

## HEALTH POLICY AND THE HMO

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Policy making is fraught with difficulty. The long-range results are often far afield from the original expectation. This, of course, has been conspicuous in such fields as defense, foreign affairs and economics. Serious attempts to formulate a national policy for the delivery of medical services are relatively new for the United States. Foreseeing the ultimate result of any policy decision is quite difficult. It was certainly not perceived that the laudable Flexner reform of medical education, aided and implemented by the support of medical education through research funds from the federal government, would ultimately create a crisis in the access to primary medical care. The reforming of medical education to change and shorten the medical curriculum, the creation of a "specialty" of primary family practice and the genesis of new health professionals, such as the nurse practitioner and the physician's assistant, are all attempts to ameliorate the effects of a policy decision made sixty years ago. This is not to say that the policy decision was wrong; the inference is that the ultimate results were difficult to foresee.

The past seven years have seen much activity at the federal level in attempts to make health policy. The dominant event is, of course, the modifications of the Social Security Act creating the Medicare and Medicaid programs in 1965. The size of these programs was matched by the size and acrimony of the debate

preceding its passage. Parts of the Act creating these programs reflect the thoughts of those who were in advocacy, and indeed, parts of the Act reflect the thoughts of those who were in opposition. It was, in great part, an Act of compromise. Being of very broad scope, many of the provisions were without significant precedent. Many of the decisions about specific items were made with only fragmentary information, for the data were not at hand on which to base policy in a more predictive fashion. The crisis in health care followed quite promptly.

The amendments of the Economic Opportunity Act of 1966 established the authority for the comprehensive Neighborhood Health Center component of the Office of Economic Opportunity. The success or failure of this policy decision over the past five years is not at issue. However, the amount of information available to forecast the results of this innovative series of demonstrations was small indeed, and it is doubtful that what little existed was significantly taken into account in formulating the policies.

The Regional Medical Programs, as envisioned in the DeBakey Committee Report, bear only faint resemblance to the resultant Act (PL 89-239). The Act itself, with its admonishing stricture against changing the organization of the delivery of health services, stands in contrast to the main thrust of the present program, which is, indeed, to change the organization of the delivery of health services. The Partnership for Health, Comprehensive Health Planning Act (PL 89-749), also displays a significant disparity between the intent of the original health policy and the program practice after a five-year period.

All of these programs, each a major policy decision, each problem-ridden in its execution, were entered upon with high intent but with a very small information base on which to make a decision. There are many more examples. Even a superficial review points up that the data available for decision making are not only scarce but of widely varying quality. This state of affairs leads to assertion, strong advocacy and equally strong denial. Social policy is inevitably based on ideology and not on

information. Perhaps this situation is inevitable. Nevertheless, the thought recurs that perhaps more adequate sources of information about health services would lead to the formulation of more accurately predictive policy in this crisis-ridden field.

The size of the stake is huge and is rapidly increasing. The estimates made of the cost of Medicare and Medicaid prior to its implementation in 1966 and the subsequent cost overruns cannot help but remind one of the defense industry. The effect on state budgets of Medicaid has provoked a crisis in local financing and political recriminations that extend far beyond the health field. Some of the remedies advocated, such as institutional price controls and peer review organizations for professionals, would seem to be derived from the homeopathic philosophy.

The nation is at the beginning of a major new thrust in health policy—the era of the Health Maintenance Organization. It has been widely heralded for the past two years. It is one of the policy issues on which the President and his administration, Wilbur Mills and the House Ways and Means Committee, and Senator Kennedy all agree! Although imminent, the Congress has not yet acted on any of the many related proposals.

The name Health Maintenance Organization (HMO) is new in the past two years. Considering the state of the art, it must be considered a politicized euphemism. The vast majority of the work of any such organization that fulfills the requirements being laid down will be sickness care; and, indeed, on the assumption that man is mortal, it will probably remain so into the future. However, with that caveat, the HMO is intended to provide the inherent motivation for any prevention and any cost-effective disease detection that exists.

Inasmuch as the term Health Maintenance Organization is not self-revealing as to the concepts implied, it is necessary to make them more explicit. The noun in the term Health Maintenance Organization is “organization,” and the first provision is that there be an organization of comprehensive medical services with the understanding of a guaranteed access to these

services in relation to medical need. The second provision is that of an enrolled population that has had a choice of systems of medical care and has voluntarily chosen the HMO.

Finally, the costs of all care are to be mutualized among the defined population so that a total budget is funded. The budget is then paid by contract to the providers of care, both professional and institutional, who, in turn, agree to deliver their respective services for an agreed-upon-in-advance capitation. The resultant dynamic is to convert morbidity from its usual status as an asset of the providers to the status of a liability to them. Hence, the provider, like the consumer, has his economic interest in morbidity prevention. Thereby the rather optimistic name of Health Maintenance Organization.

The President, in his health message of November 18, 1971, states:<sup>1</sup>

In recent years, a new method for delivering health services has achieved growing respect. This new approach has two essential attributes. It brings together a comprehensive range of medical services in a single organization so that a patient is assured of convenient access to all of them. And it provides needed services for a fixed-contract fee which is paid in advance by all subscribers.

Such an organization can have a variety of forms and names and sponsors. One of the strengths of this new concept, in fact, is its great flexibility. The general term which has been applied to all of these units is HMO—Health Maintenance Organization.

The most important advantage of Health Maintenance Organizations is that they increase the value of the services a consumer receives for each health dollar. This happens first because such organizations provide a strong financial incentive for better preventive care and for greater efficiency.

Under traditional systems, doctors and hospitals are paid, in effect, on a piecework basis. The more illnesses they treat—and the more service they render—the more their income rises.

This does not mean, of course, that they do any less than their very best to make people well. But it does mean that there is no economic incentive for them to concentrate on keeping people healthy.

A fixed-price contract for comprehensive care reverses this illogical incentive. Under this arrangement, income grows not with the number of days a person is sick but with the number of days he is well. HMO's therefore have a strong financial interest in preventing illness, or, failing that, in treating it in its early stages, promoting a thorough recovery and preventing any reoccurrence. Like doctors in ancient China, they are paid to keep their clients healthy. For them, economic interests work to reinforce their professional interests.

And the House Committee on Ways and Means in its report to the Congress states:<sup>2</sup>

Your committee believes that a serious problem in the present approach to payment for services in the health field, either by private patients, private insurance or the government, is that, in effect, payment is made to the provider for each individual service performed, so that other things being equal, there is an economic incentive on the part of those who make the decisions on what services are needed to provide more services, services that may not be essential and even unnecessary services.

A second major problem is that, ordinarily, the individual must largely find his own way among various types and levels of services with only partial help from a single hospital, a nursing home, a home health agency, various specialists and so on. No one takes responsibility, in a large proportion of the cases, for determining the appropriate level of care in total and for seeing that such care, but no more, is supplied.

The pattern of operation of Health Maintenance Organizations that provide services on a per capita prepayment basis lends itself to a solution of both these problems with respect to the care of individuals enrolled with them. Because the organization receives a fixed annual payment from enrollees regardless of the volume of services rendered, there is a financial incentive to control costs and to provide only the least expensive service that is appropriate and adequate for the enrollee's needs. Moreover, such organizations take responsibility for deciding which services the patient should receive and then seeing that those are the services he gets.

Secretary Elliot Richardson, in the White Paper of May, 1971, after reiterating in similar words the idea and motivation

of HMO's, describes the findings that interest the government in this form of organization.<sup>3</sup>

In contrast with more traditional and alternative modes of care, HMO's show lower utilization rates for the most expensive types of care (measured by hospital days in particular); they tend to reduce the consumer's total health-care outlay; and—the ultimate test—they appear to deliver services of high quality. Available research studies show that HMO members are more likely than other population groups to receive such preventive measures as general checkups and prenatal care, and to seek care within one day of the onset of symptoms of illness or injuries.

The sources cited for these conclusions are from the studies of Denson, *et al.*, and Shapiro, *et al.*, and from the Social Security Administration, Office of Research and Statistics on the Medicare Program.

In his remarks before the American Hospital Association in Chicago on August 24, 1971, the Secretary stated: "I am firmly convinced that at this time, no alternatives are superior to ours in the strength of their base of knowledge. . . ."<sup>4</sup> The Secretary, however, clearly pointed out the state of the art in this manner:<sup>5</sup>

I should like to say, however, in passing, that our proposals evolved out of an examination of literally hundreds of options. And one of our judgmental criteria was: how far may we go with an option given our state of knowledge.

In some instances, we found the knowledge to be extensive, sufficiently so to propose sweeping changes. In other instances, we were brought up sharply by the taut reins of ignorance. We were wary then, and are wary now, of panaceas calling for universal and abrupt changes, where the base of knowledge is so fragile it can support little more than fancy.

The American Medical Association is, however, unconvinced. In its publication on Health Maintenance Organizations of May, 1971, quoting its testimony before the Senate finance Committee on H.R. 17550, the Association states:<sup>6</sup>

We believe that cost and utilization data should first be developed with control demonstrations testing the capability of such a

program to accomplish its purpose. There are questions regarding in-fact cost savings, as well as the quality of health care which may be provided when there are economic incentives to providers to reduce utilization.

These statements, that of Secretary Richardson as to no alternatives being superior in regard to the strength of the base of knowledge, and the American Medical Association's forthright skepticism, rather well stake out the ground of debate on the validity of the HMO strategy. Many secondary grounds of debate concern financing, tactics of promotion, what manner of organizations might qualify and many other derivative issues, but all pend on the nature of evidence that the HMO is, indeed, a better way.

As previously mentioned, the name Health Maintenance Organization in its present connotation is new in the past two years. However, the notions that lie behind the name are not new. It is always hard to say when ideas originate, and, in fact, they often keep being reinvented. The President, in his health message, cited the idea's being present in ancient China, and inasmuch as this has been oft cited over the years, there may be some substance to it. A Chinese scholar, however, and one professionally engaged in working with these concepts, has stated that he has had great difficulty authenticating any widespread use of the notion in ancient China.<sup>7</sup> Medical mutuals and "Friendly Societies" with similar ideas did indeed exist in the nineteenth century in Europe and the lands that had been colonized by Europeans.

The most significant, reasoned and detailed approach in the United States stems from the series of reports of the Committee on the Cost of Medical Care, reporting from 1927 to 1932, that advocated prepayment and group practice as specific policies for rationalizing the American medical care system.<sup>8</sup> The professional founder of the Kaiser Foundation Medical Care Program, which dates back to 1933, has reported that he was not influenced by this report, inasmuch as it did not come to his attention until many years after the program he founded was

already successful.<sup>9</sup> Perhaps this offers a lesson for those who spend considerable portions of their time sitting on committees studying health policy. Theoretical hypotheses are often of little avail without viable examples.

Most of the prototype organizations that now would qualify as HMO's had their origins in the 1930's and 1940's, and most of the evidence in regard to cost and utilization comes from those organizations. They have been known as prepaid group practices. Each was involved in controversy from its origin. Organized medicine, which would now like to develop controlled demonstrations, originally was restrained from annihilating them only by federal and state Supreme Court decisions. The American Medical Association arrived at an alleged neutral position with the Larson Committee Report of 1959.<sup>10</sup> Many of the constituent medical societies, however, have taken much longer to arrive at such a neutral position, if indeed they have.

None of this long debate appeared to influence the federal government in arriving at a Health Maintenance Organization policy. It was only with medical care cost escalation and the resultant budgetary dilemmas, particularly as they affected the Medicare and Medicaid programs, that the executive and legislative branches of the government became sensitized and aware of any options.

The Medicare law, as passed in 1965, mentioned prepaid group practice and capitation payment as a result of the prepaid group practice organizations' efforts to modify the law to allow their usual manner of program function. However, to this day, and despite several modifications of the law, the prepaid group practice programs remain functioning on a cost reimbursement basis, a process quite at variance with prospective budgeting.

The attempts, however, to make the Social Security Administration and the Congress aware of these difficulties and the resultant data comparing the health care utilization of the elderly under these programs with the national averages proved to be



a very salutary exercise. It is largely on the basis of these data and the data flowing from the Federal Employees Health Benefits Act of 1959 that the federal government became aware of its option. Reports of various study groups and commissions have underlined these differences,<sup>11</sup> but if it were not for the involvement of the Congress with the funding of its own creations, sensitivities to such reports would be markedly less.

As these data developed year after year, together with conceptual arguments to elucidate why such data resulted from these programs,<sup>12</sup> government authorities became progressively more interested. When, finally, in July of 1969, the President proclaimed a health crisis and called for significant innovation in the health care system, the examination of options became inevitable. The approach of the prepaid group practices was clearly being advocated as the solution to the American health care crisis. What was the information on hand at that time concerning prepaid group practices on which sufficient judgments about HMO's could be made? What was the quality of the data? What information might have been available, considering the state of the art, and in what way might the state of the art be advanced in a practical manner to significantly contribute to policy making? Examining the state of the art relative to social policy concerning the HMO is instructive in assessing data needs in health policy generally. Certainly many of the questions are the same and many of the data are equally available.

Evaluating the effectiveness of a medical care form, such as prepaid group practice, requires the measuring of that form's performance against its stated goals.<sup>13</sup> In medical care the goals are to reduce morbidity, minimize disability and avoid premature death. Measuring effectiveness has two components. The first is the measurement of the technical performance of the system. The second assessment relates to measuring the form's acceptance; how well, for example, prepaid group practice has gained acceptance by the population and by the providers of care. Unfortunately, research in each of these areas has been

limited, and it has been difficult to draw any definitive conclusions.

Donabedian indicates that the evaluation of quality can proceed by evaluating the structure, process and outcome of the medical care system.<sup>14</sup> It is possible to use this framework in the assessment of effectiveness of prepaid group practice. This type of evaluation does not answer specific questions about the health of the populations of prepaid group practice programs. Rather, it asserts that when an appropriate structure and an appropriate process are developed and certain outcomes can be observed, these outcomes will affect positively the health of the population. This approach seems reasonable, but the ultimate evaluation, of course, must determine if belonging to a prepaid group practice program improves the health status of the population enrolled. Little evidence exists that personal health services provided in any current system materially affect the health status of populations. The scientific problems of measurement and the difficulties of experimental design in medical care are constraints.

We are left with the assessment of structure, process and a limited outcome in evaluating prepaid group practice relative to the remaining medical care systems. For example, it has been argued that integrating care in a hospital-based system, providing the centralization inherent in the use of a single medical record and making available all needed resources under central administrative control provide the potential for making appropriate services available at all times. If there are no financial barriers to care and if all appropriate services are available, an increased probability exists that care will be of adequate quality.

Further, it is argued that the medical care system can be organized to minimize the motivation for physicians to proceed inappropriately. It can avoid, for example, providing financial incentives to unnecessarily hospitalize patients or to perform unnecessary surgery. In prepaid group practice the relation between the financing system and the organization of medical care is critical in structuring the environment to avoid motiva-

tion for such undesirable behavior. The capitation payment to physicians, by providing the group a fixed income for each person enrolled in the system, is designed to facilitate use of appropriate service.

It has been asserted that in prepaid group practice the colleague interaction is an important determinant of quality, even though little experimental evidence exists concerning this point. Such factors as the ready availability of all specialties, the ease of consultation and the easy exchange of information can be viewed as positively influencing the quality of care. On the other hand, it has been argued that social pressure can be applied for inappropriate behavior as well as appropriate behavior in an organized situation. In the highly structured situation of group practice organizations, attitudes, good or bad, concerning quality and appropriate utilization of services will be reflected in the practice pattern of physicians.

In a tightly knit prepaid group practice structure, it is simple to institute peer review on the behavior of individual physicians. The providers of care have to use and see each other's work because of the unit medical record. It is assumed that this unit record leads to better quality. In the unorganized system, records are maintained by one man and are not subject to the critical review of general use, except in the hospital. The contemporary demand for peer review has caused county medical societies throughout the country to attempt to develop peer review mechanisms in the solo practice, fee-for-service system.

Differential outcomes resulting from the process and structural differences in prepaid group practice systems appear as utilization pattern differences. In particular, there is a reduction in surgery on patients of prepaid group practice physicians and some increases in the use of preventive services. Donabedian, for example, has concluded that tentative evidence indicates that unjustified surgery tends to be less frequent in a prepaid group practice program.<sup>15</sup> He refers particularly to the much lower tonsillectomy rates in prepaid group practice in the federal employees health benefit program. He cites differences

in overall hospitalization rates and in rates for surgical procedures among group practice patients. He further cites data indicating that preventive services are used more frequently by members of prepaid group practice programs, particularly higher utilization for cervical cytology examination and more appropriate use of general and prenatal checkups among members of the group practice plans. A higher proportion of group practice members make contact with a physician each year, thereby increasing the probability of preventive care. Data are limited in these areas, however, both with regard to behavior within the prepaid group practice program and to data deriving from the solo practice, fee-for-service system.

As has been mentioned many times, most Kaiser physicians are either board certified or board eligible and the system's hospitals are all approved by the Joint Commission for the Accreditation of Hospitals. This is true to a varying degree in other group practices. These are structural features generally considered to be related to quality. Also, Kaiser, HIP and increasingly other prepaid group practice plans have research units that continually assess various aspects of system performance and feed results back into the system. Such systematic research is rarely attempted in other segments of the medical care system because neither a defined population base nor an integrated unit record system are available. This type of research provides at least the potential for assessing and therefore affecting quality.

In evaluating the effectiveness of the prepaid group practice organizations, assessment of the acceptance factors is certainly indicated. How does participation in this system affect satisfaction with medical care by both the patients and the providers of care? Evidence on consumer and professional satisfaction is fairly scanty, although work has proceeded since Friedson's classic work.<sup>16</sup> It is possible, however, to make two broad generalizations about this question of consumer satisfaction. First, the great majority in any medical care system appear to be fairly well satisfied with the health services they have. In addi-

tion, there appears to be a hard core of the dissatisfied, perhaps as high as ten per cent, who dislike many things about the medical care system in which they participate.<sup>17</sup>

The major problem in evaluating consumer satisfaction with prepaid group practice programs is the difficulty of answering the question: Compared to what? Significant dissatisfaction with the arrangements of medical care is being expressed throughout the United States. Significant numbers have no arrangements. Various consumer-oriented groups have been attacking much of the medical care system, but, particularly, they have been raising questions concerned with participant satisfaction.

The statement has been made that members of the Kaiser Foundation Medical Care Program are generally satisfied with their medical care system. The system serves more than two million members, having had a very high growth rate. The dual or multiple choice requirement of the Kaiser Program indicates this growth is based on periodic individual decisions and not on majority action of groups. On the other hand, prepaid group practice programs have not attained this high growth rate in some parts of the country.

A survey recently completed on a sample of the Kaiser membership in Portland indicates significant general satisfaction with the medical care system, but also indicates the pervasiveness of certain typical criticisms.<sup>18</sup> A large proportion of people interviewed recalled they joined Kaiser because of recommendations from friends or relatives. Generally the participants' motivation for joining Kaiser was financial rather than a view that the organization of care was significantly better than care in the community in general. These data may indicate that the total coverage of services at a reasonable premium is the prime attraction of the system. After receiving service in the system, the members appeared relatively satisfied with the quality of care, the cost, the facilities and the physician characteristics generally, but appear to express some dissatisfaction with particular system characteristics, including waiting time for an appointment. Less than six per cent suggested that Kaiser

physicians were not as good as physicians outside of Kaiser, whereas nearly twenty per cent felt they were better. The majority said they were about the same.

The above data are generally consistent with Donabedian's conclusions that the majority of subscribers to group practice plans are satisfied with their plan in spite of the substantial differences in the various plans. He points out that the subscribers who complain about medical care have a great many things about which to complain. He states that an appreciable proportion of complaints made by subscribers of prepaid group practice plans are applicable to medical care generally.<sup>19</sup>

The existence of an organized system provides the capability of changing the factors causing unhappiness among consumers of care. The Group Health Cooperative in Seattle, for example, is controlled by an active consumer board that is greatly concerned with matters of consumer satisfaction. The role of the consumer in the development of this prepaid group practice program has been well detailed by MacColl.<sup>20</sup>

The basic belief in the consumer's right to purchase his preference has been put forth as important in controlling provider behavior. However, because the supply of medical care practitioners is relatively tight, the right to withhold his dollar from the providers of services if dissatisfied is a very weak control. The potential exists for organized consumer groups to influence the behavior of the medical care system and to increase satisfaction within the system. This is one of the goals of health maintenance organization development. The federal legislation pending is likely to have mandates for consumer involvement in the planning and provision of services in HMO's.<sup>21</sup> Consumer control has been more or less implemented in the Office of Economic Opportunity (OEO) Neighborhood Health Center projects, but the score has not yet been tallied on the relation between consumer satisfaction and the degree of consumer influence and control in the system. It is possible that the level of patient satisfaction is no different in organizations controlled

by consumers than in organizations controlled by the suppliers of care.

Data are almost nonexistent concerning the satisfaction of physicians in prepaid group practice, and it is nonexistent concerning the relative satisfaction of the other personnel in the system. Some feel that, in general, physicians participating in prepaid group practices are satisfied with this type of arrangement. Conceptually, at least, group practice is designed to increase physician satisfaction. The freedom from concern with the mundane business operations of medical practice, the ability to arrange hours and to limit the excessive burdens of long night and weekend calls, the ready availability of various fringe benefits and the easy access and social support of working with a group of esteemed colleagues combine to make group practice an apparently favorable work environment. Whereas the reports from medical directors of prepaid group practice organizations in the 1950's and early 1960's reflected the difficulties of recruiting adequate physicians,<sup>22</sup> recent reports indicate recruiting is only difficult because of the present inadequate supply of physicians in certain specialty fields of practice. Recruitment of physicians for prepaid group practice programs has become relatively successful.

Published data, again from the Kaiser-Permanente medical care system, indicate a low turnover rate for physicians once they become involved with the program. The Kaiser medical care system is organized by contracting for medical services with autonomous partnerships of physicians, the various Permanente Medical Groups. The partnerships hire new physicians as salaried employees for periods from two to three years. At the end of this probationary period, acceptable physicians are taken into the partnership. Data for the years 1966 through 1970 from the Permanente Medical Group indicate an average turnover rate of less than ten per cent per year for employed physicians in the probationary period and less than two per cent per year for the partners.<sup>23</sup>

A recent study published by Smith is one of the few to even explore the attitudes of other personnel in prepaid group practice programs.<sup>24</sup> This study does not provide the basis for comparison, but there is little reason to believe that personnel would be any less satisfied working in hospitals or ambulatory care facilities associated with prepaid group practice programs. Certainly the availability of pension and other benefits and the stability of working in a large organization might increase satisfaction for most.

In general, much work remains to be done in assessing acceptance factors. Particular attention should be paid to the concomitant relation between satisfaction and the behavior of patients and providers within the system. It might be possible to evaluate the acceptance factors of prepaid group practice programs and other medical care systems, differentiating those factors that relate to the financing of the system from those that relate to the organization of care.

Much of the social policy discussion concerning the HMO is brought about because of asserted economic advantages of the prepaid group practice arrangements. These arguments can only be assessed in light of the evaluation of the efficiency of this form of organization. In a review of economic research in group medicine, Klarman points out that the expected savings from group practice medicine might include two major components: economies of scale in the production of services and a lower rate of hospital utilization widely associated with the prepaid form of group practice.<sup>25</sup> However, to adequately evaluate the efficiencies of prepaid group practice, it is necessary to assess the total input needed to produce required services for a population of given characteristics. Prepaid group practice should be viewed as a medical care delivery system that accepts responsibility for the organization, financing and delivery of health care services to a defined population. The attainment of this definition ought to set the bounds for this evaluation.

There is little reason to believe that the contributions of prepaid group practice in the efficiency of medical care would



be from efficiencies of scale. Efficiencies of scale, deriving from internal operating efficiencies of a medical care organization, ought not be expected to provide a significant magnitude of savings even if they do exist. For example, there is no reason to believe that a prepaid group practice system could produce a single unit of hospital care more economically than another hospital of the same size. Nor is there even reason to believe that the prepaid group practice system could produce any single doctor office visit more cheaply than other practitioners.

Nevertheless, the expenditures for producing medical care services for a total population covered by prepaid group practice programs are less than the expenditures for care to similar populations covered in the traditional solo fee-for-service system. These expenditure differences arise from what can properly be called the "system efficiencies" of prepaid group practice. The reductions in expenditure for the care of total populations derive from many sources. It is clear that the populations covered by prepaid group practice programs use fewer days of hospital care per person in the population than do similar populations in the community system, even when utilization outside of the system is taken into account.

The organization of the total medical care system, including financing factors, medical practice factors, facility supply factors, all act in the same direction to maintain the lower use of hospitals by the total population. By integrating fiscal responsibility with the organization of medical care, prepaid group practice can reduce incentives for the physician or the population to prefer that inappropriate services be provided on an inpatient basis. Services in or out of hospital are financed in the same manner. The full range of services can be made available within a prepaid group practice program, so that physicians and population find inpatient, ambulatory care, diagnostic and most other services equally available.

The impact of these phenomena can be seen in historical data from Kaiser, Portland.<sup>26</sup> As the cost per day of hospitalization rose in the Kaiser Hospital in Portland from \$13.23 per patient

day in 1950 to \$54.80 per day in 1966, paralleling the national increase, the cost of hospitalization per member year increased from \$12.53 in 1950 to \$27.31 in 1966. A four-fold increase per patient day was reflected as a two-fold plus increase in cost per member per year because the use of hospital days per person per year in the population decreased concurrently. It is this difference in the rate of increase in cost per day and cost per person per year that accounts for the difference in the cost of hospitalization for the Kaiser-Portland population relative to the remainder of the community.

A similar perspective must be taken to evaluate the potential of prepaid group practice programs for appropriate use of manpower in the United States. Bailey questions the relative efficiency of group practice in the production of medical services by relating the number of ancillary personnel per physician and the number of visits per physician in various sizes of group practice.<sup>27</sup> However, the more relevant measure, and the one that really defines the impact of the system efficiencies, is the number of physicians and other personnel required to provide the total medical care services for a population.

Stevens has estimated the number of physicians that would be needed to provide medical care to the American population, other things being equal, if the relative ratio of physicians to population for the United States totally was equal to that of Kaiser-Portland.<sup>28</sup> He estimates the need to be ten per cent fewer physicians than were, in fact, available in the United States.

These data were not meant to imply that it would have been possible to provide care for the total population of the country in a Kaiser-like system, but rather to point out the possibility of other solutions to the problem of the current disequilibrium in physician services other than simply increasing the number of physicians. The study is cited here to point out the difference between Bailey's approach of evaluating efficiency by looking at efficiencies of scale and Stevens' approach of assessing "system efficiencies." Stevens asks, "What are the inputs necessary to

provide service to the entire population?" and not, "What are the inputs necessary to produce a given unit of service?"

Data are now available that bear on the magnitude of outside utilization in Kaiser, and particularly in Kaiser in Portland. The above-mentioned survey of members of the Health Plan in Portland gathered information on the outside utilization of members. Preliminary tabulations of these data indicate that about ten per cent of the population had at least one use of outside medical care services in the twelve months preceding the interview. A characteristic use was for the member new to the system to use his old source of service for a minor problem. These services accounted for considerably less than ten per cent of the total services used by the population, and a significant portion was for services paid for by and known to the medical care system.

Critics have asserted that the use of hospitalization in prepaid group practice programs represents an underutilization of hospital services. Considering that the technology has not yet been developed to appropriately measure differences in health status in populations, it can only be said that the population using medical care services in prepaid group practices with a hospital base of two beds per 1,000 does not appear to be any less healthy or appear to have any higher mortality rates, than do populations receiving hospital care in a system utilizing four hospital beds per 1,000. In contradiction to more equating with better, one must be cognizant of the risk of iatrogenic, hospital-based disease.

It is quite clear that two different forms of organization are envisaged in the Health Maintenance Organization concept. Prepaid group practice is obviously the dominant idea, and the data derived to support the HMO have been derived from prepaid group practice, as seen in the Secretary's White Paper.<sup>29</sup> Further, in speaking of the HMO concept, the President has referred to "one-stop shopping" as part of it. Obviously, "one-stop shopping" in regard to the HMO can only mean the centralized, integrated, organized group practice model.

However, another model is extant—the medical foundation, or decentralized model, in which services are rendered in each individual physician's office. The medical foundation model quite clearly stems from experience of the San Joaquin Medical Foundation. This program, founded by the San Joaquin Medical Society under the leadership of Dr. Donald Harrington, dates from 1954. Part of the impetus for its creation stems indirectly from prepaid group practice. The International Longshoremen's and Warehousemen's Union on the Pacific Coast had initiated a coastwise contract for prepaid group practice for its members who lived in areas where prepaid group practice was available (the major West Coast ports) with service starting in January, 1950.

After a few years' experience the Union was more satisfied with the medical care provided in those areas that had prepaid group practice. In response to the Kaiser Program's being urged by the Union to extend its services to the inland Sacramento River ports in 1954, the San Joaquin Medical Society arranged the prototype of the present foundation program with representatives of this union and the employer association. The program was then extended to other groups who wished to enroll. An insurance carrier served as the intermediary, setting the premium rates and underwriting the liability.

The principles of the foundation methodology, as they evolved, included an insistence upon broad, comprehensive coverage, so that the appropriate services could be used; a fixed fee schedule acceptable to all participating physicians as full payment; and peer review of the medical performance of the collaborating physicians so that quality could be reviewed. Quality, in this context, was defined as appropriateness of the medical care process for the presumed diagnosis. Claims for services that were judged inappropriate were to be denied.

The medical foundation concept at this stage of development lacked one of the elements considered essential to the HMO concept. It had no prospective budget or capitation in which the providers are put at risk for the responsibility for the delivery

of comprehensive services. There has been an experiment with this approach for "MediCal" in the past two years, with asserted cost savings to that program. On the basis of this limited operational experience as underwriters, the medical foundations have become the decentralized model of HMO. The active role of advocacy of the HMO option by the medical foundations has gained wide Congressional support.

One of the repeated statements of the administration is that there are to be possible many innovative forms of HMO. Almost every form put forward so far has been a variant of the prepaid group practice or medical foundation model, with some that seem to be combinations of the two. No totally new idea has come forward. It should be emphasized that neither prepaid group practice nor the medical foundation is a monolithic concept,<sup>30</sup> there being a wide range of varieties of each.

Countervailing forces are at work in the federal government in sponsorship of the HMO option. Foremost, perhaps, is the urgency to implement such a program so that this choice will be available to a significant portion of the American public in a significant number of places in this decade. This is a monumental task, and some of the difficulties have been detailed elsewhere.<sup>31</sup> The opposing tendency on the part of the government is to make rules and regulations sufficiently constraining so that this new system cannot be abused. The potential for abuse is significant. The abuses that have occurred within the Medicare and Medicaid programs have been well publicized, and the administrators of these programs have felt the heat of Congressional investigation. They are naturally inclined to protect themselves by creating rules and regulations that would provide meaningful control to prevent such abuse. H.R. 11728, the Health Maintenance Act of 1971, submitted by Congressman William Roy of Kansas, is quite precise in defining an HMO.<sup>32</sup>

The paradox, of course, is that the professional providers of health service outside of HMO's find themselves under very little control and constrained by very few rules and regulations.

In general, there is an open-ended payment system, where each piece of work performed has a "usual and customary" price tag, and the manner of enterprise is quite free indeed. The only constraint is against fraud. The providers are being asked to take advantage of the health maintenance option under detailed constraints. They are being asked to underwrite the risk financially with a prospective budget, with which most have had very little experience. Although interest is high in the HMO concept, it should not be expected that this phenomenon, like Asian flu, will sweep the country within a few months.

The public may be strongly motivated to want this type of access to organized services on a budgeted basis. But what of the incentives to the provider, particularly the professional provider, who at present has very few constraints, in either the way he practices or the way he is rewarded? Marginal economic incentives, depending on his underwriting risk, may be enough to arouse his curiosity and even enough to move professionals to apply for planning grants for HMO's. But when the totality of constraints and their implication become clear, the enthusiasm for operations may diminish.

Certainly, to many in the profession the decentralized model of HMO, the medical foundation, seems a much less radical transformation of their present way of practice. However, a hard look at past experiences in this realm is not encouraging. The Medical Service Bureaus in the Pacific Northwest were prototype HMO's created in response to the depressed financial circumstances of the 1930's. Underwriting commonly resulted in the payment of a pro rata reduction of the nominal fee schedule. This made for unhappy physicians. The physician tended to distinguish the patients who paid him a full fee from those who returned to him a pro rata reduction or discounted fee. Characteristically the latter fee was distinguished as a second-class fee, and, hence, the patient became, *pari passu*, a second-class patient. This made for unhappy patients as well as unhappy physicians. Although these early models were not exact

prototypes of the present day HMO, their operational similarity was close enough to be a warning as to the generalization of this phenomenon.

It has been often asserted that these medical care systems cater essentially to the working populations; that the socioeconomic population distribution is truncated because the very poor and the wealthy are not included. Particularly if poor populations are excluded, HMO's are not likely to have widespread significance in solving the problems in universal access to medical care.

Population groups covered by most group practice programs in the United States were enrolled through occupational groups. Since 1950, health care entitlement has usually been a fringe benefit of employment. The early history of most of the prepaid group practices in existence is dominated by the enrollment of large groups that formed the nucleus for the growth of that program. HIP was stimulated almost entirely by enrollment of city employees in New York. The Kaiser Foundation Health Plan of Oregon was dominated early by its relation with the longshoremen's union; Community Health Association in Detroit by the United Auto Workers, and the Group Health Association of Washington, D. C., by the federal employees.

Although most of the prepaid group practice programs have diversified their memberships and now provide service to members of all of the socioeconomic classes, the distribution of members is not yet equivalent to the general community distribution. Those without entitlement by employment are underrepresented. This, of course, is true of all health insurance in this country.

The prepaid group practice programs gained experience in dealing with federal funding agencies because of Medicare. A significant proportion of the membership of various programs was over 65 years of age, and it was necessary to develop a modus operandi for collecting governmental payments for

the provision of services. The process was initially difficult, as previously mentioned, because the federal government could not deal with capitation payments.<sup>33</sup>

When the amendments to the Economic Opportunity Act were passed in 1966, establishing authority for the Neighborhood Health Center component of OEO, two prepaid group practice programs, the Medical Foundation of Bellaire, Ohio,<sup>34</sup> and Kaiser, Portland,<sup>35</sup> were funded as OEO Neighborhood Health Centers. These group practice programs offered the poor an opportunity to participate in established medical care systems already delivering health services to a diverse group in the same geographic area.

This approach was significant because it obviated the time, expense and complexity of building, staffing and organizing new and segregated medical care facilities for the poverty group. The group practice organizations indicated that facilities already existed in many poor areas that could be utilized for the provision of health care services for the indigent. These programs demonstrated the feasibility of organizing and delivering health care through existing medical care systems although it was necessary to finance care from the public sector.

The two programs appeared to succeed in their objectives,<sup>36</sup> and other prepaid group practice programs have developed ways to provide medical care to poverty groups, including the Group Health Cooperative of Seattle, the Kaiser Foundation of Southern California and Hawaii, the Group Health Association of Washington, D. C., the Community Health Association of Detroit, the Harvard Community Health Foundation, and HIP. There is little reason to believe that the prepaid group practice programs cannot accept a proportionate share of the indigent population into their system. What appear necessary are financing mechanisms that are flexible enough to deal with the capitation form of payment and stable enough to produce continuity of membership.

A genuine concern of the medical foundation type of HMO is its ability to deliver health services to the urban poor. The



centralized prepaid group practice model of the HMO quite clearly can create a Neighborhood Health Center and organize services to be delivered to whatever population lives in proximity, and this has been demonstrated, although on a limited scale because of the inability to obtain the financing for a massive test.<sup>37</sup> The problem with the decentralized foundation model is that the individual physicians have largely left the ghetto area in which the urban poor reside, and therefore physical access to the physicians, who are in numbers in suburbia, has little practicality for this population.

For HMO's in general the critical deficit of the poor is their lack of effective entitlement. The nature of Medicaid financing, creating large local tax burdens, constrains the program from implementing the original intent of Title 19. If the costs of the population to be served in an HMO must be mutualized on an equitable basis and the Title 19 mechanism is inadequate, the disadvantaged will be excluded. Only by falling back upon the much larger base of direct federal revenues can the poor effectively participate in HMO programs.

For an HMO to function on a forecast budget and make comprehensive services available on a continuous basis to those who recognize themselves as members of such a program, there cannot be any "on-again-off-again" eligibility status. Eligibility and membership must be on the same basis as most negotiated groups and the federal employees, with the opportunity for enrollment and disenrollment being usually no greater than annual. The difficulties cited, which are formidable, stand in the way, at this time, of general implementation of the HMO option for the impoverished, either in the form of prepaid group practice or in the form of medical foundations, unless there is, by legislation, new federal entitlement.

These options, therefore, are not completely feasible without a form of national health insurance that provides adequate financing for comprehensive medical care and provides it in such a way that eligibility is continuous and without categorization. Furthermore, the incentives for HMO's, at present, in

view of the simultaneous constraints as cited above, are not so great as to produce significant change. A form of national health insurance that truly provides equal sums of monies for equal numbers of people of the same characteristics may lead to a reasonably rapid reorganization of the delivery of health services. But to expect one group of providers to accept risk, regulation and a closed-end financial system while leaving others in an unregulated, open-ended system is unreasonable.

It is interesting to contemplate the special dilemma of the medical schools and their interest in the HMO option.<sup>38</sup> In summary, the schools are seriously underfunded. They are dissatisfied with their organization of ambulatory care and ambulatory care teaching. On initial study of these factors, the HMO option appears as a solution to both problems. However, most schools, by tradition and location, are involved with indigent populations with inadequate entitlement. Furthermore, there is inherently little faculty dedication to the responsibilities of continuous primary care. If an HMO is to be voluntary as to membership and self-sustaining as to premiums, how are the teaching costs to be paid, in view of the competitive nature of the option? These issues have been explored elsewhere.<sup>39</sup>

It is clear that we need to know much more about how all HMO's operate, particularly from the consumer viewpoint. Much of the information could be gathered from the presently operating examples. Federal funding for this practical research has not been forthcoming. No agency seems to feel primarily responsible for funding such studies. But when this is accomplished in depth across large samples of the various delivery systems, policy making will be on a firmer base.

The HMO policy is thus a rather classic example of federal policy making in health. Considerable reliance is being placed on this alternate form of health services delivery system to contain the costs of health care. But the likelihood of widespread successful implementation under present circumstances is doubtful. This is not because the HMO does not have merit, but be-

cause the present fee-for-service pattern is left with most of the rewards and few of the constraints.

The total national expenditures on health care from all sources for the federal fiscal year 1974 are officially forecast at \$105,400,000,000, if no new legislation is enacted.<sup>10</sup> All proposed new legislation increases this huge total. This is one dollar of each thirteen in the projected GNP. More people will be involved in "providing health" than in growing food. Despite the size and scope of this expenditure, it is not uncommon for physicians to express the wish that medical care were not such a political issue! It is evident that any activity taking one dollar in thirteen will remain in the forefront of political action regardless of the kind of legislation passed or not passed. An analogy may be made with agriculture. Ever since the Secretary, Henry Wallace, asked that the little pigs be destroyed, there has never ceased to be a controversy about the farm policy in Congress and in the nation, and never has a policy been produced that pleased all. Because of its size and its personal significance, "health care" will repeat this process with even greater intensity and acrimony.

Medical care research, under these circumstances, must inevitably grow and develop new sophistication and productivity. If the product of the medical care process is to be better health, then health must be defined in a way that can be better measured. A generally accepted yardstick or index of this state would be a significant advance. Measuring the outcome in terms of health by examining various medical care processes has been extraordinarily difficult. Counting the pieces of the process, the dollars, the manpower, the days of hospitalization, the office visits, the technical tests performed and so forth, has been an inadequate substitute for outcome measurement, but unfortunately reflects the state of the art.

The National Center for Health Services Research and Development, an agency of the Department of Health, Education, and Welfare, was created in 1967 to serve the nation in the

function its name implies. It is apparently not a field in which quick results are to be expected. Edgar Trevor Williams, the Secretary of the Rhodes Trust of Oxford, in a speech<sup>41</sup> at Chicago, reviewed the role the Nuffield Foundation had played in the United Kingdom in relation to the National Health Service. It had been the sponsor of research, and then demonstration, on a scale just large enough to be significant, testing the interjection of new ideas and processes into the National Health Service. The result often so clarified an issue that it led the bureaucracy into implementing the reform on full national scale. Our National Center has not yet played this role, if this is even an expected part of its mission.

It may remain for private funds to undertake this risk-laden role. It is probably much more than coincidence that the current presidents of some of the major American foundations have been drawn from the physician leaders of medical care administration. It may be that with their support of health care research, health policy can be made from a much more secure information base in the future.

## REFERENCES

<sup>1</sup> United States Congress, House Document No. 49, 92nd Congress, Health, message from President of United States relative to building national health strategy, February 18, 1971.

<sup>2</sup> ———, House, Committee on Ways and Means, *Social Security Amendments of 1971; Report on H.R. 1*, House Report No. 92-231, 92nd Congress, 1st Session, 1971, p. 89.

<sup>3</sup> United States Department of Health, Education, and Welfare, *Towards a Comprehensive Health Policy for the 1970's, A White Paper*, Washington, D. C., United States Government Printing Office, May, 1971, p. 32.

<sup>4</sup> Richardson, E. L., Remarks before the American Hospital Association, Chicago, Illinois, August 24, 1971, p. 2 (of mimeograph copy).

<sup>5</sup> *Ibid.*, pp. 1, 2.

<sup>6</sup> American Medical Association, Division of Medical Practice, *HMO's as Seen by the AMA: An Analysis*, May, 1971, p. 6.

<sup>7</sup> Chu, P., personal communication.

<sup>8</sup> Committee on the Costs of Medical Care, MEDICAL CARE FOR THE AMERICAN PEOPLE, the Final Report, adopted October 31, 1932, Chicago, The University of Chicago Press, reprinted by the U. S. Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration, Community Health Service, 1970.

<sup>9</sup> Garfield, S. R., personal communication.

<sup>10</sup> Larson, Leonard W., *et al.*, Report of the Commission on Medical Care, *JAMA*, Special Edition, January 17, 1959.

<sup>11</sup> National Advisory Commission on Health Manpower, REPORT, Washington, United States Government Printing Office, 1967, Volumes 1 and 2.

<sup>12</sup> Saward, E. W., The Relevance of Prepaid Group Practice to the Effective Delivery of Health Services, *The New Physician*, 18, January, 1969.

<sup>13</sup> Greenlick, R., The Impact of Prepaid Group Practice on American Medical Care: A Critical Evaluation, *Annals of the American Academy of Political and Social Science; The Nation's Health: Some Issues*, 399, 100-113, January, 1972.

<sup>14</sup> Donabedian, A., An Evaluation of Prepaid Group Practice, *Inquiry*, 6, 3-27, September, 1969; ———, A REVIEW OF SOME EXPERIENCES WITH PREPAID GROUP PRACTICE, Bureau of Public Health Economics, Research Series No. 12, Ann Arbor, Michigan, The University of Michigan, School of Public Health, 1965.

<sup>15</sup> Donabedian, *Inquiry*, *op. cit.*

<sup>16</sup> Freidson, E., PATIENTS' VIEWS OF MEDICAL PRACTICE, New York, Russell Sage Foundation, 1961.

<sup>17</sup> Donabedian, *Inquiry*, *op. cit.*

<sup>18</sup> Pope, C. R. and Greenlick, M., Determinants of Medical Care Utilization: Selected Preliminary Tables from Household Interview Survey, unpublished report presented to Kaiser Foundation Oregon Region Research Policy Committee, San Francisco, California, June 21, 1971.

<sup>19</sup> Donabedian, *Inquiry*, *op. cit.*

<sup>20</sup> MacColl, W., GROUP PRACTICE AND PREPAYMENT OF MEDICAL CARE, Washington, D. C., Public Affairs Press, 1966.

<sup>21</sup> United States Congress, House, H.R. 11728, 92nd Congress, 1st Session, *A Bill to Amend the Public Health Service Act to Provide Assistance and Encouragement for the Establishment and Expansion of Health Maintenance Organizations, and for Other Purposes*, 1971.

<sup>22</sup> Saward, E. W., Experience with the Recruitment of Physicians to Prepaid Group Practice Medical Care Plans, unpublished presentation to the American Public Health Association, 90th Annual Meeting, Miami, Florida, October 17, 1962.

<sup>23</sup> Cook, W. H., Profile of the Permanente Physician, in Somers, A. R. (Editor), THE KAISER-PERMANENTE MEDICAL CARE PROGRAM: A SYMPOSIUM, New York, The Commonwealth Fund, 1971, p. 104.

<sup>24</sup> Smith, D. B. and Metzner, C. A., Differential Perceptions of Health Care Quality in a Prepaid Group Practice, *Medical Care*, 8, 264-275, July-August, 1970.

<sup>25</sup> Klarman, H. E., Economic Research in Group Medicine, *NEW HORIZONS IN HEALTH CARE: PROCEEDINGS OF THE FIRST INTERNATIONAL CONGRESS ON GROUP MEDICINE*, Winnipeg, Wallingford Press Ltd., 1970, pp. 178-193.

<sup>26</sup> Saward, E. W., Blank, J. D. and Greenlick, M., Documentation of Twenty Years of Operation and Growth of a Prepaid Group Practice Plan, *Medical Care*, 6, 231-244, May-June, 1968.

<sup>27</sup> Bailey, R. M., Economies of Scale in Medical Practice, in Klarman, H. (Editor), *EMPIRICAL STUDIES IN HEALTH ECONOMICS*, Baltimore, The Johns Hopkins Press, pp. 255-273.

<sup>28</sup> Stevens, C. M., Physician Supply and National Health Care Goals, *Industrial Relations, A Journal of Economy and Society*, 10, 119-244, May, 1971.

<sup>29</sup> United States Department of Health, Education, and Welfare, *op. cit.*

<sup>30</sup> Steinwald, C., *Foundations for Medical Care*, Blue Cross Reports, Research Series 7, Chicago, Blue Cross Association, August, 1971.

<sup>31</sup> Saward, E. W., The Relevance of the Kaiser-Permanente Experience to the Health Services of the Eastern United States, *Bulletin of the New York Academy of Medicine*, 46, 707-717, September, 1970.

<sup>32</sup> United States Congress, House, H.R. 11728, *op. cit.*

<sup>33</sup> Wolkstein, I., Incentive Reimbursement and Group Practice Prepayment, *PROCEEDINGS OF THE 19TH ANNUAL GROUP HEALTH INSTITUTE*, Washington, D. C., Group Health Association of America, 1969, pp. 92-100; West, H., I. Group Practice Prepayment Plans in the Medicare Program, *American Journal of Public Health*, 59, 624, April, 1969; Newman, H. F., II. The Impact of Medicare on Group Practice Prepayment Plans, *American Journal of Public Health*, 59, 629, April, 1969.

<sup>34</sup> Goldstein, G., Paradise, J., Neil, M. and Wolfe, J., Experiences in Providing Care to Poverty Populations, *PROCEEDINGS OF THE 19TH ANNUAL GROUP HEALTH INSTITUTE*, *op. cit.* p. 74.

<sup>35</sup> Colombo, T., Saward, E. and Greenlick, M., The Integration of an OEO Health Program into a Prepaid Comprehensive Group Practice Plan, *American Journal of Public Health*, 59, 641, April, 1969.

<sup>36</sup> Greenlick, M., Medical Service to Poverty Groups, in Somers, *op. cit.*, p. 138.

<sup>37</sup> Colombo, Saward and Greenlick, *op. cit.*, pp. 641-650.

<sup>38</sup> Danielson, J. M., Director, Department of Health Services and Teaching Hospitals, Association of American Medical Colleges, personal communication, July 14, 1971.

<sup>39</sup> Saward, E. W., Some Caveats for Medical Schools, in Somers, *op. cit.*, pp. 183-188.

<sup>40</sup> United States Department of Health, Education, and Welfare, *A STUDY OF NATIONAL HEALTH INSURANCE PROPOSALS INTRODUCED IN THE 92ND CONGRESS: A SUPPLEMENTARY REPORT TO THE CONGRESS*, Washington, D. C., July, 1971.

<sup>41</sup> Williams, E. T., speech given at the American Hospital Association Convention in Chicago, Illinois, August, 1971.