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As I watch my patients age, and as I myself grow older, I become increasingly anxious about the fate of the Medicare program and about health insurance for the elderly in general. My anxiety is fueled by both what I have learned from health services research and what I observe at the bedside.

First, the number of people over age sixty-five is increasing dramatically.\(^1\) This points to the need for an increase in the rate of spending for Medicare above and beyond the rate of general medical care inflation. At the same time, economic forces are generating pressure to contain the rate of growth of Medicare. In real terms, this means that the amount of resources available to the “new” Medicare population will decline and that the needs of elderly patients may not be met.

Second, despite what one does to alter one’s lifestyle or to practice good health behavior, the need for medical care grows as one ages. This need increases greatly if the purpose of medical care expands beyond curative medicine to include the maintenance of physical, mental, and social functioning. Labor-intensive procedures for maintaining independent functioning, such as having a paid companion to help one dress or walk, are costly.

Third, just when a person’s mental ability to deal with abstractions and choices is diminishing, one needs sound mental capacity to make difficult decisions about which medical options to choose when one becomes sick. Nevertheless, at the same time that confidence in decision-making ability is declining, older persons are asked to identify and choose between the complex trade-offs of different therapies and their potential health outcomes.

These observations lead me to conclude that it will be difficult for the Medicare population to obtain the care they need or want. Under these...
circumstances, how do we build a system that provides high-quality health care to an elderly, and perhaps somewhat incapacitated, population?

**Goals Of Health Care For The Elderly**

The first step is to agree on the major goals of health care for the elderly. I believe that there are four. First, every elderly person in this country should be provided with all necessary care. By this I mean a level of care that meets the following criteria: The benefits to the patient exceed the risks; providers believe that it would be improper not to recommend this care and would go on strike if they could not provide such care; there is more than a reasonable chance that the care will benefit the patient; and the benefit to the patient is not small. Provision of this care should be strongly advocated by the medical profession and be supported by scientific data. We should be able to measure whether this level of care has been provided and report our success or failure to the appropriate governmental and public agencies, including Congress and the president. We also should be able to determine whether the ability to obtain necessary care varies according to where one lives or one's personal characteristics.

The second goal should be to eliminate waste (that is, unnecessary care) from the Medicare program, so that the resources to provide necessary care are not squandered and are available to those who need them. To do this, we must hold all providers (physicians, hospitals, laboratories, and so on) accountable for the efficiency with which they deliver care. Much of the care now paid for by Medicare is unnecessary. In the same vein, we should recognize that it is inefficient to provide care with public money when the cost is so great that the benefit is not worth the expense.

Third, we must raise the mean level of quality of care provided to Medicare patients and decrease its variation. Quality should be measured in terms of the necessity of the care provided, the excellence of the care, and patient satisfaction. Above all, care should be provided in a way that maintains the highest standards of human dignity.

Fourth, elderly patients must take more responsibility in assuring that the overall health care system works for senior citizens. I believe that the contract between the elderly and Medicare needs to change, such that elderly persons move from being passive users to being active participants in improving the health care system. Medicare beneficiaries must, when asked, provide information that will help to evaluate new technology, the quality of care provided by physicians and hospitals, or changes in Medicare policies. I do not mean, of course, that Medicare patients should be forced to participate in randomized controlled trials. However, a hip fracture patient should be required to answer confidential questions, six months...
after surgery, about his or her ability to walk about or climb stairs or the amount of pain he or she has.

Providing necessary care, eliminating waste, improving the quality of care, and evaluating new technology require a change in the contract among patients, the general public, and Medicare. These four goals will not be achieved without effort. Also, several overriding considerations and trade-offs may limit, or at least qualify, the extent to which these goals are realized.

Factors Affecting Medical Care For The Elderly

Organizational factors. Most care for the elderly in the future likely will be provided by for-profit firms that use gatekeepers and preauthorization to control costs. Mechanisms must be in place to ensure that elderly patients are treated fairly under this type of system— for example, that they are treated nonprejudicially in terms of age, race, and sex; that they are referred to appropriate specialists; and that they are referred to care as close to their home as possible. Most gatekeeping is now done by doctors themselves as part of the process of delivering care, but their decision making is dependent on implicit information rather than on information supported by formal guidelines. Thus, the potential for bias against individual patients is great. A system that depends on gatekeepers and preauthorization must have written guidelines for providers to ensure that the delivery of health care is both ethical and clinically justifiable and that necessary care is not withheld. Written guidelines regarding specific diseases or symptoms also should be given to patients, who will need to take a more active role in their own care. Such information should help a patient determine whether he or she is a candidate for a particular procedure or test, how quality of care varies by hospital or physician, and even how individual preferences can determine which medical option to choose.

Geographic variation. Data show that geographic residence (for example, region, or urban versus rural) is an important determinant of the procedures or tests patients receive. This has been shown to be true in the United States, Canada, and Europe. Sometimes, these differences are clinically justifiable, For example, because of higher levels of sun exposure, the number of necessary dermatological procedures per person will be higher in Phoenix than in London. However, if there is no clinical explanation for geographic differences in distribution of services, then the result of perpetuating such differences will be that some persons will not receive care when they need it and others will receive unnecessary care.

Cost containment among high consumers of care. Approximately 2 percent of the U.S. population (many of whom are elderly) account for
about 40 percent of all health care spending.\(^8\) To be effective, cost containment efforts are likely to target persons who use a disproportionate amount of resources. However, these persons, who probably have severe chronic or acute illnesses, are those least likely to be able to defend themselves against reductions in care. Therefore, as indicated above, we must insist that tools and techniques be made available to ensure that such persons receive necessary care when they need it.

**Efficacy and effectiveness.** Many physicians in academic medicine are likely to know about the results of controlled clinical trials, which usually are performed under ideal conditions (efficacy). However, we have little information about what happens when a procedure is performed by an average physician or in an average hospital (effectiveness), because we do not routinely collect such data. Knowledge about efficacy and effectiveness among physicians outside of academia is often spotty.\(^9\) If patients are to receive the best care possible from their physicians, all practitioners must become knowledgeable about efficacy and effectiveness and participate in research in this area. Before receiving a license to practice medicine, and when renewing this license, all physicians should be required to commit themselves to helping to develop new knowledge about efficacy and effectiveness in the general medical community. Two clinical examples demonstrate why this is important.

In the first example, a sixty-five-year-old patient calls his physician complaining of crushing chest pain. It is likely that the patient will be told to go to the nearest hospital. But what evidence demonstrates that the physician acted correctly? We know that the chance of surviving a heart attack in a hospital is highly dependent on the particular hospital a patient enters. In a study of 400 U.S. hospitals, we found, after adjusting for case severity, that the thirty-day mortality rate for heart attack patients was 24 percent in hospitals providing the best quality of care (top 25 percent), compared with 30 percent in hospitals providing the worst quality of care (bottom 25 percent).\(^10\) Thus, an additional six patients per hundred admitted because of a heart attack to one of the 25 percent of hospitals with the worst quality of care will die within thirty days of admission. However, if patients who did not live closest to the best hospitals were sent to them anyway, a few of them also might die, because it would take longer to get to the hospital, thus delaying effective care. The physician telling a patient where to go in this situation must have access to at least three types of information: the effect of quality on outcomes; which hospital(s) have demonstrated the best quality; and the risk of delaying care in order to transport the patient to the best hospital.

A second example that demonstrates the importance of knowledge about medical efficacy and effectiveness involves carotid endarterectomy, a deli-
Carotid endarterectomy has been shown to be very efficacious in symptomatic males with obstruction of this artery.\textsuperscript{11} However, the study that led to this conclusion was a controlled clinical trial performed in hospitals with very low operative complication rates. We found that the complication rate of this operation, when performed by an average surgeon, was two to three times higher than that reported in the controlled trial.\textsuperscript{12} Thus, if the procedure were to be performed by an average surgeon, continuing medical therapy, as opposed to surgery, would be the better choice. On the other hand, patients referred to the very best surgeons clearly would be better off if they underwent the surgery. Again, knowledge about who produces the best outcomes should determine the choice made by and for the patient about whether medical or surgical therapy should be pursued.

Clearly, differences in quality can greatly affect the outcome of care. Thus, knowledge about medical effectiveness must be developed and acted upon. Data on quality of care must be collected for individual hospitals and physicians, so that referring physicians and patients can make the best decisions in specific clinical situations.\textsuperscript{13}

\textbf{Quality of care.} The mean level of the quality of care in today’s health care system is not high, and variations in the level of quality are substantial. Perhaps one-quarter of what is done is inappropriate, and perhaps one-quarter of all hospital deaths are preventable.\textsuperscript{14} In the 400-hospital study described above for heart attack patients, we found similar results for patients with pneumonia and heart failure. Specifically, the mortality rate in the bottom 25 percent of hospitals (after controlling for case-mix) was 25 percent higher than that in the top 25 percent of hospitals.

Data from managed care organizations indicate that excess care and lack of access can exist side by side. A study conducted in a managed care population showed that 40 percent of hysterectomies were performed for less than appropriate reasons at the same time that 20 percent of persons who sought essential prenatal services did not receive them.\textsuperscript{15} We must insist on both improving the level of quality and reducing variations in quality that result from organizational differences.

\textbf{Cost factors.} Changing physicians’ behavior without economic incentives has been shown to be virtually impossible.\textsuperscript{16} However, introducing economic incentives can spark great changes. For example, after the Medicare hospital reimbursement system changed from a cost-plus system to a fixed-price system under diagnosis-related groups (DRGs), hospital lengths-of-stay fell almost immediately by 25 percent.\textsuperscript{17} While acknowledging that economic incentives can play an important role in changing providers’ behavior, we must watch carefully for unintended negative consequences that can result from changes in incentives to providers.
**Excess capacity.** There are perhaps more than three times the number of mammography machines in the United States than are actually needed to provide mammograms to all women who need them. Many physicians who perform carotid endarterectomies do so only once or twice a year. This excess capacity is wasteful and leads to poor quality of care. Patients receive services they do not need so that equipment or facilities can be used, and physicians who are not experienced in delicate procedures perform them nonetheless. Because technologically sophisticated machines and equipment are expensive, it is difficult to pay down their cost or amortize them over time if they are not used very often. Fewer machines or facilities would be used more often, thus allowing them to “pay for themselves” and justifying replacement with more up-to-date technology. For example, California has more than 100 facilities that offer coronary artery bypass surgery, whereas New York has only thirty-one such facilities. If the low-volume facilities in California were eliminated, it is likely that there would be fewer unnecessary procedures, and that the procedures performed at the remaining high-volume facilities would be of higher quality. The amount of choice available to California patients still would be substantial.

**Clinical specialization.** As noted above, the number of procedures performed by a hospital or practitioner translates into good outcomes and perhaps even cost-effectiveness. However, the level of specialized clinical training needed to achieve good outcomes has not been established. How physicians can best work together in managed care settings also has not been established. If elderly patients are going to be asked to give up the freedom to choose their doctor, then the medical community must seriously address some fundamental questions: What kind of clinical training is necessary to become a good doctor? How much clinical training and what type is necessary for one to be a generalist or a specialist? It is disconcerting—even frightening—to see how little information we have when it comes to answering such questions.

**Quality versus cost containment.** No one questions that containing the cost of medical care (both in Medicare and otherwise) is and should be a high priority. However, making changes in the system to contain costs while ignoring clinical issues may save money at the expense of quality. Introducing copayments, coinsurance, and/or deductibles; changing the supply of facilities or practitioners; or imposing explicit budgetary controls will all result in monetary savings. However, without a clinical paradigm and/or attention to quality, there is no way to ensure that these savings will not be accompanied by an indiscriminate reduction of services—necessary services will decline as rapidly as unnecessary services, and centers of excellence will decline as rapidly as mediocre facilities. To ensure that the Medicare system does not sacrifice quality for cost, physicians need to alter
their responsibility to patients in at least six ways.

First, physicians must be empowered to work together in a multispecialty framework in which they can develop specific clinical guidelines that define necessary care and examine the impact of these guidelines on health and costs. Second, physicians need to insist on the public release of data that link quality and cost to providers and health plans. Even though elderly patients may not be likely to change providers or plans based on these data, such information must be made available to guarantee the improvement of the marketplace.

Third, just as consumers have an obligation to contribute information on the risks and benefits of various technologies, or the quality of one institution versus another, physicians need to advance new knowledge by participating in studies and providing information to the research community. This applies to physicians in both academic medicine and private practice. Fourth, physicians with sufficient experience should be the ones performing complex procedures or techniques, especially if special expertise is needed. Fifth, rigorous research must examine and establish a meaningful link between clinical training and patient outcomes. Consumers must no longer choose a specialist or subspecialist based solely on credentials that have not been shown to relate to differences in the quality of care or services provided. Finally, a new system of communication and cooperation must be established among providers. What is needed is a different way of managing patients, so that a team, rather than a group of individual professionals, is working together to assure better patient outcomes.

Conclusion

Although this essay may seem pessimistic, this is not the case. A number of promising developments are occurring, which may bring about an exceptional health care system in this country. First, methodologies to measure quality, necessity, efficacy, effectiveness, and outcomes are being developed rapidly; with public-sector financial support, this growth will continue. Second, the information revolution may enable providers to use new technologies to reduce waste and thus practice medicine more efficiently. Third, patients’ preferences are beginning to be incorporated into the practice of medicine, thus bringing clinical actions more in line with what patients want. For example, I want a health care plan that will enable me to receive only the care I need when I become sick, without the marginal, unnecessary care that is often provided. But I also would like to be assured that the care I receive will be provided by excellent physicians and excellent institutions. I know I will need to make some trade-offs. For instance, I may not be able to see a specialist on demand. Also, I must be willing to give up nonessen-
tial care, even if this care represents a last hope or would provide a small health benefit, but at great economic cost.

Others will have different health care preferences. However, we must agree on the priorities for a publicly funded program such as Medicare. Health care reform in other countries, such as the Netherlands and Sweden, can be very instructive in this regard.22 We need to reduce waste, define what constitutes necessary care, and ensure that those who provide care do it well. Development of the information and methods needed to make this happen requires public support, and the methodological tools for bringing about a better health care system—measures of quality and appropriateness, practice guidelines, and information on the relative effectiveness of alternative providers—must be placed in the public domain. If we can do this, then we can surely achieve our goals in improving health care for the nation’s elderly citizens.

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