

The Growth of Medical Technology and Bureaucracy: Implications for Medical Care

DAVID MECHANIC

Center for Medical Sociology and Health Services Research,
University of Wisconsin-Madison

Despite significant differences in ideology, values, and social organization, most Western developed countries—and probably most countries in the world—face common problems of financing, organizing, and providing health care services. As populations increasingly demand medical care, there is growing concern among the governments of most nations to provide a minimal level of service to all and to decrease obvious inequalities in care. To use available technology and knowledge efficiently and effectively, certain organizational options are most desirable. Thus, there is a general tendency throughout the world to link existing services to defined population groups, to develop new and more economic ways to provide primary services to the population without too great an emphasis on technological efforts, to integrate services increasingly fragmented by specialization or a more elaborate division of labor, and to seek ways to improve the output of the delivery system with fixed inputs. Although all of these concerns to some extent characterize national planning in underdeveloped countries, they particularly describe tendencies among developed countries as they attempt to control the enormous costs of available technologies. Throughout the world there is increasing movement away from medicine as a solitary entrepreneurial activity and more emphasis on the effective development of health delivery systems.

Having discussed these trends elsewhere in detail (Mechanic, 1974, 1976), what I will do here is examine how changing technology and organization affect not only the provision of medical care, but also the underlying assumptions of practitioners and patients. My thesis is that medical care constitutes a complex

psychological system of assumptions and meanings that is significantly affected by the bureaucratization of medical tasks and the growing specification of the technical aspects. Public policies everywhere in the world increasingly play a role in the financing and organization of care, but when such public policies violate the psychological assumptions and social expectations of health practitioners and patients, they may have consequences very different from those intended.

Modes of Rationing Health Services

Medicine has in recent decades undergone an enormous development in specialized knowledge and in technology. While these advances have brought considerable progress in treating some diseases, most of the major diseases affecting mortality and morbidity—from heart disease and the cancers to the psychoses and substance abuse—are only poorly understood, and existing efforts, while they ameliorate suffering and sometimes extend life, are not able to cure or prevent the incidence of most of these conditions. The technologies that do exist are often extraordinarily expensive, require intensive professional manpower, and must be applied repeatedly to a patient during the long course of a chronic condition. Take an example where success has been quite impressive, such as in hemodialysis and transplantation in end-stage kidney disease: intensive and expensive efforts must be made over a long period to sustain life and functioning, which on a per capita basis consume a very high level of expenditure (Fox and Swazey, 1974). As these halfway technologies have developed—intensive care units, radiation therapy for cancers, coronary bypass surgery—the aggregate costs of medical care have continued to move upward, with medical services consuming a larger proportion of national income. In the United States, for example, where in 1940 the cost of health care was \$4 billion and 4 percent of the gross national product, 1976 costs were almost \$140 billion and 8.6 percent of the gross national product. While the proportional increase is not as large in nations having a centralized prospective budgeting process, as in England, the trend, nevertheless, is the same and a source of concern among all thoughtful people.

Since the prevalence of illness and “dis-ease” is extremely high in community populations, as has been repeatedly demonstrated by

morbidity surveys (White et al., 1961), there is almost unlimited possibility for the continued escalation of medical demand and increased medical expenditures. As people have learned to have higher and more unrealistic expectations of medicine, demands for care for a wide variety of conditions, both major and minor, have accelerated. No nation that follows a sane public policy would facilitate the fulfillment of all perceptions of need that a demanding public might be willing to make. As in every other area of life, resources must be rationed. The uncontrolled escalation of costs in developed countries results in part because techniques of rationing are in a process of transition, and most countries have yet to reach a reasonable end point in this transitional process. The process is one of movement from *rationing by fee* through a stage of *implicit rationing* through resource allocation to a final stage of *explicit rationing*. In this process the role of physician shifts from entrepreneur to bureaucratic official, and medical practice from a market-oriented system to a rationalized bureaucracy. These shifts, in turn, have an important bearing on the psychological meaning of the doctor-patient relationship, on the uses of medical excuses for various social purposes, and on the flexibility of medicine as an institution to meet patient expectations and to relieve tensions in the community at large. The remainder of this paper will explicate each of these points.

Types of Rationing

In the traditional practice of medicine, and in much of the world still today, the availability of medical care has been dependent on the ability to purchase it. Those with means could obtain whatever level of medical care was available, while those without means were dependent on whatever services were made available by government, philanthropists, the church, or by physicians themselves. Since affluence was limited, and medical technology and knowledge in any case offered only modest gains, the marketplace was a natural device for rationing services. Indeed, it worked so well that physicians were often supporters of government intervention and direct payments for care since such support increased their opportunities for remuneration.

Fee-for-service as an effective system of rationing broke down due to a variety of factors. First, medical technology and knowledge expanded rapidly, greatly increasing the costs of a serious

medical episode, and imposed on the ill a financial burden that was large and unpredictable. Associated with this was a growing demand on the part of the public for means of sharing such risks through benevolent societies and insurance plans and, as costs mounted, for government to assume a growing proportion of these expenditures. Because of the traditions of medical practice, however, and the political monopoly that physicians had gained over the marketplace, the rise of third-party payment was not associated with careful controls over the work of the physician and how he generated costs. While third-party payment increased access to services, the orientations of increasingly scientific and technologically inclined physicians resulted in a large acceleration in the use of diagnostic and treatment techniques. The consequence has been the escalation of costs which we now almost view as inevitable. Physicians have been trained to pursue the "technological imperative—that is, the tendency to use any intervention possible regardless of cost if there is any possibility of gain (Fuchs, 1968). This contrasts with a cost-benefit calculation in which there is consideration of the relative costs and benefits of pursuing a particular course of action. The "technological imperative," when carried to its extreme, incurs fantastic expense for relatively small and, at times, counterproductive outcomes.

In a provocative analysis, Victor Fuchs (1976) asks why almost all the developed countries in the world pursue national health insurance when such a policy is "irrational" from an economic point of view in that it encourages the overconsumption of services relative to other needs. Moreover, he argues, it often results in the purchase of the wrong and, perhaps, less useful types of care. He comes up with the intriguing suggestion that the thrust toward national health insurance may have relatively little to do with health.

Externalities, egalitarianism, the decline of the family and traditional religion, the need for national symbols—these all play a part. In democratic countries with homogeneous populations, people seem to want to take care of one another through programs such as national health insurance, as members of the same family do, although not to the same degree. In autocratic countries with heterogeneous populations, national health insurance is often imposed from above, partly as a device for strengthening national unity. The relative importance of different factors undoubtedly varies from country to country and time to time, but the fact that national health insurance can be viewed as

serving so many diverse interests and needs is probably the best answer to why Bismarck and Woodcock are not such strange bed-fellows after all.

Many developed nations shifted quite early away from fee-for-service rationing to what I have referred to as *implicit rationing*. Under health insurance plans in various European countries, rationing was imposed either by the centralized prospective budgeting procedures of the government, as in England, or through the limited resources available to "sickness societies" that contracted with physicians and hospitals for services for their members. For example, in England under the National Health Insurance Act of 1911, and later through the enactment of the National Health Service in 1946, the central government budgeted fixed amounts for providing community medical services on a capitation basis, and hospital services as of 1948 on a global budget. Similarly, sickness societies in other countries had to make contractual agreements with physicians within the means available, thus limiting the extent of services that could be rendered.

In European countries that adopted national health insurance through an indirect method, such as mandated employer-employee contributions, governments increasingly assumed a larger proportion of the costs of physician services and institutional care. Since government had little control over how costs were generated by physicians and hospitals, there was continuing pressure for increased expenditures by both patients and physicians. Governments took on the obligation in making up deficits between costs generated by health professionals and the funds available from employer-employee contributions. They did so either by raising the social security tax rates or by making larger contributions each year from general revenues. In England, where the government had direct budgetary control, costs were more successfully contained, but there were constant pressures from health professionals for increased expenditure, nevertheless. Despite direct control, the proportion of national income allocated to health care escalated, but at a lesser rate than in many other countries that had more open-ended budgeting systems.

Implicit rationing depends on the queue. Limited resources, facilities, and manpower are made available, and the health care system adapts to demand by establishing noneconomic barriers (Mechanic, 1976: 87-97). Health professionals, having their own

styles of work and professional norms, accommodate as many patients as they can, making judgments as to priorities and need. Access to services may be limited by long appointment or referral waiting periods, by limited sites of care (and therefore greater barriers of distance and inconvenience), longer waiting times, bureaucratic barriers, and the like. Rationing also may occur through the control exercised over the extent of elaboration of services: the laboratory tests ordered, the diagnostic techniques used, the rate of hospitalization, the number of surgical interventions, and the time devoted to each patient. Capitation or salary as a form of professional payment tends to limit the extent of these modalities; fee-for-service increases the rate of discrete technical services for which a fee is paid (Glaser, 1970; Roemer, 1962).

Implicit rationing has the effect of limiting expenditures, but not necessarily in a rational way. Such rationing is based on the assumption that the professional is sufficiently programmed by his socialization as a health practitioner to make scientifically valid judgments as to what constitutes need, what treatment modalities are most likely to be effective, and which cases deserve priority. It is supposed that the exercise of clinical judgment will result in rational decision making. But as Eliot Freidson (1976:136–137) has noted, evaluation of medical judgment by professional peers is so permissive that only “blatant acts of ignorance or inattention” are clearly recognized as mistakes. Moreover, it is the more knowledgeable, more aggressive, and more demanding individuals who get more service; and these patients are usually more educated, more sophisticated, but less needy (Hetherington et al., 1975). In short, under implicit rationing the assumption is that physicians exercise agreed-upon standards for care and that services are equitably provided in light of these standards. The fact is that these standards are very murky, if they exist at all, and even the most obvious ones have little relationship to any existing knowledge on the implications of varying patterns of care for patient outcome. Under these conditions, the most effective and vocal consumers may get more than their share of whatever care is available. Moreover, given the ambiguities of practice, physicians and other health professionals may play out their own personal agendas, cultural preferences, and professional biases. Being remunerated on salary, they may work at a comfortable and leisurely pace; and they may choose to emphasize work they find most interesting, neglecting important needs of patients,

such as needs for empathy and support, which may be perceived as professionally less fulfilling functions.

There is considerable evidence that systems of implicit rationing provide care at lower cost because of the limited budget available and the containment in provision of resources and manpower, but there is little evidence to support the contention that the result is a fairer allocation of social resources. Under implicit rationing, large disparities continue in the availability of facilities, in allocation of manpower and resources per capita (and in relation to known rates of morbidity in the population), and in access to services (Cooper, 1975; Logan, 1971; Hetherington et al., 1975). Affluent areas tend to retain more facilities, manpower, and other resources, and relatively little redistribution takes place. There are very large variations from area to area and institution to institution in the procedures performed, work load, ancillary assistance available, and the level of technology.

Increasingly, governments are seeking means to move from implicit to explicit forms of rationing. The idea of explicit rationing is not only to set limits on total expenditures for care, but also to develop mechanisms to arrive at more rational decisions as to relative investments in different areas of care, varying types of facilities and manpower, new technological initiatives, and the establishment of certain minimal uniform standards. The difficulty with establishing such priorities and standards is the overall lack of definitive evidence as to which health care practices really make a difference in illness outcomes. While standards for processes of care are readily formulated, it is difficult to demonstrate for most facets of care that such process norms have any clear relationship to outcomes that really matter. Indeed, health services random trials tend to show that such expensive innovations as coronary intensive care or longer hospitalizations for a variety of diseases seem to make little difference in measurable outcomes for populations where they are routinely used (Cochrane, 1972).

The difficulty of imposing explicit rationing, however, is more political than scientific. While there is always danger in establishing general guidelines that the overall formulation will not fit a specific case, there are many instances in medical practice where intelligent restrictions on practices of physicians are likely to lead to both improved and more economical practice. The fact is, however, that physicians resist such guidelines as intrusions on their profes-

sional judgment and autonomy, and tend to do whatever they can to subvert them. Even with a certain amount of slack, intelligent guidelines—sensitive to the realities of medical practice and human behavior—can be an important contribution toward more effective rationing than usually exists under the implicit system.

There are a variety of techniques that are used under many insurance systems to restrict the options of health practitioners (Glaser, 1970), and these are becoming more commonly adopted. The most straightforward is the simple exclusion or restriction of certain types of services that may involve large costs but dubious benefits—for example, psychoanalysis, orthodontia, rest cures, plastic surgery for cosmetic purposes, etc. In the case of essential components of treatment, the program may set maximal numbers of procedures that will be paid for or establish required time intervals between procedures that can be repeated and remain eligible for coverage. These limitations have the function of restricting the physician's discretion although to a modest degree. In theory, however, they can be very much extended. Another technique is to limit the cost of a treatment by requiring the physician to provide justification if he wishes to exercise a more expensive option. Since physicians tend to dislike additional required paperwork, if the guidelines are reasonable they are likely to be effective.

In the United States emphasis is now being given to mandatory peer review, a process whereby utilization practices and, in the future, the quality of care as well will be evaluated. Moreover, justification under federal programs must be provided if certain established norms are to be exceeded. While these requirements are still very weak, and frequently insufficiently responsive to contingencies at the service level, and involve a great deal of unnecessary administrative effort, in theory they can be quite valuable if the review process is an intelligent one and if control over the review mechanism is not captured by physicians who wish to maintain ongoing practices. The necessity of any guideline or standard should be evaluated in terms of its costs and benefits. When the costs exceed the benefits, the rule is obviously pointless.

Some countries require pre-review for specified expensive procedures. If pre-review is used too extensively it becomes a costly and inefficient technique but, if used sparingly to control expensive work of dubious effectiveness and possibly dangerous as well, it can have effects both as a deterrent and as a means of controlling

irresponsible practitioners. Particularly in the area of surgical intervention and perhaps also in the use of dangerous classes of drugs, pre-review functions both to reduce costs and to encourage a higher quality of care. In short, both government itself and nongovernmental insurance programs are becoming more bold in intruding on areas that physicians regard as within their discretion. We have every reason to anticipate that this trend will continue.

Rationing and Primary Medical Care

The most salient aspect of medical organization in modern countries is the enormous growth of specialization and subspecialization that has occurred. While much of this development is due to the growth of biomedical science and technology, specialization is also a political process bringing economic advantages and greater control over one's work and responsibilities (Stevens, 1971). Specialization, moreover, allows physicians to dominate a specified domain and to restrict competition. While the traditional concept of the specialist was as a consultant physician who assisted the generalist with puzzling problems or those of greater complexity, existing specialties are organized around varying population groups such as pediatrics or geriatrics, types of technology such as radiology, organ systems such as nephrology, etiologies such as infectious disease, and disease categories such as pulmonary disease. The most recent distortion of the concept of the consulting physician was the development of a specialty in family practice, which in effect defines the generalist as another type of specialist.

While there are many issues relevant to the manner in which specialization has emerged, the distinction with the greatest importance for rationing is the one between physicians who engage in primary care and those who provide specialty care or more complex hospital services. Everywhere in the world, nations are seeking to define the appropriate functions and responsibilities for each of the levels of care and their most efficient balance. Most discussions of primary care, particularly in countries that retain the provision of services at least in part within the private marketplace, suffer from confusions among the organizational, service, and manpower dimensions of the situation.

The most typical view of primary care is that it is the care given by certain types of practitioners who work as generalists: general

practitioners, family practitioners, nurse practitioners, and so on. It is assumed that the training received by such practitioners prepares them adequately to provide first-contact care and to take continuing responsibilities for overall needs of the patient. While convenient, this definition includes as primary care highly complex medical and surgical procedures that are more adequately performed by physicians who are highly conversant with the field and who perform these procedures sufficiently frequently to do them expertly. While a considerable amount of major surgery is performed by general practitioners in the United States and elsewhere, major surgery is not appropriately included as primary care. Similarly, many specialists insist that they devote significant amounts of their time to primary care, and thus the shortage of primary care physicians is exaggerated. It should be clear then that this approach to understanding the appropriate role of primary care is not particularly helpful.

It is frequently suggested that one way of resolving the issue of primary care is to divide arbitrarily medical functions into primary, secondary, and tertiary. Such an approach, however, misses the major point which is that the practice of medicine is a conceptual and intellectual endeavor in which physicians with diverse training perceive, evaluate, classify, and manage comparable patients differently. The evaluation of a patient in good medical practice comes from listening to the patient, getting to know the person, and developing a clinical context in which the patient is willing to reveal himself or herself. How physicians will come to view a patient's problem depends on their orientations and how accessible the patient is to them psychologically as well as physically. The key point is that differences between primary and specialist practitioners are not simply a matter of what they do, but also a matter of how they do it. An essential aspect of primary care is the physician's attitude, assumptions and storage of information about the particular patient, and the way the practitioner goes about evaluating the patient's complaint. Many patients first contacting a physician are in a stage in which their symptoms are unorganized and fluid (Balint, 1957). What the physician defines as important, what he inquires about, and how he evaluates the patient's symptoms and illness behavior are molded by his knowledge of the patient as well as his training and orientations. In understanding how varying types of general and subspecialty training affect medical practice, it is necessary to have a good appreciation of how patients with comparable presenting complaints are evaluated and managed differently.

Still another way of viewing primary care is as part of an organizational system. Here the emphasis is less on a particular type of practitioner and how he is trained, and more on how different levels of care are organized and how they relate to one another. For example, in most organized medical care systems there are designated primary care physicians who have responsibility for first-contact care, for assuming continued responsibility for an enrolled population, and for dealing with the more common and less complicated problems of their patients. These systems are often established so that patients are required to seek more specialized services through the referral of their primary doctor. Similarly, secondary and tertiary care facilities are organized in relation to the system as a whole, and attempts are made to specify the conditions for coordination among varying levels of care. Although the particular type of practitioner used at varying levels of care is not an unimportant issue, the major focus shifts to defining responsibilities for care functions at each level of care. Primary care services, however they are defined by the system, may be organized in a variety of ways with alternative types of personnel as long as the necessary functions are performed. In this context, primary care is a level of service, not a particular type of practitioner.

The formulation of a planned system of primary, secondary, and tertiary functions has important implications for rationing. When the primary practitioner is the source of entry into the care system and a gatekeeper to access to more specialized practitioners and technologies, the rate of use of specialized technologies can be very much diminished. Systems of care that use primarily a sole source of entry through a primary physician make do with many fewer specialists and specialized facilities, and without any major loss in effective care. As Paul Beeson (1974:48), who has held responsible positions in both England and the United States, has noted:

There are 22,000 in family practice in the United Kingdom and 70,000 in family practice in the United States. There are 8,000 in specialist practice in the United Kingdom and 280,000 in specialist practice in the United States. . . . The striking difference is economy in the use of specialists. To me this is the most obvious reason why America has a badly distributed, excessively costly system.

An effective system of care, moreover, allows an opportunity to organize manpower rationally relative to population groups, thus

limiting the extent to which doctors generate marginal efforts due to their excessive concentration in any area. Also, by emphasizing functions and patterns of care, rather than types of medical specialties, it is much less difficult to develop functional substitutes to physicians in performing many primary care services. Because the emphasis is on a service, it is more possible to develop participation of health practitioners who are trained and willing to perform functions that physicians are unwilling to do, that they do poorly, or that they provide inefficiently—for example, health education, patient monitoring, medically related social services, and the like.

When primary care is defined as part of a system, problems still remain in coordination and motivation. The point at which referrals should take place from one level to another, for example, is left to the individual practitioner and is often affected by the implicit incentives built into the organization of health services or in how health personnel are remunerated. A common complaint in organized systems of care based on a capitation arrangement is that unnecessary referral is made to secondary services because of the lack of incentive for continued care at the primary level (Forsyth and Logan, 1968). These problems can be alleviated, if not avoided, by a good understanding of the epidemiology of help-seeking, with specification of standards for referral and with incentives promoting good care.

The Structure of Doctor-Patient Interaction under Varying Rationing Arrangements

Each of the types of rationing described tends to be associated with a particular mode of physician-patient interaction, although there is great variation within each type, dependent on the personalities of the actors involved, the work load and work flow, and the incentives operative in any particular situation. Eliot Freidson (1961, 1970, 1976) has written extensively on these types of relationships, and in this section I draw heavily on his work. Very simply, it is my contention that, as rationing varies from fee-for-service to implicit to explicit rationing, the types of influence shift from client control to colleague control to bureaucratic control. Similarly, the nuances in the physician's role shift from "entrepreneur" to "expert" to "official."

Freidson has convincingly illustrated how the shift from fee-

for-service practice to prepaid group practice is accompanied by lesser flexibility and responsiveness of the physician. When the retention of the patient is no longer an economic issue for the physician, there is no need to "humor the patient" nor bend to the patient's wishes when they are contrary to the physician's best judgment. Freidson argues that in the prepaid situation colleagues are a more important reference group, and while the physician may be more inflexible he may practice a higher standard of medical care. The extent to which differences between fee-for-service and prepaid practice will exist depends greatly on the competition for patients existing in any practice area. As competition increases, physicians may be more willing to provide greater amenities to patients and to be flexible to their requests in order to retain their patronage. When the physician has more patients than he requires, there may be little client control even in the fee-for-service situation. As the physician becomes less dependent on the patient—either because he is only one of a large number of physicians servicing an enrolled population or because he is in a favorable competitive situation—he can more easily play the role of the neutral expert, one whose decisions are quite isolated from any personal financial stake he may have in his work.

In theory, implicit rationing encourages the physician to play the role of the expert, but in actuality the difficulty lies in the ambiguity of his expertise. Since the physician by the very nature of his work is required to come to many social decisions quite irrelevant to his technical expertise, and since physicians differ radically on these social judgments, there is no clear basis for these decisions. For example, consider the frequently occurring issue of whether a hospitalized mother should be sent home or retained for a few more days because the physician anticipates that her family will expect her to resume usual duties, or because she may be inclined to quickly reassume responsibilities. In theory, when the patient must incur part of the fee, such potential cost will influence the decision. However, when third parties assume the cost, neither the physician nor the patient has any incentive to choose the more parsimonious decision. If the physician acts as an expert, his bias is to use resources if he sees any potential benefit. Incentives to do otherwise come only when he is personally faced with a limitation of resources. A global budget without further guidelines, although it may restrict the physician's actions to some extent, does not insure rational decision making and may encourage highly preferential

behavior depending on the physician's perceptions of and attitudes toward the patient.

Although the evidence is not fully clear, most existing prepaid group practices seem to conserve resources more by controlling inputs—numbers of primary care physicians, beds, and specialists—than by directly affecting the manner in which physicians make decisions in allocating resources. While it has been alleged that the incentives for physicians to avoid unnecessary work may be an important factor, there is no impressive evidence that such incentives substantially affect decision making itself (Mechanic, 1976). Most of the rationing that takes place seems to be at the administrative planning level, and then physicians seem to adjust to whatever resources are available. Thus, in most prepaid group practices or in health centers or polyclinics, physicians still very much retain the role of “expert.”

As health care plan administrators or government officials attempt to tighten expenditures by moving toward a system of explicit rationing, physicians are pushed to a larger degree into the role of bureaucratic official. The case of the Soviet physicians, described by Field (1957), who were limited in the number of sickness certifications they could issue, provides an extreme example of how bureaucratic regulation can substantially limit the options available for physician decision making. While no explicit rationing system in the world has gone this far in any systematic way, there is a discernible tendency toward greater administrative control. In such circumstances the physician must explicitly determine which patients are more needy of a particular service, and he must develop ways to discourage or influence other patients who insist on such service. Increasingly, for example, the physician will require pre-review of certain decisions or have other decisions reviewed after the fact. The intrusion of such requirements or review, if seriously performed, can have a significant effect on decision making, particularly on the “technological imperative.”

Everywhere in the world physicians have retained considerable autonomy; even in such highly bureaucratized contexts as military medicine, industrial medicine, and the health services of communist countries, physicians have persisted in their roles more as experts than as bureaucratic functionaries. The shift is more nuance than drama, and while such tendencies will grow throughout the world, rationing is more likely to be imposed on the total framework of services and less on the decisions of the individual physician treating a

particular patient. In any case, the growing bureaucratization of medicine poses some serious dangers, and I conclude this paper with a brief consideration of these.

The Effects of Bureaucratization on Medicine as a Social Institution

Medicine as a social institution has extremely broad functions. Not only does medicine deal with the prevention and treatment of pain, disease, disability, and impairment, but it also provides an acceptable excuse for relief from ordinary obligations and responsibilities, and may be used to justify behaviors and interventions not ordinarily tolerated by the social system without significant sanctions. The definition of illness may also be used as a mechanism of social control to contain deviance, to remove misfits from particular social roles, or to encourage continued social functioning and productive activity. Thus, the locus of control for medical decision making is a key variable in examining the implications of medical care for social life more generally.

In the case of fee-for-service medicine, the physician acts as the agent of the patient. Although his own personal economic interests may intrude in the relationship, his role is to defend the interests of the patient against any other competing interest. The increasing employment of physicians by health programs or complex organizations involves changes in the auspices of medical care that depart in significant ways from traditional concepts (Mechanic, 1976). As I have noted throughout this paper, and specifically in my discussion of rationing, bureaucratic medical settings involve multiple interests, thus putting the physician under pressure to sacrifice certain potential interests of an individual patient to satisfy organizational needs. In the case of such institutions as health maintenance organizations, for example, increased administrative directions for rationing, as well as financial incentives, are developed to encourage physicians to avoid providing unnecessary services. But since the concept of "necessary" is itself vague, the determination may reflect the balance of pressures on the physician.

The bureaucratization of medicine also has the effect of diluting the personal responsibility of the provider, making it more likely that interests other than those of the patient will prevail. By segmenting responsibility for patient care, the medical bureaucracy

relieves the physician of direct continuing responsibility. If the patient cannot reach a physician at night or on weekends, obtain responsive care, have inquiries answered, or whatever, the problem is no longer focused on the failure of an individual physician, but on the failures of the organization. It is far easier for patients to locate and deal with individual failures where responsibility is clear than to confront a diffuse organizational structure where responsibility is often hazy and the buck is easily passed. To the extent the physician knows that a patient is his or her charge, the physician feels a certain responsibility to protect the patient's interests against organizational roadblocks and requests that may not be fully appropriate. But when responsibility is less clear it is easier to make decisions in the name of other interests such as research, teaching, demonstration, or the "public welfare," whatever that might be.

The growth of bureaucratic medicine is in many ways an effective response to the development and complexity of medical knowledge. But it also involves some significant threats to the concept of physician responsibility for the best interests of the individual patient and for the empathic and supportive relationships that are so vital to effective care of the whole person. It also involves a shifting in the balance of power in dealing with the broader problems for which patients use the medical system such as in alleviating anxieties and excusing failure. The physician's role as advocate of the patient derives from a close and continuing relationship and knowledge of the patient and a certain relational alignment to him. Bureaucratic structures tend to promote more segmented and detached relationships and ambiguities and conflicts in relational alignments. While in theory bureaucratic structures could be developed to promote empathy, continuity, and humane care, the tendency is for bureaucratic and technical functions to be given higher priority. Physicians are rewarded more for being good managers and researchers or for coping with a large work load than for providing interested and humane care. While physician care in bureaucracies is often humane, such behavior seems to occur despite bureaucratic structure rather than because of it.

Bureaucratization in medicine is inevitable. The challenge thus is to promote organizational arrangements that ration wisely and fairly, and that provide incentives for listening to the patient and caring for him. Humane medicine is an effective component of good patient care. Medical outcomes often depend on the understanding

and cooperation of patients and their willingness to engage their problems in a serious and committed way. Medicine without caring, no matter how effective the technique, has a limited capacity to fulfill the broad potential of medicine as a sustaining institution for those who come to depend upon it. The development of bureaucratic incentives, thus, must be designed to enhance humane values while capitalizing on advances in knowledge and technology (Howard and Strauss, 1975). In my estimation this can be most effectively accomplished by upgrading the role and performance of the primary care sector and by regulating carefully through the planning process the availability and provision of the more expensive, complex, and dangerous technologies. Within broad guidelines, physician and patient must remain as free as possible to negotiate satisfactory solutions to the personal and social dilemmas that bring them together.

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Address reprint requests to: David Mechanic, Professor of Sociology, Center for Medical Sociology and Health Services Research, University of Wisconsin, Social Science Building, Madison, Wisconsin 53706