- the plan or medical staff -- could conceivably produce results quite different in terms of extent and type of reduced utilization (Martin, Ehreth, & Geving, 1985; Stuart & Stockton, 1973).

The concept of prior authorization for treatment is most appropriate to nonemergency institutional care (Mackie & Decker, 1981). Unnecessary hospital days are the single highest expense in HMOs (Donahue, 1986). Not only are the costs of overutilization highest in the institutional setting, but for surgical procedures in particular, expenditures might well be reduced if the attending physician had to seek authorization from a panel of doctors or a doctor (the plan's medical director) committed to avoiding

unnecessary use of surgical facilities (Martin, Ehreth, & Geving, 1985).

As antecedent controls, HMOs' authorization procedures reduce use by (a) limiting the conditions under which enrollees receive hospital services, (b) increasing waiting time to see a physician or receive a service, and (c) setting the conditions under which enrollees can seek more costly referral services. Because they reduce costs by keeping people out of the system, too stringent control over access can theoretically adversely affect health and satisfaction.

Review Mechanisms

Utilization control through the review of medical treatment is an obvious complement to authorization requirements in the sense that the one typically provides the standards of "appropriateness" of care which the other applies (Stuart & Stockton, 1973). Review mechanisms may occur concurrently with medical treatment or retrospective to the treatment. Both are monitoring devices. Record reviews offer few direct challenges to physicians not affiliated with an HMO because the payer has no direct control over the physician. The reviews may focus on patients' service use or physicians' prescribing practices.

Most HMOs consider concurrent hospital review a cornerstone of their utilization control system (Donahue, 1986; Chu, 1986). It monitors the timeliness with which care is provided and the adequacy of discharge planning. Concurrent review attempts to insure that,

when a choice of care is involved, the patient may be provided with less expensive but equally beneficial treatment.

As efforts continue to reduce hospital use further, additional savings can come only from reducing ambulatory care costs (Foldes, Boller, & Jacobson, 1986). Ambulatory care records assume an importance not found outside the HMO where the patient record is the property of the attending physician and not open for review. Approximately 20 percent of an HMO's budget is spent on ancillary (laboratory and radiographic) services obtained for ambulatory patients (Mackie & Decker, 1981). Monitoring the use of these resources provides a significant means for controlling costs, in addition to minimizing or preventing repetitive office-based services where these might be provided to compensate for discounted fees. Ambulatory record review is also a primary means of checking for underutilization (Brown, 1987; Komrad, Sanders, Stone, & Pummer, 1986).

Physician profiles are another type of review that provide a means of monitoring over or underutilization (Brown, 1987). Profiles are automated or manually tabulated records of physician productivity. They can be based on claims submitted to the health plan or services prescribed by the physician. The profiles are used to track numbers and types of patients seen, treatments prescribed, and referrals made by physicians. Some plans profile only their primary providers. Others profile both primary care and specialist physicians (Brown, 1987).

Review mechanisms may be carried out by the HMO medical director, a utilization review committee, and/or a quality assurance

committee (Brown, 1987). The utilization review committee focuses on utilization statistics, trends and goals rather than quality of care issues (Brown, 1987).

The specificity of utilization review varies from plan to plan (Brown, 1987). The traditional approach is for a responsible party (for example, the medical director) or committee to examine individual cases, sometimes sampled randomly,. without using any uniform methods of evaluation and often without having any predetermined criteria at hand (Stuart & Stockton, 1973). However, improved management information systems have enabled some HMOs to develop computerized screens to flag providers and subscribers for unusual patterns of care that might indicate over or underutilization (Brown, 1987; Komrad, et al., 1986; Foles, Boller, & Jacobson, 1986).

Those procedures that deal with the issue of appropriateness of care, hospital record reviews and physician profiles, in which physicians' prescribing patterns are profiled and compared to their peers are more likely to uncover practices that are detrimental to enrollee health. The procedures can be expanded to monitor organizational performance in addition to physician performance regarding patient satisfaction and access. The HMO can evaluate quantifiable standards for quality of care such as number of days to get appointments, length of time to receive laboratory test results and time spent waiting to see physicians (Bischoff, 1986).

The ability of the organization to correct problems, however, depends on how well feedback procedures are integrated into the system and its ability to reinforce corrective actions (Gertman &

Restuccia, 1981; Restuccia, 1982). For these reasons, too few review mechanisms or review mechanisms without links back to providers or administrators may adversely influence enrollee health, satisfaction, and access.

Financial Incentives

Financial incentives used by HMOs to deter utilization are geared to the physicians and their role in determining demand for care. Because the HMO provides full coverage with minimal copayments and service limitations, nonprice controls rather than financial incentives are used to limit patient demand for services.

A key difference between HMOs and other insurers is that the physician reimbursement method is changed so that providers bear some financial risk for their resource decisions. Capitation is seen by health economists as the strongest approach to eliminating much of the inherent inefficiency in the current system (Gabel & Monheit, 1983; Enthoven, 1980). Physician prepayment promotes efficiency by (a) providing the HMO with an organization-wide incentive to integrate services and (b) eliminating the incentive for providers to retain patients to maintain revenues, thus increasing timely transfers of patients between primary care providers and specialists (Schlesinger, 1986). The benefits of these incentives, however, are somewhat offset by other incentives and constraints facing HMO administrators and providers.

It is difficult to categorize the degree of risk sharing by HMO model type or other organizational characteristics because so many variations in risk-sharing arrangements exist (Brown, 1987). The

degree of risk sharing can vary from essentially none to most of the risk of profit or loss being transferred from the plan to the physician.

The effect of the financial risk on physicians' prescribing patterns appears to be linked to the percentage of a physician's practice that are HMO enrollees as well as physician payment method. Physicians in IPAs typically have around 10% of their patients belong to the HMO (Brown, 1983). Such small numbers are probably not adequate to change prescribing habits especially when the physician is paid on a fee-for-service basis (Brown, 1983). Overutilization may continue to be a problem (Martin, Ehreth, & Geving, 1985).

Capitation is not always rewarding of physician's economical practice patterns if the number of enrollees he follows is too small to absorb a high user of care. Incentives for underservice ensue when the number (panel) of enrollees is too small to balance the effect of a few heavy users (U.S. General Accounting Office, 1986). With very small panels a discounted fee-for-service may be a fairer option (Martin, Ehreth, & Geving, 1985).

Contractually transferring most of financial risk for enrollee health care to affiliated providers, who are not subject to quality-of-care safeguards by the plan has been associated with enrollee dissatisfaction with quality of care and access of services (U.S. General Accounting Office, 1986).

Summary

An integrated system of health care as demonstrated by HMOs can provide full-scale surveillance of patient utilization and provider performance, and provide the policing necessary to address the transaction costs recognized by Williamson's theory. As experience with HMOs demonstrates, the structure is transaction cost economizing because it does provide a "machinery to work things out" as well as to reduce opportunism found in the fee-for-service sector. Some HMOs have more stringent controls than others, as the previous discussion makes clear. Thus, a natural departure for applying Williamson's theory of organizations is to see whether the stringency of control and type of control are related to higher or lower transaction costs contained in key measures of HMO success. Key measures of success include enrollees' health status, enrollees' satisfaction with quality of care and access and continuous enrollment in the plan.

CHAPTER 3

METHODS AND DESIGN

The research proposed is a one-year panel study of the effect of differences in utilization controls on enrollees' health, satisfaction with quality of care and access, and disenrollment. Because utilization controls influence entry and exit from the health care system, their effects can best be assessed by a prospective approach that compares health, satisfaction and access prior to or at enrollment and at some subsequent point after joining a capitated health plan. Disenrollment is also considered because it may occur as a result of dissatisfaction with the control structures. The controls are not efficient if after entering the HMO, enrollees are more likely to be in poor health, dissatisfied and/or disenrolled.

Quasi-Experimental Design

The unique feature of prospective studies is that they begin before individuals have been exposed to a "treatment" and follow them forward in time to determine who subsequently demonstrates an effect from the treatment. In this case, the enrollees are followed forward in time from their enrollment to see if changes in health, satisfaction with quality of care and access and disenrollment are

explained by the presence of different types and stringency, or levels, of utilization control.

The research design is a quasi-experimental, pretest/post-test design (Campbell & Stanley, 1963). No control group is used. Because of this design, maturation is a threat to the internal validity of the study. Changes in health may be a function of being one year older rather than exposure to utilization control.

Model Testing

This study considers the organizational component that allows HMOs to decrease the transaction costs found in fee-for-service health care. However, the analysis does not focus on the cost savings achieved as this has been already established. Instead, the issue here is the effect of different types and levels of utilization control on enrollees' health, satisfaction with quality and access, and disenrollment. The effects of differences in utilization control on these outcomes have not been previously studied. Disenrollment is considered because retention of enrollees is necessary for the HMO to remain viable. Also, disenrollment may reflect the HMO's ability to ensure member satisfaction. If a utilization control structure to safeguard costs is so stringent that the well-being of patients is compromised, or it is associated with a high level of dissatisfaction and disenrollment, then the structure has control beyond which is optimal. By looking at these variables, a picture of what kind of HMO utilization control system is most likely to be associated with the optimal outcome of healthy, satisfied, and continuous enrollees can be drawn.

A model of Williamson's framework as applied to utilization control is depicted in Figure 2. Utilization control acts as a governance structure to control opportunism by patients and physicians that increase transaction costs. The structure influences enrollee health, satisfaction with the quality of care and access, and disenrollment through its control over patients and physicians. Not all controls operate on all players. Authorization procedures can control opportunism found in patients and physicians. The other controls focus on physicians because they direct the consumption of services by patients. The overall effects of utilization control are measured by enrollees' outcomes concerning health, satisfaction, access, and disenrollment.

From this model, three research questions are derived. The first research question asks, "Are differences in utilization controls associated with decreased health after enrollment?" It is hypothesized that enrollees' health at follow-up (T2) is not associated with exposure to utilization controls. To test this hypothesis, the following equation is derived from the model:

$$H2 = a + b_1H1 + b_2AP + b_3PP + b_4RR + b_5PRS \qquad (1)$$

where

H2 = health at follow-up (T2)

H1 = health at enrollment (T1)

AP = authorization procedures

PP = physician profiles

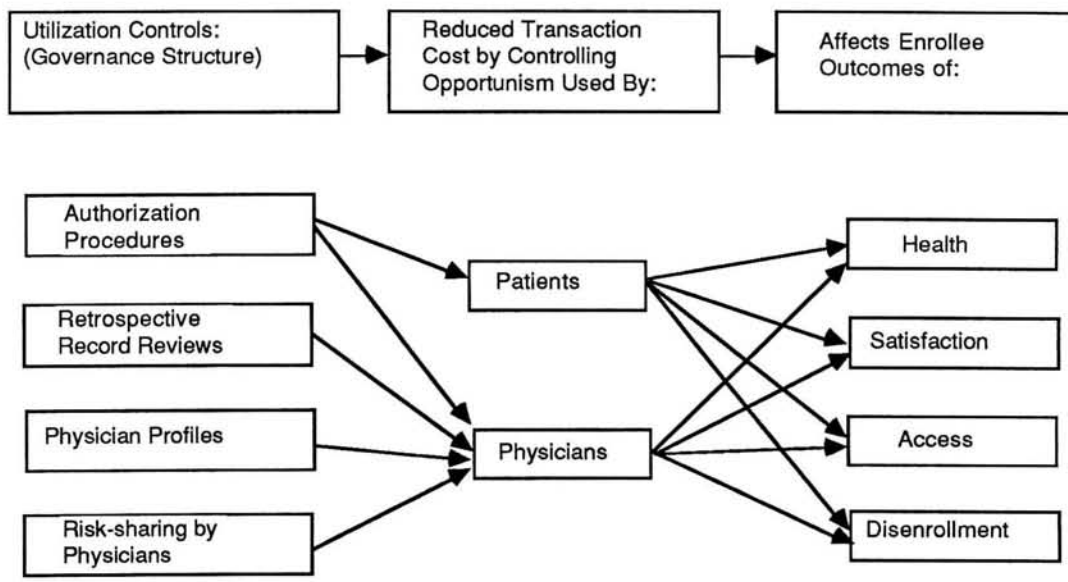

Figure 2. Williamson's Framework Applied to HMO Utilization Control and Its Affect on Enrollee Outcomes

RR = retrospective record review

PRS = physician risk sharing

Health at enrollment (T1) is included in this equation because it has been found to be the strongest predictor of health at follow-up (Binstock & Shanas, 1977; McCall, 1984).

2 A secondary hypothesis is that the net change in health between enrollment and follow-up is not associated with differences in utilization control. The equation testing this hypothesis is:

$$H2\text{-}H1 = a + b_1AP + b_2PP + b_3RR + b_4PRS \qquad (2)$$

3 A third hypothesis isolates those who report less health at follow-up to see if the decreased status or function is associated with differences in utilization controls. The equation is:

$$Y0 = a + b_1AP + b_2PP + b_3RR + b4PRS \qquad (3)$$

where

Y0 = 1 if H2-H1 is > 0, and is = 0 otherwise

Given the theoretic basis for the study and previous research, it is expected that exposure to different types and levels of utilization control procedures will result in:

1. no increase in the number of symptoms reported by enrollees

2. no decrease in enrollees' ratings of self-perceived health

3. no increase in the number of limited activity days in the last two weeks reported by enrollees

4. no decrease in enrollees' ability to perform instrumental activities of daily living

5. no increase in the number of bed days in the last two weeks reported by enrollees

6. no increase in the number of sick days per year by enrollees.

The effect of each utilization control on each health indicator will be estimated. Using this approach, the health indicators most sensitive to specific utilization controls can be identified. For example, if authorization procedures are too stringent, one might find an increase in bed days but no change in other measures of health.

The second research question asks, "Are differences in utilization controls associated with decreased enrollee satisfaction with quality of care and access?" It is hypothesized that satisfaction with quality of care and access at follow-up (T2) is not associated with different types and levels of utilization control. To test this hypothesis, the following equation will be used.

$$S2 = a + b_1AP + b_2PP + b_3RR + b_4PRS \qquad (4)$$

where

S2 = satisfaction at T2

AP = authorization procedures

PP = physician profiles

RR = retrospective record reviews

PRS = physician risk sharing

Satisfaction at baseline (T1) is not considered a predictor of satisfaction at follow-up (T2) because the respondents changed from fee-for-service care to the HMO.

The effect of each utilization control on the satisfaction with quality of care and access will be examined in the same manner as described for health. Evidence of an association between differences in utilization controls and (a) net changes in satisfaction between enrollment and follow-up as well as (b) decreased satisfaction at follow-up will be sought using the following equations:

$$Y1 = a + b_1AP + b_2PP + b_3RR + b_4PRS \qquad (5)$$

where

Y1 = (S1-S2)

$$Y2 = a + b_1AP + b_2PP + b_3RR + b_4PRS \qquad (6)$$

where

Y2 = 1 if (S2-S1) is > 0 and is 0 otherwise

It is expected that exposure to different types and levels of utilization control produces:

1. no decrease in enrollees' ratings of professional skill

2. no decrease in enrollees' ratings of providers' willingness to discuss health problems

3. no decrease in enrollees' ratings of satisfaction with regular source of care after enrolling in the HMO

4. no decrease in enrollees' rating of appointment arrangements as "convenient"

5. no decrease in enrollees' ratings of waiting time as "reasonable."

The third research question asks, "Are utilization controls associated with disenrollment?" It is hypothesized that utilization controls are not associated with disenrollment. To test this hypothesis, the following equation will be used:

$$DIS = a + b_1AP + b_2PP + b_3RR + b_4PRS \qquad (7)$$

where

DIS = disenrollment

AP = authorization procedures

PP = physician profiles

RR = retrospective record review

PRS = physician risk sharing

Should disenrollment be found to be associated with utilization controls then additional analyses will examine differences between the continuously enrolled and disenrollee groups concerning their

health, satisfaction with quality of care and access and exposure to different types and levels of utilization controls.

Regression analysis will determine the probability that changes in enrollees' health, satisfaction with quality of care and access and disenrollment are related to differences in types and stringency of utilization control structures. Regression analysis of panel data has been chosen for the following reasons. The study attempts (a) to model the relationship between the variables of utilization control, health, satisfaction with quality of care and access, and disenrollment; and (b) to explain the effects of utilization controls over a time on one group of subjects rather than to identify a difference between groups exposed to utilization controls. In addition, the response is considered to be a function of several predictor variables: authorization procedures, physician risk sharing, physician profiles, and record reviews. Logit regression will be used for the equations that require a dichotomous dependent variable. These equations look for the probability that an enrollee has reduced health, is unsatisfied with quality of care and access, and/or disenrolls after being in an HMO. A logit model is preferred when using a dichotomous dependent variable because while the regression coefficients derived from the ordinary least squares (OLS) model are unbiased, they are not efficient because of the error disturbances are heteroscedastic (Pindyck & Rubinfeld, 1981). Ordinary least square regression, in the case of a dichotomous dependent variable, often predicts values outside of the 0 to 1 range whereas maximum likelihood logit regression does not.

The pseudo coefficient of determination (R^2) and the correlation coefficient (r) will be used to measure the strength of the relationship between the independent variables and the dependent variables.

A one-tailed test of significance will be used because directional hypotheses are proposed. That is, utilization controls are hypothesized not to decrease health, satisfaction with quality of care and access, and continuous enrollment. A 95% confidence level is used.

Data Source

Secondary data from the National Medicare Competition Evaluation (NMCE) is used for this analysis. Sponsored by the Health Care Financing Administration (HCFA), the NMCE currently involves 17 HMOs in 6 demonstration sites throughout the United States where all health service are provided to Medicare beneficiaries for a prospectively determined and fixed annual payment per beneficiary. The program will assess the impacts of risk-based financing for Medicare services and examine the experiences of HMOs and CMPs enrolling Medicare beneficiaries.

Data from the NMCE being used are: (a) site visit case studies of 17 HMOs participating in the NMCE; and (b) baseline and follow-up telephone interviews of enrollees in the 17 HMOs.

Data on the utilization controls used by the HMOs come from the case studies. The case studies are reports of site visits made by the NMCE evaluation team to the plans six months after they became operational, that is, after they started enrolling Medicare

beneficiaries. The case studies were done between January 1984 and February 1986.

Interviews were conducted during the site visits with various HMO staff, including the executive director, the medical director, the person in charge of the quality assurance activities, and the chief financial officer. Some specific areas of questioning included:

1. age of the plan
2. federal qualification status
3. organizational form of the HMO
4. physician financial mechanism, incentives, structures
5. components of the quality assurance programs
6. components of utilization control structures

Three primary site visit interviewers conducted site visits and prepared case study reports of the 17 plans included in this analysis. All three participated in the first site visits to the four plans in South Florida. The other site visits were done by one or two members of the team. All three extensively reviewed each other's final case study reports to maximize reliability among the interviewers.

Data on enrollees' health and satisfaction with quality of care and access are drawn from baseline and follow-up beneficiary surveys conducted by telephone between the spring of 1984 and December of 1986. The primary purpose of the baseline survey was to measure enrollees' health and satisfaction with the enrollees' previous source of care at enrollment. The second data collection occurred one year later and included the same questions, thereby allowing an assessment of changed in enrollees' health and satisfaction with quality of care and access after exposure to utilization controls.

The follow-up survey also tracked disenrollees so that information about how they differed from continuous enrollees can be examined. The interview protocols from the baseline and follow-up surveys are in Appendices A and B.

While the sample is not representative of all people, it is available and does not limit the study design from testing the hypotheses, because units of comparison are within group rather than across groups.

Population and Sample

Health Maintenance Organizations

The sample of HMOs represent 17 HMOs nationwide selected out of 52 HMOs having risk-based contracts to provide care for Medicare beneficiaries by HCFA participating in the quality of care component of the NMCE by HCFA.

The basic characteristics of the 17 HMOs are shown in Table 2. The plans are classified according to how the primary provider physicians were organized and contracted for services with the plans because this factor represents the core of the HMO/provider arrangements. Contract physicians, who practice alone or in groups, are used by some HMOs to supplement their core physician staff. Of the 17 plans, there are five IPA-model HMOs, four group-model HMOs and eight are staff-model HMOs.

The majority of the plans (80%) are federally qualified; only two are not. The percentage is much higher than the 59% of all HMOs. Additionally most programs (80%) are not-for-profit organizations.

Table 2

National Medicare Competition Evaluation HMOs/CMPs: Federal Qualification, Age, Model Type 1984-1985

Plan	Size of Plan*	Federal Qualification	Age*	Model Type**
Plan A	68,148	YES	7	IPA
Plan B	10,300	NO	2	Group
Plan C	38,882	YES	12	Staff
Plan D	14,775	YES	5	Staff
Plan E	160,846	YES	9	Staff
Plan F	30,890	YES	5	Group
Plan G	13,111	YES	3	Staff
Plan H	42,269	NO	7	IPA
Plan I	49,789	YES	8	Group
Plan J	53,086	YES	7	Staff
Plan K	75,708	YES	25	Staff
Plan L	51,399	YES	18	Staff
Plan M	45,841	YES	4	IPA
Plan N	67,379	YES	11	Staff
Plan O	73,111	YES	6	IPA
Plan P	34,357	YES	12	Group
Plan Q	36,712	NO	7	IPA

*As of 12/31/84.

**In other reports from the NMCE a fourth model is identified -- network IPAs. Plans in the fourth category were reassigned in this report according to how the majority of their physicians were paid at the time of the HMO site visit.

A distinctive characteristic of these HMOs is their age. They are primarily young organizations, with ages ranging from two years to 25 years. The median age is seven years. Ten plans have operated for seven years or less, and seven plans have operated for eight years or more.

The size of the plans varies from 10,300 enrollees to 160,000 enrollees. The median number of enrollees is 45,841. Three plans have under 16,000 members and five plans have over 60,000 members.

Utilization controls used by the plans vary. Tables 3 to 5 list the antecedent (Table 3), concurrent (Table 4), and retrospective controls (Table 5) used by each plan.

Enrollees

The sample is 2,098 enrollees from the 17 HMOs in the baseline (80% completion rate) and includes 1,175 (70% completion rate) in the follow-up (second wave) of interviewing. Attrition from baseline to follow-up occurs because of voluntary disenrollment from the HMOs, death, or item-nonresponse to interview questions.

Enrollees self-selected the HMO in which they enrolled but were randomly selected to receive the telephone interview. The number of enrollees from each plan making up the sample varies little. Each HMO's enrollees make up between 5.3% and 6.6% of the total sample of enrollees.

All enrollees are 65 years or older. To assure the representativeness of the enrollees, baseline information was also collected from a comparison group. The comparison group is made up

Table 3

National Medicare Competition Evaluation HMOs/CMPs: Prospective Utilization Review Activities, Six Months After Operational, 1984-1985

Plan	Gatekeeper MD	Pre-authorize Hospitalization	Pre-authorize Specialist MD	Pre-authorize Urgency Care	LOS Set
Plan A	YES	NO	NO*	YES	YES
Plan B	NO	YES	NO	YES	YES
Plan C	YES	YES	YES	YES	YES
Plan D	YES	YES	YES	YES	NO
Plan E	YES	YES	YES	YES	NO
Plan F	YES	YES	NO**	YES	NO
Plan G	NO	NO	NO	YES	NO
Plan H	YES	YES	NO	NO	YES
Plan I	YES	YES	YES	YES	NO
Plan J	NO	NO	NO	YES	NO
Plan K	YES	NO	NO***	YES	YES
Plan L	NO	YES	NO***	YES	YES
Plan M	YES	YES	NO	YES	YES
Plan N	NO	YES	YES	YES	NO
Plan O	YES	YES	NO***	YES	YES
Plan P	YES	YES	NO***	YES	NO
Plan Q	NO	YES	NO	YES	YES

*Referral log maintained for retrospective review.

**Will require preauthorization if problem occurs.

***Must have authorization if specialist is outside plan.

Table 4

National Medicare Competition Evaluation HMOs/CMPs: Concurrent Utilization Review Activities, Six Months After Operational, 1984-1985

Plan	Concurrent Hospital Review	Discharge Planning
Plan A	YES	NO
Plan B	YES	YES
Plan C	YES	NO
Plan D	YES	YES
Plan E	YES	NO
Plan F	YES	NO
Plan G	YES	YES
Plan H	YES	NO
Plan I	YES	YES
Plan J	YES	NO
Plan K	YES	NO
Plan L	YES	YES
Plan M	YES	NO
Plan N	YES	YES
Plan O	YES	YES
Plan P	YES	YES
Plan Q	YES	YES

Table 5

National Medicare Competition Evalution HMOs/CMPs: Retrospective Utilization Review Activities, Six Months After Operational 1984-1985

Plan	Primary Care MD Profiles	Specialist MD Profiles	Retrospective Review of Hospital Records	Retrospective Review of Emergency Room Records	Retrospective Review of Ambulatory Care Records
Plan A	YES	YES	YES	NO	NO
Plan B	YES	YES	YES	YES	YES
Plan C	NO	NO	YES	NO	YES
Plan D	YES	YES	YES	YES	NO
Plan E	YES	NO	NO	NO	NO
Plan F	YES	YES	YES	YES	YES
Plan G	NO	NO	NO	NO	NO
Plan H	NO	NO	NO	YES	NO
Plan I	YES	NO	YES	YES	NO
Plan J	NO	NO	NO	NO	NO**
Plan K	YES	YES	YES	NO	YES
Plan L	YES*	YES*	NO	NO	NO
Plan M	YES	NO	NO	NO	NO**
Plan N	YES	YES	NO	NO	NO
Plan O	YES	YES	YES	NO	NO
Plan P	YES	YES	NO	YES	NO***
Plan Q	YES	NO**	YES	YES	YES

*Encounter log.

**Referrals tracked through patient profiles used to determine high cost patients.

***Could be done on a special study through QA Committee.

of Medicare beneficiaries outside the market area, but residing in comparable communities.

Tables 6 and 7 show the demographic and health characteristics of the two groups. From Table 6 it can be seen that the samples are predominantly white, married, have at least a grade school education, are not employed, own their home and have an income between $5,000 and $24,999. The variables showing a significant difference between groups are race, education, income and residing in a private home. When compared to the enrollees, the comparison group is more likely to be white, educated, have a higher income, own a home, but also more likely to reside in a nursing home.

Table 7 shows that the health characteristics of the two groups are similar but there is a trend for enrollees to rate themselves as healthier, to have fewer symptoms, fewer bed days, fewer limited activity days, fewer sick days and higher Instrumental Activity of Daily Living (IADL) scores.

Table 8 arrays the indicators of satisfaction with a regular source of health care for the enrollee and comparison groups. Enrollees were less likely to be very satisfied with their regular source of care or to rate the professional competence of their providers as "excellent." They were less satisfied with the courtesy of health care providers as well as providers' willingness to discuss medical problems with the patient.

Prior experiences with medical care are shown in Table 9. The enrollee group was significantly less likely to have a regular source of care or to be concerned about seeing the same physician.

Table 6

Personal Characteristics of Enrollee and Comparison Groups Participating in the NMCE

Characteristic	Enrollee Group N=2,098	Comparison Group N=1,059
Age		
Mean	74.5 years	74.9 years
Median	73.0 years	75.0 years
Range	65-100 years	65-101 years
Percent Female	57.0	59.6
Percent White	93.2	90.7*
Percent Married	57.7	58.1
Percent Unmarried, Living Alone	29.6	31.3
Percent Employed	11.3	10.7
Full-time	3.4	3.7
Part-time	7.9	6.9
Years of Education	10.9	11.3**
Percent Residing in		
Private Home	98.4	97.1
Nursing Home	0.3	2.0**
Percent Owning their Home	8.5	75.1**
Income		
less than $5,000	10.9	14.6
$5,000 to $9,999	42.6	29.5**
$10,000 to $24,999	41.1	42.3
$25,000 and over	5.1	13.6**

*Significantly different from enrollees at .05 level, using two-tailed test.

**Significantly different from enrollees at .01 level, using two-tailed test.

Table 7

Health Characteristics of Enrollee and Comparison Groups Participating in the NMCE

Characteristic	Enrollee Group N=2,098	Comparison Group N=1,059
Percent Reporting Health:		
Excellent	28.6	27.7
Poor	3.8	6.8
Percent Reporting 1 or More Symptoms	60.4	61.4
Percent Reporting 1 or More Bed Days in Last 2 Weeks	3.5	8.4**
Percent Reporting 1 or More Limited Activity Days in Last 2 Weeks	8.7	11.4*
Average Number of Bed Days in Past Year	2.9 days	6.3 days**
Percent with Ability to Perform Instrumental Activities of Daily Living[a]	88.8	83.2**
Percent Reporting Having a Physical Exam in Past Year	37.3	62.9**

[a] "Instrumental Activities of Daily Living" are meal preparation, housework, money management, shopping, taking medicine, and ability to travel outside the home. Sample members were asked whether they could do each of these tasks without help.

*Significantly different from enrollees at .05 level, using two-tailed test.

**Significantly different from enrollees at .01 level, using two-tailed test.

Table 8

Satisfaction with Regular Source of Care as Reported by Enrollee and Comparison Groups Participating in the NMCE

Characteristic	Enrollee Group N=2,098	Comparison Group N=1,059
Satisfaction with Regular Source of Care		
Percent Rating Professional Competence "Excellent"	56.7	65.3*
Percent Rating Willingness to Discuss "Excellent"	55.4	67.5*
Percent Rating Courtesy "Excellent"	58.1	68.3*
Percent Rating Travel as "Convenient"	89.0	89.9
Percent Rating Appointment Arrangements "Convenient"	94.1	94.2
Percent "Very Satisfied" with Regular Source of Care	69.4	84.3*

*Significantly different from enrollees at .01 level, using two-tailed test.

Table 9

Previous Medical Care Experience as Reported by Enrollee and Comparison Groups Participating in the NMCE

Characteristic	Enrollee Group N=2,098	Comparison Group N=1,059
Previous Medical Care[a]		
Percent with Regular Place of Care	76.9	86.9**
Doctor's Office	87.4	84.7
Clinic	10.7	12.8
Emergency Room	1.2	1.0
HMO	0.4	--
Other	0.4	1.3*
Percent with Regular Physician	70.6	80.9*
Percent Indicating Seeing Same Physician was Very Important	68.2	77.7**
Travel Time to Regular Source of Care	17.8	19.6**
Days Wait for Appointment with Regular Source of Care	6.1	5.6
Minutes Waiting in Office Before Seeing Doctor	26.2	24.5

[a]Except for the variable "percent with regular place of care," all means under this category are computed only for those beneficiaries who have a regular place of care.

*Significantly different from enrollees at .05 level, using two-tailed test.

**Significantly different from enrollees at .01 level, using two-tailed test.

Thus, Medicare beneficiaries enrolling in the HMOs tended to have fewer health problems, to have fewer ties to a regular source of care, and to be less satisfied with their previous experiences with medical care than the comparison group.

Variable Measurement

Four groups of variables are of interest: utilization controls, health, satisfaction with quality of care and access, and disenrollment. Utilization controls were measured one time and represent the treatment or independent variables. Health and satisfaction with quality of care and access variables were measured at enrollment (T1) and one year following enrollment (T2). Disenrollment was tabulated at follow-up. Table 10 lists the specific data elements to be included.

Utilization Controls

Principal component factor analysis was used to validate the separation of the procedural controls into the categories discussed in the literature and to assure that the combinations of utilization control procedures listed in Tables 3 to 5 were actually linear combinations of the same factor. The specific controls separated out into factors that represented authorization procedures, physician profiles, and retrospective record reviews with the exception of two antecedent controls, setting LOS and preauthorizing urgency care. These two procedures did load on the same factor (authorization procedures) as did the other antecedent controls (gatekeeper, preauthorizing hospital care, and preauthorizing

Table 10

List of Variables, Time Measured, and Scale

Variable	Time Measured	Scale
Utilization Controls		
1. Authorization Procedures	T1	0 to 3
2. Physician Profiles	T1	0 to 2
3. Retrospective Record Reviews	T1	0 to 3
4. Physician Risk-Sharing	T1	-10 to +10
Health		
1. Number of Symptoms	T1, T2	0 to 10
2. Self-rated Health	T1, T2	1 to 4
3. Number of Limited Activity Days in the Last Two Weeks	T1, T2	0 to 14
4. Number of Bed Days in the Last Two Weeks	T1, T2	0 to 14
5. Ability to Perform Instrumental Activities of Daily Living	T1, T2	0 to 6
6. Number of Sick Days in the Last Year	T1, T2	0 to 365
Satisfaction with Care		
1. Rating of Professional Skill	T1, T2	1 to 4
2. Rating of Provider's Willingness to Discuss a Health Problem	T1, T2	1 to 4
3. Satisfaction with Regular Source of Care	T1, T2	1 to 4
4. Rating of Convenience of Appointment Arrangements	T1, T2	1 to 4
5. Rating of Reasonableness of Waiting to See Physicians	T1, T2	1 to 4

specialist care). Preauthorizing urgency care loaded on a second factor and in the opposite direction of the others. Setting LOS did not load strongly on either factor. In addition, when setting LOS and preauthorizing urgency care were included in the factor analysis, Kaiser's measure of sampling adequacy was below the acceptable limit of 0.57. For these reasons, these two controls were not included in the authorization procedures that were folded into a Guttman scale.

A decision was made to delete the concurrent review controls because of lack of strength in controlling service use (Boaz, 1979; Ruchlin, Finkel & McCarthy, 1982), lack of variability among the plans with regard to concurrent hospital review, and lack of consensus between interviewers and plans and among plans as to what constituted discharge planning. Discharge planning ranged from setting hospital length of stay prior to admission by a clerk in the admissions office (an antecedent control) to involvement by a discharge planning nurse with the patient or family or both, hospital departments and physicians.

Each factored group of organizational controls, i.e., authorization procedures, physician profiles and retrospective record reviews, was examined as to its ability to be classified by Guttman scaling technique. Earlier research on the HMOs' utilization controls indicated that the authorization and review procedures were adopted in a sequential manner (Brown, 1987). Each group of controls for authorization procedures, physician profiles and record reviews met the standard criteria for existence of a Guttman scale (Kaluzny & Veney, 1980).

Plan ratings on the stringency of authorization procedures ranged from 0 to 3 depending on the presence of one or more of the following controls: gatekeeper, prior authorization of hospital admission, prior authorization of specialist care. The ratings of stringency of physician profiles ranged from 0 to 2 depending on the presence or absence of primary care physician profiles and/or specialist physician profiles. Ratings for retrospective record review ranged from 0 to 3 depending on the presence or absence of a utilization review committee, retrospective review of ambulatory care records and retrospective review of hospital records.

To measure the level of physician risk sharing in the plans a scale was developed from a list of risk sharing arrangements found in this sample of HMOs. A modified Delphi technique was used to construct the scale (Kaluzny & Veney, 1980). A questionnaire was sent to three health economists asking each one to rate the different risk-sharing arrangements found in the 17 HMOs (Table 11). Specified constraints on the rating were:

1. A risk-sharing arrangement that does not link physician income to services prescribed for patients (straight salary) has a value of 0.

2. A risk-sharing arrangement that increases physician income if more services are prescribed (fee-for-service payment) has a value of less than 0.

3. A risk-sharing arrangement that reduces physician income if more services are prescribed (capitated payment) has a value of greater than 0.

4. The scale's range is to be limited to -10 to +10.

A composite score for the degree of financial risk for patient services shared by physicians based on the HMO's contract with its

Table 11

Summary: Financial Risk Facing Physicians in 17 Medicare Demonstration HMOs

Plan	At Risk for In-Office Services	At Risk for Referral Physician Services	At Risk for for Hospital Services	Limits to Risk/Other Arrangements
Plan A	Yes	Withhold	No	10% withhold for referral services bonus based on overall HMO profit on Medicare
Plan B	Yes	Yes	Yes	
Plan C	No, salary	No	No	
Plan D	No, salary	No	No	
Plan E	Yes	Yes, 50%	Yes, 60%	
Plan G	No, salary	No	No	
Plan H	FFS[a]	Withhold	Withhold	Withhold
Plan I	Yes	Yes	Bonus	Maximum negotiated ceiling set on Medicare group's losses
Plan J	No, salary	No	No	
Plan K	No, salary	No	No	
Plan L	No, salary	No	No	
Plan M	Yes	Yes	Yes, 50%	Share loss or surplus on hospital and inpatient specialists equaly
Plan N	No, salary	No	No	
Plan O	FFS	Withhold and Bonus	Withhold and Bonus	Negotiated maximum risk on referral and hospital costs
Plan P	No, salary	No	No	
Plan Q	FFS	Withhold	Withhold	Withhold

[a]Fee-for-service.

primary physician group was assigned to each HMO was derived by averaging the ratings given to each plan. Those plans that capitated providers for all services including hospitalizations had the highest positive numerical scores. Those plans paying a modified fee-for-service scale and having no capitation received the highest negative numerical scores.

Two plans in this sample are actually mixed models. The primary providers have a different level of risk-sharing than specialist physicians. The plan's degree of risk-sharing was decided by the types of arrangements established for the primary providers as they make up the core physician group. This may, however, increase the error associated with the beta coefficients in the regression analysis.

Enrollees' Health

Health is a multidimensional concept. A definition of health may focus on the individual, his disease state and/or his ability to function (Binstock & Shanas, 1977). For this study, health is defined to encompass the individual's ability to function, the presence or absence of symptoms, and his feelings about his health. Data from the baseline telephone interviews provide the values for initial health. Data from the follow-up telephone interviews provide the values for health after enrollment in an HMO. Initial and outcome health are measured for each enrollee by the following indicators:

1. number of symptoms reported out of a list of ten symptoms

2. self-rated health using a scale of 1 to 4 with 4 representing excellent health

3. number of limited activity days in the last two weeks

4. number of bed days in the last two weeks

5. ability to perform instrumental activities of daily living using a scale of 1 to 6 derived from summing responses to questionnaire items

6. number of sick days in the last year.

Enrollee Satisfaction with Quality of Care and Access

Like health, satisfaction with care is multifaceted. Satisfaction represents the degree of fit between a patient and a health system and describes perceived access to care (Thomas & Penchansky, 1984). Enrollees' satisfaction with quality of care and access is measured by their responses to a battery of questions asking them to rate on a scale of 1 to 4 (with 4 being the highest rating) specific components of care described in the literature as satisfiers:

1. professional competence

2. provider's willingness to discuss a health problem with a patient

3. satisfaction with the HMO as a regular source of care

4. convenience of appointment arrangements

5. reasonableness of waiting time to see a physician.

These items have been chosen from the satisfaction battery of questions in the survey because they represent those components of

satisfaction that could be influenced by utilization controls as discussed in Chapter 2. A single index was not calculated by summing all the items on the battery because satisfaction is a multi-dimensional construct. Rossiter, Wan, Langwell, Tucker, Rivnyak, Sullivan and Norcross (1987) found satisfaction in this enrollee group to the composed of two related concepts: (a) satisfaction with quality of care and (b) accessibility or the convenience of care. Items one through three reflect satisfaction with quality of care. Items four and five reflect satisfaction with access to care.

Disenrollment

Any living enrollee not enrolled at follow-up in the HMO to which he or she belonged at enrollment is classified as disenrolled.

CHAPTER 4

RESULTS

Separate analyses were performed for continuous enrollees and disenrollees using the merged data. The disenrollees were treated as a distinct group because their leaving the HMO may have been primarily motivated by dissatisfaction with utilization control. Thus, the effect of utilization controls may be disenrollment rather than continuous enrollment with changes in health and/or satisfaction with quality of care and access. T-tests were performed to see if significant changes in health and satisfaction with quality of care and access measures had occurred since enrollment for continuing enrollees and disenrollees. Each group was also examined for the type and stringency of utilization control to which it was exposed.

Using regression techniques the effects of utilization controls on changes between enrollment (T1) and follow-up (T2) for the continuously enrolled group were studied. Logit regression analysis was then used to see if the negative changes since enrollment were associated with utilization controls.

The continuous enrollees were then compared with the disenrollees. For each of these comparisons, differences between

the mean value of characteristics of each group were calculated and a t-test performed to identify significant differences.

The last analysis studies the effect of utilization controls on disenrollment using logit regression.

Descriptive Statistics of Sample

Sample sizes by plan are shown in Table 12 along with the completion rate at follow-up for the beneficiary survey by plan. Surveys may not have been completed at baseline or follow-up or both. Follow-up surveys were conducted only if the respondent had had at least one HMO physician encounter. Thus, the column listed completions, still enrolled and no visit are excluded from the analysis. Of the 2,098 baseline respondents, 1,175 (56.0%) had at least one HMO physician encounter. The analysis of the effects of utilization controls on continuous enrollees was done on this group. The 336 (16.0%) enrollees not having an HMO visit are not included in the study because (a) they have no evidence belonging to the HMO is unsatisfactory as they are still enrolled and (b) without an expressed need to see a physician there is no evidence that exposure to utilization controls has an effect on their health.

The completion rates reflect completion of the two surveys conducted about one year apart. The overall completion rate at follow-up was 93.3%. Variation in completion occurred by plan, but it is not considered substantial except for Plan C, which has only a 79.5% completion rate. The nonresponse category (6.7%) is really a collection of reasons including refusal, could not locate, and moved from area. As reported elsewhere from the NMCE (Brown, Langwell,

Table 12

National Medicare Competition Evaluation: Distribution of Sample Survey Beneficiairies by Market Area and Plan According to Completion Status at Follow-up, 1986 (NMCE Beneficiary Survey 1985-86)

Plan	Baseline Respondents	PERCENT				
		Completions				
		Still Enrolled				
		Visit	No Visit	Disenrolled	Deceased	Nonresponse
Enrollees	2098	1175	336	376	70	141
Plan A	124	46.8	14.5	25.8	2.4	10.5
Plan B	138	76.8	11.6	5.1	4.4	2.2
Plan C	112	66.1	6.3	22.3	2.7	2.7
Plan D	122	26.2	28.7	23.0	1.6	20.5
Plan E	116	55.2	7.8	21.6	4.3	11.2
Plan F	123	71.5	16.3	5.7	1.6	4.9
Plan G	123	78.1	3.3	8.1	4.9	5.7
Plan H	125	31.2	60.8	4.0	0.8	3.2
Plan I	124	72.6	12.9	4.8	4.0	5.7
Plan J	124	74.2	7.3	5.7	4.0	8.9
Plan K	126	46.0	19.1	26.2	5.6	3.2
Plan L	115	39.1	13.0	32.2	3.5	12.2
Plan M	125	46.4	27.2	15.2	4.0	7.2
Plan N	125	4.8	6.4	1.6	4.8	
Plan O	123	58.5	27.6	3.3	6.5	4.1
Plan P	127	78.7	8.7	4.7	3.9	3.9
Plan Q[a]	126	0.0	0.8	92.9	1.6	4.8

[a]Plan Q ended its risk-based contract before the follow-up survey was fielded.

Berman, Ciemenecki, Nelson, Schreier, & Tucker, 1986; Brown, Ciemencki, & Langwell, 1987) disenrollment was substantial among enrollees in the period between the baseline and the follow-up survey. Interviewed disenrollees numbered 376 and accounted for about 18% of the sample. The analysis of the effects of utilization controls on disenrollment was carried out on this group.

Some of the 141 (6.7%) enrollees in the nonresponse category and others not contacted for either one or both surveys could also be disenrollees, but the number of disenrollees in this group is unknown given the available data. The number of deceased beneficiaries was 70, about 3.4% of the enrollee sample.

Effect of Utilization Controls on Enrollees' Health

The distribution of enrollee exposure to utilization control by type and level was not found to be centered in any one category or level as shown in Table 13. The group is split about in half between lower levels of control, that is, to one or less procedures in each of the three categories of authorization procedures, physician profiles and retrospective record reviews, and more stringent application of these activities. The majority of the enrollees (75%) were not exposed to risk-sharing arrangements that would directly affect the prescribing practices of their physicians.

When the indices of health at T1 and T2 were compared and t-tests performed, changes were identified for the number of reported symptoms, number of restricted activity days in the last two weeks and number of sick days per year (Table 14). Each had significantly increased. No significant differences were found for self-rated

Table 13

Percentages of Enrollees Exposed to Each Category of Utilization Control and Level within the Category

Category	All	Level of Control[a] 0	1	2	3
Authorization Procedures	100	19.8	16.6	41.5	26.1
Physician Profiles	100	24.5	20.6	54.9	N/A
Retrospective Record Review	100	53.3	33.6	8.2	4.9
		< 0	0		> 0
Physician Risk-Sharing[b]	100	16.5	58.8		24.7

N=1,175

[a] Level is established by Guttman scale ranging from no procedure to using all procedures within a category consecutively. Authorization procedures and retrospective review category scales range from 0 to 3. Physician profile category scale is 0 to 2.

[b] Physician risk-sharing scale is based on contractual arrangements with physicians and ranges from -10 to +10. Physician with positive risk-sharing receive capitated payments rather than fee-for-service (<0) or salary (0).

Table 14

Results of T-Tests Performed on Differences in Continuous Enrollees' Health, Satisfaction, and Access Measures Between Baseline and Follow-up (T2-T1)

Patient Variables	T-statistic
Health Measures	
Number of Symptoms	2.06*
Self-Rated Health	0.06
Number of Restricted Activity Days in Last 2 Weeks	8.20**
IADL Score	1.35
Number of Bed Days in Last 2 Weeks	0.05
Number of Sick Days Per Year	6.25**
Satisfaction with Quality of Care and Access	
Professional Skill	1.74
Willingness of Provider to Discuss Problems	4.01**
Care at the HMO	10.35**
Convenient Appointment Times	2.21*
Reasonable Waits	6.24**

* $p < .05$.

** $p < .01$.

health, IADL score and number of bed days reported in the two weeks prior to the interviews. When the frequencies are grouped according to the categories of "no change or improved" and "worse," it appears that the majority of enrollees fared well during their first year in the HMOs (Table 15).

The indices were then fit to Equation 1 using health at follow-up as the dependent variable, and health at baseline and the utilization controls as the independent variables.

As expected, prior health predicted health at follow-up for the enrollees for all measures except one (Table 16). Prior limited activity days did not influence limited activity days at follow-up. None of the utilization controls were found to influence health at follow-up. The lack of effect on restricted activity days was surprising given the significant t-test and theoretical expectations that limiting access to care via organizational controls may increase disability.

The effect of utilization controls on changes in health from baseline (T1) to follow-up (T2) was then examined. For this analysis, the value of each health variable at T1 was subtracted from its value at T2 (T2 - T1) producing a net value that represented the change in health since enrollment. The net value of the health variable then became the dependent variable in Equation 2. The utilization controls were found not to contribute to changes in health between T1 and T2 (Table 17).

The relationship between decreased health and utilization controls was then studied using logit regression (Equation 3). In the logit regression equations, the dependent variables *for* health

Table 15

Difference in Enrollees' Health, Satisfaction with Quality of Care and Access After Enrolling in HMO (T2-T1)

Patient Variables	Percentage Reporting No Change or Improved	Percentage Reporting Worse Off
Health Measures		
Number of Symptoms	74.5	25.5
Self-Rated Health	79.5	20.5
Number of Restricted Activity Days in Last 2 Weeks[a]	93.6	6.4
IADL Score	90.9	9.1
Number of Bed Days in Last 2 Weeks[b]	95.3	4.7
Number of Sick Days Per Year	77.6	22.4
Satisfaction with Quality of Care and Access[c]		
Professional Skill	79.1	20.9
Willingness of Provider to Discuss Problems	80.1	19.9
General Satisfaction	90.8	9.2
Convenient Appointment Times	86.4	13.6
Reasonable Waits	90.2	9.8
N=1,175		

[a]Derived from those reporting limited activity days in last 2 weeks at T1.

[b]Derived from those reporting bed days in last 2 weeks at T1.

[c]Satisfaction measured at baseline for enrollees' prior source of care.

Table 16

Health at Baseline and Utilization Controls Effect on

Enrollees' Health at Follow-up

Control	HEALTH Beta Coefficients					
	No. of Symptoms	Self-Rated Health[a]	Bed Days in Prior 2 Weeks	Limited Activity Days in Prior 2 Wks.	IADL	No. of Sick Days/Year
Health (T1)						
No. of Symptoms	0.519* (5.74)					
Self-Rated Health		-0.536* (21.260)				
Bed Days in Prior 2 Weeks			0.206* (6.047)			
Limited Activity Days in Prior 2 Weeks				0.050 (1.896)		
IADL					0.301* (13.458)	
No. of Sick Days Per Year						0.383* (5.000)
Control						
Authorization Procedures	0.005 (0.032)	0.005 (0.200)	-0.079 (-1.694)	0.006 (0.082)	0.018 (1.068)	-1.075 (-1.370)
Physician Profiles	-0.314 (-2.003)	0.035 (1.430)	0.060 (1.223)	-0.180 (-2.316)	0.019 (1.073)	-0.700 (-0.820)
Retrospective Record Review	-0.233 (-1.33)	-0.019 (-0.683)	0.018 (0.309)	0.041 (0.470)	-0.015 (-0.739)	-0.023 (-0.024)
Physician Risk-Sharing	-0.005 (-0.323)	-0.003 (1.140)	-0.005 (-1.002)	-0.005 (-0.616)	-0.001 (-0.686)	-0.055 (-0.668)
F value	8.252*	91.676*	8.49*	2.041	36.489*	5.995*
R^2	0.034	0.286	0.035	0.009	0.152	0.026

Note. Figures in parentheses are t-values.

* $p < 0.01$.

Table 17

Effect of Utilization Controls on Changes in Enrollees' Health (T2-T1)

Control	No. of Symptoms	Self-Rated Health	Bed Days in Prior 2 Weeks	Limited Activity Days in Prior 2 Wks.	IADL	No. of Sick Days/Year
Authorization Procedures	0.061 (0.419)	-0.011	-0.097 (-1.721)	-0.006 (0.617)	0.028 (1.183)	-1.082 (-1.341)
Physician Profiles	-0.291 (-1.837)	0.018	0.051 (0.839)	-0.001 (-0.008)	0.015 (0.608)	-0.376 (-0.430)
Retrospective Record Review	-0.204 (-1.136)	-0.036	0.028 (0.414)	0.055 (0.434)	-0.018 (-0.652)	-0.298 (-0.304)
Physician Risk-Sharing	-0.008 (-0.523)	0.004	-0.009 (-1.578)	-0.002 (-0.171)	-0.000 (-0.023)	-0.029 (-0.343)
F value	1.30	0.965	2.06	0.06	0.0460	0.900
R^2	0.004	0.003	0.007	0.000	0.002	0.003

Note. Figures in parentheses are t-values.

were coded so that increased severity or morbidity at follow-up was represented by 1 and improved health by 0.

The effect of utilization controls on decreased health at T2 was also negligible (Table 18). None of the independent variables has a significant effect on any health indicator.

The Effect of Utilization Controls on Enrollees' Satisfaction with Quality of Care and Access

When the indices for satisfaction with quality of care and access were compared and t-tests performed, they were significantly improved over the enrollees' previous source of care. Professional skill was not rated higher than prior to enrollment.

However, when the effect of utilization controls on satisfaction with quality of care and access were tested a slightly different picture emerges (Equation 4) than was found for the effect of utilization controls on health. While the effect of risk sharing was not significant for any of the satisfaction measures, procedural controls did have significant effects on satisfaction (Table 19). Enrollees were more satisfied with the care they received in plans with less authorization procedures. Enrollees were also more satisfied with appointments in those plans having fewer authorization procedures and doing less physician profiling. Retrospective review, however, was associated with higher satisfaction with appointment convenience. Plans with more extensive record review procedures perhaps are able to monitor this access concern and quickly implement actions to resolve patient problems with appointment availability.

Table 18

Results of Logit Regression: Effect of Utilization Controls on Decreases in Enrollees' in Health at Follow-up (T2)

Control	HEALTH Beta Coefficients					
	No. of Symptoms	Self-Rated Health[a]	Bed Days in Prior 2 Weeks	Limited Activity Days in Prior 2 Wks.	IADL	No. of Sick Days/Year
Authorization Procedures	0.116	-0.072	0.249	0.089	0.148	0.120
	(2.43)	(0.86)	(2.89)	(0.49)	(3.53)	(0.02)
Physician Profiles	-0.097	-0.032	-0.218	0.266	0.115	0.089
	(1.49)	(0.14)	(1.68)	(3.96)	(1.83)	(1.12)
Retrospective Record Review	-0.074	-0.151	0.068	-0.093	-0.007	-0.081
	(0.68)	(2.68)	(0.10)	(0.37)	(0.00)	(0.74)
Physician Risk-Sharing	-0.003	0.134	0.018	0.014	0.002	0.007
	(0.20)	(2.83)	(0.89)	(0.93)	(0.03)	(0.63)
(N=1175)						
Chi square with 4 degrees of freedom	4.00	6.70	7.10	6.38	6.92	2.44
R^2	0.00	0.00	0.00	0.00	0.00	0.00

Note. Figures in parentheses are chi-square values.

[a] Decreased health; all decreases coded 1; improvement or no change coded 0.

Table 19

Effect of Utilization Controls on Enrollees' Satisfaction and Access at Follow-up

	SATISFACTION WITH QUALITY OF CARE AND ACCESS				
Control	Skill	Talk	Care	Appointment	Wait
Authorization Procedures	-0.046	-0.039	-0.056*	-0.072*	-0.039*
	(-2.325)	(-1.872)	(-3.717)	(-4.508)	(-2.112)
Physician Profiles	-0.011	0.001	-0.019	-0.036**	-0.005
	(-0.518)	(0.034)	(-1.169)	(-2.038)	(-0.223)
Retrospective Record Review	0.051	0.033	0.019	0.047**	-0.003
	(2.133)	(1.257)	(1.407)	(2.389)	(-0.148)
Physician Risk-Sharing	0.002	0.004	0.001	0.003	0.003
	(0.718)	(1.719)	(0.500)	(1.816)	(1.304)
F value	1.974	1.582	3.840*	6.594*	1.482
R^2	0.007	0.006	0.013	0.023	0.005

Note. Figures in parentheses are t-values.

* $p < 0.01$.

** $p < 0.05$.

The effect of utilization controls on the changes in satisfaction with quality of care and access between T2 and T1 was examined in the same manner as the health variables. That is, a net value for the measures was determined and used as the dependent variable regression Equation 4.

The results of the analysis is shown in Table 20. The effects of utilization controls on changes in satisfaction with quality of care and access after enrollment were not significant for any of the measures.

A logit analysis was then performed on the effect of utilization control on decreased satisfaction in the same manner as the health variables, that is, reduced satisfaction with quality of care and access at T2 were coded 1 and no change or improved satisfaction were coded 0 in Equation 5.

The results of the regression are reported in Table 21 and show that the utilization controls were not significant contributors to dissatisfaction with professional skill, willingness to talk, satisfaction with care, convenience of appointments or waiting time to see the physicians.

Disenrollee Changes in Health and Satisfaction with Quality of Care and Access

T-tests performed on the health indicators found disenrollees to have fewer statistically significant changes in health within their group than the enrollees (Table 22). Like enrollees the number of symptoms increased but their reported number of restricted activity days and sick days per year were not significantly different at

Table 20

Effect of Utilization Controls on Net Changes in Enrollees' Satisfaction with Quality of Care and Access (T2-T1)

	NET CHANGES IN SATISFACTION WITH QUALITY OF CARE AND ACCESS				
Control	Skill	Talk	Care	Appointment	Wait
Authorization Procedures	-0.040	-0.067	-0.025	-0.065	-0.016
	(-1.370)	(-2.021)	(-0.807)	(-2.688)	(0.530)
Physician Profiles	-0.001	0.047	0.024	-0.026	0.029
	(0.025)	(1.293)	(0.696)	(0.959)	(0.871)
Retrospective Record Review	-0.017	0.004	-0.021	0.046	-0.025
	(-0.425)	(0.093)	(-0.529)	(1.473)	(-0.631)
Physician Risk-Sharing	-0.001	0.004	-0.004	-0.001	-0.004
	(-0.365)	(1.047)	(-1.259)	(-0.266)	(-1.162)
F value	0.934	1.540	1.202	2.325	1.035
R^2	0.004	0.001	0.006	0.005	0.011

Note. Figures in parentheses are t-values.

Table 21

Results of Logit Regression: Effect of Utilization Controls on Decreases in Enrollees' Satisfaction with Quality of Care and Access from Previous Source of Care

	SATISFACTION WITH QUALITY OF CARE AND ACCESS (T2)* Beta Coefficients				
Control	Skill*	Talk*	Care*	Appointment*	Wait*
Authorization Procedures	-0.089	-0.082	0.003	-0.145	0.019
	(1.15)	(1.06)	(0.00)	(2.20)	(0.06)
Physician Profiles	0.121	0.079	0.067	-0.039	0.104
	(1.71)	(0.83)	(0.62)	(0.13)	(1.39)
Retrospective Record Review	-0.137	0.021	-0.235	-0.014	-0.121
	(1.48)	(0.05)	(5.22)	(0.01)	(1.35)
Physician Risk-Sharing	-0.005	0.001	-0.008	-0.005	-0.011
	(0.28)	(0.00)	(0.78)	(0.20)	(1.60)
N=1,175					
Chi square with 4 degrees of freedom	6.71	1.96	8.60	3.90	5.17
R^2	0.00	0.00	0.03	0.00	0.00

Note. Figures in parentheses are chi-square values.

*Decreased satisfaction; all decreases coded 1; improvement or no change coded 0.

Table 22

Comparison of T-Tests Performed on Continous Enrollees' and Disenrollees' Health, Satisfaction, and Access Measures Between Baseline and Follow-up (T2-T1)

Patient Variables	T Statistic: Enrollees (N=1,175)	T Statistic: Disenrollees (N=376)
Health Measures		
Number of Symptoms	2.06*	3.14**
Self-Rated Health	0.06	-0.81
Number of Restricted Activity Days in Last 2 Weeks	8.20**	0.09
IADL Score	1.35	-0.91
Number of Bed Days in Last 2 Weeks	0.05	-3.97**
Number of Sick Days Per Year	6.25**	0.55
Satisfaction with Quality of Care and Access		
Professional Skill	1.74	-4.65**
Willingness of Provider to Discuss Problems	4.01**	-3.88**
General Satisfaction	10.35**	-3.43**
Convenient Appointment Times	2.21*	-3.22**
Reasonable Waits	6.24**	-1.69

* $p < 0.05$.

** $p < 0.01$.

follow-up. Bed days were significantly less at follow-up. When compared to the enrollees, the only significant differences between the two groups' health are that disenrollees are significantly more likely to have lower self-rated health and lower IADL scores (Table 23). When the data for baseline values were compared, no significant differences between the continuous enrollees and disenrolles were found.

However, at the follow-up, the t-statistics for disenrollees' satisfaction with quality of care and access are direct opposites of those for the enrollees. There are significant differences between enrollees and disenrollees reporting less satisfaction for all the satisfaction indicators associated with quality of care and access (Table 23). Unlike the continuous enrollees who expressed satisfaction with HMO system providers and care, disenrollees were significantly more likely to perceive HMO providers to be less skilled, less willing to discuss problems with them, felt the HMO did not provide good care and had greater inconvenience with appointment times and longer waits to see a provider than they experienced prior to enrollment.

From the significant negative t-statistics (Table 22) found for all the satisfaction findings when the means for both groups are compared, it appears that dissatisfaction and disenrollment go hand in hand. A dissatisfied enrollee leaves the HMO.

Rossiter et al.'s recent study (1987) of this group found them to be more likely to have characteristics that may be associated with a higher propensity to use health services -- for instance, bearing a greater worry about health, having a health problem

Table 23

Percentage of Enrollees and Disenrollees Reporting Less Health, Satisfaction and Access After Enrolling in an HMO (T2-T1)

Patient Variables	Percentage of Enrollees	Percentage of Disenrollees
Health Measures		
Number of Symptoms	25.0	28.5
Self-Rated Health	20.5	20.1*
Number of Restricted Activity Days in Last 2 Weeks	6.4	7.3
IADL Score	9.1	12.2**
Number of Bed Days in Last 2 Weeks	4.7	7.1
Number of Sick Days Per Year	22.4	21.8
Satisfaction with Quality of Care and Access		
Professional Skill	20.9	41.5**
Willingness of Provider to Discuss Problems	19.9	35.6**
General Satisfaction	9.2	33.1**
Convenient Appointment Times	13.6	22.0**
Reasonable Waits	9.8	32.6**

* $p < .05$.

** $p < .01$.

requiring hospitalization, and having a more limited ability to perform IADL. The authors suggest that these findings, combined with those showing that disenrollees are more concerned about seeing the same physician each visit, suggest that disenrollees may be those who make greater demands on the HMO system, perhaps from ongoing or unmet need, and may be concerned about the ability of the HMO system to respond to their needs in a satisfactory matter.

Disenrollees' Exposure to Utilization Controls

One situation that might increase disenrollees' concerns about the timely responsiveness of an HMO to their needs is exposure to high level of control over access. However, when exposure to controls is arrayed (Table 24) the greatest percentage of disenrollees are found in the lower levels of utilization procedures and risk sharing. When compared to the distribution for the continuous enrollees, greater percentage of enrollees rather than disenrollees are found in all the highest levels of controls except retrospective review. This implies that it is not the numbers of controls that are applied but perhaps specific controls that are offensive to some enrollees.

Utilization Control and Disenrollment

When the effect of utilization controls on disenrollment was examined using logit regression as specified in Equation 6, it was found that the procedures account for 40% of the variance in disenrollment, and all the independent variables are significant

Table 24

Percentages of Enrollees and Disenrollees Exposed to Each Category of Utilization Control and Level Within the Category

	Level of Control*							
	0		1		2		3	
Category	Enrol	Disen	Enrol	Disen	Enrol	Disen	Enrol	Disen
Authorization Procedures	19.8	5.0	16.6	47.9	41.5	21.8	26.1	25.3
Physician Profiles	24.5	13.8	20.6	41.5	54.9	44.7	N/A	N/A
Retrospective Record Review	53.5	21.5	33.6	36.2	8.2	2.7	4.9	39.6

	< 0		0		> 0	
	Enrol	Disen	Enrol	Disen	Enrol	Disen
Physician Risk-Sharing**	16.5	34.9	58.8	45.0	24.7	19.2

*Level is established by Guttman scale ranging from no procedure to using all procedures within a category consecutively. Authorization procedures and retrospective review category scales range from 0 to 3. Physician profile category scale is 0 to 2.

**Physician risk-sharing scale is based on contractual arrangement with physicians and ranges from -10 to +10. Physicians with positive risk-sharing receive capitated payments rather than fee-for-service (<0) or salary (0).

contributors to the effect except authorization procedures (Table 25).

Interaction terms were then introduced into the logit model so that the effects of combinations of utilization controls on disenrollment could be examined. Regressing the main and interactive effects of the utilization controls on disenrollment increased the amount of explained variance in disenrollment to 49.2% with the interaction terms alone accounting for 22.1% of the variance (Table 25). Authorization procedures and physician profiling were not significant contributors to disenrollment; more stringent levels of retrospective review and lower levels of physician risk sharing continued to influence disenrollment. Significant interactive effects were (a) authorization procedures by physician profiling, (b) authorization procedures by physician risk sharing, (c) physician profiles by physician risk sharing, and (d) retrospective review by physician risk sharing.

Summary

Utilization controls did not influence health. For this group of HMO enrollees, health at enrollment predicted health at follow-up. Although there was a significant increase in limited activity days between enrollment and follow-up within the enrollee group and theoretic speculation that authorization procedures could increase limited activity days because they limit access to services, this association was not found to occur.

Utilization controls did affect satisfaction with access. At follow-up, enrollees were more satisfied (a) with care in those

Table 25

Results of Logit Regression: Effect of Utilization Controls on Disenrollment from HMOs

Controls	Beta Coefficients Disenrollees=1 Enrollees=0	Chi-Square
	Main Effects	
Authorization Procedures	-0.095	1.65
Physician Profiles	0.378	15.56*
Retrospective Record Review	0.998	194.35*
Physician Risk Sharing	-0.039	21.80*
(N=1,551)		
Chi-Square with 4 Degrees of Freedom		294.43*
R^2	0.40	
	Main and Interactive Effects	
Authorization Procedures	-0.080	0.19
Physician Profiles	-0.270	0.92
Retrospective Record Review	2.100	6.78**
Physician Risk Sharing	-0.504	7.02**
Authorization Procedures by Physician Profiles	0.440	7.17**
Authorization Procedure by Retrospective Record Review	-0.451	2.91
Authorization Procedures by Physician Risk Sharing	0.177	5.10**
Physician Profile by Retrospective Record Review	-0.332	1.99
Physician Profiles by Physician Risk Sharing	0.139	12.42*
Retrospective Review by Physician Risk Sharing	-0.114	6.39*
(N=1,551)		
Chi-Square with 10 Degrees of Freedom	458.16*	
R^2	0.492	

* $p < .01$.
** $p < .05$.

plans having fewer authorization procedures and (b) with appointment convenience in those plans having fewer authorization procedures and physician profiles. Retrospective review, however, was associated with increased satisfaction with appointment convenience. Plans with more extensive record review procedures perhaps are able to monitor this concern and quickly implement actions to resolve patient problems with it.

When enrollees were compared with disenrollees several differences were found. Although the enrollees and disenrollees were not significantly different at baseline, compared to the enrollees' health, disenrollees were significantly more likely to have lower self-rated health and less ability to perform instrumental activities of daily living at follow-up. Disenrollees' satisfaction with quality of care and access was directly opposite that expressed by the continuous enrollees. Disenrollees perceived HMO providers to be less skilled, less willing to discuss health concerns with them, felt the HMO did not provide good care, had inconvenient appointment times and had longer waits than their prior source of health care.

Although utilization controls did not adversely affect health, they did influence disenrollment. The fact that the greatest percentage of disenrollees were found in plans with fewer authorization procedures and less physician risk sharing but more review mechanisms suggests that certain combinations of controls rather than stringency of utilization control influence disenrollment more than others.

The association between disenrollment and exposure to utilization controls was found to be significant for retrospective record review, and physician risk sharing and some combinations of controls.

CHAPTER 5

SUMMARY AND CONCLUSIONS

The purpose of this prospective study has been to examine the effects of differences in utilization control on the health, satisfaction with quality of care and access, and disenrollment of HMO enrollees. Previous studies of alternative care systems have shown that they are able to decrease costs (Luft, 1981; Anderson, et al., 1985), but have not examined the organizational structure within the organization that oversees utilization. No prior studies have examined the effects of different types and degrees of utilization control on the health, satisfaction and access of enrollees.

For this investigation, Williamson's (1975) theory of organizations, transaction costs economics, was used as the analytic framework. Williamson's approach is able to describe the emergence of alternative delivery systems because it speaks to the conditions surrounding the actual exchange between a patient and a physician but largely paid for by an insurer after the fact. It is applicable to a study of utilization controls because it explains the organizational design or "governance structure" adopted to promote economic efficiency.

The research questions investigated by this study were:

1. Are differences in utilization control associated with decreased enrollee health after enrollment?

2. Are differences in utilization control associated with decreased enrollee satisfaction with the quality of care over their previous source of care?

3. Are differences in utilization controls associated with decreased enrollee access to care over their previous source of care?

4. Are differences in utilization controls associated with disenrollment from HMOs and CMPs?

The analysis found that exposure to different types and stringency of utilization controls was not associated with changes in enrollees' health at follow-up. Some utilization controls did influence enrollees' satisfaction with the quality of care and access. They did affect satisfaction with care and access related to appointment convenience. Enrollees in plans with fewer authorization procedures rated satisfaction with care higher than enrollees in plans with more authorization procedures. Enrollees in those plans with fewer authorization procedures but more extensive retrospective record reviews were more satisfied with appointment convenience.

Disenrollment from the plans was significant as 18% of the enrollees left the plans during the study. Two categories of utilization control -- retrospective record review, and physician risk sharing -- were associated with disenrollment. Combinations of utilization controls, specifically authorization procedures and physician profiles, authorization procedures and physician risk

sharing, physician profiles by physician risk sharing and retrospective review by physician risk sharing were also associated with disenrollment. These utilization controls and combinations of controls accounted for 49.2% of the variance in disenrollment.

Discussion

The fact that the greatest percentage of disenrollees were found in plans with fewer authorization procedures and physician risk sharing but more review mechanisms suggests that certain combinations of controls rather than stringency of utilization control influences disenrollment.

Plans with fewer authorization procedures were less likely to use gatekeepers so that disenrollees may have been unable to establish a relationship with a physician because they did not have a consistent provider. Previous studies have found doctor-patient communication to be perhaps the single aspect of the care delivery process that HMOs perform most poorly and inability to establish a relationship with a physician a source of dissatisfaction (Luft, 1981; Zapka, Stanek, & Raitt, 1986; Wrightsen, Genuardi, & Stephens, 1987).

Plans without physician risk sharing were staff plans, which were also least likely to use gatekeepers. In a staff plan without a gatekeeper, there are few incentives for the provider to maintain contact with patients. Patient loyalty is to the plan not to the physician. The physician is not working to build or maintain a practice.

Those physicians in plans with a high degree of risk sharing were part of large physician groups. In these instances, an identity with the physician group as well as the risk associated with patient health costs may influence providers' style of communication with patients. They may perceive their role to include ensuring patient satisfaction with the group practice.

Plans with less risk sharing were more likely to require preauthorization of specialist care so that patients may have perceived that timely referrals to specialists were not made. This could explain some of the dissatisfaction with physician competency, and quality of care.

The influence of too many review mechanisms on satisfaction may be that their effect is to limit or slow the physician's actions with regard to tests, hospitalization, or referrals because of physicians' concerns about accountability. To avoid displeasing HMO administrators and medical peers as well as increasing costs, physicians may not have provided care in what the enrollee deemed a timely manner. A utilization control strategy for plans with little or no physician risk sharing may be to increase the number of review mechanisms to provide greater oversight of physicians as a means of keeping utilization down. The proposition is further supported by the significant interaction effects between (a) physician risk sharing and physician profiles, and (b) physician risk sharing and retrospective review on disenrollment.

The issue with increasing retrospective review may lie with the intent of the monitoring, whether it focuses on physician performance or system performance. For those who stayed in the HMO,

more stringent record reviews but less physician profiling were associated with greater satisfaction with appointments over their prior source of care.

Limitations of the Analysis

This research is a descriptive analysis of the effect of utilization controls on enrollees' health, satisfaction with quality of care and access, and disenrollment. Several factors, however, limit the application of its findings.

The analytic framework applied here has focused on the beneficiary reponse rather than organizational domain. Thus the effects of factors such as competition and rate of growth cannot be included but may affect application of control structures to monitor access to care. Applying a macro theory such as contingency theory may attribute different consequences to utilization controls.

The number of organizations represented in this sample is small and self-selected. In addition, the majority of the organizations are young. The manner in which they apply the controls may differ from older more established HMOs and thus effect the milieu in which patients receive care.

A cumulative effect of the different types of utilization controls cannot be specified because the scaling of the variables is based on the specific type of utilization control rather than the total group.

The time frame for this study considering the age of respondents is short. The illnesses the elderly experience are largely chronic so that increases in ill health may have been

unlikely due to the natural history of these diseases.

The analyses are descriptive only, but provide a basis for more definitive analyses of the research questions. Developing measurement models that allow for correlations between individual responses and organizational factors by using linear structural relations modeling could provide more rigorous analyses.

Future Research

Replicating this study would be helpful if more time could be allowed between the baseline interview and the follow-up interview so that the effects of utilization control over a longer time could be studied and associated with subsequent changes in health, satisfaction and access. The findings of the study may underestimate the effect of utilization controls on health in this population because the majority of health problems faced by the age group making up the enrollees are chronic. In addition, there was no medical evaluation of enrollees' health to substantiated claims as to functional ability, sick days and so forth.

Future research in this area should also focus on the effect of timeliness and ease of referral care as a source of dissatisfaction that leads to disenrollment.

Finally, the HMOs participating in this evaluation were self-selected. Thus, they may differ systematically from the general population of HMOs in the United States. Future analysis could control for structural variables that might affect the management of the controls such as rate of organizational growth or competition with other HMOs or age of the HMO.

Summary

The utilization controls found in HMOs promise to introduce predictability, rationality, and control into an otherwise fragmented, decentralized and economically nonresponsible (opportunistic) process. As Williamson has pointed out, the control structure is not placed without some cost. In the case of HMOs and CMPs, the savings accrued from controlling access may be offset by high disenrollment. Disenrollment appears, however, to be related to combinations of controls rather than their stringency. This provides HMO managers some options in choosing among the types and levels of controls they impose to achieve efficient and effective organizations.

LIST OF REFERENCES

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Anderson, O. W., Herald, T. E., Butler, B. W., Kohrman, C. H., & Morrison, E. M. (1985). HMO development: Patterns and projects. Chicago: Pleuribus Press.

Arrow, K. J. (1974). The limits of organization. New York: W. W. Norton and Company.

Beatrice, D. (1981). Case management: A policy option for long-term care. In J. Callahan and S. Wallack (Eds.), Reforming the long-term care system. Lexington: Lexington Books.

Binstock, R. H., & Shanas, E. (1977). Handbook of aging and the social services. New York: Van Nostrand Reinhold Company.

Bischof, H. L. (1986). Organizational standards of care. Proceedings of the Group Health Institute, 119-125.

Boaz, R. F. (1979). Utilization review and containment for hospital utilization: Some implications of providing care in the most appropriate setting. Medical Care, 19(4), 315-330.

Brian, E. W. (1971). Government control of hospital utilization: A California experience. Sacramento: California Department of Health Care Services.

Brown, B. S. (1987). The structure of quality assurance programs in HMOs and CMPs enrolling Medicare beneficiaries. Unpublished report from the National Medicare Competition Demonstration. Richmond: Virginia Commonwealth University.

Brown, L. D. (1983). Politics and health care organization: HMOs as federal policy. Washington, DC: Brookings Institute.

Brown, R. A., Ciemenecki, A., & Langwell, K. (1987, June). Medicare beneficiary responses to HMO marketing. Paper presented at the 1987 Group Health Institute, Seattle, WA.

Brown, R. A., Langwell, K., Berman, K., Ciemenecki, A., Nelson, L., Schreier, A., & Tucker, A. (1986). Enrollment and disenrollment in Medicare competition plans: A descriptive analysis. Unpublished report from the National Medicare Competition Evaluation. Princeton: Mathematica Policy Research, Inc.

Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Chicago, Rand McNally.

Child, J. (1973). Predicting and understanding organization structure. Administrative Science Quarterly, 18, 168-185.

Chu, M. P. (1986). The effect of utilization review in earlier discharge planning. Proceedings of the Group Health Institute, 127-132.

Coase, R. H. (1960). The problem of social cost. Journal of Law and Economics, 3(11), 1-44.

Demsetz, H. (1967). Toward a theory of property rights. American Economic Review, 57(5), 347-359.

Donahue, P. B. (1986). Concurrent utilization review and concurrent feedback: A method to effect change in utilization patterns. Proceddings of the Group Health Institute, 133-138.

Enthoven, A. C. (1980). Health plan: The only practical solution to the soaring of cost of medical care. Reading, MA: Addison-Wesley Publishing Company.

Evans, R. G. (1981). Incomplete vertical integration: The distinctive structure of the health care industry. In J. van der Gaag and M. Perlman (Eds.), Health, economics, and health economics. New York: North-Holland Publishing Company.

Felstein. M. (1981). Hospital costs and health insurance. Cambridge, MA: Harvard University Press.

Foldes, S. S., Boller, M. A., & Jacobson, C. L. (1986). High frequency users of medical care: From identification to management action plan. Proceedings of the Group Health Institute, 127-132.

Francis, A. M., Pollissar, L., & Lorenz, A. B. (1984). Care of patients with colorectal cancer: A comparison of a health maintenance organization and fee-for-service practices. Medical Care, 22(5), 418-429.

Gabel, J. R., & Monheit, A. C. (1983). Will competition plans change insurer-provider relationships? Milbank Memorial Fund Quarterly, 61(4), 614-640.

Gertman, P. M., & Restuccia, J. D. (1981). The appropriateness evaluation protocol: A technique for assessing unnecessary days of hospital care. Medical Care, 19(8), 855-871.

Gordon, J. (1972, November). How standard setting, peer review, prior authorization, and administrative regulations reduce the quality of care in a government sponsored medical program. Paper presented at the Annual Meeting of American Public Health Association, Atlantic City, NJ.

Grimes. T. E. (1970). The effectiveness of utilization review since the advent of Medicare. Unpublished master's thesis, George Washington University, Washington, DC.

Hammons, G. T., Brook, R. H., & Newhouse, J. P. (1986). Selected alternatives for paying physicians under the Medicare program: Effects on the quality of care. Santa Monica, CA: Rand Corporation.

Harkins, E. B., & Brown, B. S. (1986, October). Geriatric care needs and HMO technology: Benefit plans early implementation and disenrollment experiences from the National Medicare Competition Evaluation. Paper presented at the Annual Meeting of the American Public Health Association, Las Vegas, NV.

Hennelly, V. D., & Boxerman, S. B. (1983). Disenrollment from a prepaid group plan, a multivariate analysis. Medical Care, 21(12), 1154-1167.

Jones, G. R. (1983). Transaction costs, property rights, and organizational culture: An exchange perspective. Administrative Science Quarterly, 28, 454-467.

Kaluzny, A. D., & Veney, J.E. (1980). Health services organizations: A guide to research and assessment. Berkeley, CA: McCutchan Publishing Corporation.

Komrad, E., Sanders, J. H., Stone, D., & Pummer, J. M. (1986). A quality assurance program for a large HMO. Proceedings of the Group Health Institute, 558-571.

Lubeck, D. P., Brown, B. W., & Holman, H. R. (1986). Chronic disease and health system performance: Care of osteoarthritis across three health services. Medical Care, 23(3), 266-277.

Luft, H. S. (1981). The operations and performance of health maintenance organizations: A synthesis of findings from Health services research. (Prepared for the National Center for Health Services Research under Contract No. 233-79-3016). San Francisco: Institute for Health Policy Studies, School of Medicine, University of California.

Luft, H. S. (1982). Health maintenance organizations and the rationing of medical care. Milbank Memorial Fund Quarterly, 60(Spring), 268-306.

Mackie, D. L., & Decker, D. K. (1981). Group and IPA HMOs. Rockville, MD: Aspen Systems Corporation.

Maitland, I., Bryson, J., & Van de Ven, A. (1985). Sociologists, economists, and opportunism. Academy of Management Review, 10(1), 59-65.

Marcus, A. C., & Stone, J. P. (1984). Mode of payment and identification with a regular doctor: A prospective look at reported use of services. Medical Care, 22(7), 647-660.

Martin, D. P., Ehreth, J. L., & Geving, A. R. (1985). A case study of United Healthcare: Lessons for health care plans. Menlo Park, CA: Henry J. Kaiser Family Foundation.

McCall, N. (1984). Utilization and costs of Medicare beneficiaries in their last year of life. Medical Care, 22(4), 329-342.

McFarland, B. H., Freeborn, D. K., Mullooly, J. P., & Pope, C. R. (1985). Utilization patterns among long-term enrollees in a prepaid group practice health maintenance organization. Medical Care, 23(110), 1221-1223.

McFarland, B. H. Freeborn, D. K., Mullooly, J. P., & Pope, C. R. (1986). Utilization patterns and mortality of HMO enrollees. Milbank Memorial Fund Quarterly, 63(3), 453-475.

Mechanic, D. (1985). Cost containment and the qualityo f medical care: Rationing strategies in an era of constrained resources. Milbank Memorial Fund Quarterly, 63(3), 453-475.

Mechanic, D., Weiss, N., & Cleary, P. D. (1983). The growth of HMOs: Issues of enrollment/disenrollment. Medical Care, 21(3), 338-349.

Pauly, M. (1968). The economics of moral hazard: Comment. American Economic Review, 57, 231-237.

Pheffer, J. (1982). Organizations and organization theory. Marshfield, MA: Pitman Publishing, Inc.

Pindyck, R. S., & Rubinfeld, D. L. (1981). Econometric models and economic forecasts. New York: McGraw-Hill Book Company.

Pope, C. R. (1978). Consumer satisfaction in a health maintenance organization. Journal of Health and Social Behavior, 19, 291-340.

Restuccia, J. D. (1982). The effect of concurrent feedback in reducing inappropriate hospital utilization. Medical Care, 20(1), 46-62.

Rossiter, L., Wan, T., Langwell, K., Tucker, A., Rivnyak, M., Sullivan, K., & Narcross, J. (1987). An analysis of patient satisfaction for enrollees and disenrollees in Medicare risk-based plans. Unpublished report from the National Medicare Competition Evaluation. Richmond: Virginia Commonwealth University.

Ruchlin, H. S., Finkel, M. L., & McCarthy, E. G. (1982). Efficacy of a second-opinion consultation program: A cost-benefit perspective. Medical Care, 22(1), 3-20.

Schlag, W. A., & Piktialis, D. S. (1987). Health maintenance organizations and the elderly: The potential for vertical integration of geriatric care. Quality Review Bulletin, 13(4), 140-147.

Schlesinger, M. (1986). On the limits of expanding health care reform: Chronic care in prepaid settings. Milbank Memorial Fund Quarterly, 64(2), 189-215.

Schramm, C. J. (1986). Revisiting the competition/regulation debate in health care cost containment. Inquiry, 23, 236-242.

Scott, W. R. (1981). Organizations: Rational, natural, and open systems. Engelewood Cliffs: Prentice-Hall, Inc.

Sloss, E. M., Keeler, E. B., Brook, R. H., Operskalski, B. H., Goldberg, G. A., & Newhouse, J. P. (1987). Effect of a health maintenance organization of physiologic health: Results from a randomized trial. Annuals of Internal Medicine, 106(1), 130-138.

Sorenson, A. A., & Weisinger, R. P. (1981). Factors influencing disenrollment from an HMO. Medical Care, 19(7), 766-733.

Stuart, B., & Stockton, R. (1973). Control over utilization of medical services. Milbank Memorial Fund Quarterly, 15, 341-387.

Thomas, J. W., & Penchansky, R. (1984). Relating satisfaction with access to utilization of services. Medical Care, 22(6), 553-567.

Thompson, J. D. (1967). Organizations in Action. New York: McGraw-Hill.

U.S. General Accounting Office. (1986). Medicare: Issues raised by Florida health maintenance organization demonstrations (GAO/HRD-86-97). Washington, DC: U.S. Government Printing Office.

Williamson, O. E. (1971). The vertical integration of production: Market failure considerations. American Economic Review, 63(5), 112-123.

Williamson, O. E. (1973). Markets and hierarchies: Some elementary considerations. American Economic Review, 63(5), 316-325.

Williamson, O. E. (1975). Markets and hierarchies: Analysis and antitrust implications. New York: Free Press.

Williamson, O. E. (1979). Transaction cost economics: The governance of contractual relations. Journal of Law and Economics, 22(11), 233-261.

Williamson, O. E. (1981). The economics of organization: The transaction cost approach. American Journal of Sociology, 87(11), 548-577.

Williamson, O. E. (1985). The economic institutions of capitalism. New York: Free Press.

Wolinsky, F. D., & Marder, W. D. (1983). Waiting to see the doctor. Medical Care, 21(5), 531-555.

Woodward, J. (1970). Industrial organizations: Behavior and control. London: Oxford University Press.

Wrightson, W., Genuardi, J., & Stephens, S. (1987). Demographic and utilization characteristics of HMO disenrollees. GHAA Journal, 8(1), 23-41.

Yelin, E. H., Shern, M. A., & Epstein, W. V. (1986). Health outcomes for a chronic disease in prepaid practice and fee-for-service setting: The case of rheumatoid arthritis. Medical Care, 24(3), 236-247.

Zapka, J. G., Stanek, E. J., & Raitt, J. (1986). HMO disenrollment -- who leaves and why? Operational considerations. Proceedings of the Group Health Institute, 558-571.

APPENDIX A

APPENDIX A

MEDICARE COMPETITION DEMONSTRATION: ENROLLEE VERSION

SM VERSION-INTRODUCTION:

Hello, this is _____ and I'm calling from Mathematica Policy Research, a research firm in Princeton, New Jersey. Several days ago we sent you a letter about a study we are doing for the federal government concerning Medicare health benefits. We are now calling some of the people who enrolled in (AHP NAME) to do the interview over the telephone.

The federal government is looking at different ways of providing health care benefits under Medicare, and the questions I'll be asking will be about (AHP NAME) as well as your experiences with other health care providers.

IF NECESSARY, EXPLAIN: Your name was selected at random from a list of enrollees at (AHP NAME).

Before we begin, let me remind you that participation in this survey is voluntary and all responses will be held in confidence. May we begin the interview now?

*** GO TO 1 ***

PROXY VERSION - INTRODUCTION:

This is _____ and I'm calling from Mathematica Policy Research in Princeton, New Jersey. We are doing a study for the federal government concerning Medicare health benefits. A letter describing the study was sent to (SAMPLE MEMBER) at this address. I'm calling now to do the interview over the telephone.

TO LOCATE PROXY, SAY: Perhaps there is someone else who can answer the questions on behalf of (SAMPLE MEMBER).

Is there someone I can speak to who helps care for (SAMPLE MEMBER) and is knowledgeable about the health care (she/he) receives?

IF SPEAKING WITH PROXY, SAY: I understand that you help care for (her/him) and would be knowledgeable about the health care (she/he) receives. May we begin the interview now?

Before we begin, let me remind you that participation in this survey is voluntary and all responses will be held in confidence. Most of the questions ask for information about (SAMPLE MEMBER/ you), so you should just answer to the best of your knowledge. If you don't know the answer or don't feel qualified to respond to an item, just let me know.

*** GO TO 1 ***

>1< INTERVIEWER: CHECK CONTACT SHEET FOR AHP NAME.

Our records show that (SM/you) had enrolled in (AHP NAME) on (ENROLLMENT DATE). (Are you/Is he/she) still enrolled at (AHP NAME)?

<1> YES [goto 7]

<0> NO

<3> NEVER ENROLLED [goto mhmo]

>2mo< When did (SM/you) cancel (his/her/your) membership?

/____/____/____/
MM DD YY

<98> DON'T KNOW [goto 3]

>2a< IF CANCELLATION DATE IS AFTER ENROLMENT DATE, READ:

You said (SM/you) cancelled (his/her/your) AHP membership on (DATE FROM 2mo). (SM/you) joined (AHP NAME) on (ENROLLMENT DATE). Is that correct?

<1> YES [goto 3]

<2> NO, CANCELLATION DATE INCORRECT (CORRECT 2mo AND goto 3)

<3> NO, ENROLLMENT DATE INCORRECT

>2bmo< Can you tell me what date (SM/you) enrolled in (AHP NAME)

/____/____/____/ CORRECT ON CONTACT SHEET
MM DD YY

>3< Now I'd like you to think of ALL the reasons why (SM/you) cancelled (his/her/your) membership in (AHP NAME).

First tell me the main reason why (he/she/you) cancelled (his/her/your) membership in (AHP NAME).

_____

_____

_____

>3aa< Were there any other reasons why (SM/you) cancelled (his/her/your) membership?

<0> NO OTHER REASONS [goto 4]

<1> OTHER REASONS [specify]:_____

_____

_____

_____

>4< (Has SM/Have you) enrolled in another HMO or other prepaid health plan?

EXPLAIN IF NECESSARY: These are health plans that guarantee medical services to their members in exchange for fixed premium payments.

<1> YES

<0> NO [goto 7]

<8> DON'T KNOW [goto 7]

>5< Which prepaid health plan did (SM/you) join?

<1> VIEW OPTIONS

<8> DON'T KNOW [goto 6]

>tsit< INTERVIEWER: CHECK CONTACT SHEET:

if site is 01, goto op01	if site is 09, goto op09
if site is 02, goto op02	if site is 12, goto op12
if site is 10, goto op10	if site is 04, goto op04
if site is 07, goto op07	if site is 13, goto op13
if site is 06, goto op06	if site is 08, goto op08

>op01<

<1> THE SENIOR PLAN AT FHP

<2> THE GOLDEN AGE PLAN AT UNITED HEALTH PLAN OR WATTS FOUNDATION

<0> OTHER [specify]:_____

*** goto 6 ***

>op02<

<1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<4> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<5> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]:_____

*** goto 6 ***

>op10<

<1> GROUP HEALTH PLAN OF SE MICHIGAN

<2> HEALTH CARE NETWORK'S MEDICARE PLUS PROGRAM

<3> SENIOR PLUS OFFERED THROUGH PREFERRED HEALTH PLAN,
A SUBSIDIARY OF HENRY FORD HEALTH CARE CORPORATION

<0> OTHER [specify]:_____

*** goto 6 ***

>op07<

<1> CENTRAL MASS HEALTH CARE, INC.'S STAY WELL PLUS PROGRAM

<2> FALLON COMMUNITY HEALTH PLAN'S SENIOR CARE

<0> OTHER [specify]:_____

*** goto 6 ***

>op06<

<1> HEALTHWAY'S SENIOR PLAN

<2> THE MEDICAL EAST COMMUNITY HEALTH PLAN SENIOR PLAN

<0> OTHER [specify]:_____

*** goto 6 ***

>op09<

<1> MEDICARE PLUS AT HEALTH PLUS OF MICHIGAN OR GENESSEE HEALTH CARE, INC.

<0> OTHER [specify]:_____

*** goto 6 ***

>op12<

<1> SENIOR CARE AT GENESSEE VALLEY GROUP HEALTH ADMINISTRATION (GROUP HEALTH)

<0> OTHER [specify]: _____

*** goto 6 ***

>op04<

<1> METROCARE, A METRO HEALTH PROGRAM

<0> OTHER [specify]:_____

*** goto 6 ***

>op13<

<1> CHOICE MEDICARE AT CHOICE CARE

<0> OTHER [specify]:_____

*** goto 6 ***

>op08<

<1> THE MEDICAL WEST COMMUNITY HEALTH PLAN SENIOR PLAN

<0> OTHER [specify]:_____

>6< Now I'd like you to think of all the reasons (SM/you) considered when deciding to enroll in (PLAN SAMPLE MEMBER JOINED).

Of all the reasons (he/she/you) considered, what was the most important reason why (he/she/you) decided to enroll in (PLAN SAMPLE MEMBER JOINED)?

<1> MENTION OF LOWER COST [goto 6a]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 6b]

<3> OTHER [specify]: _____

_____ [goto 6c]

<8> DON'T KNOW [goto 7]

>6a< Could you please tell me specifically what ((he/she) was/you were) getting for less cost at (PLAN SAMPLE MEMBER JOINED).

_____

_____

>6b< Could you please tell me specifically what (benefits/services/coverages) were better at (PLAN SAMPLE MEMBER JOINED)?

_____

_____

>6c< Were there any other reasons why (he/she/you) decided to enroll in (PLAN SAMPLE MEMBER JOINED)?

<1> MENTION OF LOWER COST [goto 6d]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 6e]

<3> OTHER [specify]:_____

_____[goto 6f]

<0> NO [goto 7]

>6d< Could you please tell me specifically what ((he/she was/you were) getting for less cost at (PLAN SAMPLE MEMBER JOINED)?

_____

_____

>6e< Could you please tell me specifically what benefits/services/ coverages were better at (PLAN SAMPLE MEMBER JOINED)?

_____

_____

>6f< Were there any other reasons why (he/she/you) decided to enroll in (PLAN SAMPLE MEMBER JOINED)?

<1> MENTION OF LOWER COST [goto 6g]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 6h]

<3> OTHER [specify]:_____

_____ [goto 7]

<0> NO [goto 7]

>6g< Could you please tell me specifically what ((he/she) was/you were) getting for less cost at (PLAN SAMPLE MEMBER JOINED)?

_____

_____

>6h< Could you please tell me specifically what benefits/services/ coverages were better at (PLAN SAMPLE MEMBER JOINED)?

_____

_____

>7< The next questions are about (SM's/your) living situation. What was (SM's/your) marital status at the time ((he/she) was/you were) enrolled in (AHP NAME)? (Was SM/Were you) married, widowed, divorced, separated or had (he/she/you) never been married?

<1> MARRIED[goto 8]

<2> WIDOWED

<3> DIVORCED

<4> SEPARATED

<5> NEVER MARRIED

→ [goto 9]

>8< Did (he/she/you) and (his/her/you) (husband/wife) enroll in (AHP NAME) at the same time?

<1> YES [goto 9]

<0> NO

<8> DON'T KNOW

>8a< Was (his/her/your) (husband/wife) already enrolled at (AHP NAME) at the time (SM/you) enrolled?

<1> YES

<0> NO

<8> DON'T KNOW

>9< The next question is about the place where (SM/you) live(s). At the time (SM/you) enrolled in (AHP NAME) in (ENROLLMENT DATE) did (he/she/you) live in a private home or apartment, a nursing home or other long term care institution, or some other facility for the elderly?

<1> A PRIVATE HOME OR APARTMENT

<2> A NURSING HOME OR OTHER LONG-TERM CARE INSTITUTION

<3> SOMEWHERE ELSE

<8> DON'T KNOW

>10< How long (has (he/she)/have you) lived in this area?

<0> LESS THAN 1 YEAR [goto 11]

_____ YEARS (IF LESS THAN 75 YEARS, GOTO Q.12. IF MORE, ASK 10a)

<98> DON'T KNOW [goto 12]

>10a< (SM has/You have) lived in this area (# YEARS FROM Q.10) years. Is that correct?

<1> YES [goto 12]

<0> NO (CORRECT Q.10)

>11< Where did (he/she/you) live before (he/she/you) moved to (his/her/your) present address?

_____ _____
CITY STATE

<98> DON'T KNOW

>12< (Does (he/she)/Do you) live in this area year-round?

<1> YES

<0> NO

<8> DON'T KNOW

(NO 13 THIS VERSION)

>14< INTERVIEWER: CHECK Q.7 FOR MARITAL STATUS. IF SAMPLE MEMBER IS MARRIED, GO TO 14a.

At the time (SM/you) joined (AHP NAME) in (ENROLLMENT DATE) did (he/she/you) live alone or did (he/she/you) live with other people?

<1> ALONE [goto 15]

<2> OTHERS

<8> DON'T KNOW [goto 15]

>14a< INTERVIEWER CHECK Q.8 OR 8a: IF SPOUSE ENROLLED WITH SAMPLE MEMBER OR WAS ALREADY ENROLLED, GO TO 15.

Did anyone who (SM/you) lived with enroll in (AHP NAME) at the same time as (he/she/you) enrolled?

<1> YES [goto 15]

<0> NO

<8> DON'T KNOW [goto 15]

>14b< At the time (SM/you) enrolled in (AHP NAME) did anyone who lived with (he/she/you) then already belong to (AHP NAME), or some other HMO?

<1> YES

<0> NO

<8> DON'T KNOW

>15< INTERVIEWER: CHECK Q.7 FOR MARITAL STATUS.

The next few questions have to do with private health insurance or HMO memberships (SM/you) (and (his/her/your) spouse) may have had at the time you joined (AHP NAME).

Did (SM/you) (and (his/her/your) spouse) have any private health insurance policies or belong to any health maintenance organization just before you enrolled in (AHP NAME)?

PROBE IF NECESSARY: Did you have health insurance policies that were not Medicare or Medicaid or Veteran's benefits?

<1> YES [goto 17]

<0> NO [goto 16]

<8> DON'T KNOW [goto 20]

>16< People have different reasons for not having health insurance other than Medicare. What were (SM's/your) reasons for not having any private health insurance?

INTERVIEWER: IF INSURANCE COVERAGE IS MENTIONED, PROBE FOR TYPE. IF PRIVATE COVERAGE, CORRECT Q.15 AND GO TO Q.17.

(CIRCLE ALL THAT APPLY)

<1> CAN'T AFFORD ANY

<2> MEDICARE WAS ENOUGH

<3> HAD MEDICAID

<4> HAD VETERAN'S BENEFITS

<5> COULDN'T FIND POLICY DESIRED

<6> REFUSED/DENIED/CANCELLED BY INS. CO.

<7> DISSATISFIED WITH PREVIOUS INSURANCE

<8> COVERAGE ENDED WITH PREV. JOB/RETIREMENT

<9> DIDN'T NEED INSURANCE

<0> OTHER [specify]:_____

<98> DON'T KNOW

*** goto 20 ***

>17< How many different private health insurance policies did (SM/you) have just before (he/she/you) enrolled in (AHP NAME)?

_____ (IF MORE THAN 4, ASK 17a. IF LESS, GO TO 18)

<98> DON'T KNOW [goto 20]

>17a< (SM/you) had (# FROM 17) health insurance policies before enrolling in (AHP NAME), is that correct?

<1> YES [goto t17a]

<0> NO (CORRECT 17)

>15< What (was the name of the policy/were the names of the policies) that (SM) was/you were) were covered by just before (he/she/you) enrolled in (AHP NAME)?

INTERVIEWER: WRITE POLICIES BELOW. IF MORE THAN 4 POLICIES, WRITE FIRST 4 ONLY.

a. IF ONLY ONE POLICY MENTIONED: I'd like to ask some more about this policy.
b. IF MORE THAN ONE POLICY MENTIONED: First, let's talk about the POLICY #1 policy. (Next, let's talk about the (POLICY #2/#3/#4) policy.)

		POLICY #1	POLICY #2
>18a<	Was this policy obtained through a group such as an employer, a union, or a senior citizens' association, or did you obtain this policy directly from an insurance agent or company?	<1> GROUP (ASK 18b) <2> DIRECTLY FROM INSURANCE AGENT OR COMPANY [goto 18c] <8> DON'T KNOW [goto 18c]	<1> GROUP (ASK 18b) <2> DIRECTLY FROM INSURANCE AGENT OR COMPANY [goto 18c] <8> DON'T KNOW [goto 18c]
>18b<	Through what kind of group was this policy obtained? (CIRCLE ONLY ONE)	<1> SENIOR CITIZEN'S GROUP <2> SM'S EMPLOYER <3> SM'S UNION <4> SPOUSE'S EMPLOYER <5> SPOUSE'S UNION <6> RELIGIOUS/FRATERNAL GROUP <7> OTHER (SPECIFY: _____) <8> DON'T KNOW	<1> SENIOR CITIZEN'S GROUP <2> SM'S EMPLOYER <3> SM'S UNION <4> SPOUSE'S EMPLOYER <5> SPOUSE'S UNION <6> RELIGIOUS/FRATERNAL GROUP <7> OTHER (SPECIFY: _____) <8> DON'T KNOW
>18c<	Was this health insurance policy specifically designed to pay for medical expenses not paid for by Medicare? These policies are sometimes called "Medicare supplemental" or "Medicare complimentary."	<1> YES [goto 18e] <0> NO <8> DON'T KNOW	<1> YES [goto 18e] <0> NO <8> DON'T KNOW
>18d<	We'd like to know whether this policy was a "major medical" policy, that is, a health insurance policy that paid some percentage of the medical costs after ((SM) paid (his/her/your) medical expenses up to the amount of the deductible. Was this a "major medical" policy?	<1> YES <0> NO <8> DON'T KNOW	<1> YES <0> NO <8> DON'T KNOW
>18e<	INTERVIEWER: REFER TO Q.7 FOR MARITAL STATUS. Did (SM/you) (or (his/her/your) spouse) pay any part of the premium for this policy?	<1> YES <0> NO <8> DON'T KNOW (GO TO 18a, POLICY #2 OR Q.19)	<1> YES <0> NO <8> DON'T KNOW (GO TO 18a, POLICY #3 OR Q.19)

POLICY #3	POLICY #4
<1> GROUP (ASK 18b) <2> DIRECTLY FROM INSURANCE AGENT OR COMPANY [goto 18c] <8> DON'T KNOW [goto 18c]	<1> GROUP (ASK 18b) <2> DIRECTLY FROM INSURANCE AGENT OR COMPANY [goto 18c] <8> DON'T KNOW [goto 18c]
<1> SENIOR CITIZEN'S GROUP <2> SM'S EMPLOYER <3> SM'S UNION <4> SPOUSE'S EMPLOYER <5> SPOUSE'S UNION <6> RELIGIOUS/FRATERNAL GROUP <7> OTHER (SPECIFY: _____) <8> DON'T KNOW	<1> SENIOR CITIZEN'S GROUP <2> SM'S EMPLOYER <3> SM'S UNION <4> SPOUSE'S EMPLOYER <5> SPOUSE'S UNION <6> RELIGIOUS/FRATERNAL GROUP <7> OTHER (SPECIFY: _____) <8> DON'T KNOW
<1> YES [goto 18e] <0> NO <8> DON'T KNOW	<1> YES [goto 18e] <0> NO <8> DON'T KNOW
<1> YES <0> NO <8> DON'T KNOW	<1> YES <0> NO <8> DON'T KNOW
<1> YES <0> NO <8> DON'T KNOW (GO TO 18a, POLICY #4 OR Q.19)	<1> YES <0> NO <8> DON'T KNOW (GO TO Q.19)

>19< INTERVIEWER: CHECK # OF POLICIES FROM Q.17

Now I am going to read a list of items that are sometimes covered by insurance policies. Please tell me which were covered by the private insurance polic(y/ies) that we have been talking about.

Dental?

<1> YES

<0> NO

<8> DON'T KNOW

>19b< Prescription drug?

<1> YES

<0> NO

<8> DON'T KNOW

>19c< Private nursing or home health care?

<1> YES

<0> NO

<8> DON'T KNOW

>19d< Eyeglasses?

<1> YES

<0> NO

<8> DON'T KNOW

>20x< INTERVIEWER: CHECK CONTACT SHEET: IF SITE EQUALS <01>, CALIFORNIA, GO TO 20c.

>20< Just before (SM/you) joined (AHP NAME), (was (he/she)/were you) covered by any of the following government health benefit plans...

Medicaid?

<1> YES

<0> NO

<8> DON'T KNOW

*** [goto 20b] ***

>20c< Just before (SM/you) joined (AHP NAME), (was (he/she)/were you) covered by any of the following government health benefit plans...

MediCal?

<1> YES

<0> NO

<8> DON'T KNOW

>20b< Veteran's Administration or another military health plan, such as CHAMPUS or CHAMPVA?

IF YES, ASK IF VA OR OTHER.

<1> YES, VETERAN'S ADMINISTRATION

<2> YES, OTHER

<3> YES, BOTH

<0> NO

<8> DON'T KNOW

>21< The next few questions are about the medical care (SM/you) received before enrolling in (AHP NAME).

Before (SM/you) enrolled in (AHP NAME), was there a particular doctor's office, clinic, health center, or other place that (he/she/you) usually went to if ((he/she) was/you were) sick or needed advice about (his/her/your) health?

<1> YES [goto 23]

<0> NO

<8> DON'T KNOW [goto 36]

>22< People have different reasons for not having a usual place for medical care. In (SM's/your) case, what was (his/her/your) main reason for not having a usual place for medical care before (he/she/you) joined (AHP NAME)?

PROBE FOR ONE MAIN REASON.

<1> RARELY OR NEVER GOT SICK

<2> DIDN'T LIKE TO GO TO DOCTOR

<3> WENT TO DIFFERENT PLACES/DOCTORS FOR DIFFERENT HEALTH PROBLEMS

<4> REGULAR CARE COST TOO MUCH

<5> DIDN'T KNOW WHERE TO GO FOR CARE

<6> DIDN'T HAVE TIME TO GO FOR CARE

<7> OTHER [specify]:_____

<8> DON'T KNOW

*** [goto 36] ***

>23< What was the name of the place where (SM/you) went for health care?

_____

>t24< INTERVIEWER CHECK: IF Q.4 IS <0>, (I.E., SM CANCELLED, JOINED ANOTHER HMO), GO TO 24aa.

>24< Was (NAME FROM 23) the same place that (SM/you) currently (goes/go) to as a member of (AHP NAME)?

<1> YES [goto 25]

<0> NO

<8> DON'T KNOW

*** [goto 24a] ***

>24aa< Was (NAME FROM 23) the same place that (SM/you) went to as a member of (AHP NAME)?

<1> YES [goto 25]

<0> NO

<8> DON'T KNOW

>24a< (What type of place is/Where did (SM/you) see) (NAME FROM 23)? (Is/Was) it . . .

<1> a doctor's office, including group practice and doctor's clinic,

<2> a hospital outpatient clinic,

<3> a hospital emergency room,

<4> a public health department clinic or neighborhood health center,

<5> a company or industry clinic,

<6> (his/her/your) home,

<7> some other type of place [specify]: _____,

<8> or an HMO or other prepaid health plan?

>25< Was there a particular medical person whom (SM/you) usually saw when (he/she/you) went to (NAME FROM 23)?

<1> YES [goto 27]

<0> NO

<8> DON'T KNOW

>26< Would (SM/you) have preferred to see the same (doctor/person) on (his/her/your) visits there, or didn't it matter?

<1> WOULD HAVE PREFERRED SAME PERSON

<0> DIDN'T MATTER

<8> DON'T KNOW

*** [goto t27] ***

>27< How important was it to (SM/you) to usually see the same (doctor/person) there, as opposed to seeing different (doctors/people)? Would you say it was . . .

<1> Very important,

<2> somewhat important,

<3> or not important at all?

<8> DON'T KNOW

>t27< INTERVIEWER CHECK: IF Q.24a IS <6>, OR IF SAMPLE MEMBER SEES A DOCTOR IN A NURSING HOME, GO TO Q.34.

>28< When (SM/you) went to (NAME FROM 23), how did (he/she/you) usually get there?

<1> WALK

<2> PUBLIC BUS

<3> DRIVE SELF

<4> TAXI

<5> TRANSPORTATION PROVIDED BY CLINIC (BUS, VAN, ETC.)

<6> RIDE WITH FRIEND OR RELATIVE

<7> OTHER [specify]:_____

<8> DON'T KNOW

>29< About how long did it usually take (him/her/you) to get there?
INTERVIEWER: ROUND TO NEAREST MINUTE

1/4 HOUR	= 15 MINUTES
1/2 HOUR	= 30 MINUTES
3/4 HOUR	= 45 MINUTES
1 HOUR	= 60 MINUTES
1-1/4 HOURS	= 75 MINUTES
1-1/2 HOURS	= 90 MINUTES
1-3/4 HOURS	= 105 MINUTES
2 HOURS	= 120 MINUTES
2-1/2 HOURS	= 150 MINUTES
3 HOURS	= 180 MINUTES

_____ MINUTES (IF MORE THAN 120, ASK 29a. IF NOT, GOTO 30)

<998> DON'T KNOW [goto 30]

>29a< It usually takes two hours or more to get to (NAME FROM 23), is that correct?

<1> YES [goto 30]

<0> NO (CORRECT 29)

>30< Did (SM/you) usually have an appointment ahead of time when (he/she/you) went there or did (he/she/you) just walk in?

<1> APPOINTMENT

<2> WALK IN [goto 33]

<3> SOMETIMES APPOINTMENT, SOMETIMES WALK IN

<8> DON'T KNOW [goto 33]

>32< Not counting emergencies, how many days did (SM/you) usually have to wait between the time (he/she/you) wanted an appointment at (NAME FROM 23) and the day of (his/her/your) appointment?

<00> SAME DAY

_____ DAYS (IF MORE THAN 30, ASK 32a. IF NOT, GOTO 33)

<98> DON'T KNOW [goto 33]

>32a< (He/She/You) usually had to wait a month or more between the time (he/she/you) wanted an appointment and the day of (his/her/your) appointment. Is that correct?

<1> YES [goto 33]

<0> NO (CORRECT 32)

>33< After (SM/you) arrived at (NAME FROM 23), how long did (he/she/you) usually wait (past (his/her/you) scheduled appointment time) to see the (doctor/medical person)?

1/4 HOUR = 15 MINUTES
1/2 HOUR = 30 MINUTES
3/4 HOUR = 45 MINUTES
1 HOUR = 60 MINUTES
1-1/4 HOURS= 75 MINUTES
1-1/2 HOURS= 90 MINUTES
1-3/4 HOURS= 105 MINUTES
2 HOURS = 120 MINUTES
2-1/2 HOURS= 150 MINUTES
3 HOURS = 180 MINUTES

_____ (IF MORE THAN 120, ASK 33a. IF NOT, GOTO 34)

<998> DON'T KNOW [goto 34]

>33a< (He/She/You) usually waited more than 2 hours to see the (doctor/medical person) at (NAME FROM 23), is that correct?

<1> YES [goto 34]

<0> NO (correct 33)

>34< Now I would like to know how you would rate various aspects of the care (SM/you) received at (NAME FROM 23) before (he/she/you) joined (AHP NAME). I am going to read you a list of factors and for each one I'd like you to tell me whether you think that place was excellent, good, fair, or poor with respect to that factor.

First, how would you rate the professional competence of the physicians and other medical persons who work there? Would you say it was excellent, good, fair, or poor?

<1> EXCELLENT

<2> GOOD

<3> FAIR

<4> POOR

<5> NO OPINION

>34a< What about the willingness of doctors to discuss and explain (his/her/your) medical problems? Would you rate it as excellent, good, fair or poor?

<1> EXCELLENT

<2> GOOD

<3> FAIR

<4> POOR

<5> NO OPINION

>34b< What about courtesy and consideration of staff?

<1> EXCELLENT

<2> GOOD

<3> FAIR

<4> POOR

<5> NO OPINION

>34c< Availability of care in an emergency?

<1> EXCELLENT

<2> GOOD

<3> FAIR

<4> POOR

<5> NEVER HAD EMERGENCY

<6> NO OPINION

>34d< The next questions are about how convenient it was for (SM/you) to get an appointment and travel to the doctor's office?

First, how convenient was it for (SM/you) to get to (NAME FROM 23) from where (he/she/you) lived? Was it . . .

<1> very convenient,

<2> somewhat convenient,

<3> somewhat inconvenient, or

<4> very inconvenient?

<5> NO OPINION

>34e< How convenient were the appointments (SM was/you were) given? Were they . . .

<1> very convenient,

<2> somewhat convenient,

<3> somewhat inconvenient, or

<4> very inconvenient?

<5> NO OPINION

>34ea< Next, think about the amount of time spent waiting to see a medical person after (he/she/you) arrived at the office. Was this amount of time . . .

<1> very reasonable,

<2> somewhat reasonable,

<3> somewhat unreasonable, or

<4> very unreasonable?

<5> NO OPINION

>34f< Next, think about filing claims. Did (SM/you) complete the paperwork to file claims, did the (doctor's/medical) office do it for (him/her/you), or did someone else help (him/her/you) file the claims?

<1> DID BY SELF

<2> DOCTOR'S OFFICE DID [goto 34g]

<3> SOMEONE ELSE DID [goto 34g]

<4> NO EXPERIENCE FILING CLAIMS [goto 34g]

>34fa< Did (SM/you) find filing claims to be . . .

<1> very easy,

<2> somewhat easy,

<3> somewhat difficult, or

<4> very difficult?

<5> NO OPINION

>34g< Now, think about the costs (SM/you) incurred when ((he/she) was/ you were) at (NAME FROM 23) before (he/she/you) joined (AHP NAME).
Were these costs . . .

<1> very reasonable,

<2> somewhat reasonable,

<3> somewhat unreasonable,

<4> very unreasonable, or

<5> did (SM/name) not incur any costs?

<6> NO OPINION

>35< Still thinking about where (SM/name) got care before joining (AHP NAME) on (ENROLLMENT DATE), how satisfied (was (he/she)/were you) with that care? Would you say . . .

<1> Very satisfied,

<2> somewhat satisfied,

<3> somewhat dissatisfied,

<4> or very dissatisfied?

<8> DON'T KNOW

>36< The next questions are about Medicare. Before (SM/you) enrolled in (AHP NAME), did (he/she/you) have any problems or disappointments with Medicare?

<1> YES

<0> NO [goto 40]

<3> NO PRIOR EXPERIENCE WITH MEDICARE [goto 40]

<8> DON'T KNOW [goto 40]

>37< What were those problems?

(CIRCLE ALL THAT APPLY)

<1> OUT OF POCKET COSTS TOO HIGH

<2> DELAYS IN GETTING A MEDICARE CARD

<3> PAPERWORK ASSOCIATED W/FILING CLAIMS

<4> DELAYS IN RECEIVING PAYMENTS

<5> DESIRED SERVICES NOT COVERED (ASK 38)

<6> UNCERTAIN ABOUT SERVICES COVERED

<7> DIFFICULTIES GETTING INFORMATION

<0> OTHER [specify]: _____

<8> DON'T KNOW [goto 40]

INTERVIEWER CHECK: IF <5> CIRCLED, ASK 38.
IF <7> CIRCLED, ASK 39.
IF NOT, GO TO 40.

>38< What type of service or treatment were not covered?

(CIRCLE ALL THAT APPLY)

<1> PRESCRIPTION DRUGS

<2> VISION CARE

<3> DENTAL CARE

<4> ROUTINE FOOT CARE

<5> SERVICES OF A CHIROPRACTOR

<6> SERVICES OF A PSYCHIATRIST/PSYCHOLOGIST/OTHER MENTAL HEALTH PROF.

<7> PRIVATE DUTY NURSING

<8> NURSING HOME CARE

<9> HOMEMAKER SERVICES

<0> OTHER [specify]: _____

<98> DON'T KNOW [goto 39]

>39< What did (SM/you) not get enough information on?

(CIRCLE ALL THAT APPLY)

<1> PREMIUM COSTS

<2> OUT-OF-POCKET COSTS

<3> CONDITIONS COVERED/SERVICES PROVIDED

<4> CHOICE OF PROVIDERS

<5> OTHER [specify]: _____

<8> DON'T KNOW [goto 40]

>40< INTERVIEWER: CHECK Q.7 FOR MARITAL STATUS:
Before you joined (AHP NAME) had (he/she/you) (or (his/her/your) spouse) ever belonged to another HMO or other prepaid health plan?

PROBE IF NECESSARY: Remember, an HMO or other prepaid health plan provides certain medical services to its members as needed, in exchange for fixed premium payments.

<1> YES

<0> NO [goto 40]

<8> DON'T KNOW [goto 40]

>40aa< What was the name of this HMO (or prepaid health plan)?

<8> DON'T KNOW [goto 40b]

INTERVIEWER, CHECK CONTACT SHEET:

if plan is 011, goto ox01	if plan is 071, goto ox09
if plan is 012, goto ox02	if plan is 072, goto ox10
if plan is 021, goto ox03	if plan is 061, goto ox11
if plan is 022, goto ox04	if plan is 062, goto ox12
if plan is 023, goto ox05	if plan is 091, goto ox13
if plan is 024, goto ox06	if plan is 021, goto ox14
if plan is 102, goto ox07	if plan is 041, goto ox15
if plan is 103, goto ox08	if plan is 031, goto ox16
	if plan is 081, goto ox17

>ox01< <1> THE GOLDEN AGE PLAN AT UNITED HEALTH PLAN OR WATTS FOUNDATION

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox02< <1> THE SENIOR PLAN AT FHP

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox03< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<4> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<5> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox04< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<3> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox05< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox06< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox07< <1> GROUP HEALTH PLAN OF SE MICHIGAN

<2> SENIOR PLUS OFFERED THROUGH PREFERRED HEALTH PLAN/ HENTRY FORD HEALTH CARE CORPORATION

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox08< <1> GROUP HEALTH PLAN OF SE MICHIGAN

<2> HEALTH CARE NETWORK'S MEDICARE PLUS PROGRAM

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox09< <1> FALLON COMMUNITY HEALTH PLAN'S SENIOR CARE

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox10< <1> CENTRAL MASS HEALTH CARE'S STAY WELL PLUS PROGRAM

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox11< <1> THE MEDICAL EAST COMMUNITY HEALTH PLAN SENIOR PLAN

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox12< <1> HEALTHWAY'S SENIOR PLAN

<0> OTHER [specify]:_____

*** [goto 40b] ***

>ox13< <0> OTHER [specify]:_____

*** [goto 40b] ***

>ox14< <0> OTHER [specify]:_____

*** [goto 40b] ***

>ox15< <0> OTHER [specify]:_____

*** [goto 40b] ***

>ox16< <0> OTHER [specify]:_____

*** [goto 40b] ***

>ox17< <0> OTHER [specify]:_____

>40b< (Was SM/Were you) involved in the decision to (join/enroll (SM) in) (AHP NAME) in (ENROLLMENT DATE), or was the decision made entirely by someone else?

<1> SAMPLE MEMBER INVOLVED [goto 40e]

<2> PROXY RESPONDENT INVOLVED [goto 40e]

<2> DECISION MADE BY OTHERS

>40d< Who was primarily responsible for the decision to enroll (SM/name) in (AHP NAME)?

PROBE FOR RELATIONSHIP TO SAMPLE MEMBER.

(CIRCLE ONLY ONE)

<1> SPOUSE OF SAMPLE MEMBER

<2> RELATIVE OF SAMPLE MEMBER

<3> PAID CAREGIVER

<4> MEDICAL PERSON

<5> SOCIAL WORKER

<6> OTHER [specify]:_____

<8> DON'T KNOW

*** [goto 51a] ***

>40e< Since (SM was/you were) involved in the decision to (enroll in/join) (AHP NAME), please answer the following questions for (him/her/yourself). (If you don't know what (his/her) answer would be, just let me know.)

>41a< Was (SM's/your) physician a member of (AHP NAME) when ((he/she) was/you) enrolled?

<1> YES

<0> NO

<8> DON'T KNOW

>42< Now I'd like you to think of all the reasons (SM/you) considered when deciding to (enroll/enroll SM in/join) (AHP NAME). Of all the reasons (he/she/you) considered, what was the most important reason why ((he/she) enrolled/(he/she) was enrolled/you decided too enroll) in (AHP NAME)?

<1> MENTION OF LOWER COST [goto 42a]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 42b]

<3> OTHER [specify]: _____

_____ [goto 42c]

<8> DON'T KNOW [goto 45]

>42a< Could you please tell me specifically what ((he/she) was/you were) getting for less cost at (AHP NAME)?

_____

_____

*** GO TO 42c ***

>42b< Could you please tell me specifically what benefits/services/ coverages were better at (AHP NAME)?

_____

_____

>42c< Were there any other reasons why ((he/she) decided to enroll in/(he/she) was enrolled in/you joined) (AHP NAME)?

(CIRCLE ALL THAT APPLY)

<1> MENTION OF LOWER COST [goto 42d]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 42e]

<3> OTHER [specify]:_____

_____ [goto 42f]

<0> NO [goto 45]

>42d< Could you please tell me specifically what ((he/she) was/you were) getting for less cost at (AHP NAME)?

_____

_____[goto 42f]

>42e< Could you please tell me specifically what benefits/services/ coverages were better at (AHP NAME)?

_____

_____[goto 42f]

>42f< Were there any other reasons why ((he/she) decided to enroll in/(he/she) was enrolled in/you joined) (AHP NAME)?

(CIRCLE ALL THAT APPLY)

<1> MENTION OF LOWER COST [goto 42g]

<2> MENTION OF MORE OR BETTER BENEFITS, SERVICES OR COVERAGE [goto 42h]

<3> OTHER [specify]:_____

_____ [goto 45]

<0> NO [goto 45]

>42g< Could you please tell me specifically what ((he/she) was/you were) getting for less cost at (AHP NAME)?

_____

_____[goto 45]

>42h< Could you please tell me specifically what benefits/services/ coverages were better at (AHP NAME)?

_____

_____[goto 45]

CURRENT ENROLLMENT

(NO Q's 43-44 THIS VERSION)

>45< When (SM/you) joined (AHP NAME), did (he/she/you) expect (his/her/your) overall cost for health care to be more than, less than, or about the same as costs would have been if (he/she/you) had not joined (AHP NAME)?

<1> MORE

<2> ABOUT THE SAME

<3> LESS

<8> DON'T KNOW

>46< When (SM/name) joined (AHP NAME), did (he/she/you) expect that the quality of medical care (he/she/you) would receive there would be better, worse, or about the same as the medical care (he/she/you) had been getting?

<1> BETTER

<2> ABOUT THE SAME

<3> WORSE

<8> DON'T KNOW

>47< We are very interested in knowing how (he/she/you) learned about (AHP NAME) before (SM/you) joined in (ENROLLMENT DATE). I am going to read a list of possible information sources and I'd like you to tell me, for each one, whether or not (he/she/you) learned about the program in this way before (SM/you) joined.

Did a friend or relative tell (SM/you) about the program?

<1> YES

<0> NO [goto 47b]

<8> DON'T KNOW [goto 47b]

>47a< Is this friend or relative a member of (AHP NAME)?

<1> YES

<0> NO

<8> DON'T KNOW

>47b< Did (SM/you) hear about it from a doctor, nurse, pharmacist or other medical person?

<1> YES

<0> NO

<8> DON'T KNOW

>47c< Did (he/she/you) hear about the program from literature sent to (him/her/you) through the mail which (he/she/you) did not request?

<1> YES

<0> NO [goto 47d]

<8> DON'T KNOW [goto 47d]

>43< Do you recall who sent (SM/you) the literature?

<1> YES, (AHP NAME)

<2> YES, MEDICARE, SOCIAL SECURITY, OR OTHER FEDERAL AGENCY

<3> YES, OTHER [specify]:_____

<4> DON'T RECALL

>47d< (Did (SM/you) hear about (AHP NAME) from a speaker at a meeting of a church, club, or community organization?

<1> YES

<0> NO

<8> DON'T KNOW

>47e< Did (SM/you) hear about it through a newspaper advertisement?

<1> YES

<0> NO

<8> DON'T KNOW

>47f< through a newspaper story?

<1> YES

<0> NO

<8> DON'T KNOW

>47g< Through a radio commercial?

<1> YES

<0> NO

<8> DON'T KNOW

>47h< Through radio news or a radio program?

<1> YES

<0> NO

<8> DON'T KNOW

>47i< Through a TV commercial?

<1> YES

<0> NO

<8> DON'T KNOW

>47j< Through TV news or a TV program?

<1> YES

<0> NO

<8> DON'T KNOW

>47k< In deciding to (enroll SM in/join) (AHP NAME), did you call or write (AHP NAME) to request information?

<1> YES

<0> NO

<8> DON'T KNOW

>47kb< In deciding to (enroll SM in/join) (AHP NAME) did you attend an open house there?

<1> YES

<0> NO

<8> DON'T KNOW

>471< Did (SM/you) visit (AHP NAME) to talk with a staff member about joining, other than at a group meeting?

<1> YES

<0> NO

<8> DON'T KNOW

>47m< Did a representative of (AHP NAME) visit (him/her/you) in (his/her/your) home?

<1> YES

<0> NO

<8> DON'T KNOW

>49< Which of the sources you mentioned, influenced (SM/you) the most in deciding to (enroll SM in/join) (AHP NAME)?

(CIRCLE ONLY ONE)

<1> FRIEND OR RELATIVE

<2> MEDICAL PERSON

<3> LITERATURE

<4> SPEAKER

<5> NEWSPAPER AD

<6> NEWSPAPER STORY

<7> RADIO COMMERCIAL

<8> RADIO NEWS/PROGRAM

<9> TV COMMERCIAL

<10> TV NEWS/PROGRAM

<11> OPEN HOUSE

<98> DON'T KNOW

INTERVIEWER: CHECK PREVIOUS SERIES TO MAKE SURE THE ITEM CIRCLED WAS MENTIONED ABOVE.

>50< Before (SM/you) decided to (enroll SM in/join) (AHP NAME), did (he/she/you) hear about or get information on any other HMOs or other prepaid health plans?

<1> YES

<0> NO [goto 51a]

<8> DON'T KNOW [goto 51a]

>50a< Which HMOs or prepaid health plans did (he/she/you) hear of or get information about?

<8> DON'T KNOW [goto 50b]

INTERVIEWER: CHECK CONTACT SHEET:

if plan is 011, goto oy01	if plan is 071, goto oy09
if plan is 012, goto oy02	if plan is 072, goto oy10
if plan is 021, goto oy03	if plan is 061, goto oy11
if plan is 022, goto oy04	if plan is 062, goto oy12
if plan is 023, goto oy05	if plan is 091, goto oy13
if plan is 024, goto oy06	if plan is 021, goto oy14
if plan is 102, goto oy07	if plan is 041, goto oy15
if plan is 103, goto oy08	if plan is 031, goto oy16
	if plan is 081, goto oy17

>oy01< <1> THE GOLDEN AGE PLAN AT UNITED HEALTH PLAN OR WATTS FOUNDATION

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy02< <1> THE SENIOR PLAN AT FHP

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy03< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<4> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<5> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy04< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<3> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy05< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE GOLD PLUS PLAN AT INTERNATIONAL MEDICAL CENTER OR IMC

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy06< <1> THE SPECIAL MEDICARE PROGRAM AT AV-MED HEALTH PLAN, INC.

<2> MEDICARE PLUS AT COMPREHENSIVE AMERICAN CARE OR CAC

<3> THE SPECIAL MEDICARE PROGRAM AT HEALTH AMERICA

<4> SOUTH FLORIDA GROUP HEALTH

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy07< <1> GROUP HEALTH PLAN OF SE MICHIGAN

<2> SENIOR PLUS OFFERED THROUGH PREFERRED HEALTH PLAN/
HENTRY FORD HEALTH CARE CORPORATION

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy08< <1> GROUP HEALTH PLAN OF SE MICHIGAN

<2> HEALTH CARE NETWORK'S MEDICARE PLUS PROGRAM

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy09< <1> FALLON COMMUNITY HEALTH PLAN'S SENIOR CARE

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy10< <1> CENTRAL MASS HEALTH CARE'S STAY WELL PLUS PROGRAM

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy11< <1> THE MEDICAL EAST COMMUNITY HEALTH PLAN SENIOR PLAN

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy12< <1> HEALTHWAY'S SENIOR PLAN

<0> OTHER [specify]: _____

*** [goto 50b] ***

>oy13< <0> OTHER [specify]: _____

*** [goto 50b] ***

>oy14< <0> OTHER [specify]: _____

*** [goto 50b] ***

>oy15< <0> OTHER [specify]: _____

*** [goto 50b] ***

>oy16< <0> OTHER [specify]: _____

*** [goto 50b] ***

>oy17< <0> OTHER [specify]: _____

>50b< Before (SM/you) joined (AHP NAME), did (he/she/you) compare (AHP NAME) with any other plans by discussing those plans with a friend, relative, or doctor, requesting information, visiting, or reading and comparing information about any another plans?

<1> YES

<0> NO

<8> DON'T KNOW

>51a< Now I am going to read some statements. Please tell me whether they are true or false for (SM/you).

(He/She/I) worr(ies/y) about (his/her/my) health more than other people (his/her/my) age worry about their health.

<1> TRUE

<2> FALSE

<8> DON'T KNOW

>51b< (He/She/I) will do just about anything to avoid going to the doctor.

<1> TRUE

<2> FALSE

<8> DON'T KNOW

>51c< When (SM is/I am) sick, (he/she/I) tr(ies/y) to keep it to (him/her/my)self.

<1> TRUE

<2> FALSE

<8> DON'T KNOW

>51d< (SM/I) usually (goes/go) to the doctor as soon as (he/she/I) start(s) to feel bad.

<1> TRUE

<2> FALSE

<8> DON'T KNOW

>52a< The next questions are about health problems (SM/you) may have had or been bothered with in the last six months. In the last six months (has SM/have you) had or been bothered by chest pain with exercise or exertion?

<1> YES

<0> NO

<8> DON'T KNOW

>52b< In the last six months, (has SH/have you) had or been bothered with a cough without fever which lasted at least three weeks?

<1> YES

<0> NO

<8> DON'T KNOW

>52c< In the last six months, (has (he/she)/have you) had or been bothered with a severe loss of eyesight?

<1> YES

<0> NO

<8> DON'T KNOW

>52d< (In the last six months, (has (he/she)/have you) had or been bothered with) stiffness, pain or swelling of joints lasting more than two weeks?

<1> YES

<0> NO

<8> DON'T KNOW

>52e< (In the last six months, (has (he/she)/have you) had or been bothered with) bad stomach cramps or pain?

<1> YES

<0> NO

<8> DON'T KNOW

>52f< (In the last six months, (has (he/she)/have you) had or been bothered with) loose bowels (diarrhea)?

<1> YES

<0> NO

<8> DON'T KNOW

>52g< In the last six months, (has (he/she)/have you) had or been bothered with any, loss of consciousness, fainting spells, or passing out?

<1> YES

<0> NO

<8> DON'T KNOW

>52h< (In the last six months, (has (he/she)/have you) had or been bothered with) any problems with bleeding, other than nose bleed, not caused by an accident or injury?

<1> YES

<0> NO

<8> DON'T KNOW

>52i< (In the last six months, (has (he/she)/have you) had or been bothered with) shortness of breath with light exercise or light work?

<1> YES

<0> NO

<8> DON'T KNOW

>52j< (In the last six months, (has (he/she)/have you) had or been bothered with) a weight loss of more than ten pounds unless ((he/she) was/you were) dieting?

<1> YES

<0> NO

<8> DON'T KNOW

>53< When (SM/you) joined (AHP NAME), (was (he/she)/were you) aware of any health problem for which (he/she/you) expected to need care?

<1> YES

<0> NO [goto 57]

<3> DON'T KNOW [goto 57]

>54< Did (he/she/you) think this problem might require a stay in the hospital?

<1> YES

<0> NO [goto 57]

<8> DON'T KNOW [goto 57]

>55< Had (he/she/you) been putting off going into the hospital for this problem?

<1> YES

<0> NO [goto 57]

<8> DON'T KNOW [goto 57]

>56< Why?

(CIRCLE ONLY ONE)

<1> WOULD COST TOO MUCH

<2> AFRAID OF TREATMENT

<3> OTHER [specify]:_____

<4> EXPECTED TO GET BETTER CARE AT (AHP NAME)

<8> DON'T KNOW

>57< The next few questions refer to the past two weeks, that is, from (DATE 2 WEEKS AGO) through yesterday.

During the past two weeks, were there any days when (SM/you) stayed in bed all or most of the day because of any illness or injury?

<1> YES

<0> NO [goto t59]

<8> DON'T KNOW [goto t59]

>58< During the last two weeks, how many days did (SM/you) stay in bed all or most of the day?

_____ DAYS ==> IF 14, GO TO 61.

>59< (Not counting the days in bed,) Were there any (other) days during the past two weeks that (SM/you) cut down on things that (he/she/you) usually (does/do) because of illness or injury?

<1> YES

<0> NO [goto 61]

<8> DON'T KNOW [goto 61]

>60< (Again, not counting the days in bed) During the last two weeks, how many (other) days did (SM/you) cut down for as much as a day?

_____ DAYS

>t60< INTERVIEWER CHECK: AMOUNT FROM Q.58 = _____

AMOUNT FROM Q.60 = _____

TOTAL =

IF TOTAL IS MORE THAN 14, READ 60a.
IF 14 OR LESS, GO TO 61.

>60a< You said that (SM/you) spent (AMOUNT FROM 58) days in bed and (AMOUNT FROM 60) days that (SM/you) cut down during the last two weeks. That adds to (TOTAL FROM t60).

INTERVIEWER: CORRECT ANSWER TO Q.58 TO CORRECT DAYS IN BED.
CORRECT ANSWER TO Q.60 TO CORRECT DAYS CUT DOWN.

WHEN CORRECTED, TOTAL FROM t60 MUST READ 14 OR LESS.

>61< During the past 12 months, about how many days did illness or injury keep (SM/you) in bed all or most of the day?

(Include the days in the past 2 weeks.)
(Include the days while a patient in a hospital.)

_____ DAYS [goto Tx60]
<0-365>

<998> DON'T KNOW (READ 61a)

>61a< Would you say . . .

<0> none,

<1> 1-7 days,

<2> 8-30 days,

<3> one to six months, (31-180 days), or

<4> more than 6 months?

<8> DON'T KNOW

*** [goto 62] ***

>Tx60< INTERVIEWER CHECK: (A) TOTAL FROM t60 = _____

(B) AMOUNT FROM 61 = _____

IF (B) IS LESS THAN (A) READ A60a.
IF THE SAME OR MORE, GO TO 62.

>A60a< You said that (SM/you) spent (TOTAL OF 60 AND 61) days in bed during the past year; but before you said that (SM/you) had spent (AMOUNT FROM 58) days in bed during the past 2 weeks.

Altogether, including the days during the last two weeks, how many days did (SM/you) spend in bed during the last year?

INTERVIEWER: CORRECT Q.61 FOR TOTAL DAYS FOR YEAR.

WHEN CORRECT, Q.61 MUST BE THE SAME OR MORE THAN Q.t60.

>62< The questions I'm going to ask now have to do with how (SM/you) manage(s) with several routine daily activities. For the purposes of this research study, we need to ask these questions for all respondents, regardless of how well they manage. When answering these next few questions, please think about what (SM is/you are) physically able to do, not necessarily what ((he/she) does/ you do) do.

First, can (SM/you) get to places out of walking distance without help, that is, can (he/she/you) travel alone on buses or taxis, or drive (his/her/your) own car?

<1> YES

<0> NO

<8> DON'T KNOW

>62b< Assuming (SM has/you have) transportation, can (he/she/you) go shopping for groceries or clothes without help?

<1> YES

<0> NO

<8> DON'T KNOW

>62c< (Is SM/Are you) physically able to prepare (his/her/your) own meals (him/her/your)self?

<1> YES

<0> NO

<8> DON'T KNOW

>62d< Can (he/she/you) do housework such as scrubbing the floor without help?

<1> YES

<0> NO

<8> DON'T KNOW

>62e< If (he/she/you) had medicine to take, could (he/she/you) take it without help, in the right dose at the right time?

<1> YES

<0> NO

<8> DON'T KNOW

>62f< Can (he/she/you) handle (his/her/your) own money, such as writing checks and paying bills, without help?

<1> YES

<0> NO

<8> DON'T KNOW

>tadd< INTERVIEWER CHECK: COUNT NUMBER OF <1>'s CIRCLED IN Qs.62-62F.
IF LESS THAN 5 <1>'s CIRCLED, ASK 63a.
IF 5 OR MORE CIRCLED, GO TO 64.

>63a< Can (SM/you) do the following without any help . . .

a. dress and undress?

PROBE: (can (he/she/you) put out clothes, dress and undress (him/her/your)self)?

<1> YES

<0> NO

<8> DON'T KNOW

>63b< take care of (his/her/your) own appearance such as combing (his/her/your) own hair (and shaving)?

<1> YES

<0> NO

<8> DON'T KNOW

>63c< feed (him/her/your)self with no help?

PROBE: eat?

<1> YES

<0> NO

<8> DON'T KNOW

>63d< get in and out of bed?

<1> YES

<0> NO

<8> DON'T KNOW

>63e< take a tub bath or shower?

<1> YES

<0> NO

<8> DON'T KNOW

>63f< (Does (he/she)/Do you) have trouble getting to the bathroom on time?

<1> YES

<0> NO

<8> DON'T KNOW

>64< Before (SM/you) joined (AHP NAME), when was the last time (he/she/you) had a regular physical examination even though ((he/she) was/you were) feeling all right and had no symptoms to check out?

READ CATEGORIES IF NECESSARY

<0> NEVER

<1> MORE THAN 10 YEARS AGO

<2> BETWEEN 5 AND 10 YEARS AGO

<3> BETWEEN 1 AND 5 YEARS AGO

<4> LESS THAN 1 YEAR AGO

<8> DON'T KNOW

>65< In general, would you say (SM's/your) health is excellent, good, fair or poor?

<1> EXCELLENT

<2> GOOD

<3> FAIR

<4> POOR

<8> DON'T KNOW

>66< Comparing (SM's/your) general health to other people (his/her/your) own age, would you say (his/her/your) health is much better, better, about the same, worse, or much worse?

<1> MUCH BETTER

<2> BETTER

<3> SAME

<4> WORSE

<5> MUCH WORSE

<8> DON'T KNOW

>67< In the 12 months before (SM/you) joined (AHP NAME), how much did (he/she/you) spend for health care, counting doctor and hospital bills, dental care, and prescription drugs, but not counting what any insurance has paid or will pay and not counting insurance premiums--would you say . . .

<0> nothing,

<1> less than 100 dollars,

<2> from 100 to 500 dollars,

<3> or more than 500 dollars?

<8> DON'T KNOW

>68< Now for a few general questions. . .
At the time (SM/you) joined (AHP NAME) in (ENROLLMENT DATE), (was (he/she)/were you) working at a job for pay?

<1> YES

<0> NO [goto 70]

<8> DON'T KNOW [goto 70]

>69< (Was (he/she)/Were you) working full-time or part-time?

<1> FULL-TIME

<2> PART-TIME

<8> DON'T KNOW

>70< What is the highest grade or year of regular school that (SM/you) completed?

_____ GRADE
<0-11>

<12> HIGH SCHOOL

<14> SOME COLLEGE, NO DEGREE

<16> COLLEGE DEGREE

<98> DON'T KNOW

>71< INTERVIEWER, CHECK Q.7 FOR MARITAL STATUS:
(Does SM/Do you) (or (his/her/your) spouse) own (his/her/your/their) own home?

<1> YES

<0> NO

<8> DON'T KNOW

>72< What is (SM's/your) racial or ethnic background?

READ CATEGORIES IF NECESSARY:

<1> White,

<2> Black,

<3> American Indian or Alaskan native, [goto 74mo]

<4> or Asian or Pacific Islander? [goto 74mo]

<5> OTHER [specify]: _____

<8> DON'T KNOW

<9> REFUSED

>73< (Is SM/Are you) of Spanish origin or descent?

PROBE: (Is (he/she)/Are you) Mexican, Mexican-American, Chicano, Puerto Rican, Cuban or from another Hispanic group?

<1> YES

<0> NO

<8> DON'T KNOW

<9> REFUSED

>74mo< What is (SM's/your) birthdate--when (was (he/she)/were you) born?

/____/____/____/
MM DD YY

<98> DON'T KNOW

>76< What is the monthly income that (SM/you) (or (his/her/your) spouse) receive? Include all sources such as wages, salaries, social security, pensions, net rental and so forth.

$ _____ (IF MORE THAN $6,000, ASK 76tt. IF NOT, GO TO 77)

<999998> DON'T KNOW [goto a76]

<999997> REFUSED [goto a76]

>76tt< You said (SM's/your) (and (his/her/your) spouse's) monthly income was (AMOUNT FROM 76), is that correct?

<1> YES[goto t77]

<0> NO (CORRECT 76)

>a76< If you (cannot/will not) tell me the exact amount, can you give me an estimate? Is your monthly income . . .

<1> under $500 a month?

<2> between $500 and $1000 a month, or

<3> more than $1000 a month?

<8> DON'T KNOW [goto 79]

<7> REFUSED [goto 79]

>77< (Does SM/Do you) (and (his/her/your) spouse) receive any other income on a regular basis, such as interest or dividends, which you do not receive monthly that you have not already told me about?

<1> YES

<0> NO [goto 79]

<8> DON'T KNOW [goto 79]

<9> REFUSED [goto 79]

>78< Not counting what you have already told me about, how much other income (does (he/she)/do you) receive, per quarter or per year?

$_____ PER <1> QUARTER

<2> YEAR

<3> OTHER [specify]:

_____

<99998> DON'T KNOW [goto 79]

<99999> REFUSED [goto 79]

>79< We may want to get in touch with (SM/you) again in about one year. In case we cannot reach (him/her/you) at this address, may I have the name and address of someone else who would know (his/her/your) address one year from now?

This information would be helpful even if you don't expect to be moving in the next 1 year.

NAME: _____

>80< STREET ADDRESS: _____

>81< CITY: _____

>82< STATE: _____

>83< ZIP: _____

>84< PHONE: (_____) _____ - _____

That is all the questions I have. Thank you for your time.

APPENDIX B

APPENDIX B

AHP ENROLLEE QUESTIONNAIRE - FOLLOW-UP

>A< Hello, may I speak to (NAME OF SAMPLE PERSON)?

<1> SAMPLE PERSON ANSWERS [goto I]
<2> SAMPLE PERSON UNAVAILABLE
<3> SAMPLE PERSON DECEASED [TERMINATE]
<4> SAMPLE PERSON INCAPACITATED [goto E]

===>

>B< Can I usually reach (NAME) at this number?

<1> YES [goto D]
<2> NO

===>

>C< Where can I reach (NAME)?

IF PERSON HESITANT TO GIVE INFORMATION:

My name is _____ and I am calling from Mathematica Policy Research in Princeton, New Jersey. We are doing a follow-up to the study we did two years ago for the federal government concerning Medicare health benefits. At that time we interviewed ((NAME/(PROXY about (NAME)) and we would like to speak with (NAME) (OR PROXY) again. I would appreciate it if you could tell me how to reach (NAME).

<1> CALLBACK [goto cb]
<2> PROXY NEEDED [goto E]

===>

>D< When can I call back to reach (NAME)?

<1> CALLBACK CAN BE ARRANGED [goto cb]
<2> SAMPLE MEMBER CANNOT BE INTERVIEWED

===>

>E< This is _____ and I'm calling from Mathematica Policy Research in Princeton, NJ. We are doing a follow-up to the study we did two years ago for the federal government concerning Medicare health benefits. A letter describing the study was sent to (NAME) at this address. I'm calling now to do the interview over the telephone, and perhaps there is someone else who can answer the questions on behalf of (NAME). Is there someone I can speak to who helps care for (him/her) and is knowledgeable about the health care (he/she) receives?

<1> NO PROXY POSSIBLE [TERMINATE]
<2> CALLBACK FOR PROXY [goto cb]
<3> PRESENT RESPONDENT CAN BE PROXY [goto G]
<4> PROXY COMES TO PHONE

===>

>F< This is _____ and I'm calling from Mathematica Policy Research in Princeton, NJ. We are doing a study for the federal government concerning Medicare health benefits, which is a follow-up to a study in which (NAME) was interviewed two years ago. A letter describing the study was sent to (NAME). I'm calling now to do the interview over the telephone, and I understand that you help care for (him/her) and would be knowledgeable about the health care (he/she) receives. May we begin the interview now?

<1> YES
<2> NO [goto cb]

===>

>G< May we begin the interview now?

<1> YES [goto 1
<2> NO [goto cb]

===>

>H< Before we begin, let me remind you that participation in this survey is voluntary and all responses will be held in confidence. Most of the questions ask for information about (NAME), so you should just answer to the best of your knowledge. If you don't know the answer or don't feel qualified to respond to a subjective item, just let me know.

TYPE <g> TO BEGIN INTERVIEW ===> [goto 1]

>I< Hello, this is (INTERVIEWER NAME) and I'm calling from Mathematica Policy Research in Princeton, New Jersey. Several days ago we sent you a letter about the study we are doing for the federal government concerning Medicare benefits. We interviewed you about two years ago for this study, and we're now calling back some of the people we talked to then, to learn more about their experiences with the special Medicare program at (AHP NAME).

May we begin the interview now?

<1> YES
<2> NO [GO TO CALLBACK ROUTINE]

Before we begin, let me remind you that participation in this survey is voluntary and all responses will be held in confidence.

===>

>1< Our records show that you had enrolled in the program for Medicare beneficiaries at (AHP NAME) on (ENROLLMENT DATE). Are you still enrolled at (AHP NAME)?

<1> YES [goto 7]
<2> NO

===>

>2< When did you cancel your membership?

¶__¶__¶__¶
MO DAY YR

<1-123184>
<dk> DON'T KNOW

===>

>3< What were your reasons for cancelling your membership in (AHP NAME)?

<1> COST MORE THAN EXPECTED
<2> FOUND BETTER PLAN
<3> TOO LONG WAIT FOR APPTS
<4> TOO LONG WAIT AFTER ARRIVAL
<5> INSUFFICIENT TREATMENT
<6> OTHER UNSATISFACTORY CARE
<7> REGULAR PROVIDER NO LONGER ASSOCIATED WITH PLAN
<8> OTHER (SPECIFY)
<dk> DON'T KNOW

===>

[program repeat]

[program test for # of reasons]
[program test for fills from 3]

>3a< IF MORE THAN ONE REASON: Which of these would you say was the most important reason for cancelling your membership?

(LIST REASONS GIVEN IN Q.3)

===>

>3b< IF 3 = 5, ASK: Have you received sufficient treatment from another source of care since cancelling your membership at (AHP NAME)?

<1> YES
<2> NO
<dk> DON'T KNOW

===>

>4< Have you enrolled in another HMO or other prepaid health plan?

EXPLAIN IF NECESSARY: These are health plans that guarantee medical services to their members in exchange for fixed premium payments.

<1> YES
<2> NO.[goto 7]
<dk> DON'T KNOW [goto 7]

===>

>5< Which prepaid health plan did you join?

(REGIONAL LIST TO BE INSERTED)

--->

>6< What were the reasons why you decided to enroll in (AHP NAME FROM Q.5)?

<1> YOUR PHYSICIAN WAS A MEMBER OF PLAN
<2> YOUR FAMILY OR FRIENDS RECOMMENDED IT
<3> YOU WOULD ALWAYS HAVE A PLACE WHERE A DR WAS AVAILABLE
<4> THERE WOULD BE NO MEDICARE FORMS TO FILL OUT
<5> COST REASONS
<6> YOU THOUGHT (AHP NAME) WOULD OFFER BETTER QUALITY OF CARE
<7> PROXIMITY OF MEDICAL CENTERS, HOSPITALS
<8> (AHP NAME) HAD BETTER BENEFITS THAN MEDICARE OR OTHER PLANS
<9> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>6a< ASK IF "1" NOT CODED IN 6: Was the physician you had before you enrolled a member of (AHP NAME FROM Q.5) when you enrolled?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

[program repeat]

>6b< ASK IF MORE THAN ONE REASON GIVEN IN Q.6: Of the reasons you've told me, which of these would you say is the most important reason why you enrolled in (AHP NAME FROM Q.5)?

(FILL WITH ANSWERS FROM 6, PLUS <1> if 6a = 1)

<1> YOUR PHYSICIAN WAS A MEMBER OF PLAN
<2> YOUR FAMILY OR FRIENDS RECOMMENDED IT
<3> YOU WOULD ALWAYS HAVE A PLACE WHERE A DR WAS AVAILABLE
<4> THERE WOULD BE NO MEDICARE FORMS TO FILL OUT
<5> COST REASONS
<6> YOU THOUGHT (AHP NAME) WOULD OFFER BETTER QUALITY OF CARE
<7> PROXIMITY OF MEDICAL CENTERS, HOSPITALS
<8> (AHP NAME) HAD BETTER BENEFITS THAN MEDICARE OR OTHER PLANS
<9> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>7< The (first/next) questions are about your current living situation.

What is your current marital status--are you now married, widowed, divorced, separated, or have you never been married?

<1> MARRIED
<2> WIDOWED
<3> DIVORCED
<4> SEPARATED
<5> NEVER MARRIED

===>

>8< The next question is about the place where you live. Do you live in a private home or apartment, a nursing home or other long-term care institution, or something else?

<1> PRIVATE HOME OR APARTMENT [goto 9]
<2> NURSING HOME OR OTHER LONG-TERM CARE INSTITUTION
<3> OTHER (SPECIFY) [goto 9]

===>

>8a< What is the name of the place where you live?

===> [goto 12]

>9< IF 7 CODED 1 (MARRIED), GO TO 11.

>10< Do you now live alone or with other people?

<1> ALONE [goto 12]
<2> OTHERS

===>

>11< How many other people do you live with?

<0-15>
<dk> DON'T KNOW

===>

>12< OK, now I'd like to ask about any private health insurance policies you may have, other than (AHP NAME).

INTERVIEWER, TYPE <g> TO CONTINUE ===>

>12a< (TEST FROM BASELINE)

IF OTHER PRIVATE INSURANCE POLICIES LISTED ON BASELINE, GO TO Q.13

>12b< IF NO OTHER INSURANCE ON BASELINE, ASK: Do you now have any private health insurance policies other than (AHP NAME)?

<1> YES [goto 16]
<2> NO [goto 21]
<dk> DON'T KNOW [goto 21]

--->

>13< When we interviewed you before, you said you had (NUMBER OF POLICIES) in addition to (AHP NAME); that is, (NAME POLICIES).

Do you still have a policy with (POLICY #1)?

<1> YES [goto 15]
<2> NO
<dk> DON'T KNOW

--->

>14< Why do you no longer have this policy?

(READ ONLY IF NECESSARY)

<1> IT WAS TOO EXPENSIVE
<2> DIDN'T COVER WHAT I EXPECTED OR NEEDED
<3> FELT THAT (AHP NAME) COVERAGE WAS ENOUGH, I DIDN'T NEED MORE
<4> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

[program repeat for each policy]

>15< Do you now have any other policies besides (POLICIES WITH YES IN 13) and (AHP NAME)?

<1> YES
<2> NO [goto 21]
<dk> DON'T KNOW [goto 21]

--->

>16< How many other private health insurance policies do you now have, not counting (AHP NAME) (AND POLICIES WITH YES IN Q.13)?

<1-10>
<dk> DON'T KNOW

--->

>17< What (is the name of this other policy/are the names of these other policies) that you have now?

--->

>18a< I'd like to ask some more about (this policy/each of these policies). (First, let's talk about the (POLICY NAME) policy.) Was this policy obtained through a group such as an employer, a union, or a senior citizen's association, or did you purchase this policy directly from an insurance agent or company?

<1> GROUP
<2> DIRECTLY FROM INSURANCE AGENT OR COMPANY [goto 18c]
<dk> DON'T KNOW

--->

>18b< Through what kind of group was this policy obtained?

<1> SENIOR CITIZEN'S GROUP
<2> R'S EMPLOYER
<3> R'S UNION
<4> SPOUSE'S EMPLOYER
<5> SPOUSE'S UNION
<6> RELIGIOUS/FATERNAL GROUP
<7> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>18c< Was this health insurance policy specifically designed to pay for medical expenses not paid for by Medicare? These policies are sometimes called "Medicare supplemental" or "Medicare complementary."

<1> YES [goto 18e]
<2> NO
<dk> DON'T KNOW

--->

>18d< We'd like to know whether this policy was a "major medical" policy, that is, a health insurance policy that pays some percentage of your medical costs after you pay your medical expenses up to the amount of the deductible. Major medical policies are not limited to a fixed amount per day of illness or to a specific disease. Was this a "major medical" policy?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>18e< Do you (or your husband/wife pay any part of the premium for this policy?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

[program repeat]
[program test for any more policies]
[program repeat 18a-e for each policy]

>19< Which of the following types of coverage are provided by this private insurance other than with (AHP NAME)?

>19a< Dental?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>19b< Prescription drug?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>19c< Private nursing or home health care?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>19d< Eyeglasses?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>20< What are your reasons for continuing coverage on other health insurance, while you are enrolled in (AHP NAME)?

(READ ONLY IF NECESSARY)

<1> THE EXPENSE FOR THE EXTRA PROTECTION SEEMS REASONABLE
<2> IT'S FREE
<3> THE SECURITY OF HAVING EXTRA COVERAGE
<4> THE PLAN COVERS SERVICES I NEED OR EXPECT TO NEED
<5> OTHER (SPECIFY)
<6> HAVEN'T THOUGHT ABOUT IT
<7> HASN'T COME UP FOR RENEWAL SINCE JOINING AHP
<dk> DON'T KNOW

--->

>21< Now I have some questions about your experiences at (AHP NAME). Since joining the Medicare program at (AHP NAME), thinking of what you (and your husband/wife) have had to pay out of your own pocket, do you think your overall cost for health care has increased, decreased, or remained about the same?

<1> INCREASED
<2> REMAINED ABOUT THE SAME
<3> DECREASED
<dk> DON'T KNOW

--->

>22< Do you think that the quality of the medical care you have received at (AHP NAME) has been better than, worse than, or about the same as the medical care you had been getting before you joined?

<1> BETTER
<2> ABOUT THE SAME
<3> WORSE
<nc> NO CARE RECEIVED
<dk> DON'T KNOW

--->

>23< Now, thinking about your experience at (AHP NAME), have there been any things that were better than you expected?

<1> YES
<2> NO [goto 24]
<dk> DON'T KNOW

--->

>23a< What kinds of things that were better than you expected?

--->

>24< Are there any things about membership in (AHP NAME) that you feel you didn't get enough information on before you decided to join?

<1> YES
<2> NO [goto 25]
<dk> DON'T KNOW [goto 25]

--->

>24a< What did you not get enough information on?

<1> PREMIUM COSTS
<2> OUT OF POCKET COSTS
<3> CONDITIONS COVERED OR SERVICES PROVIDED BY THE PLAN
<4> CHOICE OF PROVIDERS WITHIN THE PLAN
<5> GETTING CARE OUTSIDE GEOGRAPHIC AREA SERVED BY THE PLAN
<6> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

[program repeat]

>25< The next questions are about your visits to (AHP NAME).

Have you visited a physician or clinic whose services were covered by (AHP NAME) since joining on (ENROLLMENT DATE)?

<1> YES
<2> NO [goto 35a]
<dk> DON'T KNOW [goto 35a]

--->

>25a< Do you usually go to the (AHP NAME) clinic or do you go to the office of a doctor whose services are covered by the plan?

<1> CLINIC
<2> PLAN
<dk> DON'T KNOW

--->

>26< How do you usually get to this doctor's office or clinic?

<1> WALK
<2> PUBLIC BUS
<3> DRIVE SELF
<4> TAXI
<5> TRANSPORTATION PROVIDED BY AHP (BUS, VAN, ETC.)
<6> RIDE WITH FRIEND OR RELATIVE
<7> OTHER (SPECIFY)
<dk> DON'T KNOW [goto 28]

--->

>27< About how long does it usually take you to get there?

<1-300> MINUTES
<dk> DON'T KNOW

--->

>28< Do you usually have an appointment ahead of time when you go there, or do you just walk in?

<1> APPOINTMENT
<2> WALK IN [goto 31]
<3> SOMETIMES APPOINTMENT, SOMETIMES WALK IN
<dk> DON'T KNOW [goto 31]

--->

>29< Not counting emergencies, can you usually get an appointment to see a medical person at (AHP NAME/your doctor's office) when you want to see this person, or do you usually have to wait?

<1> CAN USUALLY GET APPOINTMENT [goto 31]
<2> USUALLY HAVE TO WAIT
<dk> DON'T KNOW

--->

>30< Not counting emergencies, how many days do you usually have to wait between the time you want to see a medical person and the time you actually see a medical person at (AHP NAME/your doctor's office)?

<1-90> DAYS
<dk> DON'T KNOW

--->

>31< After arriving at the (clinic/office), about how long do you usually have to wait (past your scheduled appointment time) to see a medical person?

<0-300> MINUTES
<dk> DON'T KNOW

--->

>32< Is there a particular medical person whom you usually see at the (office/clinic)?

<1> YES [goto 34]
<2> NO
<dk> DON'T KNOW

--->

>33< Would you prefer to see the same medical person on your visits to the (clinic/office) or doesn't it matter?

<1> PREFER TO SEE THE SAME PERSON
<2> DOESN'T MATTER [goto 35]

--->

>34< How important is it to you to usually see the same medical person there, as opposed to seeing different persons. Would you say it is .. .

<1> very important,
<2> somewhat important,
<3> or not important at all?
<dk> DON'T KNOW

--->

>35a< Have you ever wanted a service or treatment that was not provided or covered by (AHP NAME)?

<1> YES
<2> NO [goto 36]
<dk> DON'T KNOW [goto 36]

--->

>35b< What type of services or treatment were they?

<1> PRESCRIPTION DRUGS
<2> VISION CARE
<3> DENTAL CARE
<4> ROUTINE FOOT CARE
<5> SERVICES OF A CHIROPRACTOR
<6> SERVICES OF A PSYCHIATRIST/PSYCHOLOGIST/OTHER MENTAL HEALTH PROF.
<7> PRIVATE DUTY NURSING
<8> NURSING HOME CARE
<9> HOMEMAKER SERVICES
<0> OTHER

--->

>36< Since you joined the special Medicare program at (AHP NAME), have you ever wanted to see a particular doctor or other medical person, not including dentists, who was not a member of (AHP NAME) even though those services would be provided by that plan?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>37< While enrolled in the special Medicare program at (AHP NAME), have you used the services of a non-(AHP NAME) medical person? Do not count emergencies, referrals from (AHP NAME), dental services, or services received because you were travelling outside the service area for (AHP NAME).

<1> YES
<2> NO [goto 42]
<dk> DON'T KNOW [goto 42]

--->

>38< How many times have you gone to a non-(AHP NAME) medical person since you joined (AHP NAME)?

<1-99> TIMES
<dk> DON'T KNOW

--->

>39< Why weren't (AHP NAME) medical people seen for these services?

<1> AHP DID NOT COVER R'S CONDITION
<2> COULD NOT GET SERVICES QUICKLY ENOUGH AT AHP
<3> AHP TOO FAR AWAY FROM WHERE R LIVES
<4> R WAS OUT OF AHP SERVICE AREA WHEN SERVICES NEEDED
<5> WANTED TO USE PRE-AHP PROVIDER
<6> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

[program repeat]

>40< Who paid, or will pay, for the medical bills for (these visits/ this visit)?

<1> SELF-PAY
<2> MEDICARE [goto 42]
<3> (AHP NAME) [goto 42]
<4> OTHER PRIVATE INSURANCE [goto 42]
<5> NO FEE [goto 42]
<6> OTHER (SPECIFY) [goto 42]
<dk> DON'T KNOW

--->

[program repeat]

>41< How much did or will you (or your spouse) pay out of pocket for these services, not counting anything that has been or will be reimbursed by any insurance?

$<0-99999>
<dk> DON'T KNOW

--->

>42< Have you had any problems at (AHP NAME) that have caused you concern or inconvenience?

<1> YES
<2> NO [goto 45]
<dk> DON'T KNOW [goto 45]

--->

>43< Have you ever discussed these problems with a staff member at (AHP NAME)?

<1> YES
<2> NO [goto 45]
<dk> DON'T KNOW [goto 45]

--->

>44< Were you generally satisfied with the outcome of these discussions?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

IF Q.1 = 2 GO TO Q.45a

>45< ASK IF Q25=NO. Have you ever received any treatment or services that were covered by (AHP NAME) since your enrollment in (ENROLLMENT DATE)?

<1> YES [goto 46a]
<2> NO [goto 46k]
<dk> DON'T KNOW [goto 46k]

--->

>45a< Did you ever receive any treatment or services that were covered by (AHP NAME) while you were enrolled?

<1> YES
<2> NO [goto 48]
<dk> DON'T KNOW [goto 48]

--->

>46a< Now I would like to know how you would evaluate the services you have received at (AHP NAME) since you enrolled in the special Medicare program. I am going to read you a list of factors and for each one I'd like you to tell me whether you think (AHP NAME) is excellent, good, fair, or poor with respect to that factor.

First, how would you rate the professional competence of the physicians and other medical persons who work there? Would you say it has been excellent, good, fair, or poor?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46b< Next, how would you rate the willingness of the medical staff to discuss and explain your health problems? (Would you say it has been excellent, good, fair, or poor?)

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46c< What about the courtesy and consideration of staff?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46d< Availability of care in an emergency?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46e< The medical results of the treatment you have had?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46f< The amount of time spent waiting to see a medical person after you arrive at the facility?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46g< What about the ease of getting convenient appointments?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46h< How about the ease of getting to (AHP NAME) from where you live?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46i< Next, how would you rate the freedom to choose among medical staff at (AHP NAME)?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46j< The amount of paperwork related to filing claims?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

>46k< Finally, how would you rate the monthly premiums and special service fees at (AHP NAME)? (Would you say it has been excellent, good, fair, or poor?)

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR
<5> NO OPINION

--->

[IF 45 = 2 OR 45a = 2 GO TO 48]

>47< How satisfied would you say you are, overall, with the medical care you have received at (AHP NAME) since you enrolled in the special Medicare program? Are you very satisfied, somewhat satisfied, neutral, somewhat dissatisfied or very dissatisfied?

<1> VERY SATISFIED
<2> SOMEWHAT SATISFIED
<3> NEUTRAL
<4> SOMEWHAT DISSATISFIED
<5> VERY DISSATISFIED
<dk> DON'T KNOW

--->

>48a< Now I would like to ask you some questions about your health. In the last 6 months, that is since (DATE 6 MONTHS AGO), have you had or been bothered with pain in or around your heart or chest?

<1> YES
<2> NO [goto 49a]
<dk> DON'T KNOW [goto 49a]

--->

>48b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 48d]
<dk> DON'T KNOW [goto 49a]

--->

>48c< Did you actually see someone at (AHP NAME) about this pain?

<1> YES [goto 49a]
<2> NO
<dk> DON'T KNOW [goto 49a]

--->

>48d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>49a< In the last six months have you had or been bothered with a persistent cough?

<1> YES
<2> NO [goto 50a]
<dk> DON'T KNOW [goto 50a]

--->

>49b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 49d]
<dk> DON'T KNOW [goto 50a]

--->

>49c< Did you actually see someone at (AHP NAME) about this cough?

<1> YES [goto 50a]
<2> NO
<dk> DON'T KNOW [goto 50a]

--->

>49d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>50a< In the last six months have you been bothered with a severe loss of eyesight?

<1> YES
<2> NO [goto 51a]
<dk> DON'T KNOW [goto 51a]

--->

>50b< Did you seek care form (AHP NAME) for this problem?

<1> YES
<2> NO [goto 50d]
<dk> DON'T KNOW [goto 51a]

--->

>50c< Did you actually see someone at (AHP NAME) about your sight?

<1> YES [goto 51a]
<2> NO
<dk> DON'T KNOW [goto 51a]

--->

>50d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>51a< In the last six months have you had or been bothered with swollen or painful joints?

<1> YES
<2> NO [goto 52a]
<dk> DON'T KNOW [goto 52a]

--->

>51b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 52a]

--->

>51c< Did you actually see someone at (AHP NAME) about your joint problem?

<1> YES [goto 52a]
<2> NO
<dk> DON'T KNOW [goto 52a]

--->

>51d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPEICFY)
<dk> DON'T KNOW

--->

>52a< In the last six months have you had or been bothered with bad stomach cramps or pain?

<1> YES
<2> NO [goto 53a]
<dk> DON'T KNOW [goto 53a]

--->

>52b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 52d]
<dk> DON'T KNOW [goto 53a]

--->

>52c< Did you actually see someone at (AHP NAME) about these cramps or pain?

<1> YES [goto 53a]
<2> NO
<dk> DON'T KNOW [goto 53a]

--->

>52d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>53a< In the last six months have you had or been bothered with loose bowels?

<1> YES
<2> NO [goto 54a]
<dk> DON'T KNOW [goto 54a]

--->

>53b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 53d]
<dk> DON'T KNOW [goto 54a]

--->

>53c< Did you actually see someone at (AHP NAME) about your loose bowels?

<1> YES [goto 54a]
<2> NO
<dk> DON'T KNOW [goto 54a]

--->

>53d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5> OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>54a< In the last six months have you had any fainting spells or blackouts?

<1> YES
<2> NO [goto 54d]
<dk> DONT' KNOW [goto 55a]

--->

>54b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 54d]
<dk> DON'T KNOW [goto 55a]

--->

>54c< Did you actually see someone at (AHP NAME) about your fainting spells or blackouts?

<1> YES [goto 55a]
<2> NO
<dk> DON'T KNOW [goto 55a]

--->

>54d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO CONTACT NECESSARY
<5> OTHER (SPEICFY)
<dk> DON'T KNOW

--->

>55a< In the last six months have you had or been bothered with any problems with your heart beating hard or acting funny?

<1> YES
<2> NO [goto 56a]
<dk> DON'T KNOW [goto 56a]

---->

>55b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 55d]
<dk> DON'T KNOW [goto 56a]

--->

>55c< Did you actually see someone at (AHP NAME) about your heart problem?

<1> YES [goto 56a]
<2> NO
<dk> DON'T KNOW [goto 56a]

--->

>55d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5< OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>56a< In the last six months have you had or been bothered with shortness of breath when you climb the stairs?

<1> YES
<2> NO [goto 57a]
<dk> DON'T KNOW [goto 57a]

--->

>56b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 56d]
<dk> DON'T KNOW [goto 57a]

--->

>56c< Did you actually see someone at (AHP NAME) about your shortness of breath?

<1> YES [goto 57a]
<2> NO
<dk> DON'T KNOW [goto 57a]

--->

>56d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5< OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>57a< In the last six months have you had any problems with dizziness?

<1> YES
<2> NO [goto 58a]
<dk> DON'T KNOW [goto 58a]

--->

>57b< Did you seek care from (AHP NAME) for this problem?

<1> YES
<2> NO [goto 57d]
<dk> DON'T KNOW [goto 58a]

--->

>57c< Did you actually see someone at (AHP NAME) about your dizziness?

<1> YES [goto 58a]
<2> NO
<dk> DON'T KNOW [goto 58a]

--->

>57d< Why not?

<1> COULDN'T GET APPOINTMENT
<2> PROBLEM WENT AWAY/NOT IMPORTANT
<3> TALKED WITH CAREGIVER OVER PHONE
<4> CHRONIC PROBLEM, NO FURTHER CONTACT NECESSARY
<5< OTHER (SPECIFY)
<dk> DON'T KNOW

--->

>58< The next few questions refer to the past two weeks, that is, from (DATE 2 WEEKS AGO) through yesterday.

During the past two weeks, did you stay in bed because of any illness or injury?

<1> YES
<2> NO [goto 60]
<dk> DON'T KNOW [goto 60]

--->

>59< During the last two weeks, how many days did you stay in bed all or most of the day?

<1-14> DAYS

--->

>63c< Are you physically able to prepare your own meals yourself?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>63d< Can you do housework such as scrubbing the floor without help?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>63e< If you had medicine to take, could youu take it without help, in the right dose at the right time?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>63f< Can you handle your own money, such as writing checks and paying bills, without help?

<1> YES
<2> NO
<dk> DONT' KNOW

--->

>64< IF AT LEAST 5 1's IN 63 a-f, GO TO Q.65.

Can you do the following without any help. . .

a. dress and undress (can you put out clothes, dress and undress yourself)?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

b. take care of your own appearance such as combing your own hair (and shaving)?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>60< (Not counting the days in bed), Were there any (other) days during the past two weeks that you cut down on things that you usually do because of illness or injury?

<1> YES
<2> NO [goto 62]
<dk> DON'T KNOW [goto 62]

--->

>61< Again, not counting the days in bed, during the last two weeks, how many (other) days did you cut down for as much as a day?

<1-14> DAYS

--->

>62< During the past 12 months, that is, since this day one year ago, about how many days did illness or injury keep you in bed all or most of the day?
(Include the days in the past 2 weeks).
(Include the days while a patient in a hospital).

READ CATEGORIES IF NECESSARY.

<0> NONE
<1> 1-7 DAYS
<2> 8-30 DAYS
<3> 31-180 DAYS (1-6 MONTHS)
<4> 181 + DAYS (OVER 6 MONTHS)
<dk> DON'T KNOW

--->

>63a< The questions I'm going to ask you now have to do with how you manage with several routine daily activities. For the purposes of this research study, we need to ask these questions of all respondents, regardless of how well they manage. When answering these next few questions, please think about what you are physically able to do, not necessarily what you do do.

First, can you get to places out of walking distance without help, that is, can you travel alone on buses or taxis, or drive your own car?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>63b< Assuming you have transportation, can you go shopping for groceries or clothes without help?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

c. eat (that is, feed yourself with no help)?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

d. get in and out of bed?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

e. take a tub bath or shower?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

f. Do you have trouble getting to the bathroom on time?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>65< When was the last time you had a regular physical examination even though you were feeling all right and had no symptoms to check out?

<0> NEVER
<1> MORE THAN 10 YEARS AGO
<2> BETWEEN 5 AND 10 YEARS AGO
<3> BETWEEN 1 AND 5 YEARS AGO
<4> LESS THAN 1 YEAR AGO
<dk> DON'T KNOW

--->

>66< In general, would you say your health is excellent, good, fair or poor?

<1> EXCELLENT
<2> GOOD
<3> FAIR
<4> POOR

--->

>67< Comparing your general health to other people your age, would you say your health is much better, better, about the same, worse, or much worse?

<1> MUCH BETTER
<2> BETTER
<3> SAME
<4> WORSE
<5> MUCH WORSE
<dk> DON'T KNOW

--->

>68< In 1985, how much did you spend for health care, counting doctor and hospital bills, dental care, and prescription drugs but not counting what any insurance has paid or will pay, and not counting insurance premiums--would you say. . .

<1> nothing,
<2> less than $100,
<3> from $100 to $500,
<4> or more than $500?
<dk> DON'T KNOW

--->

>69< Now, for a few general questions . . .

What are you doing at the present time: working, looking for work, retired, keeping house, or something else?

<1> WORKING
<2> LOOKING FOR WORK
<3> RETIRED
<4> KEEPING HOUSE
<5> OTHER UNEMPLOYED

--->

>70< ASK IF 69 = 1: Are you working full time or part time?

<1> FULL TIME
<2> PART TIME
<dk> DON'T KNOW

--->

>71< ASK IF 8 = 1: Do you (or your spouse) own your own home?

<1> YES
<2> NO
<dk> DON'T KNOW

--->

>72< What is the monthly income that you (and your spouse) receive? Include all sources, such as wages, salaries, social security, pensions, net rental and so forth.

<1> UNDER $100
<2> 100-299
<3> 300-499
<4> 500-699
<5> 700-899
<6> 900-1,199
<7> 1,200-1,599
<8> 1,600-1,999
<9> 2,000-3,999
<10> 4,000 OR MORE
<dk> DON'T KNOW [goto 76]
<rf> REFUSED [goto 76]

===>

>73< Do you (or your husband/wife) receive any other income on a regular basis, such as interest or dividends, which you weren't counting in your monthly income?

<1> YES
<2> NO [goto 76]
<dk> DON'T KNOW [goto 76]

===>

>74< Not counting what you have already told me about, how much other income do you receive, per quarter or per year?

$<1-999999>
<dk> DON'T KNOW

===>

>75< [no erase]

<1> PER QUARTER
<2> PER YEAR
<3> OTHER (SPECIFY)
<dk> DON'T KNOW
<rf> REFUSED

===>

>76< That's the last question I have. Thank you very much for your time. INTERVIEWER, TYPE <g> TO EXIT INTERVIEW ===>

VITA

VITA