Distributing Limited Health Care Resources
OVERVIEW OF DISTRIBUTING LIMITED HEALTH CARE RESOURCES

Health care resources are scarce relative to needs. This means that in some circumstances we cannot provide medical treatments which would yield benefits for patients. Some people question this claim, suggesting instead that we are not willing to provide all beneficial health care to everyone. From this perspective, scarcity stems not so much from the existence of an absolute limit on health care resources as from a growing realization that increasing the resources available for health care must come at the expense of other national priorities, including education, housing, and national defense, and would compromise our nation's economic ability to compete in world markets.

We could, as some would suggest, significantly increase health care expenditures. But the major payors for health care -- government, employers and, ultimately, the public -- are reluctant to do so, for at least two reasons. First, many believe that our society's health care bill is simply too high. In 1995, total health care expenditures in the U.S. were an estimated $988.5 billion, consuming 13.6% of our gross domestic product (GDP). Second, there is a growing perception that because health care resources have been unwisely and inequitably distributed, we are not getting a good value for our investment. Despite the vast sums spent on health care, too often the health care system fails to meet people's needs, and many find themselves without access to needed care. Approximately one out of every seven Americans has no health insurance, and many more are underinsured. In addition, while among the twenty-four OECD countries, the U.S. devotes the largest portion of its GDP to health care (Table 1), it ranks 21st in infant mortality, 17th in male, and 15th in female life expectancy -- commonly accepted indicators of a population's health status.

There is a growing consensus, however, that we are not able to provide every health care service of potential benefit to everyone in need. In other words, health care resources are absolutely scarce relative to needs. The appetite for health care is indefinitely expandable, since it is almost always possible to secure some small benefit by additional treatment. Even if we could eliminate the considerable portion of health care dollars being spent wastefully and inefficiently, health care resources would remain scarce, in the sense that choices among competing health care needs would still
have to be made. And although we could increase the total resources devoted to health care, the continued development of new, more effective, and often more costly technologies, as well as other factors fueling the demand for health care would mean that we still could not provide all services to all who could benefit.

Whether due to an absolute shortage or an unwillingness to devote more resources to health care, many health care needs remain unmet. There are presently about 40 million Americans without health insurance, and 50 to 60 million will lack insurance at some time during the course of a calendar year. For a wide variety of reasons, uninsured people consist disproportionately of women, children, racial and ethnic minorities and the poor. Those in the uninsured population have inadequate access to health services even though they are generally in poorer health than people who do have health insurance. Compared with insured people, they are less likely to have a regular source of care, to see a physician in any given year, to obtain immunizations, and to receive adequate prenatal care. They are also more likely to delay obtaining needed services, thereby compounding problems and raising costs. Ultimately, many uninsured people forgo medical services.

HEALTH CARE EXPENDITURES
Despite a variety of cost containment initiatives during the past several decades, health care expenditures have continued to increase dramatically (see Tables 2-4). Among the most important factors which account for this steady (and projected) rise are:

1) Continued advances in medical technology. Technological advances and increased intensity in the use of medical technologies account for an estimated 30-40% of health care cost increases. There are often sound medical reasons for preferring new technologies since they often allow for more accurate diagnoses or are less invasive than the technologies they replace. Adopting new technologies thus enables health care providers to deliver more effective, and safer treatments for their patients. Many new technologies also require more, and better trained (and thus better paid) technicians. Moreover, it has been traditional medical practice in the U.S. to aggressively employ treatments until they yield no additional benefits to patients; the traditional ethic of physicians is to advocate for each patient's interests, without regard to the cost their care represents to others.
2) An aging population. During the 20th century, the number of persons in the U.S. aged 65 or over has increased nearly eleven-fold, so that the elderly, who comprised only 1 in every 25 Americans (3.1 million) in 1900, made up 1 in 8 (33.2 million) in 1994. Within this elderly population, women outnumber men by a ratio of 3 to 2. These trends are projected to continue and even accelerate as the "baby boom" generation enters their elderly years, so that by the year 2050, as many as 1 in 5 (80 million) Americans could be elderly. Further, the "oldest old" -- those aged 85 and over -- are the most rapidly growing elderly age group. Their numbers are expected to increase from 3 million in 1994 to 19 million in 2050, when they will comprise 5% of the total population.\textsuperscript{10}

Health costs are proportionately higher among the elderly, who require more ambulatory, hospital, surgical, and long-term care. These costs accelerate dramatically after the age of 75, and are particularly high in the final year of life. Although the elderly presently constitute only 12.5% of the population, they account for more than 33% of all health care expenditures.\textsuperscript{11} Per capita spending among those 65 and older is more than 3 1/2 times that of the total population.

3) Increased prevalence of chronic diseases and disabilities. The prevalence of cardiovascular, degenerative, malignant, and other chronic (non-acute) diseases increases sharply with age. An aging population increases the need for long-term, non-curative care which is often very costly. The more successful medicine is in prolonging life, the more opportunities it creates for such expensive care. Many patients -- frequently the elderly, but also premature infants -- are rescued from imminent death by aggressive medical interventions, but suffer permanent disabilities or impairments.\textsuperscript{12} Lack of access to health care contributes to the development of chronic medical problems as well. Individuals who lack access to health care early in their lives are more likely to develop such conditions, and thus to increase the burden on the health care system in later years.\textsuperscript{13}

4) AIDS. The number of people infected by HIV continues to increase dramatically. Since the AIDS epidemic began in the early 1980s, a total of 573,800 Americans aged 13 or older have been reported to have this disease by state and local health departments. The number of new cases being reported peaked in the mid-90s, as did the number of deaths due to AIDS. Despite the recent small decline in new cases, however, AIDS remains the leading cause of
death among Americans ages 25-44, accounting for 19% of deaths from all causes in this age group. Because of the many serious health problems encountered by AIDS patients, their health care costs are extremely high. The recent introduction of drugs known as protease inhibitors for the treatment of HIV infection has greatly improved patient's prospects for long-term survival. But these drugs, which often are used in combination, are very expensive, with annual costs per patient expected to be well over $10,000. As more patients survive for longer periods, we must also expect lifetime costs associated with treatment for AIDS and related health problems to increase even further.

THREE LEVELS OF DISTRIBUTION
There are three distinct levels at which decisions about the allocation of resources affect the provision of health care: (1) among health care and other socially important expenditures; (2) within the health care sector; and (3) among individual patients. Often the term "macro-allocation" is used to refer to distributions made at the first two levels and "micro-allocation" is applied to distribution at the third level. Allocation decisions at the level of patients are inevitably constrained by choices that have been made between health and other social goods and between priorities within the health care sector, since choices made at these higher levels determine what resources will be available to physicians treating individual patients.

At the first level, health care competes with education, defense, housing, transportation and other industries to satisfy the myriad of human wants and needs. The share of our nation's wealth devoted to health care, although flexible, will never be sufficient to meet all health care needs. Significantly increasing the share of society's resources devoted to health care, even if politically and economically feasible, will not solve the dilemma of limited health care resources - hard choices must still be made. As our ability to prevent death and disability by using expensive new technologies increases, for example, we must ask whether other social goods should receive less funding in order to prolong individual lives as long as possible.

At the second level, in the words of the President's Commission for the Study of Ethical Problems in Medicine, "patients, health care professionals and institutions, and society at large must face an ethical problem. They must choose the uses to which limited -- in some cases very scarce -- resources must be put. The choices
require comparing health care expenditures . . . within the health care budget: choices between treatment and research, between restorative steps for those already ill and preventive steps for those who may be at risk; choices among different age-groups, diseases, treatment settings, and so forth." The challenge is to determine what procedures should be followed in making such choices, and what values should guide our decisions.

At the third level, health care resources are distributed to and among individuals. For example, choosing Barney Clark from the pool of patients dying from cardiac failure to receive the first artificial heart was a micro-allocation decision. In contrast, the decision by the University of Utah to devote resources to the artificial heart program -- rather than to any one of dozens of alternative programs -- was a (second-level) macro-allocation decision. Micro-allocation occurs whenever medical resources are provided or withheld because of the particular characteristics possessed by individual patients. Thus the policies of some health care delivery systems which require prior authorization for certain medical procedures should also be recognized as micro-allocation mechanisms.

In the context of distributing limited health care resources, the term "rationing" has sparked a contentious debate. The perception by the public that our health care system actually has excess capacity (unused hospital beds are one obvious example) leads them to question the reality of scarcity. In addition, some confusion arises from the failure to distinguish between different definitions of the term "rationing" which at times compete with each other for ethical and political endorsement. One useful definition is that in a health care setting, rationing refers to a conscious decision or the adoption of an explicit policy that excludes certain persons with known medical need from treatment that might save, prolong, or significantly enhance the quality of their lives. Rationing presumes scarcity and that health care interventions are both desired and known to be effective. The paradigmatic case of rationing in health care is triage on the battlefield where decisions are made to focus on those patients who are most likely to benefit from receiving treatment, thereby denying treatment to some who will in all likelihood die, as well as to some who will improve despite not receiving treatment.

Usually, health care resources are rationed at the level of micro-allocation (selecting the recipient for an organ transplant from a
waiting list, for example), but rationing also results from decisions made at the macro-allocation level. A decision to restrict eligibility for Medicaid is a rationing decision in the sense that the people no longer eligible for Medicaid may be denied access to care that could "save, prolong, or significantly enhance the quality of their lives." Furthermore, when the quantity and quality of care to which individuals have access is determined by their personal economic resources, including health insurance coverage, we can speak meaningfully of rationing by the ability to pay.

RESPONSES TO LIMITED HEALTH CARE RESOURCES
The intertwined problems of controlling costs and expanding access to high quality health care have been the driving forces behind attempts to reform our health care system throughout this century. The problems of access and cost also suggest alternative strategies for redistributing limited health care resources at either the macro or micro levels. These strategies generally are premised on two principles: (1) health care resources should be used efficiently, and (2) health care resources should be distributed equitably. There is no consensus, however, on whether we should focus on cost and access simultaneously, give cost containment top priority, or first make sure all Americans have access to health care, and only then worry about cost containment.

1) Health care resources should be used efficiently
It is generally agreed that the first step toward greater efficiency is to reduce waste and unnecessary care. The administrative costs in the U.S. health care system, which are estimated to consume 24.7% of every health care dollar, are cited by many as wasteful. In comparison, administrative costs in the Canadian system are less than half this amount, and for some other western countries even less. Unnecessary care is defined as care with no demonstrable value to those who receive it, and includes the numerous laboratory and diagnostic tests routinely performed without medically valid indications, costly operations and procedures performed without benefit to the patient. According to some, the category of unnecessary care should also be understood to include "aggressive treatment of the terminally ill for whom treatment other than palliative care is no longer appropriate." The traditional physician ethic of maximizing health benefits for individual patients, liberal reimbursement policies, and the desire to avoid medical liability litigation all exert pressures on physicians to overutilize resources.
Curtailing waste and unnecessary care, according to some, would permit us to cover the cost of all truly beneficial health care and thereby obviate the need for rationing. Others argue that while it is clearly desirable to address these issues, by itself this would not yield significant savings and would result only in a one-time reduction in expenditures. Significantly improving the efficiency of the health care system will require (a) making providers more efficient, (b) assessing medical technologies, and/or (c) expanding prevention and health promotion.

(a) Making Providers More Efficient
Studies have revealed sharp differences from region to region in the use of medical resources and, correspondingly, in per capita expenditures. These differences are apparently not related to illness factors or the population's health care needs. Instead, they result primarily from variations in physician practice styles. There is disagreement within the medical profession itself about the appropriate diagnosis and treatment of many common conditions and, consequently, wide variations in the use of resources in the care of such conditions -- from very conservative use to very elaborate use. Often, there is little or no difference in the health care outcomes associated with these variations in treatments. Greater efficiency and significant savings might be realized if more physicians were to adopt the practice style of high-quality, efficient physicians who are conservative in their use of resources yet obtain good outcomes for their patients. A key challenge is the development of incentive systems that will reward physicians for efficient practice styles, but which will not encourage them to withhold needed treatments.

Efficiency could also be improved by implementing policies that restrict the availability of procedures for which there is limited demand to institutional providers selected on the basis of superior outcomes. For example, organ transplants could be restricted to transplant centers selected on the basis of the number of procedures performed, success rates, and cost -- in short, on the basis of the centers' proven effectiveness and efficiency. Medicare and some large employers have adopted this approach by restricting coverage for liver and heart transplants to those performed at designated "centers of excellence."

(b) Assessing Medical Technologies
Technology assessment in medicine is a tool for examining the technical issues, safety, effectiveness, and cost-effectiveness of
emerging and existing technologies. Numerous federal agencies, such as the National Institutes of Health and the Food and Drug Administration, and private organizations, including medical device manufacturers and health insurers, support or conduct medical technology assessments. Nonetheless, the U.S. has no coherent system responsible for assessing all types of medical technology. Except for drugs and some medical devices, for which the FDA is responsible, many technologies are not rigorously assessed before their widespread use. The result is that many technologies are widely disseminated without any clear evidence of their effectiveness. Part of the problem is that assessment activities tend to concentrate on new technologies -- not on those that are widely accepted and possibly outmoded. There are many expensive older technologies of questionable medical value that remain uncritically reimbursed. To improve efficiency, emerging and existing medical technologies could be assessed to identify those that are effective, and reimbursement policies structured to promote their use.

(c) Expanding Prevention and Health Promotion

Health care resources can be used to protect life and health by treating patients once they have become ill or injured, on the one hand, or to prevent death and disease by keeping people healthy on the other. Some recommend allocating more resources for prevention and point to immunizations, prenatal care, and other prevention programs as effective and relatively inexpensive ways to improve the population's health status and control costs. Others maintain that except for a few focused interventions, prevention usually adds to medical expenditures, even after allowing for savings in treatment. As Callahan cautiously notes, "people will die of something, and there is no guarantee that the illness they finally die of later in life will be less expensive than others earlier averted by successful health-promotion efforts."

(2) Health care resources should be distributed equitably

Equity in the distribution of health care resources has alternatively been said to require (a) strict equality, (b) access to all medically necessary care, (c) access to an adequate level of care, or (d) access to assure equal opportunity. Others have suggested that equity would be promoted by (e) using age as a standard for distributing resources and (f) limiting access to health care when patients are responsible for their health problems. Equity is a concept requiring comparisons between individuals, so policies to implement any of the suggested criteria are most naturally understood as representing choices about
the principles that should guide micro-allocation decisions. As noted previously, however, decisions about the macro-allocation of health care resources also influence the actual effect of implementing any of the proposed interpretations of what constitutes an equitable distribution among individual patients.

(a) Strict Equality
If equity were understood to require strict equality, everyone would receive the exact same level of resources to spend on health care. Assuming that health care resources are scarce, it will not be possible to provide everyone access to an optimal level of care. But equity as strict equality would mean that people with compelling medical needs, such as newborns with severe congenital impairments, would have to cope with their medical needs with the same share of resources available to anyone else, impaired or not. Systems of allocation employing this criterion would be "single tier" systems because they would deny an individual access to more or higher quality services than are available to others in the population, even if he or she were willing to pay for those services.

(b) Access to all medically necessary care
Equity framed in terms of equal access to medically necessary care requires that all members of the population in question be guaranteed "access to the health services which can reasonably be considered appropriate for meeting their medical needs." Everyone would have access, not to the same share of care, but to all needed care. If we employ strictly medical criteria to determine what constitutes need in this context, medical necessity will encompass the full range of conditions for which health care might be effective. Thus, equity as access to "medically necessary care" is roughly equivalent to equity as access to "all beneficial care." Pushed to the extreme, this criterion becomes overly broad and could swallow up all of society's resources, since there is virtually no limitation to possibly beneficial care. It appears, then, that some stronger constraint than medical necessity is needed to define the range of care to which all should have access.

(c) Access to an adequate level of care
Some suggest that by interpreting equity as access to an adequate level of health care we can avoid both an impossible commitment of resources as well as the opposite error of abandoning the enterprise of seeking to ensure that some level of health care is in fact available for everyone. Understood in this way, equity would mean that each
member of society, regardless of his/her ability to pay, would have access to an adequate level of health care. In a single tier system, the specified level of benefits would be treated as an absolute, guaranteeing access to the same range of medical services for everyone. Alternatively, in a two tier system, it would function as a minimum or a floor through which no one should fall, while services above this level (e.g., elective cosmetic surgery) would be available for purchase in the health care market.

There is no generally agreed upon understanding of precisely what constitutes an adequate level of care. The range of health care deemed adequate will reflect the values we expect our health care system to embody and promote, and what consensus there is about these values remains incomplete. However, although disagreements exist at the margins, especially in cases of new and expensive technologies, there is overwhelming consensus that many specific medical interventions are clearly needed for care to be adequate. It is possible in these circumstances to construct a package of benefits deemed adequate even though we lack a rigorous definition to precisely identify boundaries. Because the range of health care needs and our capacity to respond to those needs are continually changing, however, specifying an adequate level of health care requires an ongoing deliberative process capable of incorporating changing information on technology, consumer preferences, and resource availability.

(d) Access to assure equal opportunity
Norman Daniels has suggested that an equitable distribution of health care should be based on expected outcomes of treatment. On his view, the principle of "fair equality of opportunity" should guide our distribution of health care. As he interprets this principle, it requires that all individuals have a fair chance of enjoying, at each stage of life, the "normal range of opportunities," that is, "the array of life plans reasonable persons in (a given society) are likely to construct for themselves." Our ability to realize various life plans is largely dependent on the normal functioning of our bodies and minds, that is, on our physical and mental health. Using fair equality of opportunity as our guide, we would distribute health care resources so as to decrease or offset the disadvantages arising from disease and disability.

(e) Using age as a standard for distributing resources
One of the more controversial proposals in this arena is the suggestion, most closely associated with Daniel Callahan, that age be used as a standard for distributing health care resources. He interprets this not as a medical criterion serving as a proxy for a person's physical condition, but as a "patient-centered criterion" which recognizes the importance of a person's history and biography. On his view, all people should have the opportunity to live a "natural life span" -- to achieve a "full biographical life." Accordingly, the goal of health care for people who have not yet achieved this is to avoid premature death and to relieve pain and suffering. For people who have lived a natural life span (typically, by their late 70s or early 80s, according to Callahan), the goal of health care will shift to the relief of pain and suffering only, and will not include extending life or resisting death. If we cannot provide all beneficial care to all people, Callahan suggests it is morally permissible to distribute resources among the generations by using age as a standard for reducing the aggressive use of health care for the elderly. Critics object that relying on chronological age as a standard for allocation decisions ignores more salient individual factors such as the patient's usual state of well-being. In addition, this form of rationing would affect women disproportionately, because more women than men occupy the ranks of older Americans.

(f) Limiting access to health care when patients are responsible for their health problems
With our enhanced understanding of the causal conditions of diseases, disabilities, and injuries, we now know that much morbidity is avoidable or may be reduced and that personal behavior and lifestyle may contribute significantly to a person's health status. Sensible diet, exercise, use of seat-belts and motorcycle helmets, abstinence from smoking, and only moderate consumption of alcohol are among the many activities that can protect or improve individuals' health status. Consequently, a conceptual shift is occurring from the belief that illnesses are beyond individual control to the belief that individuals are (often) causally-responsible for their health status.

Some suggest that the notion of personal responsibility for health should be used "for singling out for special treatment those who engage in unhealthy habits." Such people, it is claimed, should be encouraged, persuaded, or even coerced to change their behavior. For example, healthy living habits could be promoted through education; the government could prohibit certain activities such as
riding motorcycles without a helmet. Alternatively, people who engage in risky behavior could be required to pay more for their health care insurance or for medical care when they become ill or injured, or to subsidize the costs associated with their unhealthy behaviors through the imposition of "sin taxes." Critics of such allocation policies caution against making scapegoats of those with risky lifestyles, or distracting attention from more significant sources of inequity in our health care system.

THE FAILURE OF REFORM AND THE RISE OF MANAGED CARE
The pressures created by spiraling health care expenditures and the growing number of uninsured Americans have made health care reform a high priority at both the state and national levels. By the early 1990s the need for major reform had once again found its way onto the national political agenda. During his first term, President Clinton proposed the Health Security Act of 1993, which would have required each state to submit a plan to provide universal coverage for its citizens for approval by a National Health Board. Federal spending on health care programs was to be constrained through the imposition of a global budget. A number of alternative proposals were also put forward, but after a long and intense public debate, Congress was unable to enact any legislation creating a national health care policy. With the failure of federal efforts to institute global reforms, the task of reforming our health care system fell to the individual states and to the private sector.

A number of states have enacted legislation to assure access to an adequate level of care for their citizens while controlling the level of expenditures for publicly funded health programs. Among these, the Oregon initiative has received the most scrutiny, in part because it predated federal reform efforts, but also because it adopts explicit rationing mechanisms to guarantee a basic level of health care to all Oregonians eligible for an expanded Medicaid program or unable to secure private insurance. Among the many criticisms leveled against the Oregon Plan, the most significant for our discussion is that the burdens of rationing fall disproportionately on the poor. Despite the flaws of its rationing scheme, however, Oregon provides valuable lessons about the importance of democratic procedures and public participation in the formulation of explicit policies for rationing health care.

Efforts by the states and the federal government to restructure our nation's health care system are limited in the sense that their
primary effect is restricted to publicly funded health care programs. The bulk of health care services are provided by the private sector in which market forces of supply and demand are relied on to determine what services will be available and to whom. The response of private concerns in the health care sector to the problem of escalating costs has been a steady trend toward a form of organization, known as managed care, which integrates the financing and delivery of health care to promote efficient and effective use of resources.\textsuperscript{47} In contrast to traditional fee-for-service practice, managed care plans contract to deliver a specified range of services for a fixed fee; patients typically must obtain services from physicians and hospitals selected by the plan as providers; primary care providers act as "gatekeepers" who must provide referrals for patients to access specialty services; providers also are subject to utilization review and, usually, assume some financial risk, thus creating incentives to limit the costs incurred in treating their patients.

All of these organizational structures have the effect of allocating resources among the subscribers of particular managed care plans, and the policies adopted by different plans can be assessed in terms of the various criteria discussed previously. One of the most troublesome features associated with the new mode of health care delivery is the changes it implies for the physician-patient relationship.\textsuperscript{48} As noted earlier, the traditional physician ethic places the physician in the role of advocate for the good of the patient -- but in the managed care environment, physicians are expected to balance the needs of their individual patients against the good of the population comprised of all plan members,\textsuperscript{49} or even against the need for the organization itself to remain profitable. The physician is thus placed in the role of a "double agent"\textsuperscript{50} with ambiguous obligations and loyalties. How these sometimes conflicting demands should be balanced, and whether it is permissible for physicians to "game the system,"\textsuperscript{51} finessing the rules in order to secure medical benefits for their patients, are questions that must be resolved as we move into the era of managed care. In addition to policies that require physicians to balance patient welfare against the good of plan members as a group and the economic good of the organization, salary incentives that reward physicians for conserving resources can generate direct conflicts of interest between physicians' own good and that of their patients.\textsuperscript{52} All of these pressures on the physician-patient relationship have given rise to a debate about the appropriateness of "bedside rationing" by physicians, with critics
arguing that such practices undermine the bond of trust between doctors and their patients, and defenders of the practice claiming that the nuances of sound clinical decision making require physicians to accept this role.

The emergence of these problems signals that the rise of managed care has fundamentally altered the context of medical practice -- and our approach to the ethical issues involving allocation decisions must change accordingly. Focusing on the ethical dimensions of the behaviors of individual physicians interacting with individual patients cannot resolve the kinds of problems that arise in the complex organizations that are coming to dominate the health care scene. We must therefore broaden our perspective in order to grapple with questions concerning the ethics of organizations, and attempt to devise institutional structures and procedures that will promote the ethical pursuit of health care goals in the context of limited resources. At the global level, we must re-examine the social and political assumptions which have undergirded the development of our health care system. We must confront directly the ethical tensions that arise when we treat health care as a commodity to be bought and sold in a marketplace where the profit motive is the driving force. Whether managed care and the discipline of a competitive marketplace will succeed in controlling health care expenditures remains to be seen. Even if it is successful in this task, however, we still need to address the problem of providing access to care for all of our citizens -- market forces by themselves will not improve access for the economically disadvantaged members of our society. Perhaps one of the most important questions to be faced is who should determine the criteria that guide us in distributing health care resources, and what procedures should be followed to ensure that those whose care is most directly affected by such decisions have a voice in this process.
Table 1
1995 Health Care Expenditures as Percent of Gross Domestic Product: Selected OECD Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Expenditure as Percent of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>5.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>6.5</td>
</tr>
<tr>
<td>Japan</td>
<td>6.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>7.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>7.9</td>
</tr>
<tr>
<td>Germany</td>
<td>8.7</td>
</tr>
<tr>
<td>France</td>
<td>9.4</td>
</tr>
<tr>
<td>Canada</td>
<td>10.3</td>
</tr>
<tr>
<td>United States</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Source: Health Care Financing Administration, Office of the Actuary (January 1997)

Table 2
U.S. Health Care Expenditures by Year (Billions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditures (Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>247.2</td>
</tr>
<tr>
<td>1985</td>
<td>428.2</td>
</tr>
<tr>
<td>1990</td>
<td>697.5</td>
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<td>1991</td>
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<td>1992</td>
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<td>1993</td>
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<tr>
<td>1994</td>
<td>937.1</td>
</tr>
<tr>
<td>1995</td>
<td>988.5</td>
</tr>
</tbody>
</table>

Source: Health Care Financing Administration, Office of the Actuary (January 1997)
Table 3
U.S. Health Care Expenditures as Percent of GDP

Source: Health Care Financing Administration, Office of the Actuary (January 1997)

Table 4
U.S. Per Capita Health Care Expenditures by Year

Source: Health Care Financing Administration, Office of the Actuary (January 1997)


If recent trends continue, Uwe Reinhardt, a Princeton economist, estimates that health care expenditures would equal our gross national product in approximately 80 years.

For example, physicians are much more likely to perform a CAT scan than surgery and biopsy to diagnose (or rule out the possibility of) a brain tumor.


Mariner WK. Rationing Health Care and the Need for Credible Scarcity:


23 The complexity of the notion of medical benefit, and the variety of factors relevant to assessing such benefits are suggested by the discussion contained in an important report of the AMA Council on Ethical and Judicial Affairs: Ethical Issues in Health Care System Reform. *JAMA* 1994; 272(13):1056-62.


29 The Institute of Medicine and the National Academy of Sciences estimate that only 10-20% of all existing medical technology has been subjected to any sort of clinical trial or systematic study.


35 Daniels N. Just Health Care (Cambridge; Cambridge University Press, 1985) p. 33.


UNFOLDING ISSUES

Is health care a private consumption good (like automobiles) or a social good (like defense)?
What role should the profit motive and market forces play in shaping our health care system?
Is access to health care a citizen's basic right?

What ethical obligations do physicians have toward their patients and toward society, and how should these obligations be balanced when they conflict?
What are the ethical obligations of health care institutions toward patients and society, and how can institutions be structured to respect those obligations?

What should be the respective roles of the federal government, state governments, and the private sector in reforming the health care system?
Who bears responsibility for assuring access to an adequate level of care -- the federal government, state governments, local governments, or the private sector?

What health care services should be included in "an adequate level of care"?
Who should determine what constitutes an adequate level of health care -- health care professionals, insurance companies, the public, the federal government, state and local governments?

How should limited health care resources be allocated? By whom?
What are morally appropriate criteria for rationing health care?

Should age be a factor in distributing health care resources?
Should health care services for the elderly be cut (increased)?
Should they be cut (increased) for any other age groups?

Should people whose habits or lifestyles result in a need for health care shoulder a greater burden of the cost of such care, e.g., by paying more for health insurance or for medical services used?

Should the development and/or diffusion of new medical technology be regulated?
Who should bear responsibility for performing technology assessments, and who should pay for them?
Should the performance of certain medical procedures (such as organ transplants) be restricted to selected institutional providers? Should the availability of certain medical procedures and/or specific standards of care be legislatively mandated?

Should the geographic distribution or areas of specialization of physicians be regulated?
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