and often irrational antiscience activists. Their frenetic activity is designed to arouse the public's hostility toward science. Yet research remains our most potent weapon in solving the many remaining problems in human health, and any neglect of the infrastructure for medical research will inevitably retard the rate of discovery. The effect will impinge negatively on the economy, health, and education of our people (*11*). Again, in the words of Vannevar Bush (*1*)

> [S]ince health, well-being, and security are proper concerns of Government, scientific progress is, and must be, of vital interest to Government. Without scientific progress the national health would deteriorate; without scientific progress we could not hope for improvement in our standard of living or for an increased number of jobs for our citizens; and without scientific progress we could not have maintained our liberties against tyranny.

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The Political Debate About Health Care: Are We Losing Sight of Quality?

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The issue of health care reform appears to be a perennial one, not only in the United States, but also in many other industrialized countries whose citizens thought their problems had been resolved. Its force seems to ebb and flow with the political and economic tides, but today, in the United States, even if some real obstacles to legislative action remain, opinion is aroused in a new way. Indeed, the strong public demand for health care reform—first manifested during the unexpected election of Senator Harris Wofford (D–PA) in 1991, and later during the presidential campaign—has developed into a top political priority.

Over the years, three factors have usually been familiar cornerstones of any American health policy debate (*1*): (i) cost control, (ii) equity of patient access to services, and (iii) the quality of health care delivered to patients. Cost control is the effort to hold down health spending to levels commensurate with our national capability and willingness to pay; equity of access is the ability of all our citizens to obtain (that is, both to pay for and to find available) the health services they need; and quality of care is the appropriateness, timeliness, and outcomes of those health services, once delivered and received.

Recently, however, a perplexing shift has occurred in the sense that, although the factors of cost and access continue to be vigorously invoked, little is being written or said about the need to maintain and to improve the quality of our health services. Table 1 shows a media reflection of current emphases.

This neglect is surprising because the quality of health care services has such obvious functional importance: it is nothing less than the primary goal of providing those services in the first place; it affects both cost and access and in turn is affected by them; and it is produced, at its most basic level, through the doctor-patient relationship that forms the heart of Western health care systems. Given so integral a function, then, it would seem that any major health policy that did not recognize the importance of quality and its sensitivity to changes elsewhere in the health system could be expected to encounter serious questions about its validity.

Beyond validity, however, the quality of health care is a political issue because everyone, at some point in time, is a patient. Because an important part of the public will thus have experienced the system's quality firsthand, it is likely that the success of any health care reform will be politically evaluated at least as much in terms of how good its services are, as what it costs or who it includes. This has always been the case in the past, and results of a recent study examining patient satisfaction with health services by Johns Hopkins University suggest that it is still the case today (*2*).

But what policy difference does it make, then, if quality is dramatically eclipsed by cost and access in the national political debate? I argue that the quasi-invisibility of the issue is of critical importance to policymakers, if only because ignoring it can lead to major misjudgments about the likely effects of changes to be made in other parts of the health system. Given that the three factors of cost, access, and quality are mutually dependent, one of them cannot be importantly modified without affecting the others. Indeed, their interactions are so intimate and numerous that, from a policy viewpoint, they cannot legitimately be separated. Instead, they need to be considered as dynamically interrelated parts of the health care system as a whole.

Changing a health care system is like playing Chinese baseball, which is almost exactly like American baseball except for one (and only one) difference:

> After the ball leaves the pitcher's hand and as long as the ball is in the air, anyone can move any of the bases anywhere. . . . The secret of Chinese baseball, then, is not just keeping your eye on the ball, but on the bases as well (*3*).

In the Chinese baseball of health policy—assuming that the three bases represent quality of care, equity of access and cost control—with almost everything in flux and all systems open, it seems impossible to imagine that quality of care could remain unchanged under a health system that reformed both cost and access.

Table 1. Number of articles in *The New York Times* primarily addressing the factors of medical costs, access to health services, and quality of care (1989 to 1993).

	Cost	Access	Quality
1989	40	9	3
1990	41	11	3
1991	82	21	2
1992	59	15	2
1993*	79	2	1

*Through July.

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In the past, various efforts to address any one of these three factors in isolation have had unexpected consequences for the other factors. For example, an initiative to reduce Medicare costs in 1984 (through the establishment of prospective payment and diagnosis-related groups) ended up increasing problems of access for elderly patients and decreasing the quality of their health services (*4*); and the deinstitutionalization of mentally ill people in the 1970s, without provision for their further care, lowered hospital populations and reduced costs, but contributed to the development of our current homeless populations (*5*).

It has been said (*6*) that "almost every advanced country's system of medical finance is bringing results that are the opposite of those predicted by its politicians, professed by its doctors, believed by its voters, and hoped for by its saints." Yet some effects on health quality are reasonably predictable, first, as the immediate consequence of efforts to lower costs or increase access; and second, as the longer-term results of combined, cascading, and cumulative interactions among the three.

Potential Effects of Cost Reductions

The most likely effect of trying to reduce costs—in the face of rapidly increasing demand, an aging population, a highly labor-intensive health service industry, and a rising rate of technological innovation—is rationing. Aaron and Schwartz (*7*) have noted:

> Growth of medical costs will be contained on a sustained basis only if we are prepared to ration care to those who are insured and are able and willing to pay for services. . . . Concern for fundamental values such as age, visibility of an illness, and aggregate costs of treatment will inevitably shape our decisions on resource allocation. Physicians and other providers will increasingly experience tension between their historic commitment to doing all that is medically beneficial and the limitations imposed on them by increasingly stringent cost limits.

As such, rationing represents effects on both equity of access and quality of care, and it is already in place, not just in the National Health Service in Britain but also in Oregon (whose form of rationing applies only to its Medicaid population) and elsewhere. Indeed, there are reasons to believe that informal rationing is already occurring in a hundred different ways, and that the medical profession has often had "to disguise rationing decisions about the use of resources as clinical decisions about appropriate treatment (*8*)."

Two other readily foreseeable effects of cost reduction on access and quality are (i) a decrease in the amount of time physicians and surgeons can spend with patients, as well as a concomitant decrease in the number of real physician services per visit; and (ii) a corresponding increase in patient waiting time and in the number of visits required for appropriate medical care to take place. In Japan, for example, where physician fee controls have been stringent, "physician visits now last roughly 5 minutes, and the Japanese average 12 visits to the physician each year—roughly three times as many as Americans, whose average visit length is 15 to 20 minutes" (*9*).

In a larger sense, past experience shows that trying to contain costs can be expected not only to influence access to medical services as well as their quality in terms of appropriateness and timeliness, but could also affect health outcomes through effects on the core doctor-patient relationship. That is, if the meaningfulness of contacts were reduced; if patients should become exasperated by long waits; if their compliance with doctors' orders were to decrease; and if stressful tensions should be created between providers and patients on the question of who will receive what services, the effectiveness of doctor-patient interactions is likely to decline and patient outcomes along with them.

Other probable effects of cost reductions are decreases in staff. After diagnosis-related groups were implemented in 1984, for example, the number of workers on hospital payrolls was cut by about 3% nationally in 1985. This decline meant then (and would likely mean again) that hospital patients received less attention, call bells were answered less quickly, and nurses' caseloads crept or zoomed upward, depending on the depth of the cut.

However, cost reductions could also have some very beneficial effects on quality of care. But benefits would occur only in an environment in which attention to cost was intimately associated with concern for quality. Much progress has recently been made in the field of health outcomes research, which seeks to establish the most effective medical procedures and discourage the use of less effective ones, such as unnecessary or inappropriate surgery (*10*). Because of this work, it is plausible that quality could improve despite cost reductions, if the findings of outcomes research were used to drive the elimination of ineffective therapies; to develop more efficient standardization (in those areas where standardization is appropriate); to encourage watchful waiting instead of immediate action (again, where appropriate); and simply to constrain everyone—hospitals, doctors, insurers, and patients—to take fewer inappropriate risks.

Potential Effects of Access Improvement

One of the major political forces behind today's health care reform is that some 37 million people in America are without health insurance. Although this lack of insurance is real, there are other problems (in particular, the effective availability of providers and facilities), that also limit access to health care. In El Paso, for example, only 30 of the city's 800 physicians (4%) maintained practices in the poorer part of the city. Yet this area houses 170,000 people, or one-third of El Paso's population (*11*). Further, many of the hospitals, clinics, and other health facilities that used to serve residents of America's inner cities no longer do so.

Increased access also runs up against the existing specialty distribution of physicians in the United States. Only about 25% of U.S. physicians are currently general practitioners, versus about 50% of Britain's doctors, for example. In the short run it is not clear how access to insurance can overcome these two major distribution-of-resources problems. The question, then, is: What would it take to persuade the right mix of doctors, nurses, and health facilities to relocate to those rural and urban areas that are poorly served, and especially to crime-ridden inner cities? In short, universal access may be easier to postulate than to achieve.

With respect to the likely interactive effects of increased access, perhaps the most important derives from the fact that poor people for whom health care has not been routinely available are more likely to have serious health problems than people who have enjoyed regular access to care, a good education, and awareness of how to use the sometimes inhospitable U.S. health care system (*12*). From the viewpoint of effects on quality, the critical question is: To what degree will the health problems of poorer and sicker people entering the health care system for the first time affect the appropriateness, timeliness, and outcomes of services?

Increased access must necessarily increase costs. Past experience with Medicare and Medicaid teaches that the introduction of new populations to health services is a "sleeping iceberg of unmet need (*13*)." If past is prologue, notable increases in health expenditures will follow on the heels of increased access, and these higher expenditures can then be expected to have a further effect on quality by putting downward pressure on the utilization of new technologies.

On the other hand, it is clear that effectively increased access would bring highly beneficial near- and long-term outcomes for those who have not had regular health care in the past. This alone would

make some initial sacrifice of quality by our society highly worthwhile. But sacrifice in a democracy has to be consented to. The big political question about equity of access thus becomes: Whose sacrifice, how big, for how long, decided by whom, and at what cost?

Potential Combined, Cascading, and Cumulative Effects

Numerous effects feed upon, reinforce, or fight each other in a system as complex and dynamic as that of health care delivery. Furthermore, health reform can have cumulative political repercussions. Several points give an idea of the criticality of these potential system effects.

It seems more than likely, based on past experience both in the United States and abroad, that the combined results of constraining costs and greatly increasing the size of the patient population would be to create a secondary wave of access problems, by further overcrowding, if not actually swamping, existing hospitals, clinics, nursing homes, and other facilities (*14*). Indeed, under the system in vigor today, scheduling doctors' appointments or hospital services usually takes days and even weeks. Even though the U.S. health care system is often characterized as having excess capacity, that capacity is not effective everywhere because of the unequal geographic distribution of general practitioners and the many demand-supply mismatches that exist across the various types of medical need. In consequence, successive, ramified access problems can be expected to occur, especially in areas where the appropriate providers are in short supply.

Moreover, if any form of widespread rationing should occur, this could recreate, to some extent, the politics of exclusion that universal access to health care is precisely intended to cure. The elderly, say, could become ineligible to receive certain needed services (because of rationing according to age, imposed by cost constraints), and others could also find services delayed or denied (as a result of queuing).

Again, past experience teaches that preventive services do not come cheap, yet they have been mentioned as one of the important cost-saving features of health reform. Although these services are often a good idea from the perspective of health outcomes, they have tended not to save money, but rather to push system costs upward, as many cost-effectiveness studies have clearly shown (*15*).

With respect to cumulative political effects, these could emerge either from rising public expectations of equality, or from perceptions of lost power and control. De Tocqueville reminds us that for people living in democratic societies, equality is not just a desire, but a "passion that is ardent, insatiable, incessant, and invincible" (*16*).

In the case of health reform, the whole effort to provide services to people who did not have them in the past has its roots in that ardent and insatiable passion. The difficulty is that if we are forced to move slowly in bringing new patients into the system, or if those who currently have no health insurance should discover that obtaining it brings them no nearer to the effective receipt of health services, this could disappoint millions of people and present federal, state, and local governments with a serious credibility problem.

The middle class, on the other hand, would be less likely to suffer from dashed expectations than from a perceived loss of equality, a sense of regression. Even though middle class voters have pushed hardest to achieve health reform—in particular, security of insurance coverage and cost reduction—there may have been some belief among them that manipulating cost and access in the right directions could be done without affecting quality. In that case, major and numerous disappointments can be expected if the past beneficiaries of readily available, top-quality health care should find themselves facing greatly increased waiting periods, precluded from access to new, life-saving technology, or unable to arrange for the most appropriate medical procedure.

Health providers would also feel some loss of authority if a struggle for control should occur with the big insurance companies likely to emerge from a managed-competition system. Indeed, this struggle has been ongoing for some years now and doctors have not taken casually what they see as the insurance industry's "increasing third-party intrusion into the practice of medicine" (*17*).

The ever-increasing pressure to contain costs, although as yet wholly unsuccessful, is bearing more and more heavily on physicians. They find their clinical judgment questioned and constrained by their traditional friends, as insurers shift from underwriting to "managed care." Physicians also notice that a rapidly increasing share of health care costs is going not to themselves or even to clinical care but to the administrators of the payment process. The widely noted calculation that the excessive overhead cost of U.S. private insurance is large enough to pay for all the care of the uninsured, implicitly suggests the possibility of transferring tens of billions of dollars of income from administrators to clinicians. Suddenly, a public system—preferably with little or no decrease in total expenditures, just a transfer from "unproductive" to "productive" activities and people—seems quite interesting. Thus we find physicians at the forefront of those calculating the costs of private insurance and even suggesting—seriously and with plausible arguments—the outright abolition of the private insurance industry (*18*).

In short, if a multiple-payer, managed-competition system should be enacted involving increased power for a small number of big insurance companies, this would extend the present trend toward increased insurer control of medical practice. The political implications are potential deep dissatisfaction and possible disaffection on the part of health providers. But even more importantly, a loss of control by doctors with regard to determining the kind and amount of treatment their patients should receive could have major impact on health outcomes, in particular, and on quality of care in general.

The issue of whether clinical judgment or cost concerns will determine patient treatment goes to the heart of the quality issue and the doctor-patient relationship. Whatever health reform proposals emerge and whatever the form of the debate, it will be crucial for policymakers to think carefully about the effects on quality of such basic changes in clinical responsibility and for doctors to make their voices heard on this issue. After all, quality in health service delivery in its most fundamental form is produced by the successful interaction of a doctor and a patient.

Implications for the Present Debate

The above discussion is merely illustrative of the multiple effects that efforts to reduce cost and improve access could have, not only on the quality of our health care but also on the very system factors we are trying to improve. Past experience, here and abroad, confirms the likelihood of their occurrence.

Reforming the health care system today seems a lot harder than when Bismarck was in power. It involves truly extraordinary complexities, given the magnitude of what we are trying to achieve and the barriers to achievement, the size of the health industry ($900 billion plus), the number and variety of system stakeholders and affected populations, the potential waves of predictable and unpredictable reform effects, and the likely political fervor, rhetoric, and volatility of the upcoming debate. In such a policy environment, we are unlikely to arrive at a perfect health reform program in one fell swoop. So we need to find time to understand the predictable effects of what we want to do; plan the effort well; protect its points of vulnerability; and build in iterative corrections, revisions, and improvements. Perhaps the consideration of potential quality effects, such as those discussed here, can help avoid an exclusive and inappropriate focus on cost and access alone. In any case, continuation of the stillness currently surrounding the quality issue would be unfortunate because it will

reduce our understanding of the potential consequences of health reform, prevent us from choosing wisely among available options, and decrease our flexibility and preparedness to manage the necessary changes.

Modern programs are rarely straightforward; neither, it turns out, were earlier ones. Bismarck's health reform seemed complex and risky to German citizens in the 1880s; and Alfonso the Learned, complaining about the problems of reforming 13th-century Spain, said, "If God in his wisdom had only consulted me before embarking on His creation of the world, I would have suggested something simpler."

Today, in the 21st century, we still have Alfonso's complexity problem: For health policy, that corresponds to "keeping our eyes on all the constantly moving bases." Doing that will force us to recognize that maintaining and improving the quality of health care received by our citizens is at least as important a national goal as controlling health expenditures and increasing access to services. Therefore, at this critically important juncture in the health care debate, let us break the current silence on issues of quality, admit unblushingly that inevitable difficulties lie ahead, and prepare to deal with them openly and effectively.

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19. I am grateful to J. Droitcour and G. Silberman for their help in reviewing this paper.