Medical Progress: What Should We Seek and What Should We Limit?

Daniel Callahan

Nothing is so common these days than talk of the need for health care reform. There is hardly a country in the world where one can not find such a discussion, and often heated debate, about the future of its health care system. One might indeed see the need for reform as a kind of chronic disease of modern medicine and health care systems. Moreover, once some reforms are put in place, one can be sure that there will soon be a call for still another round of reform. Almost always the need for reform centers on the cost of health care, and how to manage and control those costs. And nothing seems to work for very long.

What is the cause of this chronic disease? Part of it is surely political, a function of changing parties and ideologies with different agendas to put in place. But a more fundamental reason is the nature of modern medicine, and a medicine that must cope with a changing demographic scene. There are three major reasons for the constant stress.

One of them is the fact of aging societies, a reality true of all western developed countries. There are a growing number and proportion of elderly, with even greater numbers and proportions expected over the next few decades. Since it is commonly estimated that health care of those over 65 is approximately four times as much per capita as those under 65, further financial difficulties can be expected as the population ages and the proportion of elderly people increases. Spain, along with other countries with a low birth rate—as I will discuss in a later lecture—will be under a particularly strong threat

Another reason is the constant introduction of new, and usually more expensive, technologies--notably new drugs and devices--and the intensified use of older technologies. And still another reason is the increased public demand for good, and for that matter even better, health care. Modern people have come to expect constant improvement in medicine and health care. What was adequate care a decade ago is rarely considered adequate any longer; and this year's level of care is not likely to seem adequate a decade in the future.

Of all these reasons, however, I believe that medical progress and technological innovation are the most important. Historically, the idea of medical progress is comparatively new. The medicine of the Hippocrates era, some 2500 year ago, had no such idea. Some diagnostic skills and the provision of some comfort was all that the physician could offer, and that situation continued until well into the 16th and 17th centuries. The great change in outlook came with the speculations of Francis Bacon and Rene Descartes. They saw the possibility of using scientific knowledge to understand human biology and to conquer disease. Descartes even raised the possibility of a great lengthening of human life.

But it took some centuries more before those speculative possibilities became realities. By the second half of the 19th century, scientific medicine was hitting its stride with constant new discoveries and some clinical applications. Death rates began to decline, average life expectancy increased, and greater understanding of the role of public health—particularly diet, clean air and water, and good sanitation—emerged. By the middle of the 20th century, the idea of progress through scientific research and the possibility of constant technological innovation was well established.

Research budgets increased in dramatic ways, the medical and device industries well understood that people would pay for constant progress, and the role of

health care as a major social institution and focus of government concern became universal. But by the 1960s, even as the excitement of medical progress grew, the early signs of financial stress began to appear. By the 1970s, worry about the rising cost of health care became a concern in every country. But despite that concern and various efforts to do something about it, costs continued to rise, and they continue to rise to this very day. Health care cost projections out into the future, 20, 30, or 40 years from now, are everywhere a source of alarm.

Medical progress has brought us wonderful rewards. We live longer and healthier lives. Most of our babies and their mothers survive childbirth, most of our young people can expect to become old people, and most our old people can expect to live longer and in better health than their parents and grandparents. It is hardly any wonder, then, that medical progress and technology are revered.

Yet there is that cost problem. The greater the progress we make the more expensive the whole venture becomes. As with the rise of affluence more generally, however much we get is never as much as we would like.

In the United States the estimate is that from 40% to 50% of cost increases can be traced to the technological factor, and I suspect something similar may be true in Europe. The net result of the technologies and other factors in the United States has been an average general system-wide cost increase of 7%-10% a year for the past several years, and with no end in sight. European countries I know are under severe costs pressures as well, even if perhaps not so much as in the United States.

By virtue of greater government control of health care spending, annual percentage cost increases have been half those of the United States. But, even so, they are usually greater than the increase of general inflation, and the percent of Gross Domestic Product (GDP) going to health care almost everywhere steadily increases. In

Spain it has grown from 7.2% in 2000 to 8.1% in 2004. That kind of growth is something to worry about.

What is to be done about this problem? It will simply not be possible for health care systems in developed countries to continue down this path. Unlimited increases in health care spending are not sustainable. The major threat of escalating costs is to undermine the ideal of equitable access to health care, which most European countries have realized over the decades. A lesser threat, but not trivial, is that of constant legislative struggles about health care, rationing of an open and covert kind, waiting lists, and increasing public dissatisfaction with health care Ironically, the actual health of a population may be at a historical high point. But since the expectation has come to be that of constant improvement, a failure to improve will no doubt be taken as a sign of failure.

Many efforts at reform are underway, and I will simply mention some of the most prominent: increasing use of co-payments and deductibles, privatization of parts of health care systems, long waiting lists for elective surgery and other forms of non-emergency care, the use of evidence-based medicine to better determine which treatments are efficacious, and various forms of rationing, often unacknowledged.

All of those efforts are important, but I want to suggest that they are not likely to work much better in the future than in the past—and that, if we limit ourselves to them, the reform crisis will continue, and even get much worse. I call all of those methods administrative and organizational; that is, an effort to change the system in some clever way to deal with the cost problem.

But, given the nature of the problem, there is no way we can be that clever. We must think about the problem in a much deeper, even more radical way. We need to change our ideals and some of our modern values about medicine and health care—

and not simply try to find better ways to reorganize existing systems, important as that is.

We need what I call a “sustainable medicine,” and the key to such a medicine requires a rethinking of the idea of medical progress and constant technological innovation. By a “sustainable medicine” I mean an idea, or even vision, of medicine and health care that aims to be (a) equitable and accessible to all, (b) affordable to national health care systems, and (c) equitable and affordable in the long run, not simply for a few years.

I take the notion of “sustainability” from the environmental movement, one of whose aims is to have an earth that can sustain human life of a good quality for the indefinite human future, one that knows how to avoid ruining the atmosphere and the earth in ways that would harm future life. I am looking for an analogous idea in health care.

We do not have at present sustainable health care systems in any country. Constant medical progress, adding to costs, and aging populations, also adding to cost, guarantees they will be unsustainable—and thus guaranteeing a threat to universal health care and an affordable medicine. If medicine is unaffordable, it can not be equitably distributed; only the wealthy will be able to get the best health care, and everyone else will have to settle for less.

I have already indicated why I do not believe that organizational and managerial reform can cope with the present unsustainable situation. Nothing less than some fundamental rethinking is needed. If there is to be a sustainable medicine, we will need to formulate in some fresh way the idea of progress that drives the technology costs and feeds public demand and, along with that, come to accept the idea that sooner or

later we will have to reach some plateau of both progress and thus health care spending.

The western idea of medical progress is what I call the “unlimited model” of progress. By that I mean an idea of progress that sets no limits on the improvement of health, that is, the reduction of mortality, the cure of all disease, and the relief of all medical miseries—and the notion of what is a medical problem itself constantly changes, by the process known as medicalization. It is “unlimited” in the sense that, however much health improves, whether in reduced death rates or sickness rates, it will never be sufficient to satisfy human demands—and thus further progress must always be pursued. If the average age of people in our doctor’s offices or in hospitals was 100, those people would be saying “help me doctor, save my life, reduce my pain and suffering, help me to be healthy once again.” An unlimited idea of progress invites that kind of unbridled desire, which has no boundaries, no limits to our aspiration.

But an unlimited, infinite, vision can not be paid for with finite funds. We need instead to redefine progress in a way that will be affordable in the long run, and thus equitably accessible to all, and which will have, as its model, a finite vision of medicine and health care. By a “finite vision” I mean one that does not aim at the overcoming of aging, death, and disease, but limits their effects to old age only, and which simply tries to help everyone avoid not death itself, but to avoid a premature death and to live lives with a decent, even if not perfect, quality of health.

The vision of a finite medicine, with limited goals and aspirations, would have to include a number of ingredients:

First, it would have to heavily shift research and medical care in the direction of health promotion and disease prevention. That would mean putting considerably more research money into an investigation of those health behaviors most likely to bring

about disease and illness and a focus on how to change those behaviors. Billions of dollars have recently been spent on mapping the human genome. Comparable research sums need to be spent on understanding health behavior: why is it that obesity is increasing almost everywhere and what can be done to change that trend? Why is it that so many people continue smoking in the face of the evidence that smoking is a lethal habit? Why is it so hard to get contemporary people to exercise?

We do not really know the answers to questions of that kind, much less how to change such behaviors. But we need to find answers. What we can not do is to continue throwing high technology medicine of an ever more expensive kind at sick people. We need to better understand how to keep them well in the first place so that they do not need, or want, those technologies.

Second, we need to find good ways to compare expenditures on health care against expenditures on other socially important goods, such as education, job creation, and environmental protection. It is well known, for instance, that the higher a person's education level the more likely they are to have better health as well. As for jobs, it is also well known that those without work, or doing work well below their talents, are at much greater health risk than those who are adequately employed. But in many countries health care is treated as if it is something special, so much so that it ought not to be compared with other expenditures. But, even for the sake of health, there are useful ways of spending money that have nothing to do with the direct delivery of health care. And beyond that point a well-run, balanced society needs to have some good sense of its most necessary priorities; and health care may not always come out at the top of the list.

Third, we need the public to understand that rationing is now and will always be a part of any health care system. No system can give everyone everything they need in

the name of better health. Our aspirations will always exceed our resources, particularly when medical progress itself has the result of raising public expectations of what medicine can do for them. A survey some years ago in the United States found many more people now believe they are in worse health now than people surveyed 30 years ago. Yet in actual fact their health was far better. It is just that their notion of what counts as “good health” has changed. We want more, expect more, and complain more loudly when we don’t get it. And when we do get it, we quickly raise the bar, wanting something still better. Thus one way or another rationing will be needed. That issue needs to be discussed openly, which legislators and health officials are nowhere happy to talk about. But if rationing is to be fair and reasonable, then it must be done with the knowledge and general consent of those being rationed.

Fourth, our technologies must be much more toughly evaluated, and preferably before they are released to the public rather than afterwards. Mention has already been made of evidence-based medicine as one technique for controlling costs. But evaluation of that kind is ordinarily aimed only at the efficacy of a diagnostic or therapeutic procedure, not at its likely economic impact. But that impact needs to be evaluated as well, and it should be done by the manufacturers of the technology, whether drugs or medical devices. The companies are now forced to evaluate new drugs for their safety and efficacy, and it would be thoroughly appropriate for them to evaluate their economic impact on health care. There should of course be government oversight of such work, paid for by the companies but verified and approved by government.

Only if the evaluation shows that the technology will not significantly raise costs, or do so only for exceptional technologies, should governments be willing to pay for them. This would be a very tough standard, but much better than the present situation,

one that sees new technologies more or less dropped into health care systems uninvited. In the future they should be asked in, but only if their developers have shown they are worth the money and not just good for our health.

Finally, and most fundamentally, a change from an infinite to a finite model of medicine would have to embody a different attitude toward human aging and death. Even if it is well understood in daily medical practice that people get old and die, that is by no means the case in the medical research community. In that community every lethal disease is a candidate for a cure and the phenomenon of aging often treated as some kind of preventable condition, itself a kind of disease. Few people want to die and not many welcome aging. But those realities are part of the human life cycle, which has yet to be repealed despite a great deal of talk about doing so.

Medicine must increasingly shift its focus from length of life to quality of life, from the cure of disease to caring for those who can not be cured. A medicine that keeps people alive too long, burdening their life with technological treatments that may bring them much pain with little health gain, is not a decent and humane medicine. Two hundred years ago most people died of infectious disease, ranging from plagues to diptheria. Most interestingly, when people got sick from infectious disease they either died quickly, within a few days, or they recovered; and when they recovered they usually had few lingering symptoms. Now lives can be kept going for many years in the presence of disease, whether cancer or heart attacks or Alzheimer's.

Naturally, those who died of infectious disease two centuries ago died much younger. We now have the advantage of living much longer, but also our dying takes much longer, extended by chronic diseases that can be partially controlled but not cured. Now we can live to be 80 or 85 or 90, but we are likely to do so with a number of chronic conditions that leave us sick but not dead. The average old person with a

terminal disease in the US will have an average of 5 serious medical conditions, compared with only one for someone not dying.

Perhaps it is a good trade off that we now live longer, but spend more of our later years burdened by disease, though I sometimes wonder about that. Would I prefer to have died at 45 from small pox to avoid death at 85 from congestive heart failure? Well, I am not sure about that, though I am glad that small pox was cured. Would I prefer to die now, at 77 from cancer or kidney failure, or live into my 80s with a 50% chance of contracting Alzheimer's disease? Ironically also, infectious disease has not actually been conquered. Because of new diseases, such as AIDS, and more and more infectious conditions resistant to antibiotics, and an increase in hospital deaths from infection, the rate of deaths from infectious disease is as high now as it was 40 years ago.

In the end, in asking that we reconsider the idea of progress, I am not asking that we stop progress, but only that we think about what it is giving us as its general direction. Its present direction is not sustainable, focused as it is on cure and cure by high-technology medicine, usually of a costly kind. No matter how much money we spend on combating aging and death they will win out in the end. Medical progress is a bit like exploring outer space: no matter how far we go, we can go even further.

With space travel the economic limitations of unlimited exploration soon became obvious: no more moon walks, much less manned trips to Mars. We have settled instead on space shuttles as an affordable, even if limited, means of exploring outer space. And fairly recently both the airline industry and the airplane manufacturers decided that supersonic passenger planes were just not economically viable. We need analogous insight into unlimited medical progress. We can not afford everything we might like, even life itself.

By calling for a change in our vision of the future of health care, I am simply asking that we be reasonable in our expenditures and our expectations. No one wants to live with a health care system in constant economic turmoil, or with one that excludes the poor from all of its benefits. Only a sustainable health care system is likely in the long run to be tolerable. There will be less technological progress, some people will not live as long as they might have desired, and many medical desires may go unfulfilled. That may seem a high price to be paid for sustainability. But I believe that our present unsustainable systems carry an even higher price, threatening justice and social stability. Less is often better than more in human life, and that may well be the case with health care.

Meanwhile, there is a consoling thought. Expert estimates are that about 60% of health status improvements over the past century have come from improvements in the social and economic conditions of life, and only 40% from improved medical care. That trend is likely to continue. It means that, even if high technology progress is slowed and rationed, people are almost certain to live longer lives in the future and in better health than at present. One of the most interesting differences between American and European health care is that there is much more technology available to Americans, more scanning and imaging devices, more advanced heart surgery and expensive cancer treatments—and yet European health outcomes are better than ours. More technology and greater access to it, in short, does not necessarily bring about better health.

One of the most important developments in recent health care has been not only the increasing number of those who live into their 80s and 90s, but how many of those who do so have not survived because of advanced medical care. While there has been a steady increase in the age of those undergoing advanced technological

treatment, particularly in surgery, there has been a decline in acute care medicine for those over 80. Moreover, those who make it to the age of 90 are likely to have had good health through much of their life, avoiding doctors, hospitals, and intensive care units. The long standing hope of a “compression of morbidity,” that of a longer life in good health followed by a quick death is happening with more and more people. Of course not everyone is so lucky, and for most of us a slow decline is still most likely.

I want to conclude by taking up the two questions posed in the title of my lecture: What should we seek? What should we limit?

We should seek:

--to go from being a young person to being an old person, but not to live indefinitely

--we should seek good health care for our children to make certain that happens

--we should seek to live our lives in as healthy a way as possible: follow a good diet, control our weight, do not smoke or drink to excess, and exercise regularly

--avoid going go doctors excessively: they are trained to find something wrong with you, and if you give them enough chances to do so, they will—follow the model of those who live to be 90, which seems to mean having little to do with medicine

--if, despite our best efforts, we become ill, then we should not expect miracles from our doctors, nor expect them to always keep us alive with the most expensive technologies

--a health care system that treats everyone alike and distributes good care equitably

--we should seek a society that provides everyone with a good education, makes jobs available, treats everyone fairly, and takes good care of the poor: a healthy

society needs much more than a good medical care system to keep everyone in good health

What We Should Limit

--specific efforts to constantly extend life expectancies—an average age of 75-80 is a long enough life to experience most of what a full life offers

--efforts to find a medical solution to all of life's problems, whether the solution be drugs or physical enhancements

--efforts to constantly increase the supply of new technologies, limiting them only to those that show significant benefits at an affordable price

--we should be wary of utopian medical ideas: having exactly the kind of children we want; living lives much longer on average than we now live; developing drugs that will help us eliminate some of the necessary suffering of life, such as grief

--any scientific, medical, or commercial efforts to persuade us that nothing is more important than more and better health. How we live with and accept our finitude is as important as having good health. Good health is not much good in a bad society. Illness can be better endured in a good society.

Medicine will surely continue to make progress, even if there should be a more limited set of goals as it is pursued. Nothing in human life stands still, and neither will medicine. But that progress must always be seen in the context of other social needs, alse important to human welfare: food, clothing, shelter, jobs, economic security, the welfare of family, national defense, and now environmental protection. Health is an important human good and the provision of health care an important social obligation. But is not the only social obligation.