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Foreword

Two years ago I wrote the Foreword to Health Care Reform by Victor Fuchs, a compilation of 12 of the health care reform articles that Victor published in the 2008-09 period. I referred to Victor Fuchs as the dean of American health economists and contrasted the brevity, clarity and creativity of his articles with the denseness of the health care legislation in Washington. It was clear two years ago that there was still much work to be done in this area, particularly in controlling the runaway costs of health care in America. The facts are stark. We spend more on health care than any country in the world, no matter how you measure it. As a fraction of GDP, we spend 50 percent more than the second place country and twice the average of the OECD countries. If health is captured by life expectancy, then among OECD countries we are at best middle of the pack. Federal and state budgets are under great strain because of the burden of health care costs, and real take-home wages for middle-class Americans have stagnated to the past 30 years, partly because of the sharply increased cost of employer-sponsored health insurance. We are still on a completely unsustainable path in terms of health expenditure. If you haven't yet read Health Care Reform, I recommend you do so. You can find it by going to http://siepr.stanford.edu/publicationsprofile/2147.

Now, Vic Fuchs has come up with the sequel and, unlike Hollywood, the sequel is every bit as good as the first edition. Vic continues to generate a wide range of ideas about how health care could be structured in the United States. This new booklet, More Health Care Reform, contains eight of the articles that he published in 2010 and 2011. It is not just more of the same. Vic tackles completely new areas such as how to restructure medical education and new priorities for biomedical innovation. He challenges long-standing conventions such as the 11 years it takes to train a medical doctor (four years as an undergraduate, four years in medical school and three years of residency) not to mention the extra years that many specialties and subspecialties require. He notes that education in engineering is much more efficient than education in medicine and offers up what amounts to a radical restructuring of medical education. “That’s how it has always been done” is not a good justification for the current costly structure of medical education. We need more radical ideas in this field.

In terms of new priorities for biomedical innovation, Vic Fuchs asserts that we need more emphasis on innovations that improve the quality of life, instead of focusing rather exclusively on those that lengthen life expectancy. At the same time, Vic suggests that we shift to emphasizing value-conscious innovation. Cost matters: It matters at the individual household level and it matters in terms of the future course of the standard of living in the United States. I have firsthand experience with the drive to reduce costs in the electronics industry, an industry where the pace of quality improvements has been staggering. An electronics product such as a smartphone has no hope in the marketplace unless it is priced attractively. There certainly isn’t similar pressure to reduce costs in the health field, but we should look for policies that would increase the rewards for cost-effective innovation in this area as well.

I have known Vic Fuchs for roughly 40 years. Thinking about his flow of ideas in economics has been a constant in my life. I strongly suggest you read this latest installment of his collected writings on health policy in America.

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Preface

In January 2010 SIEPR published Health Care Reform, a collection of my short pieces about health policy. The present volume, More Health Care Reform, extends my analysis and policy recommendations, and tackles related issues such as the structure of medical education. The “more” in the title reflects my belief that there is still much to be done in the area of health reform. Nothing short of a substantial change in the way the United States finances, organizes, and delivers health care can simultaneously meet the problems of high cost, uneven access, and avoidable lapses in quality of care. The “more” also reflects the fact that all the pieces in this new collection were written after the publication of Health Care Reform.

For financial support of my work on health care reform I gratefully acknowledge funding from The Robert Wood Johnson Foundation. For help in preparing the original manuscripts, I thank my assistant, Rossannah Reeves. I am grateful to Michelle Mosman, director of communication, Stanford Institute for Economic Policy Research, for supervising preparation of this booklet, and John Shoven, director of SIEPR, for again writing a forward. John was co-author of one of the pieces in this collection, as was Arnold Milstein, M.D. Finally, I thank the editors of the New England Journal of Medicine and the Journal of the American Medical Association for their editorial support and permission to reprint the articles.

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The Structure of Medical Education —
It’s Time For A Change

By Victor R. Fuchs, Ph.D.

Last spring, in his elegant commencement address to the Harvard Medical School, Dr. Atul Gawande appealed for a dramatic change in the organization and delivery of medical care. His reason, “medicine’s complexity has exceeded our individual capabilities as doctors.” He accepts the necessity of specialization, but he criticizes a system of care that emphasizes the independence of each specialist. Dr. Gawande is not alone in thinking that scientific, technologic, and economic changes require reorganization of care. Larry Casalino and Steve Shortell have proposed Accountable Care Organizations (ACOs); Fisher, Skinner, Wennberg and colleagues at the Dartmouth Medical School have focused on reforming Medicare, and many others have also called for major changes.

I expressed similar concerns in 1974 in my book Who Shall Live?, but at that time I rejected the claim that the problems of medical care had reached crisis proportion. In 2011, however, I agree with those who say the need for comprehensive reform must be marked URGENT. The high and rapidly rising cost of health care threaten the financial credibility of the federal and state governments. The former finances much of its share of health care by borrowing from abroad; the states fund health care by cutting support of education, maintenance of infrastructure, and other essential functions. These are stopgap measures; neither borrowing from abroad nor cutting essential functions are long-run solutions. The private sector is equally distressed. Surging health insurance premiums have captured most of the productivity gains of the past thirty years, leaving most workers with stagnant wages. Not only is there a pressing need for changes in organization and delivery, but Ezekiel Emanuel and I, in our proposal for universal vouchers funded by a dedicated value-added tax, argue that such changes must be accompanied by comprehensive reform of the financing of medical care (Brookings paper).

But that’s not what I want to talk to you about today. My subject is the urgent need to change the structure of medical education. It seems to me that such change is necessary, and perhaps inevitable, given the revolution in medicine over the past half century, and given the changes in organization and delivery of care that lie on the horizon.

The need for change

Consider the deluge of new medical technologies in recent decades. According to Dr. Gawande, in deciding on interventions for their patients, clinicians now must choose from 6,000 drugs and 4,000 procedures. To be sure, many of the 6,000 are not new chemical entities but rather combination drugs, alternative dosage forms, and other variations. Still, the burden on the clinician to make an appropriate choice is great, especially if, as stated in the Physician Charter, “physicians are required to provide health care that is based on the wise and cost-effective management of limited clinical resources.” Economists have been touting cost-effectiveness for years, but it is a harbinger of change to see organizations representing more than half of all active physicians sign a charter committing them to practice cost-effective medicine.

Along with the new technologies, there has been a proliferation of specialties and sub-specialties. Fifty years ago, there were 18 specialty boards and very few sub-specialties. Now there are 36 specialty boards and 116 sub-specialty certifications, for a total of 152. Does such proliferation provide much or any benefit to patients? The United Kingdom has only 97, while, Canada and France have fewer than half as many. Proliferation of specialties and sub-specialties almost certainly adds to the cost of medical education and the cost of care, while its effect on quality of care has not been systematically investigated. The former chair of medicine at a major academic medical center thinks it has an adverse effect on patient care, but other experts disagree. We just don’t know the answer. If
empirical studies conclude that so many sub-specialities are desirable, the training structure that produces them should and could be made more efficient. Medicine is one of the few fields that requires specialists to have more training than generalists. This may have been rational at one time, but may not be today.

Finally, and closely related to the new technologies and increased specialization, there is the soaring cost of medical care. In 1960 U.S. health expenditures, in 2009 dollars, were $864 per person. In 2009, they were $8085. Along with the cost of medical care, the cost of medical education has increased exponentially.

In the face of such revolutionary changes, how has the structure of medical education adapted? It seems that the answer is hardly at all. Fifty years ago, the basic structure was four years of college, four years of medical school, and three years of post-graduate training. Only after 11 years of post-high school graduation was the physician deemed ready to practice medicine. The same is true today, although a much larger percentage than formerly go beyond 11 years to obtain additional specialized training. And in one medical school I know of fewer than 40 percent graduate in 4 years.

**The goals of change**

A reasonable goal for structural reform might be to reduce that basic period from eleven to nine years. This can be done by cutting time off the front end or the back end of the process or both. About the front end, I note that there are now 33 medical schools that combine college and medical training in six years. Could there be more such schools? What is known about the quality of care delivered by physicians from these programs compared with the graduates of conventional medical schools? Very little. Most other developed countries combine college and medical school in one program that is typically less than eight years long. Are their physicians inferior to American physicians?

It might be argued that foreign medical schools can admit students directly from high school because the educational achievement of those high school graduates is greater than that of American high school graduates. This is probably true on average, but there are certainly some American high school graduates with educational achievement equal to those who graduate from foreign high schools. Why couldn’t American medical schools consider for admission applicants who, through appropriate examinations and interviews, appear to be as well qualified as the college graduates the schools are now admitting, regardless of how many post-high school years the student has completed? I understand that thoughtful leaders in medicine are studying various possibilities for accelerating admission to medical school for qualified candidates. That’s great. But I hope they realize that the health care system is entering the “ICU;” prompt, decisive action is needed.

In order to reduce time at the back end, schools might consider accelerating choice of specialization. Dr. Gawande notes that there was a time when “doctors could hold all the key information patients needed in their heads and manage everything required themselves.” He says that in such a world it made sense for physicians to prize “autonomy, independence, and self-sufficiency.” But that time is gone forever. What remains is a structure of medical education based on those outmoded assumptions. For Dr. Gawande, who is as handy with a metaphor as with a scalpel, the bottom line is “we train, hire, and pay doctors to be cowboys. But it’s pit crews people need.”

**A proposed new structure**

If Dr. Gawande is correct, what does this imply for the structure of medical education? Isn’t it time to give up the conventional wisdom that pouring more and more knowledge into each physician about more and more subjects will produce a better system of medical care? Far from rejecting specialization, embrace it sooner. For the purpose of stimulating discussion, I propose the following structure for medical education:

- Two years of medical education taken by all students. This common curriculum would consist of 50 percent basic science with an emphasis on competencies that would be useful to every physician. Subsequent exposure to basic science would depend on its relevance to the student’s prospective career.

- One-third of the time would be devoted to an introduction to clinical care of individual patients, making as full use as possible of modern technologies that have been successful in training programs in industry, the armed forces, and other settings.

- One-sixth of the time would be used to cover key aspects of the health of populations and the organization and delivery of care, with emphasis on a team approach to enhance health. It is important for all physicians, regardless of prospective careers, to understand how each element fits into a health care system.

Upon completion of the two years, each student would select a track which launches him or her into the world of specialization. Here is an example of what the tracks might look like:

- Leaders of primary care teams, possibly sub-divided into adult care, pediatric care, and geriatric care.
• Clinical specialists in medicine, hospital based and ambulatory.
• Clinical specialists in surgery and other procedural specialties.
• Possibly another track for those headed for specialties such as radiology and pathology that treat medical and surgical patients.
• A track for students whose major interest is research, possibly similar to current MD-PhD programs but with explicit recognition that the trainees are not preparing to be clinicians.

The content of the training program would differ depending on the track. For example, students training to be leaders of primary care teams would be exposed to more statistics, epidemiology, preventive medicine, and management skills than those in the other tracks. They would learn how to deploy nurse practitioners, physician assistants, and other non-physicians most effectively.

Is it feasible for students to make specialty decisions sooner than they do in the present structure? Before you answer with a resounding “no”, let me tell you a “tale of two schools.”

A tale of two schools

Just a stone’s throw from the Stanford School of Medicine (if you have a good arm) is the Stanford School of Engineering. The latter school accepts students after they have completed two years as undifferentiated Stanford undergraduates. Prospective students of engineering are encouraged to take a wide variety of courses during their first two years at Stanford, but are also advised to make sure they are getting a good start toward engineering through courses in mathematics and science. At the beginning of their junior year the engineering students declare which of 17 fields they plan to specialize in. The fields range (alphabetically) from Aeronautics and Astronautics to Product Design and include such well-known specialties as Chemical, Civil, Electrical, and Mechanical Engineering.

Notice that the choice of specialization is made two years after high school graduation. I may have said that too rapidly. Let me repeat it. Two years after high school, engineering students at Stanford commit themselves to one of 17 specialties. At MIT students must choose their specialty at the end of their freshman year. The heavens do not fall. The SAT scores of the engineering students suggest that they are intellectually about equal to the Stanford medical students. The School of Engineering helps students learn about the various specialties by offering 20 seminars on different subjects with enrollment preference given to freshmen. Examples of seminar subjects are: “Bioengineering Materials to Heal the Body,” “Digital Dilemmas,” “Water, Public Health and Engineering,” and “What is Nanotechnology?”. An additional 12 seminars are offered on other subjects with enrollment preference given to sophomores. Examples of their titles are: “Electric Automobiles and Aircraft,” “Environmental Regulation and Policy,” “Medical Device Innovation,” and “The Flaw of Averages.” These seminars provide an opportunity to work closely with faculty. In addition there are many one-unit seminars that provide exposure to key issues and current research in various fields. At the end of four years at Stanford, approximately 80 percent of the engineering students graduate with a bachelor's degree and enter the workforce to practice their specialty. Students who go on for a fifth year typically do so in order to earn a master's degree.

There are of course, many differences between engineering and medicine. Biologic systems are probably more complex than the systems engineers work with, and causal relations are less firmly established. An alleged difference is that physician decisions affect life and death, but the same could be said for many engineers. The men and women responsible for our bridges and tunnels, the design of our airplanes and cars, the safety of our water supply, and many similar functions are surely making decisions that affect life and death. One of the biggest differences is that engineers specialize from the start of their training; they are not expected to know about all aspects of engineering. They normally work in team settings. They are, to use Dr. Gawande’s words, “pit crews” not “cowboys”. Collectively, they get the job done. Perhaps the biggest difference is that when a medical student chooses a specialty, he or she is usually choosing a life-time occupation. For an engineering student, life-time occupation is not as closely linked to choice of specialty training. One reason for persistence by physicians in a certified specialty is that diminished competition affords the specialist the opportunity to earn a “monopoly rent.”

Training sub-specialists

As an example of how specialty training in medicine does not have to take as many years as tradition demands, consider Dr. Robert Chase's experience in training plastic surgeons at Stanford. When he began his program, plastic surgery required completion of residency in general surgery followed by another residency program in plastic surgery. The combination took a minimum of seven years and more often eight or nine. Drawing on his experience as chief resident in general surgery at Yale, a two-year fellowship in plastic surgery at the University of Pittsburgh, and active duty in the Valley Forge Army hospital, Dr. Chase was pretty sure he could train plastic surgeons in no more than 6 years
and often in four or five. To this end he developed an integrated program that started residents headed for plastic surgery side by side with residents headed for general surgery.

The idea was rejected by the American Board of Plastic Surgery, but he pursued it anyway. Fortunately, the first residents to complete the program did so well at both the written and oral examinations that the Board gave tentative approval to the program. Today there are 27 truly integrated programs similar to Stanford’s, and another 62 that combine general and plastic surgery; only 27 of the traditional programs remain. It would be surprising if similar shortening could not be accomplished in other fields of medicine and surgery. What is required is an exceptional clinician-teacher who is willing to confront the established powers and prospective specialists who are willing to commit sooner to their specialty.

**Arguments against and obstacles to restructuring**

Until now, medical education has proceeded under the premise that “Keeping one’s options open” is a free good. It is not; and the costs to the individual and society increase every year. Those who set the rules and requirements must consider the possibility that what their generation had to endure may not be the best path for the future. Many of the existing rules and requirements seem to be based only on “tradition”. The same academic physicians who would not prescribe a drug without determining efficacy and safety, have no hesitancy in prescribing the structure of medical education without any studies that examine the appropriateness of that structure relative to alternatives.

Changing the structure of medical education will not be easy, even for those who are enthusiastic about the goal. Opponents will be numerous, and the arguments varied. Many of the most popular ones are not persuasive. Consider the cliche, “If it ain’t broke, don’t fix it.” The existing structure may not be “broke”, but it provides the intellectual foundation for a medical care system that is causing the rest of the country to go broke. Some will say that my suggestions are “controversial.” I agree. For more than fifty years I have observed and participated in attempts to reform college curricula, and I can tell you that reforms that are not controversial are inconsequential. Some will want to take credit for the gain in life expectancy of 8.4 years over the past half century. But other developed countries with different systems of medical education and medical care have achieved even greater gains and are at a higher level, while their per capita spending on medical care is 35 to 50 percent less.

Two possible objections to changes discussed in this lecture are that they threaten the deeply held (albeit antithetical) visions of the physician as scientist and the physician as humanist. The threats are real, but the visions are increasingly unreal. American medical education is at a cross-road: Shall it continue to strive to produce scientists-humanists or recognize that what society needs most at this time are competent professionals, capable of providing leadership and supervision for the more than 15 million individuals now employed in the delivery of health services. The challenge to the leaders of medical education is to figure out what kind of admission policy and what structure and content of medical education, undergraduate and post-graduate, will produce such professionals at a reasonable cost. It could be correctly argued that the cost of medical education is a relatively small part of the total cost of medical care, so why change medical education? The reason is that a restructured admission policy, earlier specialization, and shorter period of training can contribute to producing a different physician, one better suited for a team approach to remedying the cost, access, and quality problems now evident in American health care.

The obstacles to change will be partly external to the medical education establishment and partly internal. Consider, for example, the dense network of laws and regulations that now govern the practice of medicine. Some are federal, most are state, and often differ from one state to another. Those that are worth preserving should be federalized. These laws and regulations have been passed with the present structure of medical education in mind. Change in that structure will require changes in the existing legal framework. Many of the laws were enacted with the stated purpose of “patient protection”, but as is true in so many industries, they often wind up giving providers protection from competition.

Consider also how malpractice attorneys will leap on health outcomes that fall short of ideal and try to tie these lapses to changes in medical education. We badly need a better system of dispute resolution to replace malpractice suits. Consider also, how large insurance companies and hospitals will resist change, not necessarily because the change would harm them in the long run, but because change is usually disruptive and costly in the short run.

Perhaps the biggest obstacle to change will be within the medical education establishment which includes not only the medical schools but also post-graduate training programs and the bodies that control certification for 152 specialties and sub-specialties. Are all these necessary? Restructuring will undoubtedly require some faculty to change what they do and some faculty may be redundant. Many specialty and sub-specialty boards will need to change their criteria, as in the case of plastic surgeons. In some areas it may be difficult at first to find medical educators well-equipped to meet the needs of
students in the new structure. For instance, where will medical schools find instructors to train the students who have opted for the track of leaders of primary care teams?

Finally, there is the chicken or the egg problem. There are medical leaders who see the need for significant changes in the financing, organization, and delivery of care. But they feel stymied by the absence of physicians with the preparation and attitudes necessary to be most effective in the new systems of care. There are leaders in medical education who see the need for significant changes in structure and content, but wonder where the graduates of the new programs will find appropriate employment.

All these obstacles suggest that restructuring may be impossible. But I draw some hope from an observation made by Alexis de Toqueville who said, “The United States moves from the impossible to the inevitable without ever stopping at the probable.”

This is the end of my jeremiad. If I have offended any in the audience, I apologize. That was not my intent. I have, for many decades, studied the American health care system, focusing on the high cost, the inequalities in access, and the lapses in quality of care. I concluded that these problems will not yield to piecemeal reforms. What is needed is comprehensive change in the financing, organization, and delivery of care.

But I have not paid much attention to medical education. Dr. Gawande’s Harvard commencement address made me realize that reform of the health care system must be accompanied by a restructuring of medical education. Hence this lecture. Perhaps my suggestions for restructuring are off the mark. Some in this audience may have better ideas as to how it should proceed. If so, all to the good. If I have convinced you of the urgency of the task and stimulated you to address the problem, my effort will not have been in vain. I greatly appreciate the opportunity you have afforded me, and I thank you for your patience.

I await your questions with interest and a reasonable amount of apprehension.
The Doctor’s Dilemma — What Is “Appropriate” Care?

By Victor R. Fuchs, Ph.D.

Most physicians want to deliver “appropriate” care. Most want to practice “ethically.” But the transformation of a small-scale professional service into a technologically complex sector that consumes more than 17% of the nation’s gross domestic product makes it increasingly difficult to know what is “appropriate” and what is “ethical.” When escalating health care expenditures threaten the solvency of the federal government and the viability of the U.S. economy, physicians are forced to reexamine the choices they make in caring for patients.

In an effort to address this issue, physicians’ organizations representing more than half of all U.S. physicians have endorsed a “Physician Charter” that commits doctors to “medical professionalism in the new millennium.” The charter states three fundamental principles, the first of which is the “primacy of patient welfare.” It also sets out 10 “commitments,” one of which states that “while meeting the needs of individual patients, physicians are required to provide health care that is based on the wise and cost-effective management of limited clinical resources.” How can a commitment to cost-effective care be reconciled with a fundamental principle of primacy of patient welfare?

The dilemma arises for two main reasons. First, recent decades have witnessed a flood of new, expensive medical technologies (drugs, imaging devices, surgical procedures) that are of varying degrees of value to patients. A few are true breakthroughs, with strong favorable effects on mortality and morbidity. Others make a meager contribution, at best, to health outcomes. Moreover, technologies that may provide high value for carefully selected patients are often used indiscriminately for a much larger cohort of patients. Second, health insurance, private or public, has become so widespread that 90% of the country’s health care bill is paid by third parties, not by the patient receiving the service.

What is a conscientious physician to do? Some new cancer drugs cost thousands of dollars per month for a single patient. The bills for many surgical procedures run to five or even six figures. Noninvasive imaging devices can offer information to assist in diagnosis, at a cumulative cost in the billions of dollars. U.S. patients, on average, get almost three times as many magnetic resonance imaging scans as Canadian patients; there is no evidence that this large differential can be explained by national differences in the medical condition of patients or that it results in significant national differences in health outcomes. So what level of utilization deserves to be called “appropriate”?

If insurance were not widespread, many physicians would be reluctant to order an expensive intervention unless it offered a good chance of substantial benefit — that is, unless it was cost-effective. Indeed, without U.S.-style cost-insensitive insurance, many expensive diagnostic and therapeutic innovations would not be developed and brought to market. If insurance were not widespread, many physicians would be reluctant to order an expensive intervention unless it offered a good chance of substantial benefit — that is, unless it was cost-effective. Indeed, without U.S.-style cost-insensitive insurance, many expensive diagnostic and therapeutic innovations would not be developed and brought to market. The insured patient, on the other hand, will usually want any and all care that might possibly be of net benefit, regardless of cost. The physician may recognize that the intervention under consideration is not cost-effective but may recommend it anyway, for a variety of reasons: to keep the goodwill of the patient, to protect against a malpractice suit, or in the belief that the “primacy of patient welfare” makes the denial of such care “inappropriate” and “unethical.”

The doctor’s dilemma is the nation’s problem. Some policy experts think that if patients had “more skin in the game” — that is, had less insurance — the problem would be solved. It would not. Even the most ardent advocates of deductibles and copayments acknowledge the need for an annual cap on patients’ payments, beyond which insurance takes over completely. There is no consensus on the right level for the cap, but it is generally recognized that the average U.S.
household, with large debts and minimal financial assets, could not handle much more than $5,000. But the extreme skew in annual health care expenditures, with 5% of individuals accounting for 50% of spending in any given year, means that many health care decisions, and especially those involving big-ticket interventions, will be made by and for patients whose costs have exceeded the cap.

Another popular “solution” is to eliminate care that does more harm than good — that is, “unnecessary” care. Such elimination would be desirable, but the potential savings from this source are smaller than is usually claimed. It is true that after the fact, many interventions turn out to be useless or even harmful for some patients. But the heterogeneity of patient populations and uncertainty about the response of individual patients to an intervention means that it is often difficult or impossible to determine in advance which ones will prove to help particular patients and which will turn out to have been unnecessary.

There is no escaping the fact that many interventions are valuable for some patients even if, for the population as a whole, their cost is greater than their benefit. Under what circumstances are they likely to be ordered, and when are they likely to be withheld? The context within which the physician practices, his or her assumption about the behavior of other physicians, and the economic and health consequences of ordering all the care that might do some good versus practicing cost-effective medicine will affect the physician’s choice. If the physician is paid on a fee-for-service basis and the patient has open-ended insurance, the scales are tipped in favor of doing as much as possible and against limiting interventions to those that are cost-effective. In that setting, who would benefit from the resources that are saved by practicing cost-effective medicine is not obvious to the physician.

In contrast, if the physician is practicing in a setting that has accepted responsibility for the health of a defined population and the organization receives an annual fee per enrollee, the chances of the physician’s practicing cost-effective medicine are substantially increased, even though all patients are insured. The physician’s colleagues are practicing the same way, and the resources saved can be used for the benefit of the defined population, which includes the physician’s patient. In Canada, which has universal insurance, per capita spending on health care is only 55% of the U.S. level because there is a limited overall budget, and all physicians in the system recognize the need for prudence in making decisions about care.

In short, when physicians are collectively caring for a defined population within a fixed annual budget, it is easier for the individual physician to resolve the dilemma in favor of cost-effective medicine. That becomes “appropriate” care. And it is an ethical choice, as defined by philosopher Immanuel Kant, because if all physicians act the same way, all patients benefit.¹

References


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To avoid financial crises in federal and state governments and turmoil for health care stakeholders, U.S. health care must become more cost-effective. The United States spends much more per capita on health care than do other developed countries, with broad outcomes no better than those of its peers (see graph). There are, however, individual U.S. physicians and health care organizations that deliver high-quality care at a cost roughly 20% lower than the average. If the rest of the U.S. health care industry followed their example, health care spending would drop from 17% of the gross domestic product to 13%. Though that would still be well above the spending level in other high-income countries, $640 billion would become available for addressing other important public- and private-sector needs. Why don’t cost-effective models diffuse rapidly in health care, as they do in other industries? The answers to this $640 billion question lie in the perceptions and behaviors of the major participants in health care.

Insurance companies, for their part, resist national initiatives designed to standardize coverage of benefits and administrative transactions with health care providers, even though such standardization would reduce health care spending by more than $200 billion annually. They argue that standardization, like any major change, implies stress and costs for insurance companies without sufficient offsetting competitive advantages. In fact, standardization of coverage would force insurance companies to compete primarily on the basis of price, which would put pressure on their profits.

Large employers often resist using sponsorship of employee health insurance as a vehicle for creating managed competition among large health plans. Because companies wish to avoid alienating employees, only 20% of large employers require workers who choose more expensive plans to pay the marginal difference in cost. Some companies (mostly small businesses) offer employees only one plan. In addition, mistrust of government solutions among many business leaders leads them to oppose changes in the financing or organization of care that would increase the government’s role.
from “generous” employers rather than an alternative to wage increases. As long as most workers believe that characterization, the prospects for public support of a more equitable, more efficient method of financing care are poor. The media also mislead the public by emphasizing the relative benefit of clinical interventions (“reducing risk of death by one third”) when the absolute benefit (“reducing risk from 0.03 to 0.02”) is usually more relevant. Misleading headlines, designed to attract larger audiences, can make life difficult for physicians who want to practice cost-effective medicine but are beset by patients’ requests or demands for costly new therapies: the public reflexively mistrusts any apparent withholding of widely touted diagnostic or therapeutic interventions, even when they might do more harm than good.

Legislators, for their part, usually oppose reforms that would make U.S. health care more cost-effective because they seek campaign contributions from health industry stakeholders who benefit from the current inefficient arrangements. Any sector that stands to sustain losses if reform is enacted will fight harder to oppose change than the more diffuse potential winners will fight to support it.

Hospital administrators often resist efforts to reduce hospital occupancy for fear that decreases in revenue will jeopardize their ability to cover large fixed costs. The solution requires a change either in the way hospitals and physicians are paid or in incentives for consumers to select lower-cost, high-quality hospitals, or both. Administrators also fear that if they attempt to change physicians’ behavior to reduce costs, the physicians will admit their patients to other hospitals.

Physicians themselves generally resist major changes in the way they practice — for both nonfinancial and financial reasons. They see that their peers who practice most cost-effectively typically standardize their approaches to care, rely on group decision making, and emphasize outcome measurement and peer review. Most physicians are reluctant to embrace these reductions in autonomy. They also see that many of the most successful health plans forgo fee-for-service physician payment in favor of alternative methods, such as capitation or value-based remuneration. They fear that the projected cost savings will not be fully realized or will be captured by insurance companies and hospitals. And indeed, physicians in highly paid specialties would probably lose income in a more cost-effective system, though primary care physicians would probably come out ahead.

Academic health centers are typically slow to adopt cost-saving innovations in care delivery because they may conflict with, or be perceived as conflicting with, the centers’ research and education missions. Because many medical educators believe that resident learning requires some tolerance of inefficiency, they rarely prioritize teaching cost-effective clinical practice — a reality that has important consequences for the entire health care system. Young physicians learn primarily by doing or watching others do. They can’t learn how to practice cost-effective medicine if it’s not being practiced where they’re being trained. The problem is exacerbated by accrediting teams for graduate medical education that leniently audit the teaching of the two competencies most likely to improve cost-effectiveness: “systems-based practice” (reflecting an understanding of how patient care relates to the overall health system) and “practice-based learning and improvement.”

Meanwhile, manufacturers of drugs, medical devices, and equipment have the most to lose from the diffusion of more cost-effective care. If a manufacturer has a unique product, it can sell it at a high price that yields a monopoly profit. But since there are alternatives to most medical products, firms seek to create the perception that their products are unique in order to justify high prices. Marketing to consumers and physicians will be much less successful if purchasing and prescribing decisions are made by organizations such as managed-care plans or accountable care organizations that are motivated to provide cost-effective care. Such organizations have the incentive and the ability to evaluate competing products and can negotiate with suppliers for the best value. To preserve the present system, manufacturers of health care products spend heavily on federal lobbying.

Do these barriers condemn the United States to financial Armageddon or diminished health care for less-affluent Americans? One escape route is tax-supported universal coverage, the finance method that works best in most other high-income countries. Another is disciplined managed competition among health insurers, enhanced by national harmonization of the way in which commercial insurers, the Centers for Medicare and Medicaid Services, and other payers compare providers on value and of the weight they place on value when tiering network providers and paying them. Both solutions require payment reform. Neither solution is politically feasible without robust physician support: the public’s visceral distrust of policies aimed at improving the cost-effectiveness of health care can be neutralized only by their confidence in what their physicians support. The Physician Charter, a modern version of the Hippocratic Oath, has been adopted by physicians’ organizations that include a majority of U.S. physicians. It ethically commits physicians to working toward “the wise and cost-effective management of limited clinical resources.” There is not much that physicians can do directly to change the behavior of insurance companies, employers, or other
stakeholders, but physicians are the most influential element in health care. The public’s trust in them makes physicians the only plausible catalyst of policies to accelerate diffusion of cost-effective care. Are U.S. physicians sufficiently visionary, public-minded, and well led to respond to this national fiscal and ethical imperative? It’s a $640 billion question.

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From modest beginnings in the late 19th century, government's role in paying for health care has expanded greatly in every high-income country. Today, most of these countries have some form of national health insurance — that is, all or virtually all of the population is eligible for health care that is paid for in full or in large part by a government-organized insurance system. The United States has long been criticized (and praised by some) for being an exception to the rule in its approach to financing health care. Even in this country, however, government's role in paying for care has increased greatly over the past 50 years (see graph). Government's share of total personal health care expenditures in the United States grew from 20% in 1960 to almost 50% in 2007 and will undoubtedly exceed the private sector's share when the programs that were enacted in the 2010 health care reform legislation become activated.

What explains the widespread role of government in paying for health care? Some U.S. critics argue that it is all a big mistake. But in 1775, Samuel Johnson contended that “uniformity of practice seldom continues long without good reason.” Two centuries later, George Stigler, a Nobel Prize winner in economics, wrote, “If an economic policy has been adopted by many communities, or if it is persistently pursued by a society over a long span of time, it is fruitful to assume that the real effects were known and desired.” If we follow Stigler’s line of thought, we should observe the consequences of a policy and from them infer the cause or causes.

The most obvious, easily quantifiable difference between the United States and countries that have national health insurance is that those countries spend much less on health care, whether measured per capita or as a share of the gross domestic product. Not only is the United States the highest spender, but the gap between it and the other countries is unnaturally large — we spend 50% more than the next-highest spender and twice as much as the average country in the Organization for Economic Cooperation and Development. One explanation that is frequently offered is the role of “special interests” in the United States. There is little doubt that the suppliers of health care goods and services — manufacturers of drugs, devices, and equipment, as well as physicians and hospitals — prefer higher expenditures to lower ones. But isn't that true in every country? The difficult question is why the special interests have more influence over health policy in the United States than they do elsewhere. The answer probably lies in part in the structure of the U.S. political system, including the role of primary elections, long and expensive election campaigns, the separation of powers, the numerous congressional committees and subcommittees with overlapping authority, and the need for supermajorities in the Senate in order to pass meaningful legislation. But the quirks of the political system can't be the whole answer. If the U.S. public wanted a different outcome, over time they could move policy in that direction.
and physicians’ offices are usually superior to those in other countries that have a per capita income close to that of the United States. It would be of interest to determine how these benefits are distributed and how they are valued by people at different income levels.

A second large difference between health care in the United States and in countries with national health insurance is the more important role of redistribution in the latter countries. Such redistribution is evident in the greater equality of access to care and in the sharing of costs through taxes on income or payroll, value-added tax or sales tax, or other forms of taxation that are either proportional or progressive with respect to income. Of course, all insurance is redistributive after the fact. The large amount of care utilized by a small proportion of policy holders is paid from the premiums of others who use little care. The important distinction is that under a national health insurance system, the redistribution occurs before the event, since it is clear that some individuals will pay much less tax than the value of their insurance and some will pay much more.

Since redistribution plays a greater role in the health care systems of other countries than it does in the United States, there is an implication that a more egalitarian ethos holds sway in Europe, Canada, Australia, and New Zealand. From de Tocqueville to the present, many observers have commented on the stronger role of individualism in the United States than elsewhere, but there is no consensus regarding its explanation. Possible contributors to the phenomenon include the heterogeneity of the population, the revolutionary origins of the country with its dedication to “life, liberty, and the pursuit of happiness,” and the absence of many centuries of a common language, history, and culture. In speculating about the possible rise of despotism in a democracy, de Tocqueville painted a grim picture of individualism taken to the extreme. He wrote, “Each … living apart, was a stranger to all the rest — his children and private friends constitute to him the whole of mankind; as for the rest of his fellow citizens, he is close to them, but he sees them not; he exists but in himself and for himself alone.”

The lower spending and the greater redistribution in countries that have national health insurance are not independent phenomena. If spending in these countries were at U.S. levels, the taxation required to accomplish their redistribution goals would probably wreck the economy. Given the social or political desire to redistribute health care resources, constraints on spending become a necessity. These constraints take various forms, such as controls over the number and specialty mix of physicians, limits on facilities and acquisition of expensive technologies, hard bargaining over prices charged by drug companies and other suppliers, and restraints on physicians’ fees and incomes, among others.

Because the governments in these countries pay for most medical care — usually 70 to 90% of total expenditures — they are in a good position to apply these cost-restraining measures. They have what economists call “monopsony power.” The U.S. government, although it pays for almost 50% of health care, makes very little use of its power to restrain costs. Thus, in one sense, Americans wind up in the worst of all worlds, with government bearing a big part of the burden of paying for health care, with the concomitant large burden of taxes, but exercising very little control over the cost of care. As an indication of how absurd the situation is in the United States, government currently spends more per capita for health care than eight European countries spend from all sources on health care. Though life expectancy is far from a perfect measure of the quality of care, it is not without interest to note that life expectancy at birth in every one of these eight countries is higher than that in the United States.

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New Priorities for Future Biomedical Innovations

By Victor R. Fuchs, PhD

Since 1900, life expectancy at birth has increased by an unprecedented 30 years in the United States and other developed countries. Before World War II, most of the gains resulted from improvements in nonmedical factors: nutrition, sanitation, housing, and public health measures. Since World War II, however, biomedical innovations (new drugs, devices, and procedures) have been the primary source of increases in longevity. These innovations have also been the most important reason why health care expenditures have grown 2.8% per year more rapidly than the rest of the economy over the past 30 years. Will the future simply be a rerun of recent decades? Probably not. Current demographic, social, and economic forces will create new priorities for future biomedical innovations: more emphasis on improving quality of life and less on extending life, and more attention to value-enhancing innovations instead of pursuit of any medical advance regardless of its cost relative to its benefit.

Society may not pursue further gains in life expectancy as vigorously as we’ve done in the past, because there has been a dramatic shift in the age at which the increased years of life are realized (see bar graph). In the early decades of the 20th century, approximately 80% of the gains in life expectancy were realized before the age of 65 years and only 20% at 65 years or older. Now the situation is reversed — almost 80% of recent gains in life expectancy are realized at an age of 65 years or older. The main reason for the change is the sharp decline in rates of death at younger ages; thus, an ever-larger percentage of each birth cohort survives to at least 65 years of age. At the beginning of the 20th century, given the age-specific mortality rates of that time, only 41% of the birth cohort could expect to reach 65 years of age. By the end of the century, survivorship until 65 years had doubled, to more than 81%. When survivorship to 65 years of age was low, gains in life expectancy meant keeping more Americans alive during their working years. Now, further gains in life expectancy will mostly mean keeping more Americans alive while they are retired and dependent on indirect transfers of funds from younger workers for much of their living expenses, health care, and social services. At 65 years of age or older, 4 of 5 men and 9 of 10 women are not in the labor force, and almost 4 of 10 have a physical or mental disability. Moreover, almost half of all patients in hospital beds are 65 years of age or older. The U.S. entitlement programs for the elderly will be major contributors to huge federal deficits for the foreseeable future — deficits that are often invoked as reasons not to spend federal dollars providing health insurance to all Americans.

A diminished focus on developing innovations that increase life expectancy could and should be accompanied by greater pursuit of innovations, such as joint replacement, that improve the quality of life for both the elderly and the near-elderly. The potential market for quality-of-life enhancement...
among Americans 55 years of age or older is huge: 3 of 10 such Americans have difficulty stooping or bending, 1 of 10 has difficulty reaching or grasping, 4 of 10 usually sleep less than 7 to 8 hours in a 24-hour period, 15% have difficulty carrying 10 lb (4.5 kg), nearly one third have some hearing impairment, one fifth have lost all their natural teeth, and 1 of 4 has difficulty walking a quarter of a mile (0.4 km).

Along with the shift in emphasis to developing future innovations that enhance quality of life, there is a growing need for a shift to value-conscious innovation instead of fostering the “progress at any price” attitude that has dominated biomedical innovation until now. The economy cannot continue to cope with the rapid increase in health care expenditures, an increase that is fueled in large part by innovations produced in an environment that ignores cost. The problem is not just federal health care expenditures. State and local governments, hard-pressed to meet their obligations under Medicaid and other health care programs, are forced to cut back support for education, repair of roads and bridges, and other critical expenditures. And the private sector is also under duress (see line graph). A rapid increase in the cost of employment-based health insurance is the major reason why the wages of the average worker have been relatively stagnant for three decades.

To understand the differences between the present environment for biomedical innovations and a value-conscious one requires thinking of three effects of every innovation: its effect on the quality of care (including reductions in mortality and morbidity rates, relief of pain, and improvement of other types of care that patients desire), its effect on the cost of care (the resources used to develop it and provide it to patients, relative to those used for current practice), and its effect on the value of care (changes in quality relative to changes in cost). Until now, most biomedical innovations have been evaluated (if at all) only in terms of their effect on the quality of care. Cost is usually ignored, which means that value is ignored as well. There have been a few key innovations that increase quality of care and decrease the cost of care, resulting in unambiguously positive value; examples are antibiotics and diuretics. Most innovations, however, increase both quality of care and costs. Their effect on value depends on the relative sizes of these increases. In a value-conscious environment, some of the most popular innovations would meet a reasonable value standard, but many probably would not.

An additional important result of a value-conscious environment would be the encouragement of innovations whose main effect is to substantially decrease cost while holding quality constant or reducing it only slightly. Such innovations are common in other industries but rare in medicine. If some of the resources devoted to marginal advances in the quality of care were reallocated to the development of innovations that reduced the cost of...
care, the problem of paying for high-value advances in quality for the entire population would be much easier to address.

Despite passage of the Patient Protection and Affordable Care Act, there is still need for health care reform that will slow the rate of growth of expenditures. Regardless of whether that reform involves a much larger role for government or is more market-oriented, a shift in emphasis toward more value-conscious innovations is necessary and perhaps inevitable.

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The National Commission on Fiscal Responsibility and Reform, co-chaired by former Clinton White House Chief of Staff Erskine Bowles and former Republican Senate Whip Alan Simpson, faces two overriding problems. First, it must find a new source of revenue for the federal government, a source that is relatively stable, produces substantial proceeds, and does not create large disincentives for employment, saving, and investment. Second, it must bring the rate of growth of health care spending closer to the rate of growth of the rest of the economy. The gap over the last 30 years, 2.8 percent per annum, is unsustainable. As Alice Rivlin, a member of the new commission, has said, “Long-run fiscal policy is health policy.”

Control of health expenditures will require comprehensive change in the way the country finances and delivers health care. A value-added tax (VAT) dedicated to funding basic health care for all through enrollment in accountable care organizations would help solve the revenue and health spending problems at the same time.

A VAT, by itself, has much to recommend it. Unlike a payroll tax, it does not discriminate against employment. Unlike the income tax, it taxes only consumption, not saving. The base (consumer expenditures) is more stable than payroll or income over the business cycle and is large enough to provide a substantial yield at a relatively modest rate. While it is not immune to evasion or avoidance, a VAT is not as vulnerable to these problems as the income tax.

One objection to the VAT that is often raised is that it tends to be regressive. But if the VAT were dedicated to funding universal health care vouchers, the combination would clearly be progressive. Lower income individuals would get the same benefits (basic, high quality health insurance) as those with higher incomes, even though they consume less and, therefore, pay less tax via the VAT. The voucher would entitle each individual to choose an accountable care organization that assumes responsibility for delivering a defined set of health insurance benefits. The plan would be paid a risk-adjusted flat fee per enrollee, i.e., the payment would depend on age, gender, past health history, and other predictors of utilization but would be fixed for a particular participant for the coverage year. Given risk adjustment, plans would have less incentive to “cherry pick” or “lemon drop.” Given a risk-adjusted fixed price for all plans in the same region, they would compete on the basis of service and quality of care. Every plan would be required to accept all applicants. Enrollees would be free to switch plans annually. They would also be free to buy more than the basic plan with their own after-tax dollars. Switzerland and the Netherlands have successfully implemented health plans with similar features. Australia is proposing to dedicate a fixed percentage of the revenue from a general sales tax to fund all public hospitals.

Advantages of the Dedicated VAT

The advantages of this approach to funding and organizing health care are numerous and compelling. Liberals should appreciate the fact that everyone is insured for basic care. Even with the passage of the 2010 health bill it is unlikely that current policies will produce anything close to universal coverage. Implicit subsidies to the poor and sick (the difference between the value of the insurance to the individual and the amount of VAT paid) would adjust automatically with changes in income or health status. The bureaucratic hassle of Medicaid would be completely eliminated. Individuals would not risk losing their insurance coverage or having to switch to a different health plan as a result of a change in employment, income, health status, marital status, or any other characteristic. Everyone would bear a fair share of health care costs in proportion to consumption.

Conservatives should appreciate the fact that elimination of employer-sponsored insurance would sharply reduce
administrative costs and bring in at least $200 billion in tax proceeds that the government currently loses through the tax exemption of employer contributions to premiums. The mechanism of collecting the extra $200 billion would be that as employers get out of the business of paying compensation in terms of untaxed health benefits, labor market competition would force them to increase taxable wages and salaries. With the same overall compensation levels, the change in the composition of compensation would increase income tax proceeds by the $200 billion unless Congress lowered tax rates and returned the money to taxpayers in a deficit neutral manner. Labor markets would work more efficiently: Workers would not be locked into jobs and a major source of labor-management friction would be eliminated. State governments would be freed from the administrative and financial burden of Medicaid and related programs. Moreover, we suggest that the VAT could be used only to fund the health insurance voucher program and the program can use only the VAT as the source of funding. Thus, if the public and Congress want to increase benefits, they must be willing to support a higher tax rate. No deficits would be allowed. The well-known political resistance to tax increases would cause everyone to search long and hard for ways to control costs.

Physicians and hospitals would appreciate the fact that all patients have insurance. The inefficient and inequitable system of uncompensated care would be unnecessary. Finally and importantly, a small portion of the yield from the VAT could fund an institute for the assessment of new medical technologies. Such an institute would weigh the benefits and costs of new drugs, procedures, devices, and equipment. An independent institute with an assured source of funding is essential for slowing the rate of growth of health care expenditures without cutting off real progress in medical care.

There is growing support for a VAT across the political spectrum. If enacted alone, however, it would pour money into general revenues without any direct impact on expenditures. By contrast, if dedicated to fund a universal health voucher program, all the advantages of a VAT remain, and it becomes the basis for badly needed control of health care costs. Thus, the Commission could meet its two most important objectives with one policy.

**VATs in the Real World**

All value-added taxes are not created equal, and those that exist in other countries seldom resemble their textbook counterparts. While the theoretical base is total consumption, there always is pressure to exempt items such as food, children’s clothing, rent, financial services, education spending, and postal services. These exemptions should be minimized.

*Figure 1*

**Ratio of VAT Revenue to Potential VAT Revenue**

<table>
<thead>
<tr>
<th>Country</th>
<th>Ratio of VAT Revenue to Potential VAT Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>0.52</td>
</tr>
<tr>
<td>France</td>
<td>0.51</td>
</tr>
<tr>
<td>Germany</td>
<td>0.54</td>
</tr>
<tr>
<td>Italy</td>
<td>0.41</td>
</tr>
<tr>
<td>Japan</td>
<td>0.72</td>
</tr>
<tr>
<td>South Korea</td>
<td>0.71</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1.05</td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.76</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Source: Figures are the 2005 numbers from Table 3.14 of Consumption Tax Trends 2008, OECD

Figure 1 shows the actual revenue of the VAT in several countries relative to what the revenue would have been if the standard rate applied to all consumption as in the textbooks. For several leading countries such as Canada, France, Germany, and the U.K., the VAT brings in roughly half as much revenue as it would if it had been applied to all consumption. There is another group of countries (Japan, South Korea, and Switzerland) where the revenue collected is between 70 and 75 percent of the theoretical level. New Zealand has implemented a VAT that taxes all or almost all of consumption. The reason that New Zealand actually collects slightly more than it would if it applied to all consumption is that the tax is applied to investments in residential housing, which are not included in aggregate consumption. If the United States adopts a VAT, it would be economically desirable that we have the tax broadly applicable like New Zealand. If we cannot do that, and we have our doubts that we can, we should at least aspire to be as efficient as Switzerland and collect 75 percent of the theoretical revenues. It would be a terrible mistake to implement the tax in the way that Canada, France, Germany, and the U.K. have, where effectively only half of consumption is taxed. If you only tax half of consumption, you must double the rate in order to raise the required revenue. High tax rates, even high VAT tax rates, lead to serious economic inefficiencies. Exempting some items has other bad economic consequences. It leads some firms to distort production and marketing in order to take advantage of exemptions.
A U.S. VAT Dedicated to Health Care Spending

What VAT rate would be necessary to finance all federal government spending on health care? The answer depends on two things—how the VAT is designed (like New Zealand or Switzerland or like Canada) and whether and how our suggestion of universal basic health insurance vouchers is, in fact, implemented. Currently, health care accounts for about 25 percent of federal spending or roughly 6.4 percent of GDP. This spending is financed by the Medicare payroll tax and general government revenues (the personal and corporate income tax and, more realistically, by part of the deficit). If we were to implement a VAT that is as efficient at raising revenue as that of Japan, South Korea, and Switzerland, we would need a 13 percent rate just to fund the current level of federal health spending. You get to the 13 percent figure by recognizing that consumption is about 70 percent of GDP, and a VAT like Japan, South Korea, or Switzerland would effectively tax 70 percent of consumption meaning that the effective base is about half of GDP and that the rate needs to be twice the fraction of GDP to be raised. If we followed the better New Zealand VAT model, an 8 percent rate would fund all current federal spending on health care.

Of course, we suggest a complete overhaul of federal health programs with an immediate replacement of Medicaid and the ultimate replacement of Medicare (and the replacement of the employer-sponsored health insurance system) with universal vouchers for enrollment in private health plans. The federal government spending on health care would clearly increase, but the degree to which it would increase would depend on the details of the voucher plan. Because of that, the following calculations should be treated as preliminary and approximate. Ezekiel Emanuel and Victor Fuchs estimated that providing a high quality universal voucher for the entire non-Medicare population would cost about 6.5 percent of GDP. Current Medicare recipients would be allowed to stay on the current program and that costs just about 3.5 percent of GDP. While we think that it is important to allow current Medicare enrollees the choice to stay with their current plan, we would eliminate the 2.9 percent Medicare payroll tax and replace the funding with part of the VAT proceeds. We take that position to break the feeling of future entitlements that the payroll tax conveys to all American workers. We expect that the new program would spend roughly the same amount on the Medicare population. The bottom line of all these percentages is that a universal health insurance voucher system with existing Medicare recipients being permitted to keep the current program would cost the federal government just about 10 percent of GDP.

This gives us the ballpark target for the necessary revenue from the VAT that would pay for all federal spending on health care. Raising 10 percent of GDP would require a 14 percent VAT rate if we followed the example of New Zealand; more realistically, we would need a 20 percent rate if we followed the examples of Japan, South Korea, and Switzerland. These are high rates indeed. It is important to remember that we spend this much and more on health care now; it is just that the means of paying for it are diverse and hidden. The dedicated VAT would make our extremely large health tax readily apparent and salient.

If we introduced a VAT to pay for all federal health spending, other taxes could be reduced or eliminated. The 2.9 percent Medicare tax, which applies to an unlimited amount of labor income, would be history. The personal income tax revenue would grow by $200 billion or roughly 20 percent. Federal general revenues would no longer be responsible for Medicare Part B and Part D and the federal share of Medicaid would also be eliminated. This would allow for a major reduction in income tax rates or for deficits to be significantly reduced. State budgets and state taxpayers would be huge beneficiaries. One of the biggest ticket items in state budgets is the contribution to Medicaid. There would be no Medicaid under universal health vouchers and therefore there would be no state expense for this purpose. Once again, state income taxes and sales taxes could and probably should be reduced. Then there is the fact that most Americans would get a pay raise if their employer stopped contributing large percentages of their compensation to health insurance. Social Security recipients, whose benefits are adjusted for inflation, would get a benefit increase to offset the impact of the VAT on retail prices.

The Efficiency Gains from Dedicated VAT Financing of Universal Health Care

The bottom line to remember is that we are not proposing to spend more on health insurance than we do now. In fact, the changes we propose in the financing and delivery of care would result in spending considerably less. Only a universal plan such as described in this brief can achieve countrywide reductions in the inefficiencies in financing, organization, and delivery of health care.

Table 1 breaks down the potential cost reductions from real health reform of this type. There would be many channels of improved efficiencies. Significant savings would be realized in the sales, claims processing, underwriting, and administrative expense areas. We estimate that these efficiencies would reduce health spending by a minimum of 10 percent. In addition, the universal voucher/accountable care
organization structure would result in significant savings in the organization and delivery of care. We estimate that the largest single category of saving would come from the reduction in overutilization incentives inherent in the fee-for-service model of Medicare and most employer-sponsored plans today. The voucher/accountable care organization structure with risk-adjusted payments per plan year would result in much less overutilization, more efficient use of specialized personnel and equipment, and application of information technology and other modern management methods to reduce the cost and improve the quality of care.1

Table 1
Percentage Reductions in Total Health Spending Associated With Vat-Financed Universal Health Vouchers

<table>
<thead>
<tr>
<th>FINANCING OF CARE</th>
<th>Potential Cost Reductions in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing and Sales</td>
<td>4 to 7</td>
</tr>
<tr>
<td>Claims Submission and Processing</td>
<td>3 to 5</td>
</tr>
<tr>
<td>Underwriting and Other Administration</td>
<td>3 to 5</td>
</tr>
<tr>
<td>Subtotal</td>
<td>10 to 17</td>
</tr>
<tr>
<td>ORGANIZATION AND DELIVERY OF CARE</td>
<td></td>
</tr>
<tr>
<td>Elimination of overutilization related to FFS</td>
<td>7 to 12</td>
</tr>
<tr>
<td>Improved efficiency of specialized personnel and equipment</td>
<td>3 to 5</td>
</tr>
<tr>
<td>IT and other management tools</td>
<td>3 to 5</td>
</tr>
<tr>
<td>Subtotal</td>
<td>13 to 22</td>
</tr>
<tr>
<td>Grand total of potential cost saving</td>
<td>23 to 39</td>
</tr>
</tbody>
</table>

These are not merely speculative hopes or claims. Every one of the sources of cost reduction listed in Table 1 has already been proved by one or more health care organizations in various parts of the country. Unfortunately, under existing systems of financing and delivering care, there are considerable barriers to their widespread diffusion. Health care, unlike most industries, is primarily a locally produced product that does not enjoy large economies of scale. Thus, even when an organization introduces a more efficient way to organize and deliver care, the incentives and possibilities that would bring about the spread of the innovation over the country or force other health care organizations in other parts of the country to adopt the more efficient methods are weak or non-existent. Moreover, even as a health care deliverer becomes more efficient at producing health care, there is little that it can do to improve the current inefficient and inequitable system of financing health care—an expensive mixture of employment-based insurance, income-tested insurance (e.g., Medicaid), individual insurance, and uncompensated care.

Figure 2
Health Costs as Percent of GDP, Public & Private Shares, in 2009 & Under Dedicated VAT

Figure 2 contrasts the current cost of health in the United States with what it would cost under the most conservative of the efficiency gains listed in Table 1 under the structure we propose. In 2009, the United States spent 17.2 percent of GDP on health care, significantly more than any other country in the world. Figure 2 shows that private sector (individual Americans and corporations) paid 8.8 percent of GDP and governments (federal, state, and local) spent 8.4 percent of GDP. Individual Americans, both directly and as present and future taxpayers, paid for the full 17.2 percent of GDP.

We are proposing a rather radical reform—VAT financed universal medical vouchers. Our best guess is that the cost savings resulting from the better incentives of everyone being attached to accountable care organizations and the reduced administrative and sales expenses would amount to at least 4 percent of GDP. It is this health care efficiency gain that makes this radical reform worthwhile. Four percent of GDP is roughly $550 billion per year. We could use half of the health cost savings to reduce the long-term deficit and still enjoy an immediate improvement in our standard of living. This 4 percent of GDP efficiency gain doesn’t even count the efficiency improvement associated with partially switching from income taxation to consumption taxation. These are the gains that should attract the interest of the National Commission on Fiscal Responsibility and Reform.

Linking the VAT and federal health spending is a key first step in controlling federal health spending; it puts it on a budget...
and makes budget increases politically painful. A dedicated VAT would do just that. So-called general revenue financing hides the cost of federal health programs today. The federal support for Medicaid, Medicare parts B and D, and the Veterans Hospital system, for instance, are all paid out of general revenues. General revenues have to come from present and future taxpayers. In the end, Americans are paying all of the costs.

To illustrate why a dedicated tax would tend to restrain health spending consider the 2003 decision to introduce drug benefits for Medicare participants (Medicare Part D). The new program is definitely attractive to seniors with the federal government paying 75 percent of the cost of the insurance and participants paying 25 percent of the cost. Now, ask yourself, how was that new benefit paid for? What tax was increased in order to provide this new benefit beginning in 2004 (an election year)? The answer is that no tax was increased. The American public can be forgiven for thinking that this valuable new benefit was provided for free—new benefits and no new taxes! It is pretty easy politically to vote to improve benefits without voting to increase taxes. Now, consider what would have happened if all federal health spending had to come from the revenues of a VAT. Just for concreteness, say that the Congressional Budget Office determined that the 18 percent VAT would have to be increased to 20 percent in order to pay for the new benefit. These numbers are only illustrative, but now members of Congress and the White House would have to weigh the value of the new benefits against the economic and political cost of increasing taxes. But, this is exactly what our government should do before it spends any of our money—compare the costs with the benefits. One can be sure that improving benefits would be much more difficult if the cost of doing so was out in the open instead of hidden within the pool of general revenues and the federal deficit. We think that better decisions would be made if the extra costs were tied to the extra spending.

Health care costs are pretty much out of control. We spend a grand total of 17.2 percent of GDP on health care (much more than any other country) and that total is expected to push upward toward 20 percent in the not too distant future. What could possibly get us off this spending path? The first step is to highlight how much we are spending now. The “sticker shock” of a 20 percent VAT will do just that. The search for cheaper solutions will begin in earnest once we put health spending on a budget. The VAT’s revenue, at a constant rate, will only grow as fast as GDP. Efforts to contain health spending to the growth rate of GDP will really get serious if the alternative is the politically tough alternative of raising taxes.

**Summary**

- The National Commission on Fiscal Responsibility and Reform must find a new source of revenue for the federal government and must slow the rate of growth of health care expenditures.
- It is time to eliminate the confusion, the hidden and inefficient ways that we pay for federal health care.
- A value-added tax (VAT) dedicated to funding basic health care for all through enrollment in accountable care organizations would address the revenue and health care problems at the same time.
- The accountable care organizations should be paid a risk-adjusted capitation fee per enrollee.
- The VAT revenue should be used only to fund health care and should be the only source of funding for that program.
- To be most effective, the base for the VAT should be very broad, not loaded with exemptions.
- This approach serves both liberal and conservative goals by providing universal coverage, cost control, and deficit reduction.

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Health Care Is Different — That’s Why Expenditures Matter

By Victor R. Fuchs, PhD

Health Care Expenditures In the United States have been increasing much more rapidly than the rest of the economy over the past 30 years. The average gap, 2.8% per annum, results in health care’s share of the economy doubling every 26 years. Why does this matter? Would it matter if expenditures for personal computers were increasing 2.8% per annum more rapidly than the rest of the economy? The appropriate response would be, “So what?” Concern about health care expenditures is often attributed to the large role of these expenditures in the federal budget and the effect on the deficit. But that is not the whole story. A dollar spent on health care is not a priori more fiscally toxic than a dollar spent on transportation or education or any other item in the government budget. Moreover, health expenditures in the private sector have also been increasing rapidly. What matters most are the characteristics that distinguish health care from other goods and services: great uncertainty about an individual’s need for care, the essential nature of some care, and the ambiguous role of competition. These characteristics help explain the distinctive institutional features of health care and their consequences.

Uncertainty About an Individual’s Need for Care

In any year, the incidence of illness is distributed very unevenly among the population. Many millions of individuals use no health care, while a small proportion, about 1 in 20, account for about half of total health care utilization. Much of an individual’s high utilization is unforeseen: the sudden myocardial infarction, the diagnosis of cancer, the nearly fatal automobile crash, and the like. Individual demand for most goods and services is much more predictable. Because individuals are at risk of generating health care bills far in excess of their ability to pay from income or savings, there is widespread demand for health insurance. In many countries this demand is met by publicly supplied insurance; in the United States private insurance (subsidized by government) is still the primary mode, but public insurance such as Medicare and Medicaid and direct public provision of services through the Veterans Health Administration, county hospitals, and other government agencies account for almost half the total. Insured patients tend to “overconsume” health care relative to other goods and services. If there were third-party payments for personal computers, expenditures for PCs would surely be greater than at present. Even if consumers did not purchase more computers, many would be tempted to purchase top-of-the-line models. To offset overutilization of health care, a variety of constraints are attempted, including fixed budgets for hospitals and physicians, quantitative limits on supplies of personnel and facilities, and alternative payment mechanisms such as capitation.

Essentiality of Care

Some health care can make the difference between life and death or between a full functioning life and one of pain and disability. Given the essential nature of some care, no developed country permits access to be determined solely by individual ability to pay. Every developed country engages in some redistribution; the poor who are ill obtain care paid for by others. Personal computers are not viewed the same way; if access to a computer were regarded as essential, computers would be subsidized for poor individuals. To the extent that government redistributes health care, it must increase revenues through taxes (or similar measures), which have a negative effect on the overall economy by discouraging work, saving, and investment. Some redistribution is sought through the private sector such as when insurance companies are required to charge healthy persons and sick persons the same premiums. The day after passage of the Patient Protection and Affordable Care Act of 2010 (ie, “Obamacare”), Leonhardt noted that the most important result of this act is to redistribute care to the
poor and sick with the wealthier and healthier bearing the cost. To accomplish redistribution equitably and prevent “free riders,” every country uses some form of compulsory participation. Many do so through tax-supported universal coverage; the Obama reform does it through a combination of mandates, taxes, income-based subsidies, and regulation of private insurance.

The Ambiguous Role of Competition in Health Care

Expenditures for most goods and services are not of concern for public policy, in part because they are the result of interaction between supply and demand in competitive markets. Given sufficient competition, theoretical and empirical research concludes that a commodity’s price and quantity reflect its real cost to producers and its real value to buyers. That level of competition does not exist in many health care markets. Furthermore, in numerous situations it is doubtful whether society would benefit if it did.

For instance, economies of scale prevail in hospital care. How many hospitals are needed in a community of 100,000 population for greatest efficiency? Probably only one with about 225 beds. Even in a city of 1 million, where several hospitals could efficiently compete in providing ordinary acute care, quality of care would be higher and costs lower if neonatal intensive care, open heart surgery, organ transplantation, and other specialized services were each provided in a single hospital. The production of personal computers also benefits from economies of scale, but because the relevant market is national rather than local, it can sustain a sufficient number of producers to keep the market competitive.

Another example is the provision of physician specialty care, such as urology, neurology, or interventionist radiology. Even if a community were large enough to require the services of several physicians in each specialty, patients would probably be better and more efficiently served if physicians worked cooperatively—exchanging information, covering patients for another, sharing specialized technology and assistants—than if each physician was an “independent firm” competing with colleagues. But without competition, it is not possible to automatically assume that the price and quantity (and therefore, the level of expenditures) is socially appropriate.

The conclusion that a competitive market for a good or service will result in an appropriate level of expenditures usually assumes informed consumers. A special problem for competition in health care is that consumers are frequently poorly informed. In most cases a patient has symptoms—such as fever, pain, or headache—but does not know the cause or what treatment if any should be undertaken. Given the complexity of the current medical diagnostic and treatment options available, even well-trained physicians must make decisions while facing considerable uncertainty. Which of 4 different imaging devices is the most appropriate for this patient? If the diagnosis is hypertension, which of the numerous different drugs should be prescribed? Is hospitalization needed, or can the patient be treated on an outpatient basis? Which stent is more appropriate, bare metal or drug-eluting? The notion that the typical patient, even with a computer and an electronic medical record, would be able to make these decisions correctly gives too much credence to “free market ideology” over the complexity of health care. The fact that competition cannot be relied on to result in a socially appropriate level of expenditures for much of health care explains the widespread presence of government regulation and self-regulation through professional ethics. Neither solution is perfect, but competition alone is not a realistic option for many health care markets.

In summary, the distinguishing characteristics of health care and the institutional features they induce are more fundamental source of concern about health care expenditures (private as well as public) than their role in the federal budget.

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An important element in the debate over health care reform concerns the level of future health care expenditures. Congress makes explicit projections of federal government spending over the next decade and implicitly tries to take account of all other health care spending. The Congressional Budget Office (CBO) is obliged to provide its best estimates of future costs, which then play a large role in debates over health care reform. The media dutifully report these numbers, and pundits argue about whether they are too high or too low. Lost in the din are two critical problems related to future spending — one empirical, the other conceptual.

Empirically, the projections provided by Congress and the CBO are, at best, educated guesses. No one can accurately predict what health care expenditures will be 10 years from now, because they will depend on many factors, every one of which is unpredictable. For instance, what health problems will the country face in 2020? No one knows what the incidence of heart disease, cancer, and other major objects of health care spending will be 10 years from now. The prevalence of obesity may continue to increase or reverse its course. New infectious diseases may appear and become widespread. Equally important, and equally difficult to predict, are advances in medicine, or in economic terms, changes in medical technology. New drugs, new devices, new imaging techniques, and new surgical procedures have had a huge impact on health care expenditures in the past and probably will in the future as well.

Those who create biomedical innovations usually claim that they reduce costs by detecting or treating diseases more effectively than existing interventions. Most health economists believe that biomedical innovations increase health care expenditures. Both can be correct. Some interventions, such as antihypertensive drugs and cardiovascular surgery, have been found to be cost-effective — that is, the value of their beneficial effects, in terms of lives saved, has been judged to exceed their costs. But because these interventions are used in many more patients than they were in the past, their effect is to increase total expenditures. The scale has tipped particularly far in the case of new interventions for cancer and other diseases that have resulted in only modest improvements in health despite large increases in expenditures.

Furthermore, the level of health care spending in 2020 will also depend on factors external to health, such as the state of the economy. Other things being equal, spending will probably be higher in times of prosperity and lower during a depression. But other things may not be equal. Spending for defense may rise or fall. Environmental disasters may claim a larger share of the gross domestic product, as would widespread collapse of the country’s bridges, tunnels, and other infrastructure. Thus, the priority given to health care vis-à-vis the rest of the economy, as well as changes in health problems and health care technology, will determine the level of health care spending.

Estimating how much the nation will spend on health care is difficult, but in many ways, it is even more difficult to say how much the nation should spend on health care, because the answer depends on values as well as on data related to health, medical technology, and the economy. This is the conceptual problem related to health care spending. A useful way to think about this “should” question is to imagine a family with a limited income trying to decide how much to spend on food, clothing, entertainment, and other activities. In principle, the family will get the most satisfaction from its income if it allocates it among the various goods and services in such a way that the last dollar spent in each category brings the same amount of satisfaction. If the family cannot achieve such equality, the total satisfaction could be increased by switching some spending from categories in which the last dollar spent provided less satisfaction to those in which the last dollar spent provided more satisfaction.
The same principle holds in deciding how much society should spend on health care, except that applying the principle is much more difficult. Decisions about health care spending are made at many levels — by individuals, families, philanthropic organizations, state and local governments, and numerous federal programs. Also, the estimation of benefits from health care spending is fraught with problems. What is the effect on health of additional expenditures for diagnosing and treating heart disease, or cancer, or mental illness, or other diseases? Moreover, even if the effect of medical care on health were known with certainty, the problem of putting a value on the change in health would remain. For some, estimating the value of additional health care seems so formidable that it is tempting to just walk away from it. But to do that would be to abandon the “should” question to the vagaries of drug-company advertising, political payoffs, and media ideologues. It would result in the achievement of less social benefit than the maximum possible for any given level of health care spending or in spending more than is necessary to achieve any given level of health.

What about the notion that the level of spending should be high enough to meet the public’s need for medical care? This notion is simple enough but simply impossible to fulfill.

To paraphrase Abraham Lincoln, it is possible to meet all people’s needs for medical care some of the time, and it is possible to meet some people’s needs all the time, but no nation can meet all people’s needs all the time. Choices must be made.

I suggest that in dealing with this problem, we think of the “should” question in two parts — public and private. The public part consists of deciding how much health care should be available to everyone (universal coverage), financed by dedicated taxes. This decision is a political one that requires weighing the benefits of additional care against the cost of additional taxes. Weighing benefits and costs simultaneously is the only sure way of keeping public expenditures from outpacing public revenues and thus adding to the deficit. It is also the only way of keeping “deficit hawks” from withholding financial support for health care when the public believes that the benefit of the additional care is worth its costs. The private part of the “should” decision could be made in much the same way as private decisions about any other form of consumption or investment: individual families should weigh the expected costs and benefits of additional expenditures.

The role of new medical technology deserves special attention in thinking about future health care spending because biomedical innovations as a whole have been the primary source of both improvements in health and increasing expenditures. On the one hand, it is fiscally irresponsible to continue to accept innovations regardless of cost, even if they pass tests of safety and efficacy — and it is particularly irresponsible when the interventions are provided at public expense. On the other hand, we must avoid an innovation policy that cuts off new interventions prematurely. Some interventions that are not cost-effective at first may prove to be so over time and with greater experience in implementing them. It is in gathering this experience that the private part of the “should” question becomes important. Given a substantial market for untried, cutting-edge interventions that are not subsidized by the public purse, some innovations may prove to be cost-effective in the long run. Such innovations should then be included in the publicly financed benefit package.