PROFESSIONAL JUDGMENT AND THE RATIONING OF MEDICAL CARE

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INTRODUCTION

Changes in knowledge and technology, the growth of the elderly population, and rising public expectations will continue to increase medical care costs. Due to these trends, more stringent rationing of medical care is inevitable. Future rationing must involve a blend of approaches, including: cost-sharing with patients (price rationing); administrative limits on technological expansion, reimbursable services, and provider remuneration (explicit rationing); and discretionary allocation of services within the constraints of established budgets (implicit rationing). Each approach has advantages as well as liabilities. The health care rationing debate focuses on what relative weight each of these approaches should receive.

Dependence on price rationing approaches is likely to deter appropriate as well as inappropriate medical care procedures with a larger deterrent effect on the poor. Also, while some explicit administrative constraints are essential to set the parameters of care and to avoid uncontrollable escalation of costs, dependence on explicit rationing approaches is likely to result in insensitivity to the complexity of clinical care, to the rapidly changing character of medical knowledge, to the uncertainties of the care process, and to the wide range of situations, needs, and preferences of patients.

In contrast, an implicit rationing approach offers the most realistic and appropriate way to allocate services. Because patient populations are heterogeneous, many medical interventions involve uncertainty, and the clinical decisionmaking process is iterative (using information obtained from the relationship between professional and patient), an effective health care rationing system must take into account the need for flexible physician response to numerous unprovided-for circumstances. Implicit rationing allows for needed sensitivity to variance by relying on clinical discretion,

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1 See David Mechanic, Approaches to Controlling the Costs of Medical Care: Short-Range and Long-Range Alternatives, 298 NEW ENG. J. MED. 249, 249 (1978).
thus strengthening the potential for professional/patient interaction and making unwarranted withholding of efficacious services less likely. Implicit rationing can be strengthened by appropriate grievance procedures, professional peer review, and the ultimate threat of malpractice to provide deterrents to an inappropriate decision to withhold medical care.

I. THE CONTEXT OF THE RATIONING DEBATE

As medical care costs in the United States escalate and account for a growing proportion of gross national product, health care rationing, once commonly viewed as unthinkable, has become an increasingly respectable response. The popular conception of rationing is based on the American experience of food and gasoline rationing during World War II, in which specified shares of a limited resource were distributed. Fixation on such an extreme example obscures the fact that substantial rationing occurs every day in the distribution of the limited resources of all publicly supported services.\(^2\) This *de facto* rationing is so common in everyday reality that it is hardly thought of as rationing at all.\(^3\)

\(^2\) See Lawrence M. Friedman, *The Idea of Right as a Social and Legal Concept*, 27 J. SOC. ISSUES 189, 194 (1971) (stating that there are no free goods and that even free speech and justice are rationed). Friedman notes:

> [T]he right to use the courts has no theoretical limit. But there are only so many judges and lawyers and courts... Courts are crowded; this materially affects the reality of the right to use courts. But the litigating public has, over the years, adjusted the supply of courts more or less to the level of tolerable demand.

*Id.* at 194-95.

\(^3\) The lack of awareness of hidden subsidies and funding limits is not unique to the health care rationing situation but describes much of the intersection between marketplace and social policy. See Alain Enthoven, *Health Tax Policy Mismatch*, HEALTH AFF., Winter 1985, at 6, 9-11. Most middle class Americans fail to recognize the extensive subsidies they receive for health care, housing, and other services. Thus, they perceive that housing subsidies are solely given to the poor, failing to recognize the much larger housing subsidies to the middle class through the opportunities to deduct interest for home loans on their tax return. See Neil Howe & Phillip Longman, *The Next New Deal*, ATLANTIC MONTHLY, Apr. 1992, at 88, 93 (reporting that the present government tax policy provides greater subsidies to higher-income taxpayers). Alain Enthoven estimated that revenue loss in 1986 resulting from favorable tax treatment of employer contributions for medical insurance and medical care was approximately $47 billion. See Enthoven, *supra*, at 8.
A. Background of Rationing

Throughout most of medical history, the availability of medical services was substantially rationed by the ability to pay, by the availability of number and types of practitioners and facilities in different geographic areas, and by patient compatibility with physicians' research needs and practice inclinations. To the extent that the market for medical care was primarily private, the ability of people to pay for medical care set strict constraints on its consumption. Although many physicians provided considerable charity care to patients who lacked resources, financial concerns constrained the extent of such charity efforts.

The growth of health insurance and large government programs—particularly Medicare and Medicaid—in the post World War II period has fundamentally changed health care utilization by separating the patient's ability to pay from the availability of medical services. Once one gains eligibility or pays health insurance premiums, the received entitlements are only tangentially related to out-of-pocket expenditures, if at all. This change has weakened the influence of economic constraints on patient behavior, skewing the consumption of certain medical services.

Currently, rationing occurs mostly through the design of health insurance coverage and reimbursable providers, rather than by the patient's ability to pay. Individual and administrative choices are made among coverage options for competing service benefits, types of facilities and practitioners, and contexts of care, including hospitals, nursing homes, outpatient settings, and the home. Initially, most insurance covered hospital care and only a limited scope of possible health care needs. While these insurance programs expanded, they generally continued to limit coverage in such areas as mental health, dentistry, outpatient prescription drugs, and podiatry. For instance, less than half of the elderly's health

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5 Cf. Paul Starr, The Social Transformation of American Medicine 157-62, 386-88 (1982) (finding that hospitals with greater budgetary restraints decreased the amount of charity care that they provided, although hospitals had traditionally been the primary providers of charity care).
6 See Robert B. Friedland, Medicare: Meeting the Health Care Needs of the Elderly, Issue Brief (Am. Ass'n of Retired Persons Pub. Pol'y Inst., Washington, D.C.), July 1991, at 5-6 (listing services not covered, including custodial nursing home care, outpatient prescription drugs, routine dental services and dentures, most preventive care, routine foot care, homemaker services, vision exams and eyeglasses, and hearing
care costs are covered by Medicare despite the magnitude of Medicare expenditures as a percentage of national health care expenditures.\(^7\)

Rationing also results from how care is organized. The structural organization of medical care has inherent imbalances, such as the unequal availability and distribution of tertiary care facilities, specialized hospitals, nursing homes, outpatient programs, rehabilitation facilities, and various types of reimbursable practitioners. These imbalances limit the services available to persons in some geographic areas.\(^8\) Such constraints are further reinforced in most insurance programs by cost-sharing, through co-insurance and deductibles, limits on the frequency and intervals within which certain services can be utilized, and maximum allowable expenditures on various types of benefits.

These methods of rationing had been obscured by the rapid growth of health insurance and health expenditures during the post-World War II period. Financial incentives created by Medicare reimbursement and tax policies stimulated the expansion of hospitals and development of new nursing homes.\(^9\) The number of nursing home beds, for example, grew from fewer than 570,000 in 1963 to approximately 1.4 million by 1976.\(^10\) As medical knowledge and new technologies expanded, public expectations of the quality of health care increased.\(^11\) Because most people had greater access to care than previously, and certainly more than

ts and hearing aids).

\(^7\) For the elderly, Medicare covered only 85% of hospital costs and 64% of physician services in 1987. See Henry J. Aaron, Serious and Unstable Condition: Financing America's Health Care 62 (1991). Moreover, Medicare pays only 2% of nursing home expenditures, estimated to be $47.7 billion in 1990. See Robert M. Ball, Because We're All in This Together 15 (1989). In 1981, Medicare paid only 45.3% of the per capita bill for the elderly. See Karen Davis, Aging and the Health-Care System: Economic and Structural Issues, Daedalus, Winter 1986, at 227, 230.

\(^8\) See Karen Davis, Equal Treatment and Unequal Benefits: The Medicare Program, 53 Milbank Memorial Fund Q. 449, 471 (1975) (noting that elderly persons in the West receive 32% more Medicare support for inpatient hospital care, 43% more physicians benefits, and two-and-one-half times the support for extended care facilities than those in the South).


earlier generations, access inequalities and limitations on the services available were not generally recognized. Moreover, because insurance mechanisms were separate from the supply of facilities, programs, and practitioners, the public did not see an obvious link between the theoretical availability of entitlements and difficulties in obtaining them. Despite the public's ignorance, rationing was in fact occurring.

New medical care financing made available by Medicare, Medicaid, and other government programs altered the supply of services. These programs were biased toward the reimbursement of technical procedures, in contrast to providing cognitive and counseling services characteristic of primary care.\(^{12}\) Large inequalities in access persisted by geography, urban or rural residence, and the demographic characteristics of varying population groups.\(^{13}\) Thus, resource limitations moderated the pace of growth, but not to the extent of requiring "tragic choices."\(^{14}\)

Today the need for rationing is clear. Medical expenditures have escalated dramatically since federal Medicare and Medicaid programs were initiated in 1965, and they will continue to grow due to rapid advances in science and technology,\(^{15}\) a growing population of elderly with a high prevalence of chronic disease,\(^{16}\) inceas-

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\(^{12}\) See Starr, supra note 5, at 384-86.
\(^{13}\) See Institute of Medicine, Health Care in a Context of Civil Rights 4-13 (1981) (finding inequities in the provision of health care to social and ethnic minorities and suggesting that more data be collected to evaluate possible discrimination against handicapped persons); Davis, supra note 8, at 463-80 (finding disparities in receipt of Medicare benefits based on income, race, and geographical factors).
\(^{14}\) See Guido Calabresi, Commentary, in Ethics of Health Care 48, 48-55 (Laurence R. Tancredi ed., 1974) (discussing tragic choices in the context of the doctor and patient having unequal information). Calabresi has defined "tragic choices" as

situations where there is no right decision. Assuming that a society has made some kind of decision as to how many kidney machines it will produce, how many soldiers it will need for a limited war, or how many births it can tolerate, how does it decide, explicitly or implicitly, who gets the kidney machines, who gets picked to serve in that limited war, who gets to have children.

Id. at 53-54.
ing patient expectations, and an expanding population of health professionals and physicians, who to some degree create demand for their own services. The crux of the current debate is not whether we should ration care. Rather, having recognized rationing is inevitable, the debate focuses on the appropriate mix of rationing devices to constrain supply and allocate it fairly, in a manner consistent with an acceptable quality of care.

This debate does not exist in a vacuum; health care in the United States is a public endeavor to a significant degree. The government, in some form, directly pays for more than 40 percent of all health care costs and an even larger proportion of the costs for inpatient care and the uses of expensive technology. Through its tax and reimbursement policies, the government substantially subsidizes the purchase of health insurance and the capacity of nonprofit and private institutions. Future health care reforms may require employers to provide health insurance to their workers, a form of indirect taxation. Thus, government has a large and growing stake in the shaping of future constraints and an examination of possible approaches to rationing becomes necessary.

B. Approaches to Rationing

One alternative strategy for rationing health care is to increase the proportion of the cost paid by the patient, thus reducing the cost borne by government (price rationing). With the emphasis on competition during the 1980s, substantial increases in cost sharing were introduced across the entire health care sector. One

17 See supra note 11.
18 See, e.g., VICTOR FUCHS, THE HEALTH ECONOMY 146 (1986) (finding that the proposition that "an increase in the supply of surgeons results in an increase in demand" is "strongly supported").
19 See Helen C. Lazenby & Suzanne W. Letsch, National Health Expenditures, 1989, HEALTH CARE FINANCING REV., Winter 1990, at 1, 1-2 (stating that in 1989, government accounted for 42% of health expenditures [Medicare, 17%; Medicaid, 10%; and other government programs, 15%] and that government also accounted for 53.5% of all hospital services).
20 See Enthoven, supra note 3, at 9-11.
21 Cost-sharing can be imposed through increased premiums, deductibles and coinsurance, and payments at the time of services such as for each physician or nurse visit, a common practice in HMOs. See Katharine R. Levit et al., National Health Care Spending Trends: 1988, HEALTH AFF., Summer 1990, at 171, 178 (reporting that the proportion of full-time employees with annual deductibles in employer-sponsored health insurance of $100 or more increased from 8% in 1980 to 40% in 1988). Similarly, deductibles under Medicare have substantially increased in the 1980s. See Katharine R. Levit et al., National Health Expenditures, 1990, HEALTH CARE FINANCING
obvious advantage of price rationing is that it reduces the financial burden on government or insurer by requiring patients to share an increased part of the cost. Additionally, price rationing is motivated by the theoretical belief that if individuals are required to pay part of the costs of their medical care, they will consider the need for care more carefully and choose services more selectively, thus reducing trivial and inappropriate demands for care. General support for this proposition comes not only from economic theory, but also from early results of the RAND Health Insurance Experiment (HIE), which demonstrated that copayment significantly reduced the demand for ambulatory care. Subsequent research from the HIE found that copayors did not differentiate between appropriate and inappropriate care. Thus, one could conclude that copayment reduced demand for care, but not in a discriminative or rational way. Copayment also deters the poor from seeking care to a greater extent than the affluent, even though poverty is associated with more illness and a greater need for care.

The second alternative strategy for rationing health care is through explicit legislative mandates and administrative decisions. Such explicit constraints are common and include definitions of eligibility for program enrollment, decisions about the services and procedures to be reimbursed, criteria defining eligibility for specified services, and definitions of reimbursable providers and eligible location of service provision. When explicit rationing is
used, regulators may describe in detail the services that will be available and the criteria for their allocation, and monitor care processes by preliminary review, second opinions, and audits to assure that clinicians follow specified algorithms. Explicit rationing also refers to procedures limiting the expansion of facilities such as certificates of need, regulations concerning the acquisition and use of technology, and budgeting decisions constraining the development and diffusion of technologies. Limitations of technical capacity and facilities results in queuing, a pervasive and effective rationing approach.26

One advantage of explicit rationing is that a central authority can develop sophisticated data systems and appraisals of the scientific literature to inform funding decisions about technologies and services.27 The central authority can draw on high levels of scientific and professional expertise, and can synthesize large quantities of pertinent data.28 Such a centralized authority, properly staffed, can make more scientifically sophisticated choices than individual professionals who proceed on the basis of a fragmentary command of scientific evidence and who are strongly influenced by their personal clinical experience.29

Significant progress is being made, using complex multivariate techniques, in analyzing clinical data to predict therapy outcomes for critically ill patients.30 Some of these models predict more accurately than experienced clinicians,31 and pressures will in-

28 See William L. Roper et al., Effectiveness in Health Care: An Initiative to Evaluate and Improve Medical Practice, 319 NEW ENG. J. MED. 1197, 1198 (1988) (noting that the Health Care Financing Administration has been developing such a capacity in the management of Medicare). Similarly, the creation of the new Agency for Health Care Policy and Research in the Public Health Service reflects the commitment to develop this capacity to monitor and evaluate the health care delivery system and the effectiveness of care.
30 See William A. Knaus et al., Short-Term Mortality Predictions for Critically Ill Hospitalized Adults: Science and Ethics, 254 SCIENCE 389, 389 (1991) (advocating the use of clinical data to improve the evaluation of the outcomes of life-sustaining therapy which "often succeeds in postponing death but may be ineffective at restoring health" and may result in life many would find "worse than death").
31 See id. at 391 (reporting that their study revealed that objective predictions of patient mortality were significantly more accurate than subjective clinical judgments).
crease to use such systems and constrain physician decisionmaking. As these new techniques become more sophisticated, they will be powerful aids in medical assessment, but are unlikely to substitute for an individual professional’s judgment. As William Knaus and his colleagues note:

Physicians have also been hesitant to apply probability estimates to a particular patient. The physician always knows elements of the patient’s condition that are not in the predictive model, and rarely is there evidence to show that the additional information is irrelevant. Knowledgeable physicians are also concerned over whether current patients and treatments are truly comparable to those in the predictive model and whether the identical therapies were used for patients in the database.  

Clearly, central authority must set broad constraints on the definition of reimbursable services and technologies if costs are to be constrained in our world of limitless possibilities. Detailed rulemaking, however, is too distant from the realistic contingencies of disease, the complexities of comorbidity, and the diversity of personal and family situations, to extend to specific clinical decisions under the conditions of uncertainty that characterize much of medical care. In a large and culturally heterogeneous society it is especially difficult to anticipate the varying needs, expectations, and tastes of patients and their families, and the varying and shifting family structures and social situations that are pertinent to the choices people make and their effective care.

This leads to the third alternative, implicit rationing, in which regulatory authorities set general constraints on expenditures, entitlements, and expensive technologies, but the actual allocation of services is determined within doctor/patient transactions. The English National Health Service, the Canadian Medicare System, and HMOs in the United States reflect implicit rationing to some

\[ \text{\textsuperscript{32} Id. at 390.} \]

\[ \text{\textsuperscript{33} The editor of the New England Journal of Medicine describes the situation as follows:} \]

\[ \text{In many ways the diagnostic process resembles the start of a chess game: After one or two moves (one or two symptoms), the number of possible moves (diagnostic possibilities) is usually enormous; in both chess and medicine, the object is to win, but the challenge is to make the right move in the right direction at the right time. Unfortunately, the route is almost never clear in advance.} \]

extent. Despite information problems, implicit rationing at the level of the individual physician within broad constraints is the best option. Because a strong relationship often develops between doctor and patient in critical illness situations, resulting in a high level of trust and a high quality of communication between them, the individual physician is in the best position to make good health provision judgments. The disadvantage of implicit rationing is that it may erode trust between the doctor and patient by assigning the doctor a dual responsibility of choosing between an individual patient and other patients' priorities. While troublesome, this disadvantage is more palatable than the lack of understanding and insensitivity likely to result from explicit rationing decisions in a micro-management mode by persons removed from the complicated situations and emotions associated with illness and the help-seeking process.

II. THE CASE FOR IMPLICIT RATIONING

Implicit rationing, despite some obvious limitations, offers the best opportunity to allocate care effectively in the context of uncertainty, a changing knowledge base, and heterogeneity in the American population and in patterns of illness. In developing my argument in support of implicit rationing, I will first devote considerable space to elucidating the special character of medical care, its uncertainties, and the lessons we might learn from international experience. Before proceeding, however, I should make clear how this analysis differs from the "regulatory model" suggested by Robert Blank in this Issue.34

Blank's presentation confounds the issue of universal entitlement with the processes of allocating finite medical resources. Universal entitlement, a concept that I strongly endorse, is compatible with a variety of allocative mechanisms and its endorsement provides little information on how priorities are to be established and adjudicated. Blank's presentation of the regulatory model assumes reasonably stringent economic constraints without specifying the mix of explicit and implicit rationing that would be most desirable.

Blank's challenge of "lifestyle choice" and his endorsement of Secretary Sullivan's health rhetoric simplifies extraordinarily

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complex behavioral issues. He also neglects the extent to which many of the risk factors conducive to poor health are not under the control of individual volition, and to which others, such as smoking, obesity, and substance abuse, are difficult to modify even with sustained personal motivation. While it is desirable to have incentives that encourage risk reduction and sustain personal desires for behavior change, achieving life style change, particularly in respect to the most damaging behavioral patterns, is a difficult and uncertain endeavor.

Blank also makes a point of the fact that a small proportion of medical care utilizers account for a significant proportion of all expenditures, and views this as an issue of "just distribution of scarce resources." This position obscures the difference between routine primary care and sophisticated specialized care. A disproportionate use of sophisticated services should not be surprising since in any given year only a small proportion of the population suffers critical illness. That small proportion of the population is not necessarily the same people who are using the most sophisticated resources at other times. Primary care is a valuable service that needs further development but it is misguided to regard it as a service that competes with sophisticated specialized care. Our efforts should be directed to developing a balanced system of care with appropriate linkage between primary medical care and more specialized technical services.

Blank further places great emphasis on government not only as

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35 See id. at 1577.
36 See, e.g., Diana B. Dutton & Sol Levine, Socioeconomic Status and Health: Overview, Methodological Critique, and Reformulation, in PATHWAYS TO HEALTH, supra note 25, at 29, 58 (noting that "people may want very much to follow desirable health practices but are impeded by circumstances they cannot control"); David Mechanic, Promoting Health, SOCIETY, Jan.-Feb. 1990, at 16, 16 (noting that instead of scrutinizing community structure and everyday activities, "[c]urrent efforts [at health education] still function largely at the margins").
37 See, e.g., PREVENTION IN HEALTH PSYCHOLOGY (James C. Rosen & Laura S. Solomon eds., 1985) (compiling literature that documents the difficulty of changing risk behaviors).
38 Blank, supra note 34, at 1578.
39 Severity of illness is the best predictor of physician and hospital utilization. Even among the elderly, who have a higher prevalence of illness than younger people, 63% had no or only one episode of hospitalization during an eight-year period. Less than 11% were hospitalized in four or more of the eight years, and these patients had the highest probability of dying. Even in this group, the vast majority (71%) survived the eight-year period studied. See Jana M. Mossey et al., The Consistency of Formal Health Care Utilization: Physician and Hospital Utilization, in AGING AND HEALTH CARE 81, 85-86 (Marcia G. Ory & Kathleen Bond eds., 1989).
a regulator but as "the only agent with the authority to influence public values and, thus, create a framework for setting limits." He argues that "government has a responsibility to educate the public both as to the links between lifestyle choices and health, and the need to moderate expectations." In contrast, I believe that Americans do not accept government as the "only agent with the authority to influence public values," and traditionally have been distrustful and suspicious of government, particularly central government. In reference to health affairs, I believe that the public trusts their physicians far more than any public authority and would find implicit rationing within a regulated system more consistent with their needs and preferences. To elucidate this, we must first consider the special character of medical care.

A. The Substance of Medical Care

In the typical medical encounter the patient presents a variety of complaints to a physician who, by selectively questioning the patient, seeks to identify an underlying pattern and to diagnose it. The diagnosis operates as a working hypothesis, suggesting varying degrees of information about the etiology and course of the problem as well as approaches to treatment. If the patient's problem is clear, and fits a well-established diagnostic theory, then the diagnosis itself offers a prescription for how the physician should proceed in specific treatment and overall care management.

The difficulty is that many problems do not allow clear diagnostic determinations, or are complicated by comorbid conditions. Often the treatment plan is uncertain because preferred modalities are not supported by clear scientific evidence. Kerr White, a distinguished observer of the medical care process, observed that "it is still the case that only about 15 percent of all contemporary clinical interventions are supported by scientific evidence that they do more good than harm." Numerous studies document extraordinary variabilities in practice. There are also high levels of

40 Blank, supra note 34, at 1581.
41 Id. at 1582.
42 See David Mechanic, Medical Sociology 91-92 (1978).
44 Since the initial paper by John Wennberg & Alan Gittlesohn, Small Area Variations in Health Care Delivery, 182 Science 1102 (1973), a large literature has developed documenting the extraordinary extent of such variation. For a good
inappropriate use of technologies as evaluated by implicit medical criteria. Confusion exists, however, because of the difficulty of documenting any substantial relationship between practice variation and inappropriate applications.

Substantial literature documenting enormous geographical variations in the performance of discretionary procedures suggests that high rates of utilization are associated with unnecessary and inappropriate care. If prevalence is associated with an unnecessary or inappropriate pattern of care, constraining the trend by regulation would be feasible. However, the reality is far more complex, less well understood, and more imposing from a regulatory perspective. Two RAND studies of utilization of coronary angiography, carotid endarterectomy, and gastrointestinal tract endoscopy by Medicare beneficiaries in small area aggregations found little relationship between the prevalence of these procedures and their appropriate use as measured by a careful evaluation of medical records based on carefully formulated criteria. There was, in fact, enormous variation in the use of these procedures. The investigators identified care that they rated as inappropriate, but there was no obvious explanation for these differences. It

overview on variation in medical practice, see Special Issue, Variations in Medical Practice, HEALTH AFF., Summer 1984, at 1.

There is now an extensive literature on quality and appropriateness of care, although disagreement persists on methods and criteria for such evaluation. For a general overview, see Special Issue, The Challenge of Quality, 25 INQUIRY 1 (1988). The RAND research program exemplifies some of the most outstanding efforts in this area. RAND researchers report high levels of inappropriate use of hospital admissions and surgical procedures. For a bibliography of this work, see RAND CORPORATION, HEALTH RELATED RESEARCH: 1980-91, at 15 (1991). For an excellent example, see Mark R. Chassin et al., Does Inappropriate Use Explain Geographic Variations in the Use of Health Care Services?: A Study of Three Procedures, 258 JAMA 2533 (1987).

See Chassin et al., supra note 45, at 2535-36; Lucian L. Leape et al., Does Inappropriate Use Explain Small-Area Variations in the Use of Health Care Services?, 263 JAMA 669, 672 (1990) (finding that more inappropriate procedures were found in areas of high use for three procedures, but that they did not appear to account for the high use).

See Special Issue, supra note 44 (providing sources).

See Chassin et al., supra note 45, at 2535; Leape et al., supra note 46, at 669.

Use rates for carotid endarterectomy, for example, varied from 5 to 41 per 10,000 Medicare enrollees among the counties surveyed in one study. See Leape et al., supra note 46, at 669. These rates, however, were relatively independent of the definition of appropriateness.

Approximately one third of all carotid endarterectomies were so rated. See id. at 670, tbl. 1.

See id. at 672.
is therefore difficult to understand how we can impose intelligent, explicit rationing when we cannot clearly isolate the factors that account for existing practice variation.

The mismatch between the magnitude of variation and definitions of appropriateness reflects practices under conditions of uncertainty, which must be accepted until firmer knowledge is available. The lack of precision in medical care judgments makes offering directives that cover the entire range of clinical alternatives a risky proposition. Either more conservative or more radical treatment alternatives can be advocated; the scientific evidence does not support a clear choice. Most physicians can agree that computerized automated tomographic (CAT) scans, nuclear magnetic resonance (NMR) imaging, and other expensive diagnostic modalities are used excessively. It may, however, be impossible to specify all of the contingencies that would distinguish justifiable from unjustifiable use.

No reasonable way exists of addressing this challenge within the confines of explicit rationing. Writing detailed specifications will encumber clinicians in an extensive web of regulations that will result in many ambiguities, difficulties, and absurdities. Moreover, a necessarily changing knowledge base requires continuing modifications—a source of regulatory chaos. Currently prevailing incentives encourage the use of resources on the margin because technical procedures are remunerative for the physician and involve little out-of-pocket expense for the patient. Explicit rationing that limits the capacity for expensive diagnostic and treatment

52 For an excellent analysis of the range of uncertainty, see David M. Eddy, Variations in Physician Practice: The Role of Uncertainty, HEALTH AFF., Summer 1984, at 75, 75.
53 For some grasp of the types of controversies that define everyday standards of practice, see, e.g., 2 CONTROVERSY IN INTERNAL MEDICINE (Franz J. Ingelfinger et al. eds., 1974) (presenting divergent viewpoints on over 25 common procedures).
54 Hall and Anderson, in discussing this problem, note: [T]he long lead time involved in redrafting contract forms and submitting revisions for regulatory approval renders it infeasible to undertake frequent revisions of highly detailed policy terms to incorporate up-to-the-minute advances in medical practice and effectiveness information. Mark Hall & Gerard Anderson, Health Insurers' Assessment of Medical Necessity, 140 U. PA. L. REV. 1637, 1684-85 (1992).
modalities through some form of regional scheme could be a solution. The queue for treatment would then serve to limit demand by restricting supply.\textsuperscript{56} Queuing, however, which is based on a first come, first served principle, does not distinguish between those patients who have a higher than average probability of benefiting from the intervention and those who are "lost causes." Once again, some level of professional judgment is essential to allocate available resources in relation to need and expected benefits.

Individual physicians could reasonably exercise such judgment if constrained by the knowledge that the pool of resources available for the care of their patients is finite, and that indiscriminate or careless use would limit valued diagnostic and treatment possibilities for others. Such implicit rationing is common in most public institutions throughout our society including schools, social services, the courts, and almost all other public and nonprofit agencies.\textsuperscript{57} Not all physicians will be equally responsible, nor will they be immune from responding to preferred practice styles, patient demands, or other contingencies extraneous to the clinical decision. Overall, however, this approach is preferable to the price rationing and explicit rationing alternatives.

Establishing a global budget and remunerating physicians on salary, capitation, or fees tied to an established remuneration target would weaken the current incentives for performing technical procedures that are unlikely to provide much benefit. Global budgeting will potentially provide an educational context in which, on the basis of evidence, physicians will be more open to suggestions to moderate resource utilization because they have less economic stake in performing procedures. There is also a risk of underservice, even though physicians are well socialized to be agents for patients and to balk at organizational pressures that subvert their sense of clinical responsibility.\textsuperscript{58}

Making physicians responsible for allocation decisions offers additional advantages. The clinician is more likely to understand the complexity of the patient’s clinical condition, the social and

\textsuperscript{56} See supra note 26 and accompanying text.

\textsuperscript{57} See Friedman, supra note 2, at 194 (noting that subjectively certain rights are absolute, but in reality are subject to the constraint of limited resources).

\textsuperscript{58} It is difficult for organizational authorities to modify care physicians believe to be professionally appropriate. See Eliot Freidson, DOCTORING TOGETHER: A STUDY OF PROFESSIONAL SOCIAL CONTROL 86-103 (1975).
familial consequences of the illness, patient and family preferences for conservative or aggressive care, and the value placed on possible future outcomes. Patients vary enormously in their willingness and ability to withstand pain and discomfort, to tolerate uncertainty, to fight to overcome illness, and even to stay alive. Although physicians' information on these issues is incomplete and inadequate, they have far more awareness and sensitivity than bureaucrats who typically have little or no recent clinical experience and are distant from the clinical situation. Research in psychology has shown that as decisionmakers become more distant, they are more likely to inflict pain. The clinical encounter remains a complex psychosocial transaction with powerful opportunities to affect the course of illness through the expectancies conveyed by the physician and the patient's development of emotional attachment and dependence. Weakening this aspect of the clinical encounter by transforming the physician's function to limited technical roles would undermine important elements in the care process.

Although medical care involves numerous routine services, public concern focuses on situations of uncertainty, in which patients are seriously ill. The processes of care are sequential and iterative; both technical medical decisions and patients' personal assessments depend in part on how the processes of care unfold. Few other services involve the magnitude of personal priority and emotional involvement associated with a serious illness. Patients therefore want a physician whose judgment they trust. As Kenneth Arrow noted, if patients knew how "to measure the value of information, [they] would know the information itself. But information, in the form of skilled care, is precisely what is being bought from most physicians . . . ." Patients may seek information from knowledgeable friends and other patients, medical literature, or data and advice from consumer groups, but in no way can they "test the product before consuming it." Thus, trust

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59 See STANLEY MILGRAM, OBEDIENCE TO AUTHORITY 32-43 (1969) (detailing experiment results that showed an increased ability to inflict pain when the victim is situated more remotely).

60 See JEROME D. FRANK & JULIAN B. FRANK, PERSUASION AND HEALING 132-37 (1991) (noting the strong placebo effect resulting from a patient's emotional attachment to the physician).

61 See Kassirer, supra note 33.


63 Id. at 949.
plays a key role in seeking the medical care product of any physician.

B. From Advocacy to Allocation

A major objection to rationing through establishing fixed budgets is that it shifts the role of physician from advocating the individual patient's needs to balancing those needs against the need to use resources responsibly so that the health care needs of the many may be met. The claim is that such conflicting responsibilities dilute the physician's primary responsibility to "do everything in his power to alleviate [the patient's] needs." Implicit rationing, the critics argue, makes medicine subservient to two masters, undermining the ethical substructure of the physician-patient relationship.

At a theoretical level this point is unassailable if the physician's exclusive responsibility to the patient is accepted. In practice, however, limits have always existed on such advocacy, not the least of which came from the conflicting economic and social interests of the physician. The willingness of physicians to provide care and the intensity of the care provided are influenced by the patient's ability to pay and by the scope of their insurance coverage. Payment incentives, particularly fee-for-service payment, increase the provision of services. George Eliot in her classic novel *Middlemarch* noted the incentives to overprescribe among physicians who compounded their own medications. A contemporary

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64 See DAVID MECHANIC, FROM ADVOCACY TO ALLOCATION: THE EVOLVING AMERICAN HEALTH CARE SYSTEM 146-51 (1986).
65 Charles Fried, Equality and Rights in Medical Care, Hastings Center Rep., Feb. 1976, at 29, 34. Fried's argument is curious in that he emphasizes the importance of the physician's unlimited advocacy for the patient but also indicates receptivity to HMOs, a practice context where the physician has dual responsibilities.
66 See, e.g., Charles Fried, Rights and Health Care—Beyond Equity and Efficiency, 293 New Eng. J. Med. 241, 244 (1975) (noting that rationing forces physicians to serve the interests of bureaucrats and administrations over those of their patients).
68 See GLASER, supra note 55, at 139-45.
69 See GEORGE ELIOT, MIDDLEMARCH (Oxford Univ. Press 1961) (1871-72). Eliot wrote:

One of these reforms was to act stoutly on the strength of a recent legal decision, and simply prescribe, without dispensing drugs or taking percentage from druggists. This was an innovation for one who had chosen to adopt the style of general practitioner in a country town, and would be felt as offensive criticism by his professional brethren. But Lydgate meant to innovate in his treatment also, and he was wise enough to see that the
version of this pattern is found among physicians who maintain or have equity shares in diagnostic equipment, clinical laboratories, or specialized treatment facilities to which they refer patients.  

The realities of practice organization also make the theoretical ethic of exclusive loyalty to the patient specious. Many physicians work for companies, insurance programs, multi-specialty group practices, the government, and other organizations. As a result, these physicians accommodate competing values, colleague inclinations, organizational requirements, and the need for continued institutional viability. In many instances of serious illness, chronic disease, and long term care, the physician's role involves the adjudication of both patient and family interests, with the doctor functioning as a negotiator and conciliator, rather than as an unfettered agent.
In fact, in the area of chronic mental illness, the National Alliance for the Mentally Ill has assailed the notion of physician as exclusive agent as a major impediment to care. It has attacked professionals who used this ethic to distance families from treatment and rehabilitation processes.\(^7\) Alliance members maintain that such an orientation puts the patient at risk, increases the probability of treatment failure, and imposes major costs on family and community.\(^7\) Psychiatrists and other mental health professionals are learning to incorporate these concerns into patient management activities, and families are increasingly involved in treatment planning.\(^7\)

The physician's advocacy for the patient is a value of importance, worthy of vigorous protection, but it is not absolute. Most physicians are individually responsible for at least several hundred patients and must apportion their time and efforts in some reasonable relationship to their competing patients' needs—as well as to their own needs for leisure. Some, perhaps most, patients could benefit from more time and solicitude, but the real world demands that the physician's response be appropriate, not necessari-

\(^7\) See Harriet P. Lefley, *The Family's Response to Mental Illness in a Relative, in Families of the Mentally Ill: Meeting the Challenges* 3, 9 (New Directions for Mental Health Services, No. 34, Agnes B. Hatfield ed., 1987) [hereinafter *FAMILIES OF THE MENTALLY ILL*] (noting that the mental health provider system fails “to offer training or involvement in treatment planning to families with a major role in caregiving”).

\(^7\) As Lefley describes:

Much has been written about the various stresses imposed on families by the unresponsiveness and often hostile attitudes of mental health professionals—a situation that is finally beginning to right itself . . . . \(^7\)Inconsistent and often contradictory patterns of help and information will persist throughout the course of the illness. In one type of situation there is tacit rejection of any communication with the family . . . . If the family attempts to learn more, the common patterns of response are deflection of questions, reluctance to provide diagnosis or illness information on the grounds of labeling, protestations of confidentiality, and implications that the family’s concern is pathological or self-serving.

*Id.* at 8-9.

\(^7\) See Dale L. Johnson, *Professional-Family Collaboration, in Families of the Mentally Ill, supra* note 73, at 73, 77; John P. Petrila & Robert L. Sadoff, *Confidentiality and the Family as Caregiver, 43 Hosp. & Community Psychiatry* 136, 139 (1992) (“Families should not be kept at arm’s length because of a notion of confidentiality . . . [exceeding] . . . what is necessary to protect the values that it serves. Mental health professionals may maintain appropriate confidentiality . . . and still meet a professional standard of care by communicating necessary and appropriate information to families . . . .”).
ly optimal. In theory, everyone might have the same level of medical services as the President of the United States, but medical care is a process better described as "satisficing." A stronger accountability system is possible if we acknowledge and address realities rather than blindly endorse concepts that even under simple conditions of practice could be implemented only partially.

In principle, patients should understand the operating assumptions of their health program, and this is particularly critical in multi-choice situations where patients select among varying options. For many people, HMOs, and related managed care options, will offer an excellent combination of features and services providing good value for money, but it is important that they clearly understand the tradeoffs involved. Fundamentally, patients must understand that, under managed care, the role of the physician as the patient's agent and advocate may shift in subtle ways to one in which the physician consciously balances her actions on behalf of the patient against budgetary considerations.

The idea that one's physician balances interventions against cost or other considerations makes some patients uncomfortable. In a recent study of a university employment group, comprised of a majority of well-educated and sophisticated consumers, almost two-thirds of those choosing between an HMO and a traditional plan rated "feeling that your doctor is only concerned about your health and not about limiting the plan's cost" very important. Only two other considerations were more important: getting an appointment with your doctor quickly when you want one and feeling your doctor's concern about your health is his or her primary commitment. The vast majority of new HMO enrollees believed that "in this plan the doctor is only concerned about my health and not limiting the plan's cost," a perception that was in error. Despite the assumption that enrollees will learn about rationing processes quickly, the full implications of rationing are not likely to be salient.

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76 The concept of satisficing, first introduced by Herbert Simon, was intended to explain the boundaries between rational and non-rational behavior. Simon argued, contrary to popular conception, that decision-makers could not seek optimal solutions because of informational and time constraints, but sought an acceptable solution. See Herbert A. Simon, Administrative Behavior 67-70 (1957). In his terms, human actors "satisfice because they have not the wits to maximize." Id. at xxiv.

77 David Mechanic et al., Choosing Among Health Insurance Options: A Study of New Employees, 27 Inquiry 14, 17 tbl. 2 (1990).

78 See id.

79 Id. at 18.
until serious illness strikes and expensive diagnostic approaches, referrals, inpatient admissions, and rehabilitative technologies are at issue.

HMOs are commonly marketed with the rhetoric that they keep people healthy and contain costs by avoiding serious illness.\textsuperscript{80} A more accurate, but less common, representation is that HMOs offer a more comprehensive benefit package without additional out-of-pocket expenditures in exchange for the patient's acceptance of the primary physician as gate-keeper and some rationing consistent with the physician's best judgment.\textsuperscript{81} HMO physicians continue to view themselves primarily as their patients' agents and, probably, rarely compromise their professional judgments regarding appropriateness of care. On the margin, or in situations of uncertainty, however, the incentives of implicit rationing tilt care in a different direction than is typical in fee-for-service practice.\textsuperscript{82}

The HMO and managed care contract should be explicit and every potential enrollee should know to what degree their gate-keeper/physician's personal remuneration is contingent upon staying within utilization targets. Furthermore, patients have a right to know about any other financial incentives for physicians to limit expenditures and about their physician's personal economic holdings in facilities to which they are referred.\textsuperscript{83}

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\item \textsuperscript{80} See David Mechanic, The Growth of Bureaucratic Medicine 85-97 (1976).
\item \textsuperscript{81} See David Mechanic, Consumer Choice Among Health Insurance Options, HEALTH AFF., Spring 1989, at 138, 145-48; Mechanic et al., supra note 77, at 21-23.
\item \textsuperscript{82} For a review of this literature, see Harold S. Luft, Health Maintenance Organizations: Dimensions of Performance (1987).
\item \textsuperscript{83} The responsiveness of physicians to incentives to constrain costs depends on the amount of risk, the size of the risk pool, proximity to other members in the risk pool, and physician culture and philosophy. "In an HMO-wide risk pool, the individual physician bears an infinitesimal portion of the cost of additional tests or procedures ordered by that physician . . . . Economists might not expect this amount of risk to have a major effect on physician behavior." Alan L. Hillman et al., Contractual Arrangements Between HMOs and Primary Care Physicians: Three-Tiered HMOs and Risk Pools, 30 MED. CARE 136, 146 (1992) [hereinafter Contractual Arrangements]. In contrast, plans that make physician salaries hostage to utilization targets create undesirable tensions between the physician's self-interest and patient welfare. Such incentives have been found to be associated with more frequent outpatient visits per enrollee. See Alan L. Hillman et al., How Do Financial Incentives Affect Physicians' Clinical Decisions and the Financial Performance of Health Maintenance Organizations?, 321 NEW ENG. J. MED. 86, 90 (1989) (noting that HMO incentives prompted physicians to treat patients in the outpatient setting rather than making costly referrals).
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C. Explicit Constraints on Professional Judgment

Physicians' professional judgment should be protected, but the range of their discretion could be constrained considerably by broader political and regulatory decisions. How much to invest in medical care and the availability of technology and services are political, not medical, judgments. Public attitudes suggest that Americans will not tolerate a tightly rationed health care system that withholds efficacious, though expensive, technologies. Although Americans tend to focus on dramatic and highly expensive technologies as sources of potentially large savings, the use of such technologies is relatively infrequent. Therefore, fewer opportunities to contain costs will be realized by limiting infrequent but expensive procedures than in limiting more common procedures.

Expenditures are a product of the prevalence of interventions multiplied by unit cost. Much of the cost of medical care is an aggregation of small and intermediate cost procedures repeated frequently and among large numbers of patients, such as common radiology and laboratory procedures. Similarly, surgical procedures of moderate cost, because they are performed commonly, account for major financial outlays. Some of the most common inpatient diagnostic and surgical procedures for men are CAT scans, diagnostic ultrasound, cardiac catheterization, prostatectomy, reduction of fractures, coronary bypass, and repair of inguinal hernia. The most frequent female procedures are associated with

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84 See, e.g., Mechanic, supra note 64, at 134 (noting that the public holds "high, and often unrealistic, expectations of what the physician and new technologies can achieve"); David Mechanic, Physicians and Patients in Transition, Hastings Center Rep., Dec. 1985, at 9, 9-12 (noting that patients are "sophisticated" about medicine and support "larger expenditures" for new technology). Surveys of the public repeatedly find continuing public support for new technology. For example, a survey of a national sample in 1977 found that more than three-fifths of respondents would object if "less emphasis would be placed on the use of specialized medical equipment and techniques" as a cost-saving alternative. The Gallup Org., The Gallup Study of Public Attitudes Toward Health Care and Health Care Issues—October 1977, in American Medical Ass'n, Health Care Issues: Physician and Public Attitudes 75, 78 tbl. 42 (1978).


86 See, e.g., Robert S. Stern et al., Diagnostic Accuracy and Appropriateness of Care for Seborrheic Keratoses: A Pilot Survey of an Approach to Quality Assurance for Cutaneous Surgery, 265 JAMA 74, 74 (1991) (noting that although surgery to remove cutaneous lesions involve limited costs, the "large volume" of such procedures renders them appropriate candidates for cost-containment).

87 See National Ctr. for Health Statistics, U.S. Dep't of Health and Human
reproduction, including procedures to assist delivery, Caesarean sections, repair of obstetrical lacerations, and hysterectomies.  

Rationing discussions often focus on relatively uncommon procedures such as heart, lung, and liver transplants. At present, these extraordinary and highly expensive procedures involve relatively few people because of the difficulty of organ procurement. Thus, expenditures on these high cost procedures remain small and are not a serious threat to the overall health budget. Advances in surgery and in the acquisition and preservation of organs could significantly increase the number of potential recipients. The experience of the Medicare End Stage Renal Disease (ESRD) Program suggests that potential growth of such programs will result from improvements in medical and surgical techniques and the availability of a financing source. This program which covered 16.6 thousand enrollees at an expenditure of $184 million in 1974 is estimated to have covered 93.6 thousand enrollees in 1991 at a cost of $3.7 billion. As the program grows, the enrollees covered have become older and sicker and have more comorbidity and less potential for rehabilitation.  

The experience of the Medicare ESRD Program has shown that the availability of an entitlement to a procedure under Medicare encourages aggressive treatment even though the benefits may be questionable. The quality of life that can be anticipated in these critical situations depends on the medical circumstances of the patients and their motivation to struggle with their condition. Age,
for example, is clearly associated with the extent of comorbidity and patient condition. Yet, because of the large variance in both condition and motivation of members of any age group, age alone cannot serve as a proxy.\textsuperscript{94} Thus, once an entitlement to medical care becomes available, decisions about treatment must depend on careful clinical and psychosocial judgments of patient condition and motivation.

A core dilemma of such decisionmaking is the difficulty of distinguishing clinical judgments from normative assessments and the extent to which these issues become intermingled in an implicit rationing process. Physicians commonly project their own values onto their patients in making judgments about patient motivation, capacity, function, and quality of life. Thomas Halper, for example, offers numerous examples in which physicians made unwarranted assumptions of who would or would not benefit from treatment based on judgments of intelligence, involvement in gainful employment, and worthiness.\textsuperscript{95} Such judgments, however, are not explicit, but are deeply embedded in the processes of clinical decisionmaking and are thus not open to discussion or review.

The dilemma faced by physicians in making implicit rationing decisions is similar to the dilemma underlying the "defensive medicine" claim in the malpractice area. Physicians commonly complain of wasteful use of expensive modalities that they deem necessary to protect themselves against allegations of malpractice.\textsuperscript{96} Failure to perform these procedures, however, involves a risk because other informed physicians believe these procedures to be necessary for competent treatment and will testify accordingly. The dilemma arises from the uncertainty associated with defining what constitutes a reasonable quality of care and whether nonperformance of particular tests and procedures that rarely yield new information or positive outcomes is justifiable. In rationing, as in malpractice assessment, it will be necessary to establish clearer

\textsuperscript{94} See generally supra notes 30-32.

\textsuperscript{95} See Thomas Halper, Life and Death in a Welfare State: End-Stage Renal Disease in the United Kingdom, 63 MILBANK MEMORIAL FUND Q. 52, 73-78 (1985). Halper notes that one "major pioneering nephrologist... declared that in selecting patients for dialysis, preference would be given not only to those with 'the qualities of reliability, common sense, and stoicism'-all of which arguably would increase the likelihood of successful treatment—but also patients with young children." Id. at 74 (citation omitted).

\textsuperscript{96} See PATRICIA M. DANZON, MEDICAL MALPRACTICE: THEORY, EVIDENCE, AND PUBLIC POLICY 146-49 (1985).
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norms defining the appropriate thresholds for additional diagnostic interventions. Everyone agrees that it makes little sense to perform a CAT scan on every patient with a headache. It is more difficult, however, to achieve a consensus on appropriate utilization boundaries.

The interconnections between social norms and medical assessments reflect the fact that doctors have social as well as technical medical functions. We expect them to become involved in the patient's world and in how the social and psychological context shapes the course of illness and treatment. Therefore, the danger is not so much that physicians consciously impose their values on patients who come from different life circumstances, but that their normative judgments are so taken for granted that they are no longer subject to circumspection. Although some inequities can be reduced by sensitizing and educating doctors about social and ethical dilemmas, by encouraging peer questioning, and by making patients more equal partners in decisionmaking, this danger is the price of professional discretion.

Thus, initially, the threshold decision of whether to provide a new entitlement is clearly an issue with political implications and consequences. However, once the entitlement is available, the most constructive way of controlling the cost of the entitlement is to constrain supply and allow expert professionals to allocate treatment. This is not to say implicit rationing does not have some serious difficulties. Allocation of services through clinical judgment of patient condition and motivation requires built-in safeguards for resolving contested cases, but as a medical care rationing approach it offers the most realistic model for dealing with the complexities and uncertainties of clinical situations.97

97 In this Symposium, Hall and Anderson argue that the best alternative for resolving disputes concerning coverage is to “specify a decisional process as an alternative to litigation.” Hall & Anderson, supra note 54, at 1683. They also offer a detailed model of how such an approach might be applied. Hall and Anderson’s suggestions for insurance contract revisions are fully consistent with the regulated implicit rationing model advocated in this paper. However, the dispute resolution process they advocate does not address the question of who initially makes the determination of whether a patient is eligible for a particular procedure. I argue that such decisions are better made by clinicians than plan administrators or regulators. Once such decisions are made by clinicians, the mechanisms suggested by Hall and Anderson could be used to adjudicate disputes between patients and physicians.
D. What Can We Learn From International Comparisons?

The most widely discussed and influential study of rationing, by Henry Aaron and William Schwartz, compared how England and the United States managed a range of technologies and treatments.\textsuperscript{98} Large differences in the uses of various treatments and technologies were reported, but the extent of rationing depended on the area of concern. Treatment for hemophilia, radiation therapy, and chemotherapy for cancer were used with comparable frequency in the two countries.\textsuperscript{99} Similarly, the frequency of hip replacement did not vary much, although the waiting period was longer in England.\textsuperscript{100} In contrast, coronary artery surgery was ten times more frequent in the United States, and dialysis and uncertain cancer treatments were less frequently utilized in England.\textsuperscript{101}

Interpreting these results requires some understanding of context of health care provision in each country. Aaron and Schwartz selected England, a Western nation with highly constrained investment in its health sector.\textsuperscript{102} At the time of the study, hospital expenditures per capita were less than half of those in the United States, largely as a result of a relatively low investment


\textsuperscript{99} See id. at 37-50 (noting that differences in the frequency of hemophilia treatments in the two countries are due to differing medical approaches rather than resource limitations, that the demand for radiotherapy is being met in both countries, and that both approach certain cancers—treatable metastatic tumors and prostatic and breast carcinoma—with about the same frequency).

\textsuperscript{100} See id. at 59 (noting that “the British do about three-quarters to four-fifths as many total hip replacements and nearly as much hip surgery of all kinds as Americans,” and analyzing the reasons for long waiting lists).

\textsuperscript{101} See id. at 64, 32-33, 48 (stating that while “U.S. surgeons did about 490 coronary artery bypass operations per million population in 1979, British surgeons did about 55 per million in 1977,” that “virtually every patient suffering from chronic kidney failure is treated in the United States, whereas most in Britain are not,” and that “[o]ncologists with experience in both countries estimate that, in general, the rate of treatment of solid tumors in Britain is only one-fifth or one-sixth as high as in the United States”).

\textsuperscript{102} In 1989, England invested 5.8% of its gross domestic product on health expenditures, in contrast to 11.8% in the United States and 8.7% in Canada. See George J. Scheiber et al., Health Care Systems in Twenty-four Countries, HEALTH AFF., Fall 1991, at 22, 24 exhibit 1. Among 24 member countries in the Organization for Economic Cooperation and Development (OECD), only Greece (5.1%) and Turkey (3.9%) had a lower level of health care investment. Id.
in technology. However, by selecting relatively expensive technological approaches—several of dubious value in reducing mortality or improving the quality of life—the study offers only a partial comparison. For example, England guarantees everyone access to a general practitioner, while millions in the United States face significant access barriers to primary medical care services. The United States, on the other hand, aggressively uses expensive technologies, which are more prevalent because of the incentives in fee-for-service and procedure-based reimbursement. Moreover, within Britain's health care budget, significant priority is given to the social care of the mentally ill and frail elderly persons, areas in which the U.S. health care system has major deficiencies. In contrast, the U.S. severely rations the availability of public services for persons with psychiatric disabilities, substance abusers, and other populations with extensive disabilities. Had Aaron and Schwartz chosen a different sample of health services, a somewhat different picture of the rationing processes might have been conveyed.

103 See AARON & SCHWARTZ, supra note 98, at 6 (stating that "per capital hospital expenditures are now less than half as large as those in the United States, even after adjustment for salary differences").


105 See GLASER, supra note 55, at 139-45.

106 See DAVID MECHANIC, MENTAL HEALTH AND SOCIAL POLICY 14 (3d ed. 1989) (noting that the seriously mentally ill are underinsured and underserved); THE PEPPER COMM'N, supra note 104, at 21-25. As an editorial in the British Medical Journal noted:

It is a mistake to concentrate exclusively on a number of procedures . . . for this risks giving a distorted picture of the health care system as a whole. Rationing not only concerns decisions about what resources to devote to individual patients; it also entails decisions about how to ration resources between different groups of patients. The NHS forces explicit choices about the relative priority to be given to the acutely ill, the mentally ill, the old, and the young. Unfortunately, Aaron and Schwartz ignore this dimension, with the result that they present what is at best an incomplete balance sheet.


107 See MECHANIC, supra note 106, at 143-44; see also E. FULLER TORREY, NOWHERE TO GO: THE TRAGIC ODYSSEY OF THE HOMELESS MENTALLY ILL 5-6 (1988) (discussing the tragic effects of deinstitutionalization of the mentally ill); David Mechanic & Linda Aiken, Improving the Care of Patients with Chronic Mental Illness, 25 NEW ENG. J. MED. 1634, 1635 (1987) (noting the serious deficiencies in community care for the chronically mentally ill).

Even patients who have private insurance coverage typically have limited benefits that require extensive cost-sharing. See Jo Brady et al., Trends in Private Insurance Coverage for Mental Illness, 143 AM. J. PSYCHIATRY 1276, 1278 (1986).
Nevertheless, Aaron and Schwartz provide a valuable analysis of the influences that result in different degrees of rationing. These influences include the age of the patient, the nature of the disease, the visibility of the disease, public advocacy, aggregate cost implications, need for capital outlays, and costs of alternatives to active care. They observe that the British disproportionately invest their health funds in children—119% of expenditures per adult, as compared with the United States’ 37%. Analysts in the United States have been critical of the relatively low investment in the health care of children, attributing the situation in part to the comparative disadvantage of advocates for children relative to the elderly in making claims within our political process. The high rates of voter participation and political organization among the elderly constitute a powerful political force and the U.S. health care system is thus heavily weighted in the direction of elderly care. In contrast, the British government has limited the capacity to provide dialysis to ESRD patients based on a clear relationship between age and restricted access. Although the British have no formal cutoff period by age, Aaron and Schwartz found, during the period of their study, that patients over age fifty-five were rarely seen as candidates for dialysis.

1. Rationing by Age

The reluctance of British general practitioners and medical specialists to refer older patients because of limited treatment capacity resulted in an implicit age criterion in health care rationing. The extent of knowledge of the current state of treatment, links to specialists in nephrology units, and judgments on who could benefit from treatment and how much treatment patients would

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108 See AARON & SCHWARTZ, supra note 98, at 97-99 (outlining the factors that affect rationing).
109 See id. at 97.
110 See Samuel H. Preston, Children and the Elderly: Divergent Paths for America’s Dependents, 21 DEMOGRAPHY 435, 445-48 (1984) (arguing that the elderly have gained power relative to children in all areas that determine political influence).
111 See AARON & SCHWARTZ, supra note 98, at 97 (noting “[t]he low incidence of chronic dialysis among the elderly with renal failure” as an example of rationing based on age).
112 See id. at 34 (stating that in Britain for patients with kidney failure between ages fifty-five through sixty-four, the rate of treatment is about one-third, and for patients over sixty-five, less than one-tenth, that of patients in France, West Germany, and Italy).
receive varied among these non-nephrologists. Patients motivated to receive treatment, regardless of age, who were sufficiently aggressive, and who received the support of a referring physician, might receive treatment given the informality of the referral process.\textsuperscript{113} Referring doctors, aware of resource realities, were less likely to try to achieve referral of more frail patients, thus Informally helping to adjust demand to capacity.\textsuperscript{114} Aaron and Schwartz reported considerable discomfort among general practitioners who were advising elderly patients with ESRD that little could be done.\textsuperscript{115}

The conclusions reported by Aaron and Schwartz on age rationing have commonly been exaggerated. In comparing Britain with Italy, West Germany, France, and the United States, they reported that as age increased, the disparity in rates of dialysis between Britain and these other nations increased.\textsuperscript{116} Data reported on renal replacement therapy in Newcastle upon Tyne, however, for the period of 1974 to 1985, suggests a growing proportion of unit patients over age sixty due in part to changing technology and attitudes.\textsuperscript{117} In the mid-1970s, only 2.2\% to 7\% of patients initiating treatment were over age sixty; by 1985, such patients starting treatment constituted more than one-third of all patients on dialysis.\textsuperscript{118}

Non-nephrologist discretion within the British implicit rationing approach serves a variety of functions. It allows a general practitioner or medical specialist to take into account not only chronological age, but also the health status and robustness of the individual and the potential benefits that dialysis might offer under varying circumstances. It also allows for some flexibility in responding to

\textsuperscript{113} See id. at 107-08 (noting the options of second opinions, use of hospital emergency rooms, seeking out the specialist directly, and exploiting geographical differences in health care resources).

\textsuperscript{114} See id. at 104 (noting for example, the infrequency of the elderly’s referrals for kidney dialysis and that “[b]y not referring the patient, the doctor spares the nephrologist from having to say no and the patient and family a painful rejection”).

\textsuperscript{115} See id. (reporting that refusing kidney dialysis treatment is always difficult, but becomes easier if the doctor can convince “himself that the patient is unsuitable because he is ‘a bit crumbly’”).

\textsuperscript{116} See supra note 112.

\textsuperscript{117} See J.S. Tapson et al., Renal Replacement Therapy in Patients Aged Over 60 Years, 63 POSTGRADUATE MED. J. 1071, 1076 (1987) (noting that the introduction of continuous ambulatory peritoneal dialysis (CAPD) in 1978 was primarily responsible for this growing acceptance of the elderly into dialysis and reporting that survey results indicate that patients enjoy life on dialysis more than is commonly thought).

\textsuperscript{118} See id. at 1072 fig. 1.
patient and family motivation and persistence in seeking treatment and tensions that develop in the clinical situation.

Alternatively, the British could have used an explicit rationing approach by establishing formal criteria, which strictly rationed by age. While such a measure might have provided an illusion of equity with respect to age, it would have been difficult to administer. Moreover, the British public would have found such a clear formal mandate conceptually unacceptable.119 It is one matter to consider age tempered by thoughtful clinical judgment; it is quite another to impose an inflexible blanket age rule.

Daniel Callahan has suggested that we place limits "on the length of individual lives that a society can sensibly be expected to maintain . . . ."120 He urges us to desist from pursuing goals that primarily benefit the elderly because they will result in increasing disparity between our aspirations and our ability to meet them.121 His contention that the elderly should die gracefully, without undue demand on the "medical commons," is flawed by its dependence on chronological age as an explicit criterion.122 People age in varying ways, and members of any given age group are heterogeneous with respect to physical health status, psychological well-being, and ability to carry out daily living tasks. Thus, even though chronological age is a convenient administrative marker and formal age rules have the appearance of equity, large inequities become evident when circumstances other than chronological age are considered.123

Many elderly persons have extraordinary capacities, extensive and intimate social ties, and a great zest for living. Unfortunately, attempts to define these capacities as criteria explicitly in any reasonable way is extremely difficult and likely to frustrate even the most expert administrative authority. Therefore, even though the use of medical criteria for assessing the value of an uncertain

119 Some years ago, the medical director of an NHS hospital posted a directive that patients over 65 years of age were not to be resuscitated. Michael B. Stevens, Withholding Resuscitation, 33 AM. FAM. PHYSICIAN, Jan. 1986, at 207 (1986). This resulted in a major public uproar and the immediate recision of the directive. Id.
120 See Daniel Callahan, Adequate Health Care and an Aging Society: Are They Morally Compatible?, DAEDALUS, Winter 1986, at 247, 266.
121 See id. at 248-49.
122 See David Mechanic, Health Care and the Elderly, 503 ANNALS AM. ACAD. POL. & SOC. SCI. 89, 94-95 (1989) (critiquing Callahan’s focus on age as a criterion for medical care).
intervention may result in fewer interventions for the elderly, the criteria should remain the physician-determined effectiveness of the intervention and its likely benefits on a case-by-case basis.

2. Explaining American-British Differences

Aaron and Schwartz offer a variety of plausible hypotheses to explain why American and British practices diverge more in some areas than others, but some of these post hoc explanations are not persuasive. For example, they suggest that the similarity in cancer therapy between the two countries reflects the fear that cancer inspires in the public. Similarly, they argue that public responses to the visibility of suffering accounts for comparable responses for hemophilia relative to the large differences in the use of coronary bypass surgery.

There are numerous examples suggesting that fear of illness and visibility of suffering are inadequate or incomplete explanations for the differences in treatment approaches between the two nations. Such diseases as schizophrenia and Alzheimer's disease are fearsome and highly visible, yet they have not resulted in comparable British and American efforts to ensure the essential services needed. The British tend to be utilitarian in orientation while Americans tend to be aggressively interventionist. The British have given a higher priority to non-interventionist care for the fragile elderly and the chronic mentally ill than has the American health care system. This prioritizing reflects a greater concern in British society for the caring dimensions of health interventions. The relatively low rate of coronary bypass surgery, CAT scans, and uncertain cancer interventions in England substantially reflects resource constraints, but also reflects skepticism of the true need and value of these

124 See AARON & SCHWARTZ, supra note 98, at 97 (terming cancer a dread disease and positing that fear of cancer results in its receiving a disproportionate allocation of medical resources).

125 See id. at 98 (reasoning that “people do not like visible misery” and “are made uncomfortable if they must watch severe and untreated suffering”).

126 See LYNN PAYNER, MEDICINE AND CULTURE 125 (1988) (stating that American doctors do more diagnostic testing, perform more surgery, and prescribe higher doses of medication than their British counterparts).

interventions. In addition, the British response reflects widespread belief that these procedures are overutilized in the American context, often because of economic incentives.¹²⁸

One utilitarian approach to rationing is to extend care more widely, but to narrow the range of available services to those services believed to be most important or effective. In 1989, Oregon passed legislation extending Medicaid to a larger population while providing a new and more restrictive selection of benefits to a subset of Medicaid recipients. The Oregon plan divided medical services into 709 categories, but anticipated that only the first 588 would be reimbursed. Earlier drafts of this priority list were greatly criticized, partly for violating the "rule of rescue."¹²⁹ The initial list of conditions rated minor treatments more highly than some life-saving measures, ostensibly reflecting cost-effectiveness considerations. For example, tooth capping was given a slightly higher priority rating than surgery for ectopic pregnancy or appendectomy, procedures that could be life-saving.¹³⁰

Commenting on Oregon's utilitarian approach, David Hadorn notes that "there is a fact about the human psyche that will inevitably trump the utilitarian rationality that is implicit in cost-effectiveness analysis: people cannot stand idly by when an identified person's life is visibly threatened if effective rescue measures are available."¹³¹ Hadorn makes an important point but overstates it. It is unlikely the public will accept an explicit directive that withholds a life-saving procedure, preferring instead comparable decisions to withhold services case-by-case in clinical transactions.¹³² The British system of rationing functions with little conflict because it incorporates normative judgments as part of the

¹²⁸ See AARON & SCHWARTZ, supra note 98, at 48-49 (noting that fee-for-service payment creates incentives for U.S. surgeons to perform coronary bypass surgery and for U.S. doctors to treat incurable metastatic cancer, and that many health economists and planners think that the U.S. has overinvested in CAT scanners and that unnecessary x-rays are often performed).

¹²⁹ See David C. Hadorn, Setting Health Care Priorities in Oregon: Cost-effectiveness Meets the Rule of Rescue, 265 JAMA 2218, 2219 (1991) (describing the powerful influence of the rule of rescue, which refers to people's perceived duty to save endangered life whenever possible).

¹³⁰ See id.

¹³¹ Id.

¹³² See supra note 119.
process of clinical decisionmaking.\textsuperscript{135} The public seems better prepared to allow such decisions to evolve in relationships between patients and their physicians.

The "rule of rescue" and the fact that such rescues involve modest aggregate costs is a more credible explanation for the full treatment of hemophilia in England than the one provided by Aaron and Schwartz. As of 1984, there were fewer than 100 new cases of hemophilia diagnosed each year in Britain, and the costs of treatment were reported to be in the $10,000-20,000 range.\textsuperscript{134} In contrast, the number of patients and potential aggregate costs involved in dialysis are substantially greater.\textsuperscript{135} As the extent of rationing of dialysis by age became more widely known—probably in part due to the publicity generated by the Aaron and Schwartz book—the British government responded by expanding dialysis capacity. The number of patients treated for ESRD in Britain increased from 153 to 242 per million population between 1983 and 1986.\textsuperscript{136} This response indicates that the ability of the British bureaucracy to maintain constraints depends substantially on the insulation of its decisions from the political process.

The American public would not accept the constraints typical of the British system, nor can we insulate budgeting decisions from the political process as successfully as the English. Interest group pressure is likely to play a more significant role in the United States. The politics of priority setting and investments in research, technologies, and services are routinely influenced by advocacy organizations. For example, aggressive advocates have gained coverage of ESRD by Medicare, illustrating a form of selective coverage widely viewed as a poor example of how to devise health policy.\textsuperscript{137} A recent effort to discontinue the National Institutes

\textsuperscript{135} See Halper, \textit{supra} note 95, at 79 (noting that in the clinical setting, patients will be agreeable to physician decisions because they view them as medical rather than political).

\textsuperscript{134} See AARON & SCHWARTZ, \textit{supra} note 98, at 98 (noting that low numbers exempt this group from rationing).

\textsuperscript{136} See id. at 32-33 (noting that 69 people per million were in dialysis and 56 per million had transplants in 1980, and that the "cost of hemodialysis in Britain in 1977 averaged $18,000 in hospitals and $11,500 at home").

\textsuperscript{137} See HEALTH CARE FINANCING REV., Dec. 1989, at 174 tbl. 47 (Supp.) (tabulating the number of patients treated for end stage renal failure by country from 1970 to 1987).

\textsuperscript{137} See INSTITUTE OF MEDICINE, \textit{DISEASE BY DISEASE: TOWARD NATIONAL HEALTH INSURANCE?—REPORT OF A PANEL: IMPLICATIONS OF A CATEGORICAL CATASTROPHIC DISEASE APPROACH TO NATIONAL HEALTH INSURANCE} 7 (1973) (objecting to a disease-by-disease approach primarily because of equity concerns and the fear that as more
of Health research program on the artificial heart was rejected by Congress in response to vigorous and influential advocates.\textsuperscript{198} American health care is meticulously scrutinized by a wide range of interest groups and the mass media. For example, the close scrutiny of developments in AIDS research by advocacy groups allows them to influence how the condition is defined, the manner of carrying out and regulating clinical trials, the availability and pricing of drugs, and other relevant public health policies.\textsuperscript{139} Similarly, the media is likely to remain vigilant, keeping close check on emerging knowledge and technology as well as on the rapidity of their application. Thus, as the American system moves toward more serious rationing, it is likely to do so under the intense scrutiny of an interested and informed public.

III. MAKING IMPLICIT RATIONING SYSTEMS ACCOUNTABLE

Implicit rationing is often insulated from public view and is thus susceptible to abuse. One advantage of explicit decisions is that they are visible and can be debated in the media and other forums. The public nature of explicit rationing, however, is easily exaggerated; many administrative decisions are highly technical and do not attract public attention. Powerful interest groups with high levels of technical expertise commonly negotiate compromises outside the view of other interested parties with less expertise and access to the political process.\textsuperscript{140} Many factors contribute to disparities in access including the existing distribution of health facilities, the varying capacities of institutions to apply new technologies and to attract new programs and grants, the preferences and vocational decisions of health professionals, and the politics of the budgeting

diseases are covered, medical resources would be skewed in the direction of expensive technologies).

\textsuperscript{198} See Janny Scott, Lobbying Blitz Seen Behind Restoring of Funds for Artificial Heart Research, L.A. TIMES, July 8, 1988, § 1, at 3 (reporting that the National Heart, Lung, and Blood Institute restored funds for the program upon threat of Senate retaliation via specific limits on how federal research money can be spent).


\textsuperscript{140} See, e.g., RONALD A. CASS & COLIN S. DIVER, ADMINISTRATIVE LAW, CASES AND MATERIALS 359-63 (1987) (discussing how special interest groups influenced the standards set by the EPA for coal emissions). Inevitably, administrative decisions are politicized and this often results in geographic variations in resource allocation and differential access. See id.
process itself. In sum, there is little evidence to support the idealized notion that an explicit budget process inevitably levels the playing field.

A. Achieving Accountability

An accountable implicit rationing system must meet three initial conditions to some extent. First, mechanisms must be in place to restrain variabilities in practice that cannot be justified by differences in the morbidity of patient populations or by clinical uncertainty. As noted throughout, while the boundaries of treatment will have to remain flexible because much remains to be learned about what is truly good practice, physician groups must, at the very least, regulate peers who transcend any reasonable or professionally justifiable basis for unusual practices. Second, physicians must agree to and support remunerative arrangements that use incentives to encourage balanced and effective care. Third, physician groups must be vigilant to ensure that services are allocated fairly, based on need and not in response to the most sophisticated, aggressive, and demanding patients. Increased sensitivity to this issue and clear norms reinforced by physician peer groups and outside review can reduce differential treatment according to

141 Despite its focus on equity issues for several decades, the NHS continues to have disparities in the distribution of facilities and practitioners, access to hospitals and other types of care, and health outcomes by socioeconomic status. See DOUGLAS BLACK ET AL., INEQUALITIES IN HEALTH: THE BLACK REPORT 51-64 (1982).

142 As Hall and Anderson properly note:

[W]hile it may be possible to identify clearly unwarranted procedures or specific applications of useful procedures where care is unwarranted in specific circumstances, no listing can possibly be detailed enough to cover all of the permutations that could possibly occur. Health status and patient preferences are simply too varied to practice medicine entirely by cookbook or computer. Hall & Anderson, supra note 54, at 1685 (footnote omitted). "[M]edicine is much too complex for anyone to specify a complete 'cookbook.' Although explicit rules for delivering health care may be useful, at some point physicians must be given discretion . . . ." Contractual Arrangements, supra note 83, at 148.

143 The cooperation of the American Medical Association and other medical groups in the development of a resource-based relative-value approach to physician payment reflects the possibilities for joint activities among organizations with varying interests. However, continued collaboration was jeopardized as a result of implementation decisions by the Health Care Financing Administration which would have resulted in large reductions in physician remuneration. For an analysis of the issues, see Philip R. Lee & Paul B. Ginsburg, The Trials of Medicare Physician Payment Reform, 266 JAMA 1562 (1991).
socioeconomic status, race, gender, or other personal characteristics.

1. Deterrents to Withholding Beneficial Services

On the margins economic incentives work, although the professionalism of most physicians moderate their influence. Regardless of professionalism claims, however, implicit rationing is partly acceptable because most physicians—by training and inclination—are highly professional, resist inappropriate organizational pressures, and practice at a high ethical level. Personal remuneration arrangements that improperly modify medical decision-making by providing economic incentives to doctors to withhold services should be prohibited. Comparable concerns apply to fee-for-service practitioners whose decisions to do more in marginal situations are affected by payment incentives. Patients are in a somewhat better position to refuse unwanted services or ask for second opinions in fee-for-service settings. In contrast, most patients may not even be aware of treatment possibilities when services are withheld. Therefore, deterrents to withholding services require closer scrutiny and regulation.

Although the tort system has many deficiencies, the threat of malpractice may also help deter denial of obvious beneficial services. Americans typically expect aggressive intervention, and denial of an essential service is grist for the malpractice mill. Furthermore, because standards in the United States are high, courts and juries are unlikely to be sympathetic to the denial of

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144 See John M. Eisenberg, Economics, 265 JAMA 3113, 3114-15 (1991) (summarizing recent research and concluding that "there is some response by physicians to financial incentives, but the precise pattern of these responses has not yet been clearly elucidated").

145 See Alan L. Hillman, Financial Incentives for Physicians in HMOs: Is There a Conflict of Interest?, 317 NEW ENG. J. MED. 1743, 1748 (1987) (noting that the "physician's natural inclination is to act on behalf of the patient, and they react to other stimuli than the purely economic").

146 See id. at 1747-48. For instance, a 1987 survey reported that 23% of for-profit plans put primary care physicians at individual personal risk for exceeding targets. See id. at 1746. Concern about inappropriate withholding of services led Congress in the Omnibus Budget Reconciliation Act (OBRA) "to prohibit HMOs from making incentive payments to physicians that might reduce the use of health care services . . . . Ensuing debate about the meaning and the feasibility of regulating 'bad' incentives led to postponement of the implementation of this law . . . ." Contractual Arrangements, supra note 83, at 196.

services known to be efficacious. Alternative mechanisms can also be developed to allow disaffected patients to appeal the refusal of a service they believe to be necessary. Such mechanisms would contribute to reducing doctor/patient tensions and would provide a window for monitoring decisionmaking at the margins.

All systems of implicit rationing, such as HMOs, should have highly visible, accessible, and easily usable grievance mechanisms that facilitate the review of denials of service that patients believe they should receive. These mechanisms might be structured as a hierarchy of procedures ranging from the highly informal to more formal adjudication. The process might begin with an ombudsperson who negotiates disagreements between patients and their providers, with unresolved issues reviewed by an institutional committee representing the plan, clinicians, and patients. Such procedures could serve as a buffer against litigation that is slow and costly for all involved, and does not typically result in an equitable resolution of conflicts.

A major protection against underservice is careful review and periodic audits in problematic areas of care. As physicians become more aware of sharing a "medical commons," they will have a greater stake in ensuring that resources are used wisely and effectively. To the extent that physicians must consciously function within such constraints, they will be more thoughtful about aggressive care when the value of intervention is uncertain. Physicians prefer action, but functioning under implicit constraints can temper these inclinations, particularly if the action is of little or no value. One risk is that physicians as a group may adopt highly conservative norms that restrain colleagues whose best judgment leads to more interventionist practices. At present, however, American medical care is aggressively interventionist and the dangers of restraint are more theoretical than real.

148 Hall and Anderson note: "[N]o matter how much discretion a contract gives the insurer, courts will never dispense with a level of review entailing at least a showing of minimum rationality and substantial evidence, concepts that are well articulated in administrative law and constitutional due process jurisprudence." Hall & Anderson, supra note 54, at 1673 (footnote omitted).

149 Alternatively, Hall and Anderson suggest the possibility of arbitration for dispute resolution. They note that "[d]emocratic dispute resolution is particularly attractive because this mitigates the conflict of interest of the insurer or self-insured employer at the same time that it preserves the group perspective of a pool of insured subscribers." Id. at 1696.
2. Deterrents to Providing Unwanted Services

The attraction of American doctors to technology, even when there are no benefits, requires intense scrutiny. Electronic fetal heart rate monitoring (EFM) was introduced in 1969 and was widely adopted, replacing the traditional method of auscultation in most obstetrical units. Many randomized controlled trials showed this technology to have no value beyond traditional methods and to have some possible disadvantages in that it occasionally leads to exaggerated assessments of fetal distress. One consequence is an increased number of Caesarean sections and forceps deliveries. Defenders of the technology believed its value would be more evident in the case of premature infants, but a randomized controlled trial did not confirm this. Instead, low birth weight infants who had EFM had increased risk of cerebral palsy as compared to those assessed by the traditional method.

A similar situation occurs in providing highly technological efforts to delay the end of life. This technology incurs substantial costs when many patients and their families would prefer a less dramatic and less prolonged death. There is increasing public interest in living wills, medical powers of attorney, and related concepts, and studies suggest that a majority of persons believe they would not choose life-sustaining treatment if they had a poor prognosis. Physicians remain resistant to discussing “do-not-

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151 See id. at 187 (stating that EFM is “vulnerable to abandonment in the future since its beneficial effects on patient outcomes are not well documented”).
152 See Randall S. Stafford, Alternative Strategies for Controlling Rising Caesarean Section Rates, 263 JAMA 683, 684 fig. 1 (1990) (reporting that between 1970 and 1987, the rate of all deliveries by Caesarian section increased from 5.5% to 24.4%). One might speculate how the introduction of technology might interfere with the provision of emotional support during labor. See John Kennell et al., Continuous Emotional Support During Labor in a U.S. Hospital: A Randomized Controlled Trial, 265 JAMA 2197, 2201 (1991) (reporting that such support decreases obstetric interventions including Caesarean sections and forceps deliveries and the need for epidural anesthetic, and is associated with shorter duration of labor and a lower rate of maternal fever).
153 See Kirkwood K. Shy et al., Effects of Electronic Fetal-Heart-Rate Monitoring, as Compared with Periodic Auscultation, on the Neurologic Development of Premature Infants, 322 NEW ENG. J. MED. 588, 593 (1990) (finding that EFM “did not improve the neurologic development of children born prematurely”).
154 See id. at 592 (suggesting that this might be related to the early age at which the diagnoses were made).
155 See, e.g., Linda L. Emanuel et al., Advance Directives for Medical Care—A Case for Greater Use, 324 NEW ENG. J. MED 889, 891 (1991) (surveying patients’ attitudes
resuscitate” orders and related concerns with their patients, a type of interaction which they find uncomfortable.\textsuperscript{156} Similarly, many patients prefer less aggressive treatment alternatives than many physicians are inclined to provide. When patients are actually given options, many choose more limited approaches than physicians would have anticipated.\textsuperscript{157} There is ample opportunity to involve patients to a much larger degree in choices about their own treatment. The growing interest in assisted death reflects increasing public unease with the perils of medicine's technological imperative.

One example of a highly expensive modality is intensive care, which costs approximately four times more per day than an ordinary hospital stay.\textsuperscript{158} If every seriously ill patient received intensive care, the aggregate costs would be extremely high. It makes little sense to use this expensive modality for patients whose prognosis is clearly hopeless or for those with little expected future quality of life. Nor is it justifiable for patients who are likely to do equally well with less intensive and expensive care.\textsuperscript{159}

Intelligent treatment and referral decisions depend on solid knowledge of what works and what is cost-effective. Our current knowledge is too uncertain to set specific criteria for admission and

towards medical intervention in four progressively worse scenarios and finding that an average of 71% of patients would refuse medical intervention).
\textsuperscript{156} See Susanna E. Bedell & Thomas L. Delbanco, Choices About Cardiopulmonary Resuscitation in the Hospital: When Do Physicians Talk With Patients?, 310 NEW ENG. J. MED. 1089, 1091 (1984) (noting that many physicians feel that it is the job of the doctor to make resuscitation decisions).
\textsuperscript{157} See John E. Wennberg, Outcomes Research, Cost Containment, and the Fear of Health Care Rationing, 323 NEW ENG. J. MED. 1202, 1203 (1990) (commenting that patients are more “averse to risks” than physicians).
\textsuperscript{158} See Paul E. Kalb & David H. Miller, Utilization Strategies for Intensive Care Units, 261 JAMA 2389, 2391 (1989) (reporting that estimated ratios range from 3.5:1 to 5:1).
\textsuperscript{159} There are clinical costs as well as benefits in intensive care. For example, for some patients the risks of iatrogenesis may substantially outweigh the possible benefits of more intensive monitoring. As Max Weil notes about intensive care, it is not without risk. In discussing the use of the Swan-Ganz catheter, he notes:

It provides us with some very helpful information not otherwise available. But in 2-3 percent of all cases, . . . [it] produces a pulmonary infarct—death of lung tissue which, under conditions of other critical illness, may of itself curtail the patient’s chance of survival.

Such catheters, if kept in place for six days, not only begin to lose their utility but to [sic] cause a variety of complications, such as infections and blood clots. And the cost of keeping the catheters in place for six days is estimated to be 2 percent of the patient’s life . . . .

Max H. Weil, Alternatives to Rationing, in RATIONING MEDICAL CARE FOR THE CRITICALLY ILL 17, 18 (Martin A. Strosberg et al. eds., 1989).
discharge, but research on outcomes may inform decisions about the value of alternative interventions. Even the most sophisticated clinical trials, however, are limited to select groups of patients who meet study criteria and may not represent the populations that physicians may typically see. Thus, even when rigorous research results are available, determining their applicability to patients with different social and clinical characteristics involves extrapolation. Over time, models, based on refined medical criteria, are likely to develop. Because of variation in the circumstances of patients, these models cannot be mechanically applied, but they can provide guidance for physicians to consider as they struggle with clinical decisions under uncertainty.

B. Tragic Choices

The allocation of scarce resources, as in the case of organ transplantation, is not prototypical of the majority of rationing decisions made within our vast health care system. Decisions about the allocation of scarce life-saving resources, however, will become more common with technological advances and will receive a great deal of publicity. These decisions detract attention from the far more numerous circumstances under which more routine types of rationing occur.

The problem with the dramatic case of who gets the heart and lung transplant among equally medically eligible recipients is that there is no answer, and resolution requires an arbitrary decision among competing values. To the extent that predictive medical models can be improved it may be possible to make finer biological gradations in ranking those most likely to benefit. The discriminations, however, may become so small as to have little practical import. Maintaining the illusion that only medical criteria are operative makes it possible to avoid agonizing choices among competing values.

An alternative, of course, in deciding among equally medically eligible recipients is simply to distribute available shares by lottery. Although a lottery offers the only fair resolution among conflicting values, it encounters great resistance from the public and profes-

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160 See William A. Knaus, Criteria for Admission to Intensive Care Units, in RATIONING OF MEDICAL CARE FOR THE CRITICALLY ILL, supra note 159, at 44, 44-51 (suggesting a framework for controlling admission to intensive care); Knaus et al., supra note 30, at 389 (recommending the use of probability estimates to guide clinical decisions).
sionals who prefer criteria of worthiness for these extraordinarily expensive decisions. If we choose to discriminate among recipients on some worthiness criteria, it is imperative that this be done by a fair and legitimate process that incorporates a wide range of competing viewpoints.

CONCLUSION

Societies will expend enormous resources to rescue persons trapped in a mine, lost at sea, and on many other accidental occasions. Such rescues are symbolic, affirming the value of life and the commitment of the community to individuals in distress. It seems likely that if such accidents occurred more routinely, the intensity of these rescue efforts would diminish. Similarly, many new medical techniques begin as rescues and have major symbolic as well as research significance, but as these dramatic rescue efforts become viable for larger populations of patients they raise imposing allocation questions. A heart-lung transplant may cost well over a hundred thousand dollars initially with subsequent yearly costs of approximately $50,000. Our capacity to carry out very few rescues has little impact on the health care system as a whole, but if many thousands were possible the situation would change.

Rescues eventually become viable as "conventional care," and great pressures develop to insure for them. Had policy-makers realized the cost of covering ESRD under Medicare they would have entered this arena more carefully. It was inevitable that dialysis coverage would have been extended because in the American context, with its emphasis on the worth of the individual, the notion of rescue carries great weight. Once the capability is acquired, there is extensive public pressure to use it if life is at stake. Given this reality, some have suggested that we should focus our research and development investments on cost-effective technologies and on those that are cost-saving. It remains unclear that this would be politically viable given public attitudes and the pressures

161 See Richard Saltus, Heart-Lung Transplant First in State, BOSTON GLOBE, Feb. 1, 1992, at A25, A27 (quoting the Cooperative Transplantation Study's finding that "median charges for heart-lung transplants [are] $134,881").
162 See CALLAHAN, supra note 16, at 126 (noting the need to "cut the fat" in expenditures on new technology in light of the aging U.S. population).
from the various constituencies who have a major stake in current research and technological developments.

The question of how long American society can delay coming to terms with the rationing issue in an open manner remains unanswered. Each year, as costs mount and new possibilities accelerate, the notion that we can muddle along in the usual way becomes less tenable. Even if such strategies as those represented in the Oregon Plan were feasible on a broad scale, a conclusion undermined by the exclusions negotiated in Oregon's political process,\textsuperscript{164} it is not clear that the decisions can be implemented successfully in a manner that makes sense clinically. Helping is a holistic process, not easily divided into artificial categories of care. Medicine cannot ignore caring without destroying much of the value and significance of the therapeutic encounter. Given these realities, it seems most reasonable for society to set whatever constraints on medical care expenditures are politically necessary and leave micro-decisions to negotiations between patients and health professionals. These decisions, however, should be carried out in a context of universal health care in which the entire population has access to a basic, decent, minimal standard of care.

\textsuperscript{164} See Lawrence D. Brown, \textit{The National Politics of Oregon's Rationing Plan}, \textit{HEALTH AFF.}, Summer 1991, at 28, 35 (reporting criticism that because Oregon's "coalition-building strategy" exempted Medicaid recipient groups with powerful lobbies from rationing, services for the remaining 70 percent of recipients were limited to 30 percent of the budget).