# Rationing Health Care: The Choice Before Us

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**Rapid technological advances and upward pressure on wages of hospital personnel are leading to a steady increase in health care spending that is absorbing an ever-larger fraction of gross national product. Eliminating inefficiencies in the system can provide brief fiscal relief, but rationing of beneficial services, even to the well-insured, offers the only prospect for sustained reduction in the growth of health care spending. The United States, which has negligible direct experience with rationing, can learn about choices it will face from the experience of Great Britain where health care has been rationed explicitly for many years.**

RISING SALES CAUSE JOY IN MOST INDUSTRIES, BUT INcreasing outlays for health care are causing distress not only among those who must pay the bills but among health care providers themselves. After adjusting for inflation, total and per capita personal health care expenditures have risen at annual rates of 5.5 and 4.1 percent since 1950 (*1*). The proportion of gross national product devoted to personal health care has nearly tripled. Official forecasts project that the United States will be devoting 15 percent of total production to health care by the year 2000 (*2*). Successive administrations have proposed a variety of measures intended to contain medical costs, but the results have been so unsuccessful that some observers speculate that the United States may be forced to ration health care (*3, 4*).

The term "rationing" is used in two distinct senses. First, market economies persistently deny goods to those who cannot afford them. All goods, including health care, are rationed in this sense, especially for the poor and some others who face large expenses and lack insurance. Such price rationing of medical care has a long and, in our view, ignoble history in the United States. This problem affects about 15 percent of all Americans. Second, the term "rationing" is used to refer to the denial of commodities to those who have the money to buy them. In this sense sugar, gasoline, and meat were rationed during World War II. The question now being raised is whether health care should be rationed in this sense, whether its availability should be limited, even to those who can pay for it. This kind of rationing would affect the 85 percent of all Americans who currently have health insurance and any others who may later be added to their ranks. While the first question is urgently important, we shall be focusing on rationing in the second sense.

In this article, we address key questions surrounding rising health costs. Why have recent efforts at cost containment failed? Can the United States afford unlimited, high-quality care for everyone? If not, is rationing unavoidable? If so, how will it be carried out and what will be its effect on the health and lives of most Americans?

## The Economic Basis of Rising Outlays on Health Care

Standard economic theory suggests that spending on health care is excessive. According to this doctrine, when people pay less than the full cost of what they buy, they will consume more than is socially optimal unless their consumption benefits not only themselves but others. This line of argument suggests that insurance induces excessive health expenditures because people pay for only part of the cost of care.

Patients in 1987 paid, on the average, only about 10 cents of each dollar devoted to hospital care, a share that has changed negligibly for two decades. And they pay about 26 cents of each dollar paid to physicians, a share that has fallen steadily. Although these averages conceal large differences among patients, the fully insured (or those who have exceeded ceilings on patient outlays) and physicians acting in the patients' interests have the incentive to seek any service, however costly, that provides any benefits at all. Because of insurance, these decisions impose large costs on others.

## The Unavoidable Dilemma

The intersection of this payment system and three distinct features of the health care system leads inevitably to rising costs. The first and most important is technology. Diagnostic procedures and therapies that are now routine were unknown when most physicians now in practice began their training. Computed tomography, magnetic resonance imaging, nuclear medicine, organ transplants, many of the drugs for control of ulcers and of the symptoms of coronary artery disease, open heart surgery, total parenteral nutrition, and a host of other diagnostic and therapeutic procedures have been introduced or become standard in the past two decades. Other technologies, described later, indicate that the rate of innovation is not abating. Nearly all of these innovations promise to increase the number and cost of beneficial interventions.

A second factor driving up costs is the tendency for the price of services characterized by low growth in productivity to rise relative to the price of commodities (*5*). Although a day in the hospital today differs in many ways from a day in the hospital in, say, 1960, the hotel services of feeding and space rental and most services of nurses and orderlies are produced with little more efficiency than in the past.

The final factor is the aging of the population. Although the average annual cost of health care rises sharply with age, this factor

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accounts for only a minor proportion of the 651 percent growth of real personal health care outlays between 1950 and 1987 (*6*).

Each of these inflationary forces shows every sign of continuing for decades.

Many observers deny any imminent need to consider rationing. They argue instead that we can continue to provide whatever beneficial services are available if we eliminate inefficiencies and wasteful practices. But, as we shall show, such reforms, although potentially important in absolute size, promise one-shot savings and can only briefly defer the need to consider whether and how to ration medical care.

## Why One-Time Savings Cannot Solve the Cost Problem

Various methods have been proposed for cutting costs and improving efficiency—elimination of redundant medical capacity, cessation of useless medical procedures, increased competition, better management, and reduced fees for certain physicians. Unless they are used to reduce the availability of beneficial services—in short, unless they are used to compel nonprice rationing—all promise to arrest or slow the growth of medical costs only temporarily.

The potential savings from eliminating chronically empty beds, now numbering some 300,000, are surprisingly small because the same number of patients will presumably be cared for whether or not the duplicated facilities are closed and because the marginal costs of alternative care is high relative to the marginal savings from closing excess facilities (*7*).

The potential savings from eliminating useless medical procedures, by contrast, could run into many billions of dollars. Health maintenance organizations (HMOs) claim that through superior efficiency and elimination of useless services (mostly excess hospital days) they deliver high-quality service at costs well below those of other providers. One study supported these claims (*8*), in that it was found that one HMO provided comprehensive care for approximately 25 percent less than did providers reimbursed on a fee-for-service basis for fully insured patients. However, the HMO was no less costly than fee-for-service care for patients who faced an annual deductible of $450 per family or 95 percent cost-sharing (*8*). If costs of all fee-for-service hospital and physician care were reduced by 15 percent, an estimate based on the difference between costs of HMOs and the mixture of other insurance plans, there would have been a once-and-for-all reduction in expenditures of approximately $20 billion (*8, 9*).

Additional savings that entail no rationing will become possible as evaluation of established medical procedures identifies classes of patients in which selected procedures now in use produce no medical benefits (*10*). Even a small percentage saving in an industry currently absorbing more than $500 billion per year is a high-stakes effort that should be vigorously pursued, but continuation of annual growth of real personal health care expenditures of 4.1 percent per capita would quickly dwarf the savings from increased efficiencies (*1*).

For a variety of reasons, not all providers could become as efficient as the best run HMOs, and economies would be realized over many years. As a result, savings would be achieved gradually and, therefore, would be hard to detect against the strongly rising trend in medical outlays. In short, the United States faces a choice between letting medical outlays claim an ever rising share of output, while recognizing that some will go for services producing small but positive benefits, and trying to devise socially acceptable arrangements under which some patients who have the means to pay, directly or through insurance, are denied some beneficial care.

## Policy Attempts to Control Spending on Health Care

The past two decades have seen repeated and highly touted efforts fail to slow the growth of spending on medical care.

*Regulation.* Starting in 1974 Congress sought to curtail growth of investment in medical structures and equipment by requiring advance authorization (a certificate of need or CON). Although potential penalties for noncompliance were severe, evaluations found that they were seldom invoked and that many hospitals allocated to other activities the resources not used in disapproved investments (*11*).

Former President Richard M. Nixon's price control program, begun in 1971, temporarily lowered the growth of spending on hospital services. The controls were so complex that they could not be sustained. When controls were removed, real hospital spending rose at an average annual rate of 6.9 percent in 1975 and 1976. President Jimmy Carter responded in 1977 by proposing a cap on growth of revenues per patient day. Hospitals promised to slow spending growth voluntarily but, after brief success, the effort wilted following congressional rejection of President Carter's proposal.

In 1984 the Health Care Financing Administration (HCFA) began to reimburse hospitals fixed sums for Medicare patients based on primary and secondary diagnoses at the time of admission (the "diagnosis-related group" or DRG, system). Under the prior system, HCFA had paid hospitals the audited cost of services covered by the Medicare program. Under the DRG system, hospitals receive the same amount whatever they spend, except in relatively rare outlier cases. Preliminary evidence suggests that the program has slowed growth of hospital spending under Medicare (*12*). However, it is not clear how much of this slowdown is simply the realization in the Medicare program of economies being achieved throughout the health care system, how much entails shifting of costs outside the hospital setting, and how much represents the rationing of beneficial services.

*Competition.* Some analysts have claimed that competition among health care providers can greatly reduce growth of spending on health care without any loss in the quality of care or the imposition of rationing. In pursuit of this goal, some have supported a cap on the exclusion from the personal income tax of employer-financed health insurance premiums, development and dissemination of statistics on the quality of care rendered by various hospitals and physicians, solicitation of competitive bids by employers from various groups of providers, and a host of other measures to promote efficient provision of medical care and to narrow margins

**Table 1.** Health care outlays as a percentage of gross domestic product, 1960–1986 (*29*).

| Country | Year | | |
|---|---|---|---|
| | 1965 | 1980 | 1986 |
| Australia | 4.9 | 6.6 | 7.2 |
| Canada | 6.1 | 7.4 | 8.5 |
| Denmark | 4.8 | 6.8 | 6.1 |
| France | 5.2 | 7.4 | 8.5 |
| Germany (West) | 5.1 | 7.9 | 8.1 |
| Italy | 4.0 | 6.8 | 6.7 |
| Japan | 4.5 | 6.6 | 6.7 |
| The Netherlands | 4.4 | 8.2 | 8.3 |
| New Zealand | 4.3 | 7.2 | 6.9 |
| Norway | 3.9 | 6.6 | 6.8 |
| Sweden | 5.6 | 9.5 | 9.1 |
| Switzerland | 3.8 | 7.2 | 8.0 |
| United Kingdom | 4.1 | 5.8 | 6.2 |
| United States | 6.0 | 9.2 | 11.1 |

earned by hospitals and physicians (*13*). Increased cost consciousness, it is claimed, would encourage insurance plans in which patients directly pay for an increased share of the cost of their own health care. If, in addition, patients had reliable data on medical outcomes of various providers, patients and their employers would be able to avoid high-cost hospitals and physicians who do not provide demonstrably superior care. Supporters claim such measures will not only improve the quality of care, but will also save enough money to forestall the need to ration medical care.

Even if increased competition achieves all that its advocates claim, the elimination of inefficiencies promises a one-time saving unless it slows the introduction of new medical technologies. If new technologies are introduced at an unchanged rate, the main underlying force that has driven up outlays for four decades would remain intact. In that event, the respite from rising outlays, however welcome, would be transitory.

## Costs in Other Developed Countries

Many developed nations other than the United States provide seemingly high-quality care on a basis many regard as more equitable than our own and for much lower overall costs (Table 1). Only Great Britain among advanced societies avowedly rations medical care. Since medical techniques disseminate rapidly, yet spending varies widely, a puzzle emerges. How can countries with per capita incomes approximating our own spend so much less on medical care than we do and yet avoid rationing?

Demography is not the answer. European countries, with per capita incomes comparable to our own, have older populations yet spend less on health care than we do. Alternative explanations are that the relative price of health care has risen faster in the United States than elsewhere or that growth of gross domestic product has been slower. In fact, economic growth in the United States in the past 15 years has been about average among major industrial countries. Furthermore, reliable information from which to measure health care spending in constant prices is unavailable.

A contributory factor to higher outlays in the United States seems to be that we spend more on billing and such other administrative costs as marketing than do other countries. Some estimates place the cost of administration at as much as 22 percent of national health care spending, perhaps two-fifths larger than would be necessary with a single payer (*14*).

Indices such as life expectancy and infant mortality in other industrialized countries typically match or exceed our own (*15*). This fact is often taken to mean that significant denial of services cannot be occurring in these countries. But rationing of such health services as measures to prevent blindness, relief of severe skin disorders, replacement of a damaged hip, and relief of the pain of coronary artery disease, which serve primarily to improve the quality of life, rather than to extend it, would not show up in mortality statistics. Furthermore, mortality rates are heavily dependent on life-style, diet, and income distribution, factors generally regarded as far more important than medical care as influences on mortality rates (*16*).

## What Rationing Entails

Americans are unfamiliar with nonprice rationing or its consequences. They have not thought about whether or not to implement it. Should we turn to rationing, which services will be denied to which patients, and how will the decisions be made?

The clearest answers to these questions come from Great Britain. Per capita spending on health care, about one-third in Britain of that in the United States, requires a degree of rationing there far beyond any that is conceivable here. But Britain and the United States share many important features—language, democratic values, and similar patterns of medical education and physician competence—as well as important political and social similarities. For this reason, British experience shows the kinds, if not the severity, of choices we shall face.

One of the most remarkable aspects of rationing in Britain is that some decisions that appear medically irrational are socially acceptable. For example, per capita spending on total parenteral nutrition or TPN (an expensive form of intravenous feeding often of marginal value) was nearly as high in Britain as in the United States. At the same time, many tertiary-care university hospitals lacked a CT scanner.

Nonmedical values and circumstances appear to explain such situations. For example, services depending on specialized capital equipment are easier to ration than are those that rely on multi-use inputs. Thus, CT scanning, which requires specialized equipment and staff, is tightly controlled. TPN, in contrast, is difficult to control without directly infringing on each physician's clinical freedom.

Age and cost interact to influence allocation decisions. Until the early 1980s, most patients over the age of 55 or 60 with chronic kidney failure were allowed to die without hemodialysis, a costly procedure dependent on specialized equipment and dedicated clinic space. After continuous ambulatory peritoneal dialysis, a relatively low cost procedure, became routine, the number of older dialyzed patients nearly doubled (*17*). In contrast, the British have made full-scale treatment of hemophilia generally available through special clinics. Although per capita costs are high, aggregate costs are low because only about 75 new cases of hemophilia appear each year. Furthermore, the symptoms are highly visible—severe bleeding and swollen joints. British physicians and administrators generally acknowledged that equally generous treatment would not be provided if there were 7500 new cases annually instead of 75 (*3*).

Still other considerations influence allocations to other diseases. A dread disease such as cancer elicits disproportionate support. The high costs of failure to treat patients with severe arthritis of the hip help explain the relatively generous allowances made for hip replacement. In contrast, funding for surgical treatment of coronary artery disease is meager because treatment with drugs is relatively inexpensive. These factors influence the availability of resources in a fashion independent of the expected medical benefits.

## The Physician as Gatekeeper

The denial of useful or even life-saving care is hard on both providers and patients. In Britain, primary care physicians, who are forced to act as gatekeepers for the system, bear this unpleasant responsibility. Physicians make the denial of potentially beneficial care seem routine, or even optimal, by recasting a problem of medical scarcity in economic terms.

Some British physicians understand clearly that they are not providing all care that could be beneficial. As one doctor put it (*3*, p. 102),

> The sense that I have is that there are many situations where resources are sufficiently short so that there must be decisions made as to who is treated. Given that circumstance, the physician, in order to live with himself and to sleep well at night, has to look at the arguments for not treating a patient. And there are always some—social, medical, whatever. In many instances he heightens, sharpens or brings into focus the negative component in order to make himself and the patient comfortable about not going forward.

Although rationing has been most dramatic in the treatment of chronic kidney failure, many senior British health officials and

physicians long denied that any age cutoff existed. The explanation for this puzzling disparity lies in the referral patterns of primary care physicians. Recognizing that dialysis capacity was limited, these doctors routinely favored younger over older patients whenever some complicating illness such as diabetes was present. Even older patients without other medical problems were usually viewed as unsuitable for referral because, as one doctor put it, without trying to be arch, "everyone over the age of 55 is a bit crumbly."

Such rationalization is understandable. Continued referrals of "inappropriate" candidates would be pointless, forcing the nephrologist either to tell patients that care is unavailable or to contradict the clinical judgment of the referring doctor. The local physician responds by telling the patient that, given the overall medical picture, dialysis is not appropriate. In short, rationalization serves the function performed in ordinary markets by price—it equates the amounts demanded with the amounts supplied.

## Acknowledging Appropriateness of Limits

Some British physicians acknowledge resource constraints but justify them because their country is just not wealthy enough to do all that might be medically beneficial. In the words of the head of the intensive care unit at one of London's major teaching hospitals (*3*, p. 102),

> [The number of intensive care beds has] to be appropriate to the surroundings. Now what we have by your standards is way short of the mark. It would be too small in America, but if you took this unit and put it down in Sri Lanka or India, it would stick out like a sore thumb. It would be an obscene waste of money.

Against this background, a leading oncologist described his thoughts about the problems that might be caused by development of a costly cure for a common form of cancer, metastatic carcinoma of the colon (*3*, p. 94)

> It is something I wake up screaming about. I suspect that not everybody who might benefit from [therapy] would get it in practice. If you could cure every patient who has cancer of the colon, most of whom are going to be over 65, over 55 anyway, I think we might find ourselves making value judgments about which to treat and which not to.

## Safety Valves for the Disaffected

The professional and managerial classes in Britain are less willing to accept "no" for an answer than are other social classes. Many routinely seek such elective care as hip replacement, elective abortions, or hernia repair outside the National Health Service (NHS) by paying for such care either directly or with private insurance, which about 10 percent of the British now have (*18*).

Although blatant corruption is apparently rare, aggressive or influential patients can often secure referrals from general practitioners for a second opinion at specialized centers or by going directly to emergency rooms for services that local doctors deem "unsuitable." As a result, per capita expenditures by the National Health Services were reported to be 41 percent higher for members of the upper two socioeconomic groups (professionals, employers, and managers) than for members of the "lowest" two classes (*19*). Such safety valves help explain the continued popularity of the NHS.

## Rationing in the United States

Health care rationing in the United States has moved from the realm of academic speculation to practical reality during the 1980s. Its role is likely to grow in the future. The introduction of DRGs signaled that government would not reimburse hospitals for any and all costs they might incur for Medicare patients. While initial DRG reimbursements were generous and imposed onerous choices on few hospitals, annual adjustments have been insufficient to cover both inflation and the added costs of new technology. As a result, the margin between hospital income and expenditures has narrowed (*20*). In addition, many private insurance companies have begun to require prior approval for reimbursement for various diagnostic and therapeutic procedures.

In perhaps the most dramatic instance of avowed rationing, the legislature of the state of Oregon announced in February 1988 that it would not pay for organ transplants for patients under the Medicaid program because, in the view of the legislature, the same funds would provide greater benefits if devoted to prenatal services and because the legislature was unprepared to pay for both. Following this announcement, the Oregon legislature sought the opinions of various groups on the relative priorities that should be attached to different medical interventions and of the cost of providing all care with priority scores above specified levels. With this information in hand, the legislature plans to decide how much it can spend per capita under the Medicaid program. It will then solicit bids at that cost from providers prepared to provide care under the Medicaid program for all eligible patients. The per capita allowance will require providers to limit services to those that fit within the predetermined spending level—in short, to ration care. The Oregon procedure underscores the fact that every other state already limits the range of services provided to Medicaid patients and denies reimbursement for all services to low-income households who are ineligible for Medicaid.

The strongest evidence that the United States will have to ration care if it wishes to slow growth of health care spending on a sustained basis comes from the creativity of medical scientists, who continue to develop new services that promise both significant benefits for large numbers of people and large added costs for public and private budgets. Indeed, the flow of technological innovation shows little sign of abating and may be accelerating. Some permit previously impossible interventions. Others reduce the discomfort or risk associated with previous procedures. Even if a given diagnostic service is less costly per patient, total outlays may rise because the noninvasive nature of such technologies frees the physician from the need to balance pain or risk to the patient against the value of information to be gained. Still other advances improve previously available therapies, sometimes at great cost. The following advances illustrate both the potential value and cost of emerging medical technologies.

Magnetic resonance imaging is the latest addition to the list of diagnostic devices that provide useful information noninvasively. But other expensive technologies, such as positron emission tomography and magnetic resonance spectroscopy are already in limited use and can be expected to be applied with increasing frequency.

Other costly emerging technologies include erythropoietin, a hormone that stimulates production of red blood cells. This drug has become available for treatment of severe anemia associated with chronic renal failure. Given that roughly 80,000 of the 106,000 patients undergoing chronic dialysis are suitable for this treatment (*21, 22*), and that the estimated cost is $10,000 per patient year (*23*), the annual cost from this new drug will approach three-quarters of $1 billion. Because it is also likely to be valuable in the treatment of anemia associated with AIDS and cancer, the total cost will eventually be much larger.

A second example is the automatic implantable cardiac defibrillator, a device that is activated when the heart develops life-threatening arrhythmia. Expert opinion suggests that given the likely diffusion of the technology, there will be about 20,000 potential

candidates for this therapy annually. At a total cost per patient of about $46,000 ($16,000 for the device and $30,000 for the hospitalization and surgical implantation), the annual cost would be about $1 billion (*24*).

The recent finding that AZT can delay the onset of AIDS in patients who test positive for human immunodeficiency virus opens up a new use for this drug. The estimated cost for this therapy is $5 billion annually (*25*).

Some advances bring demonstrable improvements in traditional procedures, but at great cost. Radiopaque contrast media are used in about 10 million x-ray examinations per year (*26*). Fatal reactions to this material are rare, but perhaps 300 deaths per year could be prevented by the use of a new low-osmolar agent that is ten times as expensive as those now in use (*26*). The cost of this switch would be about $1 billion, or more than $3 million per life saved (*26*).

The successful development of an artificial heart promises to have an equally large impact. Some 30,000 potential recipients per year would add $3 billion to $4 billion to expenditures, and follow-up care would increase this estimate substantially (*27*).

Other therapies, at an earlier stage of development than those just listed, also promise to boost costs. Such treatments include gene therapy, proton beam accelerators, tissue growth factors, and monoclonal antibodies. It is apparent that the advances now coming on stream, together with those now in development, will quickly overwhelm any one-time savings that can be achieved by eliminating useless care.

In addition to higher costs that advancing technology will imply for the large majority of the U.S. population with insurance, measures to extend health insurance to the roughly 15 percent of the population currently without it would also add to the growth of total health spending. The increase in costs would be less than proportional, however, for two reasons. First, about 22.8 percent of the uninsured had incomes of at least $30,000 per year in 1986 (*28*). Such households no doubt directly pay for many health services already. Second, even those who are too poor to pay anything themselves now receive some care. The cost of this care is now covered in a variety of ways—through taxes, charitable contributions in cash or in kind, and through premiums for the insured that are inflated to cover the costs of uncompensated care.

Although nonprice rationing seems inevitable if the growth of health care spending is to be slowed, it is unlikely that the United States ever would impose limits as severe as those common in Britain. Patients and physicians in the United States enjoy a well-merited reputation for demanding and supplying aggressive, high-quality treatment. Furthermore, cost containment is likely to increase the frequency of malpractice claims by discouraging physicians from providing some services that would otherwise be deemed appropriate. U.S. courts have explicitly stated that although cost consciousness has become an important feature of the U.S. health care system, both insurers and providers can be held responsible "when medically inappropriate decisions result from defects in the design or implementation of cost containment mechanisms. . . ." (*29*). In the conflict between cost containment and standards of care, the mandate for cost containment is likely to prevail, but not without turmoil.

## Concluding Remarks

Growth of medical costs will be contained on a sustained basis only if we are prepared to ration care to those who are insured and are able and willing to pay for services. If we choose this road, we shall have to face many of the issues with which the British have grappled.

Concern for fundamental values such as age, visibility of an illness, and aggregate costs of treatment will inevitably shape our decisions on resource allocation. Physicians and other providers will increasingly experience tension between their historic commitment to doing all that is medically beneficial and the limitations imposed on them by increasingly stringent cost limits. And we can almost certainly expect a substantial fraction of our society, much larger than in Britain, to use whatever means are available to get care that is in short supply. Whether we allow a separate hospital sector to develop outside the constrained system will be a key policy issue and a difficult political decision.

We see the British experience not as a frightening deterrent to serious consideration of rationing. Rather the British experience with rationing, particularly stark because of its severity, sharply delineates the kinds of choices we shall have to make. Understanding how the British made these decisions can help us find ways to make our less extreme but still painful choices acceptable. The current cost of excessive spending on services providing only small benefits is enormous and is certain to grow. The stakes in evolving politically and socially acceptable methods of curtailing such outlays are enormous.


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