1.

Introduction and Summary

There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

—Nicolo Machiavelli
The Prince

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1.

Introduction and Summary

Arrangements for financing medical care have been cited as an underlying cause of rising expenditures for medical technologies and their indiscriminate diffusion and use. Most providers of medical care, like the providers of other services, profit from greater use. The notable difference with medical care is that the people who buy and use medical technology—mainly physicians, consumers, and hospitals—are largely insulated from the direct costs associated with their decisions. Over the past decade, a number of strategies have been suggested to increase the cost consciousness of people who use medical technologies. These strategies to increase competition and their implications for medical technology form the basis of this report.

Much confusion has surrounded the use of the term competition. **The hallmark of strategies to promote competition is the intention to increase cost consciousness,** and that is how the term is used in this report. Competition also conveys a sense of relying on individuals in the marketplace to decide which technologies to use and how much they are worth, instead of relying on the centralized decisionmaking of regulation. Indeed, the goal of increasing cost sensitivity is to make these individual decisions reflect more fully actual costs and benefits.

Strategies to increase competition would not entail the elimination of regulation. The call for greater competition is relative to the present situation as the starting point. Increased competition would also mark a departure from the regulatory emphasis of public policy during the past decade. More importantly, regulation in a situation with increased cost consciousness would have a different role. Regulation would not substitute for individual decisions about the price to pay for medical technologies or the circumstances of their use. Instead, regulation would be used to establish and support a context in which the buyers and users of medical technologies were more price sensitive, and these individuals would make the decisions about use. In addition, **many of the social problems that prompted governmental regulation in the past would continue.** Examples of such problems are the adequate use of certain technologies to maintain public health, the quality of care delivered, the evaluation of medical technologies, and the accessibility of medical care to poor and elderly people.

In an analysis of proposals to increase people's sensitivity to costs, an important element is the unusual nature of medical care. A strong sense of compassion and concern for people who are sick and suffering pervades the practice of medicine. The standards of medical professionals emphasize these human values and motivate the way they care for patients. Perhaps related is the special way that society as a whole has viewed medical care, As expressed in governmental programs, there is a social concern that people be able to obtain at least minimum levels of medical care, regardless of their ability to pay.

BACKGROUND AND SCOPE OF THE STUDY

This report responds to requests by the House Committee on Energy and Commerce and the Senate Committee on Labor and Human Resources. To aid their consideration of legislation that had been proposed, these committees requested that OTA expand sections of its report *Strategies for Medical Technology Assessment* (208) to consider separately the implications for medical technology of increased competition in health care.

The indiscriminate use and rising cost of medical technology have figured prominently in discussions of problems that characterize the financing and delivery of medical care. But the development and use of medical technology have

also been prominent features of modern medical care in the United States. Thus, it is important to examine the positive and negative implications for medical technology of proposals to restructure the financial incentives of the medical marketplace.

Proposals to increase competition in medical care fall into three main categories: 1) increased cost sharing by patients when they use medical care, 2) greater competition among comprehensive care organizations that provide health insurance and deliver medical care, and 3) increased antitrust activities by Government. **This study focuses on proposals for increased cost sharing by patients and greater competition among plans. It excludes the antitrust approach.** However, antitrust activities to promote competition have major importance for price competition among medical providers and for governmental policies. Such activities merit continuing and separate policy research.

This study does not consider the problems that might arise in the process of implementing competitive proposals. It does examine the provisions of the competitive proposals and their likely effects, but does not explore the feasibility of putting the provisions into practice. Furthermore, this study does not consider the possible alternatives to competition. Although past regulatory approaches form the historical backdrop for the development of some of the competitive proposals, they are not considered in any detail. Both of these topics, and particularly the implementation phase, deserve close attention.

In considering the implications of competitive proposals, the study has used OTA's broad definition of medical technology: the drugs, devices, medical and surgical procedures used in medical care, and the organizational and supportive systems within which such care is provided. This definition includes the clinical technologies used for direct patient care, the ancillary technologies used directly to support clinical services, and the managerial technologies not directly associated with patient care but used to support the provision of medical care. In each of these areas, this concept of medical technology covers both tangible and procedural technologies.

The study considers the financing and delivery of medical technologies, but not their development or manufacture. Although the different incentives under increased competition may affect research, development, manufacturing, and marketing of technologies, those stages are not specifically addressed here. It is possible that less growth in medical care expenditures will reduce the profit rate of manufacturers and in turn lead them to reduce their funding for research and development (R&D). If this occurs, R&D activities might be cut back and the level of innovation could fall. On the other hand, the greater cost consciousness of buyers and users of medical technologies might channel R&D as well as innovation into different directions. Development of cost-decreasing and managerial technologies as well as less costly versions of existing clinical and ancillary ones might be stimulated, with no overall drop in the level of new technologies. Greater cost sharing and catastrophic coverage might even stimulate the development of expensive technologies.

This report is related to medical technology and does not address all of the virtues, strengths, or weaknesses of proposals to increase competition. How greater competition would affect insurance coverage and medical expenditures of high-risk people warrants particular attention. With greater patient cost sharing, chronically ill and elderly people might face not only higher insurance premiums but also sizable expenditures that recur every year. With more competition among comprehensive health care organizations, plans might design their benefit packages or market their policies in ways that discourage high-risk people from enrolling. Such social implications of increased competition warrant additional evaluation.

SUMMARY

Increased Competition: Proposals and Concepts

Proposals To Increase Competition

Proponents of greater price competition in medical care share the view that present insurance coverage and the resulting financial and organizational arrangements are the main source of rising medical expenditures and inappropriate technology use. Furthermore, the procompetitive proposals discussed in this study share the intention of strengthening the cost consciousness of the physicians, consumers, and hospitals that make decisions about buying and using technologies. In the present medical marketplace, there is little of the opposition and negotiation between buyer and seller that is characteristic of most purchase decisions. In most marketplaces, buyers are mindful of other purchases that they would be foregoing, and thus usually weigh whether the benefits are worth the costs. With greater sensitivity to price under proposals to increase competition, buyers and users of medical technologies are also expected to weigh alternatives and choose technologies whose costs are more commensurate with their benefits.

Although proposals to increase competition have many similarities with respect to their goals and the mechanisms for achieving them, they have a decided difference in emphasis. **The strategy to increase cost sharing when people use medical care relies on the cost consciousness of individual patients to deter their initiation of care and to temper their use of technologies as well as use generated by providers.** Like consumers of other services, patients would convey their preferences and their cost concerns by their decisions to seek or continue care or not to do so, their choice of providers, and their choice of technologies. Medical providers, like other sellers, would continue to gain more revenue (and incur more cost) from the greater use of their services. But the desire of providers to promote use and expenditures would be opposed by consumers' reluctance to pay the cost from their own incomes.

The alternative strategy, to increase competition among comprehensive care organizations, would place the cost-consciousness choice of consumers only at the point when they choose insurance coverage or plans. At that time, consumers would weigh the premium and out-of-pocket costs with the benefits of enrolling in alternative plans. In this strategy, there would be less cost sharing and less emphasis on deterring the initiation of care. Instead, the organizations that deliver medical care would have the primary role in controlling technology use. These organizations are expected to behave like present prepaid group practices, which receive revenue in advance by cavitation (per capita) payments from their enrollees and operate within a prospective budget. Pressured to compete for enrollees on the basis of premium costs as well as quality of care and style of practice, these organizations would match resources to the enrolled population and control the use of technologies, such as hospitalization.

For both sets of proposals, a change in taxation policy is the main vehicle to bring about greater price sensitivity. In the past, tax treatment of health insurance premiums has encouraged coverage, because the expense has been deductible from the income tax of employers or individuals. These deductions have led people to have more insurance than they would if they bore a larger portion of the cost of it, although how much more is not clear. Insurance coverage, in turn, has dulled the sensitivity of patients, physicians, and hospitals to the cost implications of buying and using medical technologies.

Procompetitive proponents unanimously support making taxation more neutral toward medical insurance coverage. The strategy of greater competition among comprehensive care organizations also calls for having a multiple choice of plans.

Although the choices people would make in the context of greater competition are unknown, certain tendencies are likely. Under the provisions suggested for greater cost sharing—greater cost

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sharing or total direct payment by patients up to a catastrophic limit, coverage of comprehensive benefits, and experience rating of premiums—insurance coverage would have higher levels of cost sharing at the time of use. The extent to which people would purchase supplementary insurance to cover possible expenses below the catastrophic limit is not known: those at greater risk of having medical expenses, such as elderly people and people who have recurrent expenses for chronic conditions, as well as those who generally wish to avoid risks, would be more likely to elect supplementary coverage. Overall, it is likely that the average level of copayment would increase.

Under the strategy of greater organizational competition—multiple choice of plans, community rating of premiums, and a governmental role in enrollment—membership primarily in prepaid group practices and secondarily in individual practice associations (IPAs) would grow more rapidly. It is uncertain whether or not the competition of these organizations would spur other delivery systems and the overall delivery of care to become more efficient. Also unclear are the extent to which physicians would join organized systems and the extent to which newly developed organizations would resemble present ones.

Highlights of Provisions Common to the Proposals

Besides changes in taxation policy, both strategies to increase competition in health care have in common three provisions: 1) **minimum benefits defined to cover comprehensive care, 2) full coverage of medical expenses above a catastrophic limit, and 3) payments for premiums or cost sharing related to income.** These provisions conform to the economic rationale behind the proposals and are also designed to be compatible with certain accepted social principles.

Comprehensive coverage avoids artificially encouraging the use of one kind of technology over another and permits the choice to depend on their relative costs and benefits. Procompetitive proposals have included in the minimum benefits to be covered by all plans a broad range of services: physician, hospital, and ancillary. The list may also include preventive technologies, drugs, visual and auditory services, mental health benefits, and long-term care. The areas to be covered have not been defined exactly, as befits conceptual proposals that are not intended to be fully operationalized plans.

The definition of comprehensive care is a matter of great significance. Within the new context, the delivery of medical care would be channeled in the direction of the technologies included as standard benefits and away from those that were excluded. Technologies that fell outside the boundary could be slighted, because their use would not be paid for under the cost-sharing strategy and would not be provided by comprehensive care organizations unless people added supplementary coverage. The benefits to be included in comprehensive care would, in effect, set out the scope of technologies considered an essential part of the medical profession. An example is long-term care. Inclusion of long-term care in standard benefits could give people greater financial protection and could reduce the cost and length of stay in acute-care hospitals. Some of the large prepaid group practices cover long-term care and have added their own facilities. However, coverage of long-term care could involve substantially increased expenditures.

The second provision, full coverage of catastrophic expenses conforms to the basic purpose of medical insurance—to protect people from extreme financial hardship because of medical expenses connected with accident or illness. This provision also conforms to the concept that the entire society should help individuals in special need. In any endeavor, however, resources tend to be channeled into the areas that are the least constrained. Expensive and lengthy medical care is already such an area. Under increased cost sharing, this tendency would be further strengthened, because the greater cost constraints on care below the catastrophic limit would make care above the limit a more attractive outlet for technology adoption and use. The overall effect on technology cost, however, is unclear. With greater patient cost sharing for expenses below the catastrophic limit, fewer medical cases might reach the catastrophic threshold. In the case of comprehensive care organizations, the organization would have

a financial incentive to control technology use, especially in the more expensive catastrophic range.

Social concerns also underlie the provision that payments be related to income and that they be subsidized for poor people. There is general agreement throughout the society that income should not prevent people from having access to medical care that is considered basic. Although proposals to increase competition seek to instill greater cost consciousness into medical decisions, they also recognize that this approach has limited applicability for low-income groups and cannot be used for poor people. Provisions to subsidize premiums or payments for poor people and to cushion the effects of cost sharing on low-income people would assure them financial access to basic care.

Effects of Increased Competition on the Use and Innovation of Medical Technology

Greater Patient Cost Sharing

Greater patient cost sharing at the time of use deters people from seeking care and results in a lower annual percentage of the population's having contact with the medical care system. Under this strategy, **hospital and physician services would be affected more than others,** which are now subject to more exclusions and cost sharing. Fewer people would be willing to pay the additional cost of a physician visit or a hospital admission. This reluctance would lead physicians to use less expensive settings and technologies, such as ambulatory centers or do-not-admit surgery. * In general, greater cost sharing would affect the initiation of care for children less than care for adults.

The use of preventive technologies would not be greatly affected by increased cost sharing because present insurance often excludes them from coverage and because preventive use in the past has not been very responsive to insurance coverage. **An exception is the use of preventive technologies for children in low-income families; such families have exhibited lower rates of use with greater cost sharing.**

In recent years, insurance for dental care has become more common, and employers have increasingly included it in the health insurance coverage provided to workers. With tax changes and greater patient cost sharing, this trend might be arrested and dental coverage might even fall.

At least initially with greater cost sharing, most of the people who sought medical care would receive fewer and less expensive services. Most consumers would prefer medical professionals who had lower charges and used less expensive technologies, if consumers considered the concomitant lower costs worth the differences in quality of care and style of practice. Patients might not comply with physicians' recommendations for additional visits, diagnostic tests, or therapeutic procedures, especially if the conditions were a minor inconvenience and not life threatening. Patients' reluctance to pay additional costs could also lead physicians to recommend less frequently tests or procedures that have little diagnostic, therapeutic, or preventive benefit.

Physicians, because of the effects on their own incomes, would be more likely to limit technologies provided by outside organizations. Within their own fee-for-service practices, they would be more apt to limit the use of less costly technologies than more expensive ones, particularly if the practice had a substantial investment in equipment or facilities. As with the initiation of care, technology use for children would be less responsive to cost considerations.

The combination of greater cost sharing and catastrophic coverage has been alluded to above. With increasing catastrophic coverage in private insurance and governmental programs to fall back on, people of all ages now have a low risk of paying the large expenses of catastrophic illness. The notable difference from the present would be the complete coverage for high expenses relative to the greater restrictions on payment for less costly care. Because providers would be paid for expenses over the annual limit and patients would have no out-of-pocket payments, technological innovation and use might be channeled in that direction.

*Do-not-admit surgery is performed in a hospital, but patients are not admitted as inpatients.

People might resist having surgery, hospital admission, or followup care for chronic conditions, but for the cases that exceeded the limit, cost would not be a consideration. Especially for such lengthy or difficult cases, medical training emphasizes technology use, and patients are more inclined to rely on their physicians' advice and to expect technological solutions. The use and price of technology at the upper end of the price spectrum would thus be largely unconstrained, if not encouraged. **The total effect of greater patient cost sharing on technology use and cost is unclear; fewer cases would reach the catastrophic limit, but those that did would be treated more intensively.**

In hospitals, technological innovation and use would be subject to conflicting forces. Greater pressure for efficiency would apply to technologies subject to more cost sharing. If there were fewer hospital admissions, the use of technologies associated with hospital stays would also fall. Again, the presence of preexisting equipment and facilities could retard that development. Pressures to compete for patients on the basis of costs would lead hospitals to trim their operating budgets, to use their equipment and facilities more productively, and to scrutinize more carefully requests to replace or add equipment-embodied technologies and facilities. Hospitals as well as other organizations would adopt at a greater rate cost-decreasing managerial technologies, such as energy management systems. Managerial innovations in hospitals and in organizational arrangements to deliver medical care would be adopted if they were more efficient.

A contradictory influence on hospitals and other organizations with costly cases would come from the lack of restraint on technologies associated with catastrophic expenses. Compared with the present, this situation would channel development, adoption, and use more in the direction of costly halfway technologies* for medical conditions that are lengthy or otherwise subject to expensive care. Again, the net effect on the level of these activities would also depend on the number of medical cases that reached the catastrophic limit.

Whether the net effect on technology adoption and use by hospitals would be greater efficiency or less restraint is unpredictable. Perhaps the technologies associated with low- and high-cost cases would be affected differently. Or hospitals and other organizations might become more specialized in the cases they treat. Some institutions might treat the low- and moderate-cost cases, subject to market pressures to operate efficiently, while other institutions might specialize in more expensive cases, largely free from cost constraints.

An important caveat is that **changes that apply across the entire system might produce results much different from the results of past experiments** that have increased cost sharing for only a limited number of consumers, physicians, and hospitals in an area. Systemwide changes might lower cost and use to an even greater extent. Physicians, hospitals, and other organizations might feel more pressured to be efficient when all of their patients, instead of only a small minority, are subject to substantial cost sharing.

On the other hand, in an era when the number of physicians will undergo a sizable increase, slowing the rate of growth in medical expenditures implies less income for physicians. Hospitals would also be faced with a decline in revenues. Physicians might try to resist by raising their fees, emphasizing more expensive services, and charging separately for services previously billed together and more cheaply. Hospitals as well as physicians might try to maintain their incomes by expanding the use of technologies in areas that were freely reimbursed, such as catastrophic expenses.

Competition Among Comprehensive Care Organizations

Under this strategy, prepaid group practices primarily and IPAs secondarily would experience more rapid growth in their membership, numbers of physicians, and market share. The development of other organizational arrangements combining the insurance and provision of medical care would also proceed more rapidly. Because these organizations would compete for enrollees, they would be under market pressure to produce and use

***Halfway technologies alleviate the effects of certain diseases or postpone death but do not prevent disease or reflect an understanding of it and are usually expensive.**

technologies efficiently (lowest cost for a given level of quality).

In the present context, prepaid group practices have been subject to financial pressure because they receive revenue predominantly by cavitation payment. Although prepaid groups have delivered medical care to their members at a lower total cost than fee-for-service solo practices, there is insufficient evidence that IPAs or any of the other alternative delivery systems have done so. Questions have also been raised, but not resolved, about whether people who have enrolled in prepaid groups are representative of the population or are less likely to use medical care by preference or because of health status. These caveats should be borne in mind during the following discussion, which describes the changes likely in the present situation if organizations that felt similar pressures for cost control either predominated or exerted sufficient pressure on the others.

With the lower cost sharing for ambulatory care that is typical of present prepaid groups, cost would not greatly deter people from initiating care. People in a context of greater competition among comprehensive plans would have a greater likelihood of having some annual contact with the medical care system than people in a context of greater patient cost sharing. Those covered under Medicaid would beat least as likely to initiate care as they are now.

With competing comprehensive care organizations, once people entered the medical care system, **the organization would have predominant control over the number and kind of technologies used.** In ambulatory care, the organization would have a financial interest in discouraging laboratory and radiological tests that give unnecessary or redundant results and in advising clinicians about the appropriateness and timing of tests and drugs. The presence of equipment would slow these trends. There would be fewer followup visits for many medical conditions, but greater use of the ambulatory setting for cases previously admitted to hospitals.

Ambulatory visits with doubtful cost effectiveness, such as annual physical examinations, might be reduced. **Comprehensive care organizations would not necessarily provide more immunizations or counseling** about chronic conditions, nutrition, or lifestyle. Organizations could promote these technologies if consumers expressed strong preferences for them or if they saved costs for the organization over time. Overall, the per capita rate of ambulatory visits would be the same or lower.

Hospitalization rates, especially for surgery, would fall for all age groups and income levels. As equipment and facilities were not replaced, the adoption and use of technologies associated with hospitalization would fall correspondingly. In both ambulatory and hospital settings, pressures for greater efficiency would promote the adoption and use of cost-decreasing managerial technologies. **Changes would be expected in the innovation and use of managerial technologies** in such areas as staffing patterns, the delivery of ambulatory care, and alternative delivery systems.

Comprehensive care organizations would control technology use for catastrophic care as prepaid groups do now, by their acquisition of equipment, staff, and facilities and by their arrangements with other organizations for rarely used technologies, such as open-heart surgery. Clinicians would continue to make decisions about technology use for individual patients. It is unlikely that catastrophic care would constitute a larger share of total medical expenditures. If market pressure pushed providers to be more efficient about their early treatment of medical problems, and if comprehensive coverage permitted the use of the most efficient settings and technologies, it is possible that catastrophic care would account for a smaller portion of total medical expenses.

Effects of Increased Competition on the Quality of Care

Greater Patient Cost Sharing

Although higher levels of cost sharing can be expected to lead to lower use of technologies—especially in such areas as laboratory tests and drugs, illnesses of a potentially minor nature, and certain kinds of surgery-it is not clear that these changes would decrease the quality of care. For many technologies, there is a tenuous relationship

between use and benefit to patients' health. Great variations in rates of use among populations and regions in the past support this skepticism. To the extent that the use of these technologies conveys little or no benefit, greater cost sharing would not appreciably alter the outcome or the length of a patient's condition. Quality could even be improved to the extent that present overuse of technologies with some risk, such as hospitalization and surgery, now harms patients' health without commensurate benefits.

Consumers' use of different kinds of providers could also result in similar levels of quality but at a lower price. For example, less expensive professionals, such as midwives, who were equal in technical aspects and perhaps even superior in interpersonal areas, might be substituted for physicians for some functions. Under such circumstances, levels of quality could either be maintained or improved. Coverage of comprehensive care would be likely to raise levels of quality, as providers and consumers chose the setting and types of technologies for a medical condition without the constraint of limited insurance coverage.

To the extent that people did not initiate care that could significantly alter the course of disease and affect health outcomes, however, quality of care would suffer. For technologies such as childhood immunizations that are cost effective, some harm to quality can be expected with any decline in use. Even with cost sharing related to income, people with low incomes, including many elderly people, would be deterred from initiating care. Another concern with increased levels of cost sharing is that a cost-conscious consumer shopping for less expensive services might unintentionally choose and receive care of lower technical quality, an aspect of medical care that consumers are not able to evaluate fully.

If the coverage of catastrophic expenses for everyone resulted in the use of additional services after large expenditures had already been made, the effect on quality would be indeterminate. The extra care might improve the patient's condition, have little or no net benefit, or produce harm.

Under greater patient cost sharing, the quality concern for technology use by providers would be in the direction of overuse, as it is now. With a continuation of present payment methods, providers would continue to have a financial interest in using technologies. Pressure from consumers might lead them to decrease the use of ineffective technologies. But the relatively unrestrained use of expensive technologies for patients with expenses above the catastrophic limit could have the opposite effect. **The concern regarding consumers is that they would fail to initiate care in appropriate circumstances,** both for cost-effective preventive technologies and for conditions that could be improved with early medical intervention.

Competition Among Comprehensive Care Organizations

The financial barriers to initiation of care are not stressed under this strategy, and comprehensive coverage in itself would facilitate the initiation of care. However, effective barriers to initiation of care have been achieved by restricted supply of facilities, longer waiting times to obtain an appointment, and travel time to the delivery site. To the extent that access to care is diminished, consumer satisfaction would also be lessened. However, arrangements such as walk-in clinics and emergency rooms, as well as central recordkeeping, might enhance initiation and continuity of care overall, resulting in higher levels of technical quality.

In prepaid group practices, selection of provider is constrained to a preselected and limited staff (closed panel). Although medical professionals guide the selection of providers, the implications for quality are not clear-cut. The most persistent criticism of the prepaid group practice format is that, because the prepaid group practice is a large bureaucratic organization, it tends to depersonalize patients in their dealings with providers and with the medical care system itself.

A consistent finding that relates to quality is that enrollees of prepaid group practices have lower hospitalization rates than people who use fee-for-service solo practitioners. Lowering the rates of hospitalization and of use of the technologies for routine hospital care would reduce patients' exposure to the associated risks, such as infection. Although hospitalization rates among enrollees of prepaid groups appear to be lower

across diagnostic categories, there is no indication that patients' well-being has been jeopardized or that technical aspects of the quality of care have been lower. In hospitalization as in ambulatory care, members of prepaid group practices have apparently received medical care of at least comparable quality to that provided by fee-for-service solo practices.

In a restructured situation, organizations competing for enrollees on the basis of price would have an incentive to reduce cost, even at the expense of quality. Present prepaid group practices face loss of enrollment if their membership perceives that quality is below the level that they find acceptable for the cost. Medical providers are also responsive to the external standards of their profession. For both reasons, the practice of medicine in prepaid groups has not differed in major ways from that of other providers. However, the kinds of new organizations that would develop and their response to altered financial incentives could differ from existing prepaid groups. Thus, **the direction of concern about quality with the strategy of greater competition among comprehensive care organizations would be toward underuse of medical care by providers.**

Consumer Information Under Increased Competition

Under increased competition, consumers would need information about the benefits and costs of the decisions that they would be called on to make. **To choose among competing plans that offered comprehensive care, people would require information about total costs—both premiums and out-of-pocket expenses-as well as any** quality differences **that would affect health. If benefits varied across plans, information about the coverage of each plan would also be needed.**

The information would have to be presented in a standard way to permit comparisons across plans. Although providers might have different styles of practice unrelated to quality, those differences would not be so important to know in advance. The opportunity to change plans during an open enrollment period would permit people to enroll in ones compatible with their preferences. People could learn from their own experience and that of others and gravitate toward the plans they preferred. In theory, all people do not need complete information for a market to function well. A minority of well-informed consumers can influence other consumers and the direction of the market.

As they do now, consumers would face problems in assessing technical standards of quality. For insurance policies with greater cost sharing, the direction of the concern regarding providers would continue to be with overprovision of technologies. With a continuation of retrospective payment methods, providers would have no apparent incentive to recommend too few services. For the strategy of more competing comprehensive care organizations, however, the direction of the concern with providers' use would be with underprovision. Providers operating within a prospective budget could achieve lower short-term costs by recommending too few services.

If comprehensive care organizations had minimal patient cost sharing, as they do now, cost would pose little deterrent to enrollees' initiation of care. And following the initiation of care, the organization would guide the selection of providers and technologies. **Under greater cost sharing, in which cost poses more of a barrier, people would need to be better informed about the appropriate circumstances for seeking care.** Particularly valuable would be information to distinguish self-limiting conditions from those requiring immediate care and to indicate an appropriate preventive schedule.

Society would have an interest in having people, especially children, use effective preventive and therapeutic technologies that can obviate long-term health problems and more costly care. With greater cost sharing, people out of ignorance might choose providers or technologies that were less costly but ineffective or even harmful. The unresolved issues are to what extent better informed consumers can assess incompetent providers or ineffective technologies and to what extent the medical community, other parts of the private sector, or the Government should structure the system or guide consumers' or providers' decisions so that these problems are avoided or minimized.

Although little information is now available and consumers are poorly informed about the costs of their insurance coverage and their medical care, this situation may be reasonable, since consumers are called on to make few choices. In a different context, with greater price competition and more choices, the private sector might generate much of the required information. The providers or plans themselves would be expected to make cost information more generally available. Private groups might arise to develop and publish comparisons, although the difficulty of retaining exclusive control of the information could inhibit its development.

Certain methodological problems would continue to plague comparisons of plans and providers. These problems, which apply to both quality measures and cost indices, could produce misleading results.

The experience with supplementary insurance for Medicare beneficiaries casts doubt on the ability of the private sector to provide adequate information about insurance plans. The backdrop to that situation was the complexity of Medicare coverage itself. Medicare coverage and cost sharing have many variations, and policies to supplement the gaps in coverage have been correspondingly complex. Similar problems are less likely to arise if plans are required to have certain standardized and comprehensive benefits.

IMPLICATIONS FOR POLICY

Either strategy to increase price competition in medical care implies governmental action to establish the framework for the new system. Changing taxation policy to reduce incentives for greater insurance coverage is one example of a provision that would require governmental action. Universal coverage for comprehensive and catastrophic care would require governmental action by regulation, tax incentives, or direct provision of coverage to set minimum levels of benefits to be included. Government is also the appropriate body to establish the mechanisms for relating medical expenditures or premiums for poor people to their incomes.

Under the strategy of greater patient cost sharing, Government could guarantee loans for expenses below the catastrophic threshold, or it could tax supplementary insurance policies to discourage them. Under the strategy of competition among comprehensive care organizations, Government could mandate multiple choice of plans. It could also play a role in the enrollment process, including setting standards and qualifying plans as well as providing information to consumers about the plans.

In the context of increased competition in health care, information for providers and consumers would be intertwined with issues of quality. Quality assessment and assurance would continue to pose problems under either strategy to increase competition, although the direction of concern with providers would differ under each—underprovision of medical care with comprehensive care organizations and overprovision with greater patient cost sharing.

Under the strategy of greater competition among comprehensive care organizations, information requirements for consumers would center on differences in quality (as opposed to style) that accounted for a plan's lower costs. One possible model for developing and providing information is the Federal Employees Health Benefits Program, under which Federal employees choose their insurance plans from among several alternatives. The Government qualifies plans, circulates information to employees about the plans, and enrolls members, and this year also provided each employee with comparisons of the premiums, benefit coverage, and cost-sharing provisions of each plan.

An alternative model is the combination of voluntary Federal certification and State regulation that has been adopted to address problems with supplementary medical insurance for Medicare beneficiaries. Other possible models are the procedures of the Securities and Exchange Commission

and the Truth-in-Lending laws. Using these procedures as models, the Government could require that providers generate information about premiums, covered benefits, and likely out-of-pocket expenses and present it in a standardized way to permit comparisons. It could also require information about indicators of quality or practice style.

These models address information needs related to insurance plans' costs and benefits; however, neither addresses information needs related to technology use under greater cost sharing. Present deficiencies in information about the effectiveness of technologies and the competence of providers would persist under both competitive strategies. Under these strategies, medical providers would have more interest in the cost effectiveness of medical technologies, in order to make decisions that considered costs as well as benefits.

It is unlikely that individual delivery systems would be able to generate this information. Possible sources are governmentally funded evaluations conducted in the private or public sector or evaluations from a private consortium sponsored by Government and other interested parties. Under the strategy to increase patient cost sharing, a notable difference from the present situation is the importance of consumer knowledge about initiating care. Since consumers would exercise more discretion about initiating care, they would need to improve their ability to distinguish circumstances that justified their seeking medical care from those that did not.

Under both competitive strategies, the regionalization of specialized facilities may continue to be an issue. Market pressure might make providers unwilling to acquire expensive technologies that were efficacious but used for conditions with a low prevalence. Even large comprehensive care organizations would not have sufficient volume to incorporate all the technologies that their patients would require. Enterprises might develop to provide such technologies on referral from or by contract with other providers. In addition, with greater cost sharing, market pressures for efficiency would not restrain the development, adoption, and use of expensive halfway technologies for conditions whose cost exceeded the annual catastrophic limit. Possible approaches to these problems range from relying on areawide planning at the State and local level to placing certain technologies in medical schools or changing the emphasis and continuing federally supported health planning.

Some technologies, notably primary preventive ones such as immunizations, may not be used to the extent considered socially beneficial under either competitive strategy. Current Federal and State immunization programs could continue to supplement private provision, and similar programs could supplement the use of other technologies as warranted.

Thus, alternative strategies to increase price competition in health care differ in the effects that they are likely to have on medical technologies. Furthermore, the direction of any given effect would vary according to the specific technology being considered. The nature of the problems that are likely to arise and the policies to address them will depend on the strategy and the technology under consideration.

ORGANIZATION OF THE STUDY

Chapter 2 provides background information about the medical care market and the competitive proposals that is needed to analyze their effects on medical technology. The chapter presents the similarities and differences between two kinds of proposals to increase competition: 1) greater cost sharing by patients when they use medical care, and 2) greater competition among health plans and organizations that provide comprehensive care. The concept of competition in medical care is discussed and distinguished from the textbook model.

Subsequent chapters examine the effects of the proposals on three areas that OTA considered of prime importance for medical technology: 1) use

and innovation, 2) quality of care, and 3) consumer information. Each of these chapters distinguishes increased cost sharing by patients when they use medical care from greater competition among health plans and organizations. And each also analyzes the likely effects on different decision points: consumers' selection of health plan, patients' initiation of care, and providers' and patients' selection of technologies.

Chapter 3, on the effects of increased competition on the use and innovation of medical technology, considers the likely effects on different technologies: clinical and ancillary technologies, which are used for patient care; and managerial technologies, which determine the resources available and the style of practice. The issues raised in this chapter relate to the efficiency (cost for a given level of quality) of care delivered, as well as the nature of technological advance that would be probable. Chapter 4 examines the likely effects of increased competition on quality of care, an issue related to the use of medical technologies but important enough to receive separate attention. Chapter 5 acidresses the different information that consumers would need to make the decisions expected of them under greater competition. This chapter also considers potential sources of information in a situation with different incentives.

Appendixes A and B respectively present the method that OTA used to conduct the study and acknowledge the valuable assistance of the Health Program Advisory Committee. Appendixes C through I contain case studies of governmental programs or regional situations that pertain to issues of use and innovation, quality of care, or consumer information. The material in these case studies is referred to throughout the body of the study.