HEALING AMERICAN HEALTH CARE

Despite its many sterling qualities, the nation's health-care system has become a $1 trillion monster with oversized problems that seem to grow larger by the minute: soaring federal outlays for Medicare and Medicaid, nearly one-sixth of the population without medical insurance, and rising expenses everywhere. Now the system is lumbering in a new direction, toward managed care. Appraising this new destination—with all its implications for patients and doctors, hospitals and researchers—our authors suggest a variety of midcourse alterations.

Mismanaged Care

by Caroline Poplin

Two years ago, the United States was caught up in a furious national debate over the future of its health-care system. That debate is over, with nothing substantial accomplished, and most Americans probably believe that its passing spelled the end of any significant change in the health-care system in the immediate future. Today, however, that system is changing right before our eyes. Only now there is little debate, and the driving forces are said to be beyond anybody's control.

The signs of change are everywhere. Economy-minded employers are switching to lower-cost "managed-care" plans, and employees are being told to choose new doctors or forgo insurance reimbursement. More than two-thirds of all insured Americans now belong to health maintenance organizations, preferred provider plans, or other managed-care health insurance plans. People who do not work for big corporations or other large employers, even healthy people, are finding it more and more difficult to obtain insurance. Those who fall seriously ill or leave their jobs are having trouble maintaining their insurance coverage. Patients are being discharged from hospitals quicker—and maybe sicker. Some new mothers now are sent home 24 hours after routine deliveries.

Physicians are also feeling the effects. Under the regime of managed care, they are being told by insurers to reduce their fees and adapt their practices to new guidelines, or else lose their patients. Many newly graduated specialists, carrying debts the size of home mortgages, cannot find permanent jobs because managed care has sharply limited referrals to expensive specialists. Tasks formerly performed only by doctors—such as simple surgery and routine anaesthesia—are being turned over to less costly "physician extenders"—physicians' assistants, nurse practitioners, and technicians. Yet the *Wall Street Journal* notes that new health-care conglomerates are making more money than they can profitably invest.

Hospitals are being merged, sold, or closed. Last year, 664 U.S. hospitals (more than 10 percent of the total) were involved in mergers or acquisitions. Many nonprofit hospitals are being taken over by for-profit companies, and some hospitals are being shut down. In the last two years, Philadelphia alone has lost six hospitals and a medical school. Proud old teaching hospitals have been told by managed-care companies to bring their charges down to competitive levels or suffer the consequences. Two bastions of the American medical establishment, Harvard's Brigham and Women's Hospital and Johns Hopkins Medical Institution, are even advertising for patients.

Some of the seeds of today's transformation were sowed by the very success of American medicine during the past half-century. The rise of third-party health insurance and the triumph of modern technology,

The Bureaucrats of Medicine *(1993), by Jose S. Perez*

combined with the traditional fee-for-service structure of American medicine, are driving today's historic changes.

American medicine has always been highly decentralized, rooted in close personal bonds between doctors and their patients. The doctor-patient relationship was considered essential to accurate diagnosis and a key to effective therapy, boosting the patient toward recovery—or helping him to accept failure. Even specialists operating out of hospitals tried to develop personal relationships with their patients. Each doctor was—and remains today—legally and morally responsible to the patient for the consequences of each decision he or she makes for that patient, and good doctors take that responsibility seriously.

The historical focus on the doctor-patient relationship had important economic consequences. With competition among physicians for business held in check by the American Medical Association, great economic power rested in the hands of the individual doctors. They alone decided whether, and where, a person should be hospitalized (albeit with the patient's consent) and which expensive tests or treatments should be undertaken. Doctors, like most repairmen, generally charged separately for each service they performed and for each visit, a custom called fee-for-service billing. A major thrust of the managed-care revolution is to change that practice.

Traditionally, doctors have also claimed the right to set their own prices for their services. This practice has the potential for abuse, but it has also allowed physicians to charge wealthier patients more so that they might also offer services to the poor. Such cross-subsidies, not only for care of the poor but for research and education, are a characteristic feature of American medicine. From the days of the earliest colonial dis-

pensaries and 19th-century charity wards right up to the present, moreover, there has been an abiding link between medical education and care of the poor. Young doctors have learned their profession by taking care, at virtually no charge, of those who could not afford a doctor on their own.

For all the apparent continuity in American medicine, many familiar features of the system are of quite recent origin. Not until the end of the last century, for example, did professionalized medical care become an important factor in the lives of ordinary people—often the difference between death and total recovery. Medical science simply did not have much to offer most people. Only in the last 50 years have Americans ranked medicine as a necessity of life, along with food, clothing, and shelter, and a "right" to which everyone is entitled.

Health insurance is likewise of relatively recent vintage. Blue Cross (for hospital bills) was created in the 1930s, after hospital care became too costly for middle-class families to afford out of pocket, and Blue Shield (for doctors' bills) was launched in the early '40s. These were nonprofit plans created by the medical profession and the business community. Large commercial insurers, such as Prudential and Aetna, entered the market in force after World War II, and labor unions were instrumental in winning employer-subsidized health insurance as a benefit for many people. Today, more than 1,200 firms sell health insurance in the United States.

It was not entirely coincidental that this period also saw the rise of the wealthy doctor. Before World War II, physicians were respected members of the communities they served, but they were not usually rich. Only with America's postwar prosperity did the practice of medicine become a reliable opportunity to do well by doing good. Today, the average physician enjoys an income of about $150,000, and some specialists, such as radiologists and certain surgeons, routinely earn in excess of $200,000.

The final postwar building block was the involvement of the federal government. For 200 years, the only real public contribution to medicine in the United States was the construction of municipal hospitals for the poor, state hospitals for the insane, and the provision of care to the military in war. Significant federal support for medical research and education dates only from the 1950s; federally sponsored health insurance for the elderly and the poor, with Medicare and Medicaid, respectively, began in 1965. Today, the federal government pays about 45 percent of the nation's $1 trillion annual health-care bill.

Federally sponsored research and education have had a profound impact on the system. Federal dollars helped to build the downtown temples of medicine and to produce the specialists, researchers, and teachers who make American medicine in many ways the envy of the world. During the 1960s and '70s, the boom years of American medicine, 40 new medical schools opened their doors; medical specialists now outnumber generalists nearly three to one. The National Institutes of Health, the primary overseer of the government's research effort, was consolidated in 1930; its budget has grown from $200,000 in that year to just over $12 billion today. In

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1971, President Richard Nixon declared war on cancer, calling it "the most significant action taken during my administration." Congress appropriated about $230 million for the effort that year. In 1995, despite new fiscal constraints, it gave the National Cancer Institute about $2.1 billion.

The results of the nation's heavy investment in research and training came in a rush: widespread use of ventilators, the development of the intensive care unit and the computer-assisted tomography (CAT) scanner, the introduction of cardiac bypass surgery, all in the 1970s; fiber-optic devices and magnetic resonance imagers (MRIs) in the 1980s, which made possible diagnoses that heretofore had required invasive surgery, along with recombinant DNA pharmaceuticals, and materials and techniques for total joint replacement; and finally, in the 1990s, laparascopic surgery, which permits surgeons to perform major procedures such as gall bladder removal and chest lymph-node biopsy through a few inch-long slits, thus allowing the patient to go home the same day.

These new technologies are marvelous, but there is a catch: they are all very expensive.

By the late 1970s, policymakers were beginning to realize that Medicare, the crown jewel of the Great Society, might be turning into a budgetary disaster. Medicare spending started at $64 million in 1966, grew to $32 billion in 1980, reached $160 billion in 1994, and is still climbing.

Throughout the 1980s, medical costs grew faster than inflation, rising at annual rates of about 10 percent. The rate of growth has since subsided somewhat, but health-care cost increases still outpace increases for other items in the consumer's market basket. By 1994, the United States was spending 14 percent of its gross domestic product (GDP) on health care, the highest percentage of any country in the world and more than double the share in 1960. (Next on the list of big spenders was Canada, at 10.2 percent of GDP. By comparison, in 1993 France and Germany spent 9.8 percent and 8.6 percent, respectively.)

As much as we spend, we still do not take care of everyone. Nearly 40 million Americans now lack health insurance. Some of these people choose to forgo insurance, and some get medical care at public facilities. Yet the existence of this big uninsured population is one of the most important reasons why, even though it spends a larger share of its national wealth on health care than any other nation in the world, the United States does not necessarily enjoy the best health in the world. America's life expectancy and infant mortality rates, for example, are only in the middling range among Western industrialized nations.

Why does it cost so much to cover so few? The answer lies in the peculiar interaction between modern medicine and the marketplace.

As anyone who has ever been ill knows, obtaining health care is not like buying a car or some other product. Ordinarily, a consumer shopping for an expensive item actively searches out the merchant who will give him what he wants for the lowest price. The dealer will charge the highest price he can get without driving his customer to another store. By such transactions does the invisible hand of the free market produce efficiency: the

most desired type and quantity of goods and services at the lowest cost.

Not so in medicine. When a doctor orders tests or treatments for a patient with insurance, that patient has no reason to try to shop for a lower price, even if he has the time and information to do so. This can be quite striking in practice: a patient who would cross town to take advantage of double coupons at the grocery store, or haggle for weeks over the price of a car, will enthusiastically accede to an expensive test without ever asking "How much will that be?" (or the related question, "Is it really necessary?"). Incentives to the providers, however, are unchanged: they want to sell as much as possible at the highest prices they can command. The insurance company, now the only one with an incentive to hold the line on costs, is not even a party to the initial transaction. It doesn't find out about it until the bill arrives. These elements together are a prescription for soaring costs.

The asymmetry between buyer and seller, patient and provider, does not mean the end of competition. On the contrary, providers—doctors, laboratories, hospitals, and others—continue to compete fiercely for consumers' business. But they often compete on the basis of quality rather than price: convenient facilities, attentive staff, good outcomes, whatever they think will attract their target market.

It is important to remember that not everything about this situation is bad. The knowledge that they would be rewarded for superior new technology, even if it was more expensive, doubtless encouraged manufacturers to push ahead with the development of CAT scanners and MRI machines, which are invaluable and indispensable tools in modern medicine. The flip side, though, is that medical "arms races" developed in many cities, as hospital executives concluded they must have the latest equipment to attract doctors and patients. (At one time, it was said that there were more MRI machines in Boston than in all of Canada.)

The traditional structure of health insurance, modeled on commercial insurance, also helped push medicine toward high-cost, inpatient procedures. In general, insurers design policies to cover only unexpected, expensive losses. Routine, predictable costs—be they ordinary wear and tear on cars or routine outpatient visits for people—generally are not covered. That gives both patient and provider an incentive to shift treatment into one of the covered—and more costly—areas.

With strong pressures driving costs up and nothing pushing them down, the medical system now fondly remembered by so many doctors and patients was inherently unstable. There inevitably would come a time when those footing the bill—employers, insurers, and taxpayers—would tolerate it no more. That time arrived during the 1980s.

The federal government, paying open-ended "reasonable and customary" fees under Medicare (the pricing system organized medicine demanded in return for supporting the creation of Medicare in 1965), responded to the steadily rising costs of health care with price controls, first on hospitals, then on doctors, for Medicare reimbursements. As physicians increased the volume of their services to make up for the lost income, the government added a downward adjustment based on volume. And so it went, with escalating effort and ingenuity each round.

Many insurers responded to rising costs with *their* traditional weapon: they tightened their "underwriting," the practice of identifying and classifying risks and setting appropriate premiums. Since something like 10 per-

cent of the population is responsible for 80 percent of medical costs in any given year, it behooves a prudent insurer to identify the sickly individuals and avoid them like the plague. This is called "cherry picking" by some policymakers. Tighter underwriting is the reason individuals are having more difficulty obtaining health insurance, especially at attractive "group" or "community" rates, and why insurers refuse to cover "pre-existing conditions."

Contemplation Before Surgery *(1988) by Joe Wilder, M.D.*

Finally, under mounting financial pressure, private employers, together with their insurers, devised an innovative solution—"managed care." Much of the thinking was done by insurance company officials and corporate executives who met periodically in the late 1980s in Jackson Hole, Wyoming, under the tutelage of physician Paul Ellwood and Stanford University economist Alain Enthoven. The corporate managers took advantage of the power they understood best: market power.

Recall that in the "classical" medical transaction, the third-party payer is passive: the doctor decides what is best for the patient, the patient agrees, and the insurer gets the bill. Some insurers and employers realized that because they insured many patients, they had enormous power in what was in fact a highly competitive provider market, with too many hospital beds (particularly if patients were hospitalized only for conditions *requiring* hospitalization) and too many doctors (especially as research funds dwindled). Increasingly, insurers and employers demanded steep discounts for services rendered to the individuals they covered, secure in the knowledge that if a particular doctor or hospital refused, others would be happy to step in. Patients were told by insurers to see doctors only on an approved list.

Doctors complained, correctly, that this new insurance technique would destroy the doctor-patient relationship. Many were bitterly disappointed when patients they had served faithfully for years went off to the new, discount doctors with barely a whimper or a look back. Yet for the average—which is to say healthy—patient, such a change is not necessarily a big deal. It is the chronically ill patient who suffers.

Insurers did not stop with discounts. They began to suspect that some doctors were ordering more tests and doing more procedures than were

really "necessary" in order to make up for money trimmed elsewhere. Certainly it was difficult to explain why, for example, orthopedic surgeons replaced almost twice as many knees in Boston as in New Haven in 1982 despite the two cities' having similar populations. Perhaps the New Haven doctors were doing too few knee replacements, but, considering differences in the compensation system, it seemed more likely to analysts that the Bostonians were doing too many. So in the late 1980s some insurers moved closer to truly "managing" care: they began to examine *what* care was ordered, not just how much it cost.

Their new initiative took a variety of forms—a requirement for second opinions, "preclearance" from the company for elective hospital admissions, and "utilization review," an after-the-fact check to make sure the service was medically indicated. Predictably—and appropriately—these techniques evoked howls of protest from the medical profession. Doctors complained they were being second-guessed by nurses or even clerks who knew little about medicine, were using secret protocols, and had never seen the patient. Doctors also complained that they were required to spend too much time on paperwork.

There was worse to come. Managed-care companies are increasingly finding that the best means of controlling costs lies with the doctor himself. In the most highly developed form of managed care, instead of paying a doctor for each visit or task ("fee for service"), the company pays him a flat fee per patient per month. If the patient stays healthy and needs nothing, the fee is all profit for the doctor; if the patient falls ill, the doctor must provide whatever care the patient needs, even if it costs more than the monthly fee. Under such a system, doctors become, in effect, insurers; they are at financial risk. This arrangement is called "capitation," and it is the hallmark of the emerging system of managed care.

Capitation reverses the incentives of fee-for-service medicine. Under the old system, the more a physician did, the more money he made. In the new regime, the *less* he does, the better off he is. Often the principle is extended to expensive services the doctor controls but does not necessarily perform himself. For example, the company may withhold certain sums from a physician's compensation for referrals or hospitalizations in excess of an expected number. The company doesn't inspect these cases individually. After all, he is the doctor. And if he makes an error under this cost-cutting pressure, only he is responsible.

For insurers and employers, capitation is the Holy Grail. By definition, it limits their costs. There is no need to second-guess experts in the field. They don't have to risk alienating patients by denying claims. Their paperwork is simplified. More important, they can offer the kind of truly comprehensive coverage long sought by consumers; it is now in the doctor's interest as well as the insurer's to manage the patient with the least-expensive effective therapy. The doctor now has a stronger incentive, for example, to closely monitor chronic conditions such as asthma and diabetes in order to prevent costly hospitalizations or complications. The insurers can legitimately argue that they are shifting the emphasis in health care from curing disease to preventing it.

For doctors, however, capitation is a pact with the devil. The only way to survive financially under such a system is to sign up a large number of healthy patients and try to avoid the sick, which directly contradicts their

training. There are also strong incentives to abandon solo practice for a group practice: a few severely ill people at the wrong time can spell disaster for the solo doctor—and perhaps for his patients too, as strains on his time and finances begin to effect the quality of their care.

Most troubling of all, however, is the effect of capitation on physicians' medical decisions. Many medical calls are quite straightforward. A frail 80-year-old woman with diabetes, living alone in her own home, is hospitalized so that she can be given intravenous antibiotics for pneumococcal pneumonia; it would take a brave doctor to try to manage her as an outpatient. A 50-year-old male smoker with crushing substernal chest pain and certain electrocardiogram changes goes straight to the emergency room for clot-busting drugs if he can get there in less than six hours. (Even this case is not entirely straightforward: does the man get streptokinase at $300 per dose, or TPA, a slightly better drug for certain heart attacks, at $2,400?)

But what about the 45-year-old woman with chest pain and more subtle EKG abnormalities? The EKG is consistent with heart disease but also with other conditions. Do you send her home? Order an exercise stress test (about $1,200, and many false positives)? Refer her to a cardiologist (knowing referrals count against you)? Treat her with medication empirically "just in case," although every drug has side effects? Every doctor in practice knows that serious heart disease is not common among women in this category, but there are some exceptions. Is your patient one of those?

Of course, doctors have been making such decisions for a long time. However, managed care introduces a new element: the doctor's own financial interest. It is sometimes said that under the old fee-for-service system, doctors also had a financial interest—in doing more: more tests, more procedures, more visits. But there is a significant difference. Doing more rarely means doing harm. Under managed care, doctors protect themselves by *denying* care that might help their patient (but also might not).

Some analysts say the solution is disclosure. The doctor says, "Yes, Mrs. Smith, you have locally invasive breast cancer, and I think a bone-marrow transplant might help you. But your insurance doesn't cover it." The doctor has fulfilled his professional responsibility and is off the hook. The patient sues the insurance company to have her treatment paid for. That's why many managed-care companies now include a "gag" clause in their contracts with physicians, threatening discharge for just such disclosures, or even the disclosure that a gag clause exists.

Capitation is more fiendish still. If the physician decides not to recommend the bone-marrow transplant because recovery is unlikely and the insurer will drop *him* if he goes ahead, the last thing he is going to do is tell the patient. Nor will a doctor tell a heart patient who has occasional chest pain but can still get around that he is not recommending bypass surgery (at a cost of $25,000) because, since the research literature shows that surgery for the patient's single vessel disease increases the quality but not the length of life, the insurer penalizes doctors who recommend it.

Ethically, of course, the decision about surgery should be the patient's to make, but when recommended surgery is free to the patient, virtually everyone will choose it, and costs will soar. Between 1990 and '93, for

example, U.S. physicians performed four times as much bypass surgery on heart attack victims as their Canadian counterparts did, with only modest differences in ultimate outcomes.

Managed care is changing the entire health-care delivery system in the United States—who provides care, who receives it, and what care is given. The stated goal of managed care is efficiency. Its method is to bring to medicine, the last cottage industry in the United States, the techniques of mass production. It works on volume. It assumes that there are economies of scale to be achieved. It incorporates the latest information technology. It seeks to standardize care. This allows an employer to use less skilled (and lower paid) personnel. The cardiologist can tell the internists how to treat the heart attack victim; the internist can tell the nurse practitioners how to take care of diabetics. "Cookbook medicine," say the doctors. "Improved quality control," respond the managers.

To managed-care advocates, however, the crowning achievement of their system occurs at the next level up: the reintroduction of the market. If all managed care accomplished were a transfer of profits from physicians to managers, what would be gained? The savings to *society* only accrue when different managed-care companies compete with one another for customers. As competition drives down the price each company asks, the total spent on health care must necessarily decline.*

Managed care promises to reshape health care in America. It could very well alter the traditional doctor-patient relationship beyond recognition. More important, it provides an unsettling answer to the question of who should be making the important therapeutic decisions: the doctor, the patient, or the managed-care company.

The changes wrought by managed care will reverberate throughout the health-care system, touching important institutions that consumers rarely think about. Medical schools are already feeling the effects. While academics are vigilantly protecting their right to take on as many subspecialty fellows—doctors seeking advanced training in cardiology, orthopedic surgery, and the like—as they want, young physicians are voting with their feet. Applications for specialty residencies are already falling. No one in his or her mid-thirties is going to spend three or four years working 80 hours a week at a salary of $35,000 to get trained out of a job. At some point, senior faculty are going to have to put aside some of their research and other pursuits to take up the slack.

Nonetheless, it is heartening that, despite clear suggestions that doctors in the future will have less independence and lower incomes than physicians today, applications to medical schools reached an all-time high in 1994. There were 45,000 applicants, almost double the 1986 number, for about 16,000 slots. Maybe it is just the prospect of a secure job in an insecure time that explains this increase, but perhaps now that medicine's material rewards are being scaled back, the field is attracting fewer people who are interested in the money and more whose chief goal is to help others feel better. The organized profession, in the meantime, is trying to

**One of the reasons President Clinton's failed Health Security Act of 1994 grew to such gargantuan proportions was that its architects tried to remedy some of the shortcomings of managed care. To prevent monopolies from emerging (in, say, a town that can support only one hospital), the plan provided for "managed competition." To help consumers evaluate the quality, as well as the price, of competing health plans and to prevent companies from soliciting only healthy customers, it called for more government oversight.*

Corporate Decision *(1983), by George Tooker*

improve its position vis-à-vis insurers by reducing the oversupply of physicians. It is cutting residencies, reducing medical-school class sizes, and trying to close doors to foreign medical graduates.

Medical research is also likely to be affected by the onslaught of managed care. Overall, there may well be less money going into research, particularly since insurers are intent on eliminating the higher fees that universities and specialists charge for ordinary care in order to subsidize research. The focus of research may also change, from seeking better medications or techniques that cost more to identifying those that cost less (or can be used effectively by workers with less training).

Hospitals are already changing. Community hospitals, unable to meet expenses in the new environment, are selling out to investor-owned chains. In return for financial support, the new owners may radically alter a hospital's mission—closing an unprofitable emergency room, converting it from acute to convalescent care, or restricting uncompensated care to the minimum required by law. Big cities such as New York and Washington, D.C., are overhauling the aging municipal hospitals that have traditionally served the poor, laying off bureaucrats and medical staff alike. Nor are proud university hospitals exempt from the new managed-care regime. They also must transform themselves, reducing research and teaching in favor of patient care and shifting from cutting-edge, high-tech specialty care to inexpensive primary care.

Despite all of managed care's pitfalls, Republicans and Democrats in Washington, who have reached near-total gridlock in other areas, seem to agree that it is the solution to the nation's health-care problem—even though they disagree what that problem is. Embarking on his health-care reform initiative in 1993, President Clinton said that the principal problem was access. The percentage of the population lacking medical insurance was on the rise, having increased from 12.5 percent in 1980 to about 15 percent in 1993. The only way to save enough money to

pay the bill for covering these people, Clinton concluded, was to encourage everyone to choose managed care, in a system of managed competition. The administration attempted to overcome all the shortcomings of managed care with detailed government regulation, spelling out its vision in a 1,364-page plan. There is no need to remind you of the plan's fate.

The Republicans took another route. In 1994, they warned that Medicare, the giant federal health-care program for the elderly, would be "bankrupt" by 2002. Their solution? Introduce managed care. Give seniors vouchers for private health insurance and allow private companies to compete for their business on the basis of price and, in theory, quality. No regulations were necessary. Health care for seniors would be back in the private sector where it belonged. Consumers would have more choices (of plans if not of providers), and by paying attention to the price of insurance, they would drive down the total cost of their health care to something the nation could afford. (Savings of $270 billion over seven years were promised.) And tempting prices would lead most of them to sign up for managed care. This bill, however, was the victim of a presidential veto during the budget battle of 1995.

Some conservatives, including House Speaker Newt Gingrich (R.-Ga.), were particularly taken with a variation on the voucher theme known as medical savings accounts (MSAs). Under this scenario, seniors use a portion of a government voucher worth perhaps $5,000 to buy "catastrophic" health insurance—coverage for medical expenses in excess of, say, $3,000. The remainder of the voucher goes into a savings account to cover checkups, medications, and other routine medical expenses. Any money that goes unspent ultimately winds up in the insured individual's pocket.

In theory, this encourages the prudent patient to shop carefully for doctors, drugs, and tests, and not to overuse routine services or go to the doctor too often. In other words, it is supposed to restore price competition to the market for health-care services and thus drive down costs. (This is one reason why Gingrich and others favor making MSAs of some kind more available not only to Medicare beneficiaries but to the population as a whole.) In practice, these accounts give patients an incentive to skimp on important preventive care. But MSAs have other significant drawbacks. At bottom, the difficulty is that they would return us to a model that doesn't work anymore, the old fee-for-service system with a third-party payer. Any medical problem serious enough to require hospitalization or significant medical tests will put a patient over the deductible. If that happens, an insurance company will again be doling out checks to physicians, hospitals, and other providers. This is precisely the arrangement that paved the way for managed care in the first place.

Between 1988 and '95, the proportion of workers and their families covered by managed care jumped from 29 to 70 percent. Some analysts predict that by 2000, this number will reach 90 percent. One way or another, managed care will be incorporated into Medicaid and Medicare—already, about 10 percent of seniors nationwide have opted for managed-care programs.

Does managed care work? Is it providing more efficacious health care at lower cost? Is it at least providing the *same* health care for less money?

On quality, the jury will be out for a long time. Advocates of managed

care say they have positive indications, but even they admit that these gauges—immunization and mammography rates and member satisfaction surveys—are crude measures. On cost, there are a few more straws in the wind. In California, where managed-care providers now dominate the market (covering 95 percent of the insured population in southern California alone), average insurance premiums fell for the first time in 1992. Nationwide, annual increases in medical costs have moderated in the last year or two. Some analysts attribute part of the improvement to the increased penetration of managed care. Those who have probed deeper into managed care's impact ascribe the savings primarily to two factors: a decline in hospitalization (especially length of stay) and capitation of physicians. The savings from shorter hospital stays, they fear, are one-time reductions. And the success of capitation returns us to the all-important and still-unanswered question of what is happening to the quality of care Americans receive.

Whether or not managed care will lead us to medical utopia, do we have any choice? For reasons we are all too familiar with, it is apparent that we can no longer afford the present system, certainly not Medicaid and Medicare. Doubtless, fee-for-service medicine will survive as a niche market for the well-to-do and the health obsessed. Must managed care be the destiny of everybody else?

In virtually every other developed country, it is not. These countries have gone a different way. As Joseph White, a Brookings Institution analyst, points out in *Competing Solutions* (1995), the United States is revolutionizing its health-care delivery systems in order to maintain its private financing structure. To one degree or another, Canada, Germany, France, England, Australia, and Japan have done the opposite: they have changed their finance systems and left their care-provider structures largely in place.

Each of those countries has enacted some form of national health insurance that is universal, mandatory, and comprehensive. The degree of individual choice in selecting doctors and treatments depends primarily on the historical practices in each country. Germans, for example, are able to select their own outpatient doctors, but, following the national tradition, generally get whoever is on call at the time if they need hospital care. In Canada, again following established practices, the family doctor remains the patient's primary physician in and out of the hospital. In most countries financing is public, but health care *provision* remains in the private sector. Only in England are doctors and other medical personnel employees of the government.

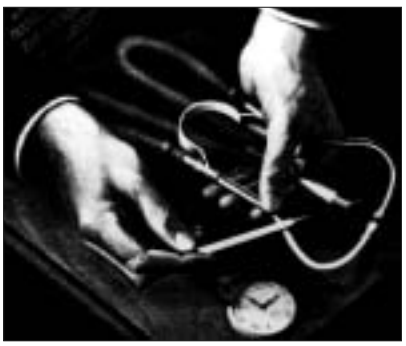
However, in each single-payer country, the national government is directly or indirectly involved. Generally, it controls costs by negotiating overall "global" budgets with large groups of providers. The providers then allocate the money among themselves as they see fit, but no more money is spent on health care. One way or another, the government also controls large capital expenses, such as hospital construction and major equipment purchases.

The single-payer approach does rein in costs, without any detectable increase in illness or mortality. At the same time, it extends at least some health care to everyone and avoids expenses caused by adverse selection, cost shifting, and multiple bureaucracies. It has already achieved some of the more desirable goals of managed care, such as a higher ratio of family doctors to specialists.

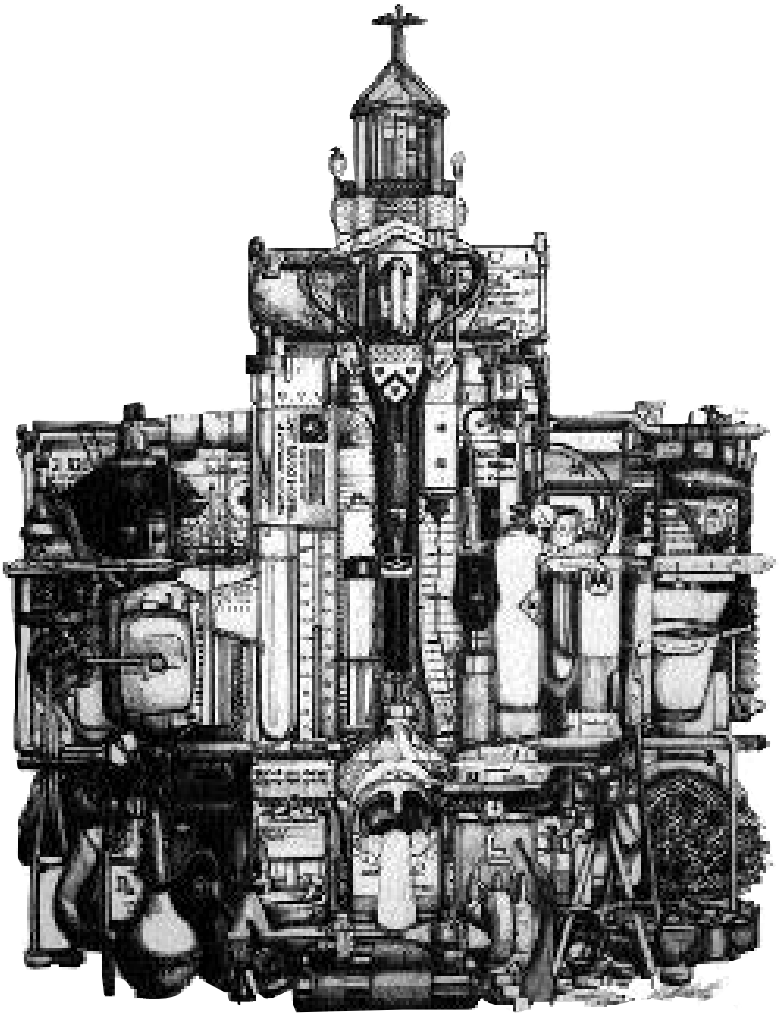
Of course, these systems are not perfect. Canada, whose experience is most relevant to our own, is also having difficulty keeping costs down. Ironically, the Canadians are now considering some managed-care techniques, including capitation. And the technique that might do the most to control expenses, requiring copayments (small fees paid by the patient for each service), seems to have been rejected as too politically unpopular. Still, Americans have much to learn from Canada and other countries.

The problems of American medicine, indeed of all Western medicine, are a direct result of its triumph. Our technology and understanding allow us to go to unprecedented lengths in pursuit of "health," and most patients expect the system to go to those lengths for them. Yet increasingly, we do not want to pay for the system that makes such benefits possible. Taxpayers do not want to pay more for the care of the elderly and the poor; employers and employees balk at paying higher insurance premiums.

The cost of health care must be trimmed, and that means that someone must decide who gets less than "everything." Traditionally in this country, the market has performed this rationing function, efficiently and invisibly, transaction by transaction. But in medicine this system is now failing us, and whatever their particular virtues, piecemeal reforms such as those proposed in the Kennedy-Kassebaum bill will not solve the fundamental problem. (The proposed law guarantees workers who leave their jobs the opportunity to retain some insurance, limits insurers' ability to deny coverage for pre-existing conditions, and may make MSAs more attractive.) Leaders across the political spectrum, from Hillary Clinton to Newt Gingrich (despite his flirtation with MSAs), are opting instead for managed care. The consequences of this fateful decision are now beginning to be felt, and doctors in particular are waiting, some anxiously, some confidently, for patients to revolt. But it is not enough to criticize managed care. Those who fear its failings must be prepared to offer something better.



Family Doctor *(1940), by Grant Wood*



St. Mary's Hospital *(1986), by Don Stewart, M.D.*

A New Prescription

by Peter J. Ferrara

Years of debate have not produced much agreement on the future of the American health-care system. But people who study the system are virtually unanimous in their diagnosis of what's wrong with the country's traditional forms of health-care financing. The patient (with advice from a doctor) ultimately decides what services and care are purchased, but another party—an insurance company, or the government, through Medicaid or Medicare—pays the bills.

As a matter of basic economics, this is a prescription for runaway health costs. In deciding what to purchase, patients have no incentive to weigh costs against benefits, for the simple reason that someone else is paying the bill. As a result, they are likely to buy any service that offers any conceivable benefit regardless of cost—from a test of dubious utility to perhaps a minor surgical

procedure. And consumers' lack of concern has ripple effects. When patients are not careful shoppers, doctors and hospitals do not adequately compete to control costs. They compete instead primarily on the basis of quality.

This fundamental flaw can be overcome only by uniting in one party the ultimate power to decide what services are purchased and the responsibility to pay for those services. There are only two ways this can be done. One is to shift the ultimate power to decide from the patient to the third-party payer. This is what is done in government-financed health-care systems: through rationing, the government or some deputized third party ultimately decides what health-care patients receive. This is also the approach taken by health maintenance organizations and other managed-care plans. The insurer ultimately decides what care patients will receive. This was the essence of President Bill Clinton's ill-fated health-care plan. It is also the reason why the proposal was so soundly defeated. The American people simply do not want to surrender control over their own health-care decisions to a third party. And who can blame them?

The only other way to overcome the defect of traditional health-care financing is to turn the purse strings over to the patient. This is the idea behind medical savings accounts (MSAs). In a traditional system, employers and employees buy all health coverage from an insurer. With MSAs, the insurer is paid a much more modest sum for catastrophic insurance, which covers only bills over a high deductible of perhaps $3,000 per year. The rest of the money that would have gone to the insurance company is paid instead into an individual account for each worker. He can then use the funds to pay his medical bills below the deductible amount, choosing any medical services or treatments he wants. If there is money left in the account at the end of the year, he can, depending on how the system is designed, roll it over or withdraw it and use it for any purpose he pleases.

Workers with MSAs, therefore, spend what is in effect their own money for noncatastrophic health care. As a result, they have every incentive to control costs. They will seek to avoid unnecessary care or tests, look for doctors and hospitals that will provide quality care at the best prices, and consider whether each proffered service is worth the cost. If MSAs were in wide use, they would stimulate true cost competition among doctors and hospitals, who would seek not only to maximize quality, as they do now, but to minimize costs as well.

MSAs already exist and, despite a substantial tax disadvantage compared with standard health insurance, they are rapidly growing in popularity. Under current law, the dollars that employees pay toward health insurance are excluded from taxable income, but MSA contributions are not. (Legislation according MSAs equal treatment is under consideration in Congress.) Nevertheless, more than 3,000 employers in the United States now offer MSAs to their employees, including *Forbes* magazine and Dominion Resources, a Virginia utility company. The United Mine Workers union has negotiated a plan for about 15,000 employees of coal mine operators. Perhaps the leading example of MSAs in practice is at Golden Rule Insurance Company, which has offered the plan to its 1,300

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workers in Indianapolis. In 1994, more than 90 percent of the company's workers chose MSAs, and they received an average year-end rebate of about $1,000, half the amount deposited in the account. Yet health costs for the company dropped about 30 percent from what they would have been with traditional health insurance.

Typically, an MSA plan might have a $3,000 deductible and $2,000 or more per year in the savings account, leaving maximum out-of-pocket exposure for the worker of $1,000 per year. By contrast, under a standard traditional insurance plan with a $500 deductible and a 20 percent copayment fee on the next $3,000, out-of-pocket expenses could reach $1,500 per year. The MSAs also offer, in effect, "first-dollar" coverage: the first $2,000 in expenses can be paid directly out of the account, with no deductible.

Critics charge that if MSAs were more widely available, only the healthy would choose them, leaving the sick "ghettoized" in increasingly expensive conventional plans. But it is easy to see why this is wrong. With less out-of-pocket exposure, and with first-dollar coverage as well as complete freedom to spend the money as they see fit, the sick as well as the healthy would prefer MSAs. This has been the experience with the firms that already offer the option. More than 90 percent of workers who are given a choice pick MSAs, with no differences between the healthy and the sick. Moreover, workers who become sick show no tendency to leave MSAs.

In practice, MSAs have also increased the use of cost-effective preventive care. That is because of their first-dollar coverage for any care the patient chooses, including preventive care. Many traditional plans, by contrast, do not cover the costs of routine checkups and other preventive care. At Golden Rule, about 20 percent of the company's workers reported in a survey that they used funds in their accounts to pay for preventive care they would not have bought under the company's traditional insurance policy. What the MSA patient *does* have is an incentive to avoid preventive care that costs more than it yields in benefits. Good candidates for trimming, for example, are the batteries of tests that often get ordered up. (John Goodman, president of the National Center for Policy Analysis, has pointed out that we could spend the entire gross national product on prevention simply by getting every American to take all of the blood tests that are currently available.)

It is true, as critics argue, that when people exhaust their MSAs and begin to draw on their catastrophic coverage, we revert to the problematic arrangement of traditional health care: the patient is choosing services but an insurer is paying the bill. But the potential savings from MSAs are so vast that this problem should not be our first concern. If they are designed with reasonable deductibles, MSAs can bring 50 percent or more of all U.S. outlays for health care under the sway of market forces. Overall, they have the potential to cut our $1 trillion national health-care bill by 30 percent or more.

Vast savings are not the only benefit. Instead of granting even more power to government, big insurance companies, and managed-care bureaucracies, MSAs would shift control of health care to individual workers and patients, and to the doctors and hospitals they choose to serve them. In short, they would solve the health cost problem by giving more power to the people.

The Two Faces Of Primary Care

by Eric J. Cassell

Among the cost cutters who are overseeing the rapid and often thoughtless restructuring of the American health-care system, "primary care" medicine has become a panacea. To the executives and physicians who run the managed-care organizations that increasingly dominate America's health-care landscape, primary care seems to offer promising solutions to many of the problems of modern high-cost medicine. They see the primary care physician as a combination low-cost general practitioner and "gatekeeper" to the rest of the health-care system, reducing the flow of patients into more specialized and expensive forms of medicine.

Within medicine, however, primary care has long had a different meaning. While its name suggests simplicity, primary care is in fact a very sophisticated response to problems created by high-cost, high-technology, highly specialized modern medicine. It has been evolving as a distinct field for several decades. Primary care emphasizes a more comprehensive view of patients and their treatment than does today's standard medicine. It seeks to aid the vast majority of patients who are not best served by the high-technology, superspecialized medicine at which the American health-care system excels, especially the poor, the chronically ill, the aged, and the disabled. Consider the plight of a poorly educated 58-year-old woman, a diabetic for 20 years. Her mother and her son both died of the disease, and she lives in constant fear of its complications. Yet she seems almost completely unable to follow the regimen of diet, exercise, and medications prescribed by a specialist. Without the added attention to the psychological and social elements of her illness that primary care provides, there is little hope of helping her.

The cost cutters tend to see only the financial and organizational advantages of primary care, and there is no question that these are considerable. Primary care is inexpensive relative to high-technology specialist care. Because most care is administered by one physician, it makes the task of administration relatively uncomplicated. And since primary care physicians do not need to operate out of high-technology hospitals or medical centers, this kind of medicine can be brought close to the places where people live, at relatively low cost—an especially useful characteristic in providing for the poor of the inner city and rural America. And, of course, there is the fact that primary care physicians can act as gatekeepers, aiding in the more rational use of resources.

It is a common and destructive error, however, to assume that the medicine itself is simple—as if primary care is concerned only with the treat-

The Clinic *(1944), by Ben Shahn*

ment of colds, sprains, and other simple ailments, and with determining who is ill enough to require the attention of a specialist. In fact, primary care is a more effective medicine not only for people with simple ailments but for those with illnesses that are serious and complex.

Specialists and specialism put the focus of medicine on an organ system or a disease; primary care medicine makes the *patient* its subject and object. It understands functional impairment and disease to be processes that enter into the patient's life story, and its interventions are chosen with the course of that story in mind. Diseases such as diabetes or even cancer unfold over such a long time that the nature of the person has an enormous impact on the evolution of the disease and its treatment. This focus on the patient rather than the disease is what makes primary care unique, and what makes it as well suited to prevention as to treatment, to children as to adults, to the well as to the sick. It is especially well adapted to the care of people with chronic illnesses, who make up the largest number of the sick.

The primary care doctor is not just an updated version of the storied general practitioner of old (who was, in any event, more storied than real for most people). Primary care physicians are generalists schooled not only in the intellectually and technically exacting realm of medical science but in communication skills, principles of behavioral science, and methods of developing the doctor-patient relationship. With these skills they can, for example, help patients become more involved in their own treatment, change harmful kinds of behavior, and stick to their therapeutic regimens. About one-third of each year's roughly 16,000 medical school graduates go into fields that are classified as primary care—family medicine, pediatrics, and general internal medicine—but only a minority of these new doctors receive such special training in primary care. The newer medical schools of the Southwest have been quicker to embrace primary care training than the more traditional citadels of the Northeast and West (although Pennsylvania State University's Hershey Medical Center

has one of the nation's exemplary primary care programs).

The rise of primary care is one of the expressions of a fundamental intellectual shift that has been taking place within medicine during the 20th century. For almost 200 years, health has been defined as freedom from disease, and medicine has been thought of as a world of disease—peopled by those who have an acute disease, are being prevented from having a disease, are being cured of their disease, or are being rehabilitated from the effects of a disease. But with the aging of the population and the growth in the number of people suffering chronic illnesses such as diabetes, arthritis, and heart disease, the idea that health is simply freedom from disease has become increasingly inadequate. Is a person with diabetes ill even if the disease is under control and he is able to live as others do? Among the elderly virtually everybody has one disease or another. Are all people who have a disease unhealthy?

Primary care has its roots in the effort to find definitions of health that accommodate these new realities and help patients meet their social, emotional, and economic goals despite illness, impairment, and functional limitation. It has links to two somewhat older movements in medicine, family medicine and hospice and palliative care (the specialized care of the dying), and shares with them the imprint of American society's growing emphasis on individual choice and dignity and its recognition of cultural diversity.

The innovative primary care that has been evolving within medicine and the kind of primary care commonly envisioned by the leaders of the new managed-care juggernaut are not necessarily mutually exclusive. There is much talk of reducing the number of specialists produced by the nation's medical schools and increasing the number in primary care fields. But if money for medical education and residency training is held back by corporate and government cost cutters, the development of true primary care and the training of primary care physicians—and specialists—will be slowed. If physicians are treated as part of the nation's health-care problem rather than part of the solution, over-regulation and declining income and morale among doctors will hamper change. This would be especially hurtful, because the eventual triumph of primary care medicine seems assured. For the older, more demanding, and more cost-conscious America of the 21st century, it is the only choice that makes sense.

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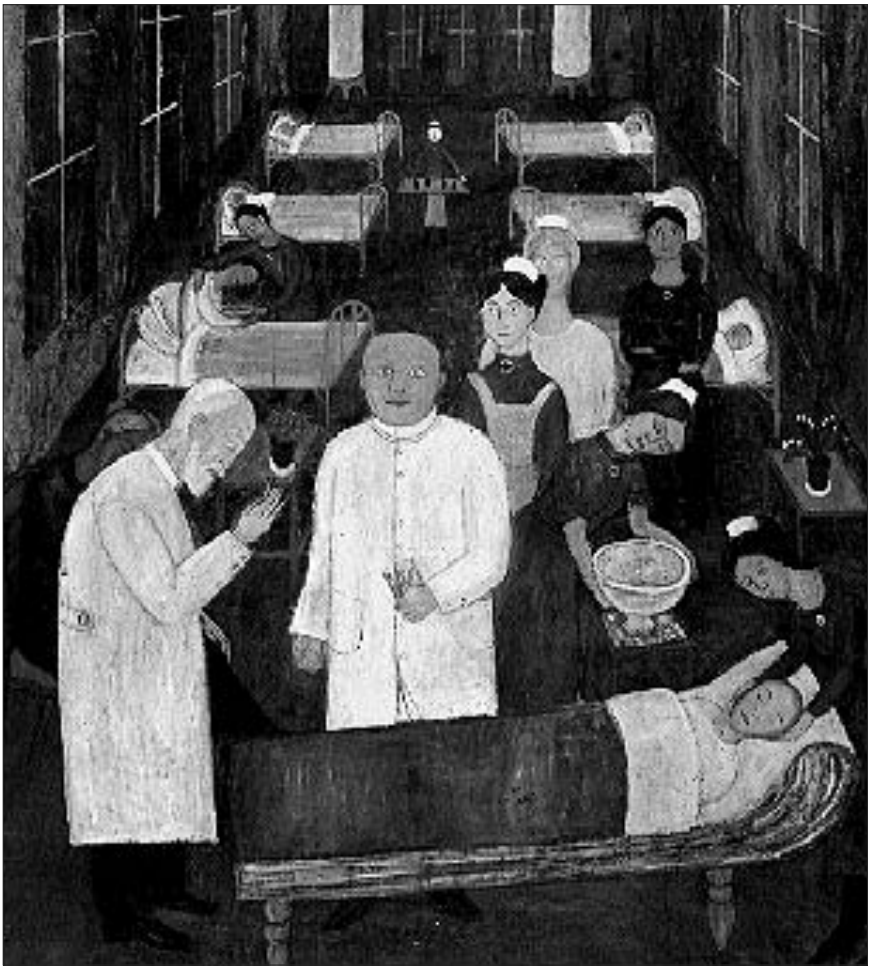
The Future of The Hospital

by C. Everett Koop

Back in medical school, when my eyes would become tired and sore late at night after hours of peering through a microscope, I would often take a break by walking to the middle of the Queensboro Bridge, where I would gaze into the distance at the lights of Manhattan or at the stars overhead. Looking far away was a welcome change, and it also gave me a better perspective on my work.

In more recent years, since leaving my post as surgeon general in 1989, I have devoted myself to the challenge of health-care reform. Traveling throughout the United States, I have spoken out on the ethical imperative of reform



Hospital Ward II *(1920), by Hilding Linnqvist*

and offered concrete suggestions about what we need to do. It has been a formidable task, often requiring intensive, almost microscopic examination of the many problems within the American health-care system. Thus, the opportunity to look into the distance, into the future, to try to get a glimpse of what the American hospital might look like 10 or 20 years from now, comes as another welcome change. Yet the images I see are more kaleidoscopic than telescopic: intriguing but always shifting, often reflecting the past as much as projecting into the future.

The hospital has become one of the dominant institutions in American society. The hospital is the one building in the community that each citizen will enter sooner or later. As the 20th century has seen the medicalization of the milestones of life—birth, pain, aging, death—the hospital has become one of the few remaining centers of communal life in our individualistic society. In popular imagery and in the top television shows, the hospital has replaced the Wild West, the city streets, and the courtroom as the place of ultimate human drama. *Gunsmoke*, *Hill Street Blues*, and *L.A. Law* have given way to *ER* and *Chicago Hope*. And for years, *General Hospital* ruled daytime television, a pop-culture icon demonstrating not only the preeminence of the hospital in American society, but also the "generalization" of the hospital—its evolution into an institution that provides all medical services to all people. We have become so accustomed to this image of the hospital that we may forget how recently it developed. And we may find more hints about the future of the hospital in its past than in its present.

The general hospital of the late 20th century is the product of a variety of very different ancestors, and it will give birth to a variety of very different descendants. Before the modern era, American hospitals served a number of distinct and differing functions, often on the periphery of both medicine and society. From their 17th-century origins as almshouses and pesthouses, American hospitals only gradually became associated with medical care. During the 19th century they branched out in different directions, as some became institutions devoted to the treatment of a particular affliction (tuberculosis, blindness), a religious or ethnic group (Catholics, Protestants, Jews), a segregated racial group (African Americans), or an age group (children).

Even in the 19th century, most Americans did all they could to avoid hospitals, which were stigmatized as places for the indigent and the dying. For a while, progress in 19th-century home medicine and home surgery even led medical visionaries to anticipate, as the author of a prize-winning Harvard University essay put it in 1876, "that state of perfection where hospitals can be dispensed with." Instead, of course, the hospital grew in importance, as the rise of scientific and technological medicine in the early 20th century led to the hospitalization of medicine and to the medicalization of the hospital. But the 21st century may see a renewed diversification, or even fragmentation, of the American hospital.

Since the early 1980s, cost-control measures have drastically changed the hospital's economic environment from one in which it thrived to one in which it must struggle even to survive. Urban hospitals dependent upon city and state taxpayer subsidies, Medicare, and Medicaid will be forced to retrench, requir-

> C. Everett Koop, M.D., *was surgeon general of the U.S. Public Health Service from 1981 to 1989.*

ing them to reduce beds and lay off personnel. Academic medical centers may see support for graduate medical education dwindle as a result of inevitable reductions in the growth of Medicare and in a diminished flow of federal funds for research. Meanwhile, curricular changes in medical education may put more students in ambulatory care centers and fewer in traditional hospitals. Suburban and rural hospitals, often competing with one another for the opportunity to provide increasingly costly care to a shrinking patient pool, will be forced to merge or shut down.

Managed care, growing far more rapidly than either its proponents hoped or its detractors feared, will put even more pressure on American hospitals. Some will simply be bought out or squeezed out of the market by hospitals owned by health maintenance organizations (HMOs). Others will find that their financial agreements with managed-care organizations force them to carry even more of the financial risk of patient care. The untoward aspects of managed care, especially of investor-driven, for-profit HMOs, may be addressed in time, either by state-by-state legislative mandates or by businesses and citizens as they gradually realize that shortcut, short-term-profit medicine may be unprofitable in the long run. But these antidotes to the problems of managed care may take years to assert themselves, and in the meantime hospitals face some tough sledding.

The solutions to these problems may lie in a return to the kind of diversification among hospitals that was seen in the past, as the harshness of the new economic climate forces hospitals to realize that they cannot be all things to all people. Competing hospitals may need to divide specialty coverage, with only one hospital in a city performing coronary bypass surgery, for example, while the other handles all magnetic resonance imaging. As economic concerns and surgical advances lead to more same-day surgery, allowing patients to return home from the hospital without an overnight stay, hospitals may need to support freestanding ambulatory clinics or same-day-surgery centers in several neighborhoods, and to extend their work in medical education to these sites.

But while some functions formerly performed in the hospital may need to be conducted at new locations outside the hospital, other services can be drawn into the hospital. A number of hard-pressed rural hospitals have found that their empty beds can be filled with long-term custodial care patients. The long-term care crisis is but one of many health-care issues our society needs to resolve. A year in a nursing home now costs more than a year at Princeton. The economic and institutional solution of the long-term care problem may need to await the retirement of millions of baby boomers (now turning 50 at the rate of one every 7.6 seconds), but hospitals should be poised to provide their part of the answer. And we also may see a return to disease-specific or condition-specific hospitals, as more Americans live longer with chronic ailments.

There is one final and vitally important way in which hospitals in the early 21st century may find themselves back where they started, for part of their function must remain the free care of those in need. I pray that charity grows, not diminishes, in the America of the 21st century, and that society as a whole provides hospitals support so they will always be able to care for those in particular need. We cannot let the hospital's present or future mission for curing eclipse its historic mission for caring.

The Research Dilemma

by Louis Lasagna

One of the legacies of the national debate over the Clinton health-care plan is a new public ambivalence about the value of medical research and technology. During that debate, Americans were told over and over—and are still being told—that the ballooning national cost of health care could be traced in part to the never-ending supply of new diagnostic and therapeutic options produced by medical science: CAT scans, MRIs, surgical procedures, medicines, prosthetic replacements for dysfunctional hips and knees, organ transplants, and so on. The co-villains in this national health-care melodrama were a medical profession profligate in its approach to medical care and a greedy, obscenely profitable health-care industry. And their sins included the promiscuous and irrational use of the new techniques and technologies.

Like all melodramas, this one is not entirely removed from reality. Medical research and technology undoubtedly have contributed to the rising cost of health care. What is often forgotten, however, is that they have also spared us incalculable expense and suffering. Vaccines have eradicated smallpox from the planet, for example, and may someday eliminate poliomyelitis. Cost-benefit analyses for individual diseases show that some treatments generate savings. Continuing digitalis therapy (which is not very costly) in patients with congestive heart failure has been estimated to prevent 185,000 clinic visits, 27,000 emergency room visits, and 137,000 hospital admissions every year. The net annual savings total an estimated $406 million.

In a perfect world, we might be able to separate "good" (i.e. cost effective) research from "bad," but it is an essential characteristic of knowledge, especially the knowledge produced by basic research, that it refuses to follow fixed paths. Peter Medawar, who won a Nobel Prize for his research on the immune system, writes that "nearly all scientific research leads nowhere—or, if it does lead somewhere, then not in the direction it started off with. . . . I reckon that for all the use it has been to science about four-fifths of my time has been wasted, and I believe this to be the common lot of people who are not merely playing follow-my-leader in research."

Critics who are alarmed by the large share of national wealth claimed by health care should direct their attention to a real villain: disease. Cardiovascular ills, cancer, and Alzheimer's disease cost the United States more than $300 billion annually in medical expenses and indirect costs such as lost work time. Add arthritis, depression, diabetes, and osteoporosis, and you rack up another $200 billion. Cutting these costs has to be considered an urgent national priority.

Medical discoveries not only reduce expenses but allow the beneficiaries

In Search of the Human Genome *(1993) by Lewis E. Calver*

to continue to live productive lives—and, not incidentally, to enjoy something to which, for better or worse, no price tag can be attached: a better quality of life. Every year, there are 500,000 new cases of duodenal ulcer in the United States and four million recurrences. While ulcers may seem to those who don't have them to be little more than a metaphor for the condition of modern life, they are quite painful—and they cost society between $3 billion and $4 billion annually in direct and indirect costs. Until very recently, doctors believed that ulcers are caused by "stress" or some mysterious form of "hyperacidity"—and that very little could be done about them. But research has shown, as a National Institutes of Health (NIH) panel concluded in 1994, that a treatable microorganism called *Helicobacter pylori* is responsible. The discovery will vastly improve the quality of life for millions of people in years to come—and save the United States billions of dollars.

Until the 1980s, most medical research in the United States was funded by the federal government, chiefly through NIH, but that has since changed. More than $30 billion is now spent annually on health-related research and development, and over half of that amount comes from industry, chiefly the pharmaceutical industry, with outlays of $16 billion in 1995. (Other research is carried out by manufacturers of medical devices such as heart valves.) NIH is a $12 billion enterprise composed of 17 specialized institutes, which deal with everything from neurological disorders and stroke to dentistry. It channels about two-thirds of its money to outside researchers in universities, hospitals, and other institutions. Much of the work funded by NIH is basic research, essential but without any immediate prospect of a payoff. Despite the new budgetary constraints in Washington, Congress has continued to expand NIH's budget modestly.

Still, much of the momentum in health-care research has shifted to the private sector. The United States is a world leader in pharmaceuticals—a lead American companies maintain in part by plowing an extraordinary 19

percent of sales income into research. Thousands of chemicals are synthesized for every one tested on humans, and of the latter, only 20 to 25 percent make it to market. The time from discovery to marketing of a new drug now averages 10 to 15 years. The average cost of bringing a new drug to market is more than $300 million (counting failures and allowing for the cost of money that could have been invested elsewhere).

The rise of managed care and the new stringency in health care have begun to alter the strategy of the drug companies. A new drug today must be either a "blockbuster" or persuasively better in some way than already-available drugs to win acceptance from the formulary committees at health maintenance organizations and hospitals and the pharmaceutical benefits programs that increasingly decide which drugs are bought. Drug companies now have little incentive to develop products that are only incrementally better.

After years of criticism, the Food and Drug Administration (FDA) has speeded up drug approvals somewhat (especially for cancer and AIDS drugs), but its demands for data from tests on animals and humans still inflate costs and needlessly prolong the process of getting new drugs into circulation. Congress may soon send a bill streamlining many of the FDA's procedures to President Bill Clinton's desk, but it is unclear whether the legislators are going to propose dramatic changes. And they may simply run out of time, leaving the matter to be dealt with after the 1996 elections.

The FDA has until recently focused primarily on its role as protector of the public health, guarding citizens from fraud and ineffective and unsafe drugs. It needs to shift its emphasis to the *promotion* of public health, which means in part getting new advances onto the market as quickly as possible. Approving an ineffective drug is bad, but so is rejecting or delaying approval of a drug that is effective. While Americans are often urged to look to Europe for models of national health-care systems, relatively little is said of Europe's speedier drug regulation processes, which frequently make new treatments available to patients long before they are in the United States.

More flexibility at the FDA, however it is achieved, is essential to the success of America's nascent biotechnology industry. Many of the most exciting medical discoveries of the future could come from this new field. Few of the roughly 1,300 biotechnology firms in the United States have become profitable so far, largely because it takes so much time to develop and win approval of a new drug, diagnostic kit, or vaccine. Nevertheless, the industry has already created such important laboratory-made health products as recombinant proteins (human insulin and human growth hormone), erythropoietin (for anemia from various causes), and alpha interferon for hairy cell leukemia.

Many diseases are still poorly treated: most cancers, Alzheimer's disease, multiple sclerosis, cystic fibrosis, and muscular dystrophy, to name a few. The apples picked from the research tree thus far have been those on the lower branches. Among the most exciting prospects on the higher branches is gene therapy, a technique whereby defective genes in human beings can

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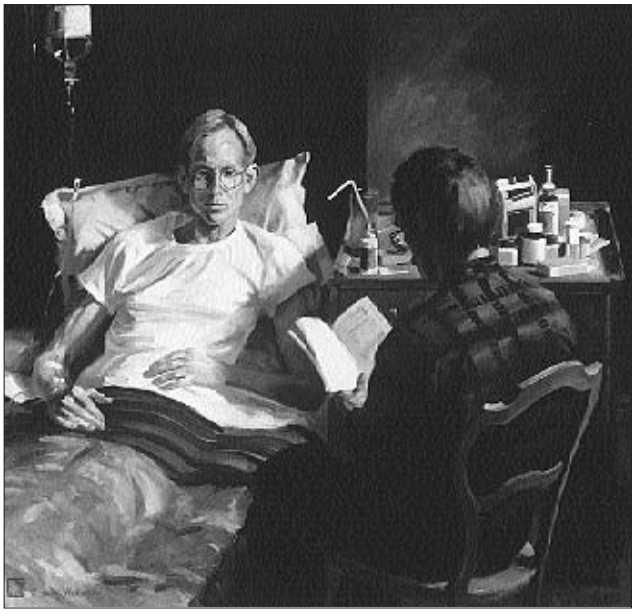
be repaired or replaced. A number of genes responsible for inborn diseases have been identified and isolated, and the exact nature of the defects characterized. But history also teaches us humility, or at least it should. We have known the molecular basis of sickle cell anemia for half a century, but treatment remains grossly inadequate. Even for those few diseases in which a defect in a single gene is responsible, repair or replacement of the affected gene may not provide a cure.



A Silent War *(1989) by Randall Lake*

Inevitably, however, medical research is going to present us with painful dilemmas. We now have, finally, a treatment for a very rare genetic disorder called Gaucher's disease, which causes the body to produce a flawed version of an enzyme needed in the metabolism of lipids. The enzyme in question is expensive to produce, and treatment at launch was estimated to cost $100,000 to $300,000 per patient per year. To my knowledge, insurers have been reimbursing for this treatment, but would they if the disease afflicted not a handful of people but millions? What if gene therapy for cystic fibrosis worked, but cost $1 million per patient? Would our health-care system pay for it? What about Alzheimer's, that cruel disease whose victims Elie Wiesel once eloquently compared to books losing their pages one by one, leaving nothing at the end but dusty covers? What if an effective therapy is discovered but is "too expensive"?

As a society that already spends 14 percent of its wealth on health care, the United States is eventually going to confront a reluctance to pay large new sums for all of the fruits of medical research. Restraining research might allow us to avoid the creation of expensive new treatments, but it would also mean sacrificing the most affordable fruits and abandoning the prospect of unexpected breakthroughs. It is a route we cannot afford. Eventually Americans will need to confront the need for rationing—not the inescapable rationing that occurs on the battlefield or in times of natural disaster, but rationing of services we can supply but for which as a society we simply are unwilling to pay. And that is a route for which we are completely unprepared.

Health Unlimited

by Willard Gaylin

The debate over the current crisis in health care often seems to swirl like a dust storm, generating little but further obfuscation as it drearily goes around and around. And no wonder. Attempts to explain how we got into this mess—and it is a mess—seem invariably to begin in precisely the wrong place. Most experts have been focusing on the failures and deficiencies of modern medicine. The litany is familiar: greedy physicians, unnecessary procedures, expensive technologies, and so on. Each of these certainly adds its pennyweight to the scales. But even were we to make angels out of doctors and philanthropists out of insurance company executives, we would not stem the rise of health-care costs. That is because this increase, far from being a symptom of modern medicine's failure, is a product of its success.

Good medicine keeps sick people alive. It increases the percentage of people in the population with illnesses. The fact that there are proportionally more people with arteriosclerotic heart disease, diabetes, essential hypertension, and other chronic—and expensive—diseases in the United States than there are in Iraq, Nigeria, or Colombia paradoxically signals the triumph of the American health-care system.

There is another and perhaps even more important way in which modern medicine keeps costs rising: by altering our very definition of sickness and vastly expanding the boundaries of what is considered the domain of health care. This process is not entirely new. Consider this example. As I am writing now, I am using reading glasses, prescribed on the basis of an ophthalmologist's diagnosis of presbyopia, a loss of acuity in close-range vision. Before the invention of the glass lens, there was no such disease as presbyopia. It simply was expected that old people wouldn't be able to read without difficulty, if indeed they could read at all. Declining eyesight, like diminished hearing, potency, and fertility, was regarded as an inevitable part of growing older. But once impairments are no longer perceived as inevitable, they become curable impediments to healthy functioning—illnesses in need of treatment.

To understand how the domain of health care has expanded, one must go back to the late 19th century, when modern medicine was born in the laboratories of Europe—mainly those of France and Germany. Through the genius of researchers such as Wilhelm Wundt, Rudolph Virchow, Robert Koch, and Louis Pasteur, a basic understanding of human physiology was established, the foundations of pathology were laid, and the first true understanding of the nature of disease—the germ theory—was developed. Researchers and physicians now had a much better understanding of what was going on in the human body, but there was still little they could do about it. As late as 1950, a distinguished physiologist could tell an incoming class of medical students that, until then, medical intervention had taken more lives than it had saved.

Even as this truth was being articulated, however, a second revolution in medicine was under way. It was only after breakthroughs in the late 1930s and during World War II that the age of therapeutic medicine began to emerge.

A Day in the Hospital *(1993), by Jose S. Perez*

With the discovery of the sulfonamides, and then of penicillin and a series of major antibiotics, medicine finally became what the laity in its ignorance had always assumed it to be: a lifesaving enterprise. We in the medical profession became very effective at treating sick people and saving lives—so effective, in fact, that until the advent of AIDS (acquired immune deficiency syndrome), we arrogantly assumed that we had conquered infectious diseases.

The control of infection and the development of new anesthetics permitted extraordinary medical interventions that previously had been inconceivable. As a result, the traditional quantitative methods of evaluating alternative procedures became outmoded. "Survival days," for example, was traditionally the one central measurement by which various treatments for a cancer were weighed. If one treatment averaged 100 survival days and another averaged 50 survival days, then the first treatment was considered, if not twice as good, at least superior. But today, the new antibiotics permit surgical procedures so extravagant and extreme that the old standard no longer makes sense. An oncologist once made this point using an example that remains indelibly imprinted on my mind: 100 days of survival without a face, he observed, may not be superior to 50 days of survival with a face.

Introducing considerations of the nature or quality of survival adds a whole new dimension to the definitions of sickness and health. Increasingly, to be "healthy," one must not only be free of disease but enjoy a good "quality of life." Happiness, self-fulfillment, and enrichment have been added to the criteria for medical treatment. This has set the stage for a profound expansion of the concept of health and a changed perception of the ends of medicine.

I can illustrate how this process works by casting stones at my own glass house, psychiatry, even though it is not the most extreme example. The patients I deal with in my daily practice would not have been considered mentally ill in the 19th century. The concept of mental illness then described a clear and limited set of conditions. The leading causes of mental illness were tertiary syphilis and schizophrenia. Those who were mentally ill were confined to asylums. They were insane; they were different from you and me.

Let me offer a brief (and necessarily crude) history of psychiatry since then. At the turn of the century, psychiatry's first true genius, Sigmund Freud, decided that craziness was not necessarily confined to those who are completely out of touch with reality, that a normal person, like himself or people he knew, could be partly crazy. These "normal" people had in their psyches isolated areas of irrationality, with symptoms that demonstrated the same "crazy" distortions that one saw in the insane. Freud invented a new category of mental diseases that we now call the "neuroses," thereby vastly increasing the population of the mentally ill. The neuroses were characterized by such symptoms as phobias, compulsions, anxiety attacks, and hysterical conversions.

In the 1930s, Wilhelm Reich went further. He decided that one does not even have to exhibit a neurosis to be mentally ill, that one can suffer from "character disorders." An individual could be totally without symptoms of any illness, yet the nature of his character might so limit his productivity or his pleasure in life that we might justifiably (or not) label him "neurotic."

Still later, in the 1940s and '50s, medicine "discovered" the psychosomatic disorders. There are people who have no evidence of mental illness or impairment but have physical conditions with psychic roots, such as peptic ulcers, ulcerative colitis, migraine headache, and allergy. They, too, were now classifiable as mentally ill. By such imaginative expansions, we eventually managed to get some 60 to 70 percent of the population (as one study of the residents of Manhattan's Upper East Side did) into the realm of the mentally ill.

But we still were short about 30 percent. The mental hygiene movement and preventive medicine solved that problem. When one takes a preventive approach, encompassing both the mentally ill and the potentially mentally ill, the universe expands to include the entire population.

Thus, by progressively expanding the definition of mental illness, we took in more and more of the populace. The same sort of growth has happened with health in general, as can be readily demonstrated in surgery, orthopedics, gynecology, and virtually all other fields of medicine. Until recently, for example, infertility was not considered a disease. It was a God-given condition. With the advances in modern medicine—in vitro fertilization, artificial insemination, and surrogate mothering—a whole new array of cures was discovered for "illnesses" that had to be invented. And this, of course, meant new demands for dollars to be spent on health care.

One might question the necessity of some of these expenditures. Many knee operations, for instance, are performed so that the individual can continue to play golf or to ski, and many elbow operations are done for tennis buffs. Are these things for which anyone other than the amateur athlete himself should pay? If a person is free of pain except when playing tennis, should not the only insurable prescription be—much as the old joke has it—to stop playing tennis? How much "quality of life" is an American entitled to have?

New technologies also exert strong pressure to expand the domain of health. Consider the seemingly rather undramatic development of the electronic fetal monitor. It used to be that when a pregnant woman in labor came to a hospital—if she came at all—she was "observed" by a nurse, who at frequent intervals checked the fetal heartbeat with a stethoscope. If it became more rapid,

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suggesting fetal distress, a Caesarean section was considered. But once the electronic fetal monitor came into common use in the 1970s, continuous monitoring by the device became standard. As a result, there was a huge increase in the number of Caesareans performed in major teaching hospitals across the country, to the point that 30 to 32 percent of the pregnant women in those hospitals were giving birth through surgery. It is ridiculous to suggest that one out of three pregnancies requires surgical intervention. Yet technology, or rather the seductiveness of technology, has caused that to happen.

Linked to the national enthusiasm for high technology is the archetypically American reluctance to acknowledge that there are limits, not just limits to health care but limits to anything. The American character *is* different. Why this is so was suggested some years ago by historian William Leuchtenberg in a lecture on the meaning of the frontier. To Europeans, he explained, the frontier *meant* limits. You sowed seed up to the border and then you had to stop; you cut timber up to the border and then you had to stop; you journeyed across your country to the border and then you had to stop. In America, the frontier had exactly the opposite connotation: it was where things began. If you ran out of timber, you went to the frontier, where there was more; if you ran out of land, again, you went to the frontier for more. Whatever it was that you ran out of, you would find more if you kept pushing forward. That is our historical experience, and it is a key to the American character. We simply refuse to accept limits. Why should the provision of health care be an exception?

To see that it isn't, all one need do is consider Americans' infatuation with such notions as "death with dignity," which translates into death without dying, and "growing old gracefully," which on close inspection turns out to mean living a long time without aging. The only "death with dignity" that most American men seem willing to accept is to die in one's sleep at the age of 92 after winning three sets of tennis from one's 40-year-old grandson in the afternoon and making passionate love to one's wife twice in the evening. This does indeed sound like a wonderful way to go—but it may not be entirely realistic to think that that is what lies in store for most of us.

During the past 25 years, health-care costs in the United States have risen from six percent of the gross national product to about 14 percent. If spending continues on its current trajectory, it will bankrupt the country. To my knowledge, there is no way to alter that trajectory except by limiting access to health care and by limiting the incessant expansion of the concept of health. There is absolutely no evidence that the costs of health-care services can be brought under control through improved management techniques alone. So-called managed care saves money, for the most part, by offering less—by covert allocation. Expensive, unprofitable operations such as burn centers, neonatal intensive care units, and emergency rooms are curtailed or eliminated (with the comforting, if perhaps unrealistic, thought that municipal and university hospitals will make up the difference).

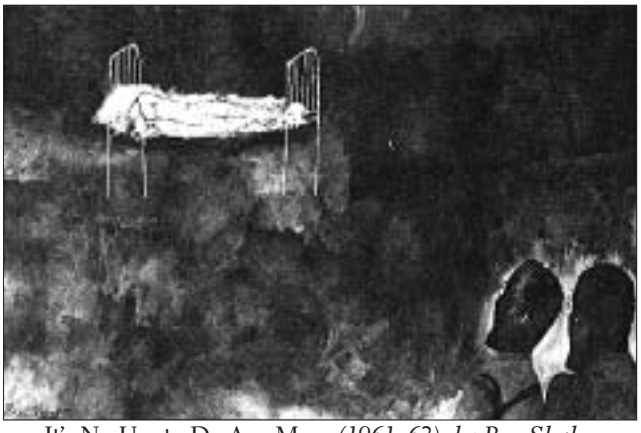
Rationing, when done, should not be hidden; nor should it be left to the discretion of a relative handful of health-care managers. It requires open discussion and wide participation. When that which we are rationing is life itself, the decisions as to how, what, and when must be made by a consensus of the public at large through its elected and other representatives, in open debate.

What factors ought to be considered in weighing claims on scarce and

expensive services? An obvious one is age. This suggestion is often met with violent abuse and accusations of "age-ism," or worse. But age *is* a factor. Surely, most of us would agree that, *all other things being equal*, a 75-year-old man (never mind a 92-year-old man) has less claim on certain scarce resources, such as an organ transplant, than a 32-year-old mother or a 16-year-old boy. But, of course, other things often are not equal. Suppose the 75-year-old man is president of the United States and the 32-year-old mother is a drug addict, or the 16-year-old boy is a high school dropout. We need, in as dispassionate and disinterested a way as possible, to consider what other factors besides age should be taken into account. Should political position count? Character? General health? Marital status? Number of dependents?

Rationing is already being done through market mechanisms, with access to kidney or liver transplants and other scarce and expensive procedures determined by such factors as how much money one has or how close one lives to a major health-care center. Power and celebrity can also play a role—which explains why politicians and professional athletes suddenly turn up at the top of waiting lists for donated organs. A fairer system is needed.

The painful but necessary decisions involved in explicit rationing are, obviously, not just medical matters—and they must not be left to physicians or health-care managers. Nor should they be left to philosophers designated as "bioethicists," though these may be helpful. The population at large will have to reach a consensus, through the messy—but noble—devices of democratic government. This will require legislation, as well as litigation and case law.



It's No Use to Do Any More *(1961–62), by Ben Shahn*

In the late 1980s, the state of Oregon began to face up to the necessity of rationing. The state legislature decided to extend Medicaid coverage to more poor people but to pay for the change by curbing Medicaid costs by explicitly rationing benefits. (Eventually, rationing was to be extended to virtually all Oregonians, but that part of the plan later ran afoul of federal regulations.) After hundreds of public hearings, a priority list of services was drawn up to guide the allocation of funds. As a result, dozens of services became difficult (but not impossible) for the poor to obtain through Medicaid. These range from psychotherapy for sexual dysfunctions and severe conduct disorder to medical therapy for chronic bronchitis and splints for TMJ Disorder, a painful jaw condition. Although the idea of explicit rationing created a furor at first, most Oregonians came to accept it. Most other Americans will have to do the same.

Our nation has a health-care crisis, and rationing is the only solution. There is no honorable way that we Americans can duck this responsibility. Despite our historical reluctance to accept limits, we must finally acknowledge that they exist, in health care, as in life itself.