Topics in Medical Economics: Health Care Rationing

By Joseph Bernstein, MD, MS

The Inevitability of Rationing

In America—perhaps the richest country in the history of the world—rationing is ubiquitous. Ferrari sports cars are rationed. Apartments on Central Park West in New York City are rationed. Wine from Châteauneuf-du-Pape is rationed. Rationing is necessary simply because there are more people wanting to live on Central Park West, for example, than there are apartments to house them. Whenever there is scarcity of supply relative to demand, there must be some means for allocating the goods in question. For the goods just described, the method of rationing is price.

Only when the price of goods is not allowed to float (which would equilibrate supply and demand) is there a need for rationing by other means. For example, when the supply of oil was strangulated by an embargo in 1973, price controls capped the maximum charge allowed by retailers. Demand at this artificially low price exceeded the supply, and gas lines ensued (Fig. 1). Contrast this with what was observed following Hurricane Katrina. Although oil refineries in the Gulf of Mexico were disrupted, the price of gas was allowed to increase when supplies decreased, and lines did not form. Rather, gas was rationed by price, or, as *USA Today* stated in its April 20, 2006, front page headline: "Drivers Curb Use as Gas Goes Up."

In the health care economy, consumers (patients) seem not to curb their use as prices rise. Unlike gasoline buyers, patients are shielded from the full marginal costs of their consumption. Even patients who pay for their own insurance are not charged a dollar more for every dollar in costs they generate; avoiding that exposure, after all, is the whole point of insurance. When consumers pay less than the full marginal cost of what they receive, the demand will exceed the supply at that price, and some other method of resource allocation—rationing—becomes necessary.

Health care rationing is not unique to countries such as Canada and Great Britain; it is done in the United States as well. Although American society does not explicitly deny dialysis to elderly patients with chronic renal failure (as is done in Great Britain), for instance, implicit rationing is rampant. Consider this: an American who has no insurance but has a cerebral arteriovenous malformation poised to rupture could find himself dead before he finds a hospital willing to treat him[1]. Allocating less care to those without medical insurance—a group comprising perhaps 30% of the population—is an implicit form of health care rationing.

More explicit forms of rationing are looming. For the past four decades, growth in spending for health care has far outpaced the overall growth of the United States national economy. If this continues, health care costs will eventually exceed our ability to pay. Figure 2 plots the projected growth in health care spending and in the United States economy overall. The gross national product, now approximately $12 trillion, is projected to grow at an annual rate of 3%. Health care spending, currently about $2 trillion, is assumed to increase at a rate of 7% per year. (These are roughly the growth rates for the past forty years.) A few dates stand out on this graph. By the year 2034, a majority of national spending will be devoted to health care. By 2044, spending on everything but health care will be less than current levels; that is, all of the economic growth will be consumed by increased health care spending. The most critical date, however, is 2053, at which time health care spending is projected to exceed the entire United States gross national product—an impossibility.

The sharp growth in health care spending has many causes, but fundamentally the problem is one of an unrestricted appetite for health care. The desire for health care is unchecked by normal constraints on consumption because typically the bills are paid by "others" (third parties rather than patients). Of course, in the aggregate, we are the "others" ourselves, and our willingness to subsidize fellow citizens has its limits. As Michael Kinsley noted in *The Washington Post,* "A subsidy has to take from someone and give to someone else. Everybody can't subsidize everybody. Or, to put it another way, society cannot give the average citizen better health care than the average citizen would choose to buy on his or her own."[2] Thus, health care spending in the United States is limited to approximately 300 million times the amount that individual average citizens would choose to spend on their own for themselves.

We need to allocate that finite amount of health care wisely. Hence, the correct question is not "Should we ration?"—for we must—but rather: "What mechanism of rationing is best?"

Modes of Rationing

Price Rationing

Everybody wants seconds at the all-you-can-eat restaurant. Similarly, the demand for health care will be inordinately high when people do not pay more for consuming more. The solution to this imbalance, in health care as in catering, seems obvious: charge à la carte prices, and all of sudden patrons are sated with less.

Fee-for-service medicine may be superficially appealing to orthopaedic

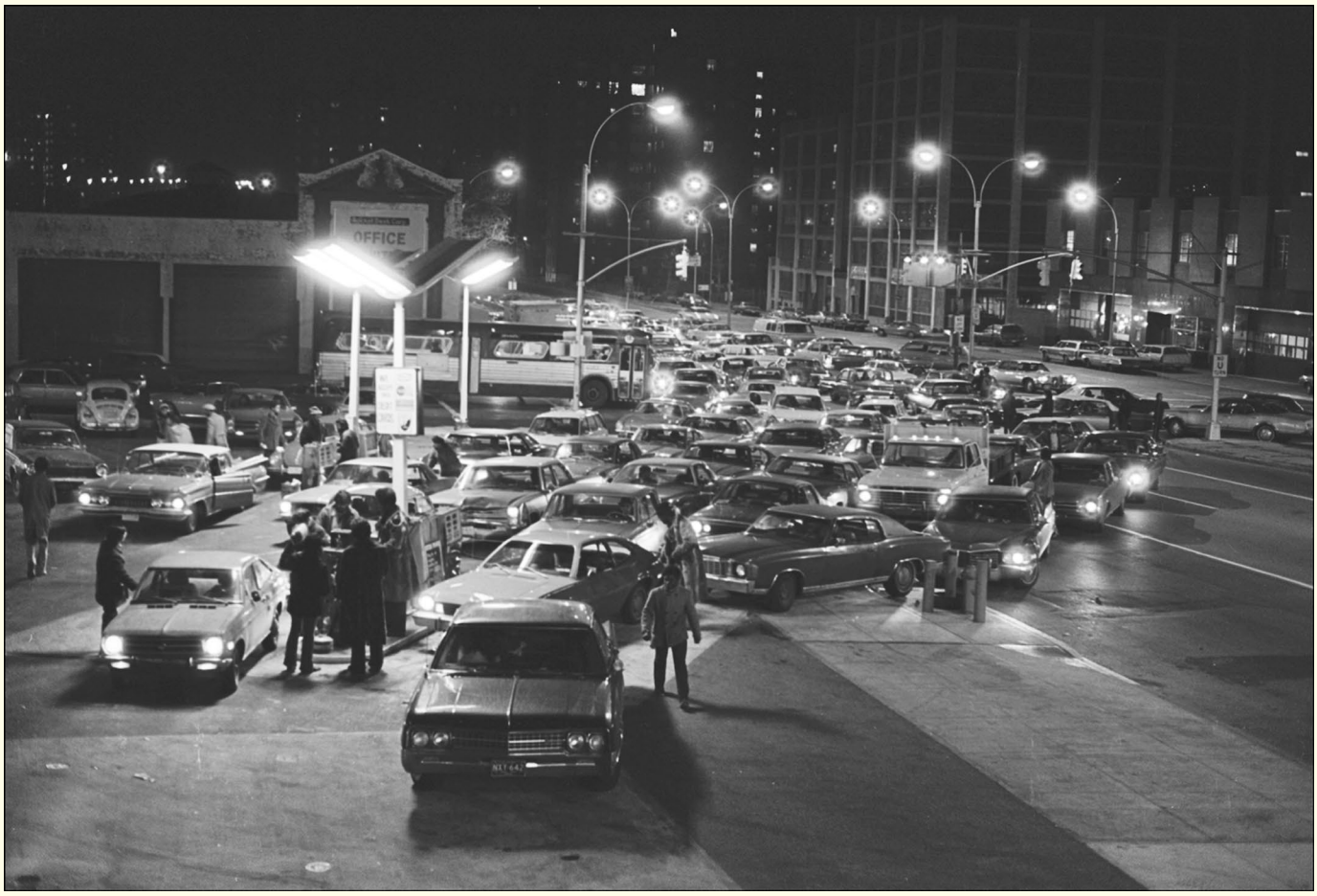

Fig. 1

Photograph of gas station lines during the 1973 fuel crisis. (Photograph, copyright 2006, by Allan Tannenbaum. Reproduced with permission.)

surgeons. They may read in *The New York Times* about colleagues who accept only cash for their work, "basically thumb[ing] their noses at the H.M.O.'s,"[3] and fantasize about collecting all of their billed charges. This, of course, is a dream divorced from reality. The physicians described in that article are possibly elite surgeons—but it is certain that they are caring for an elite group of (wealthy) patients. There are few patients who can afford to pay usual and customary fees without the help of insurance.

To bring a fee-for-service mindset to the majority of patients who cannot afford to pay for health care out of pocket, the Bush administration is touting health spending accounts. Under this approach, people are encouraged to establish accounts to which they contribute money tax-free and from which they can pay routine medical expenses. It must be recalled that the intent of health spending accounts is not to free patients from the hindrances of insurance companies to consume more, but to have them pay closer attention to the price of health care and consume less. Indeed, former Speaker of the House Newt Gingrich entitled his article in support of health spending accounts "Sticker Shock Could Help with Healthcare Costs."[4] For a thought-experiment about how this will affect orthopaedics, one might consider the experience of dental care (for which patients ordinarily shoulder a greater percentage of the charges). To their dismay, my colleagues in the dental school tell me that that even middle-class patients elect less expensive dental extraction over root canal and implants, despite the physiological superiority of the latter.

A discussion of fee-for-service medicine can evoke concern that poor people will receive substandard health care. Although American society tolerates disparity of wealth such that the rich eat better and avoid inhaling sweatshop fumes (and thereby live in a more healthful environment), a stark arrangement whereby the poor are segregated to the back of the clinic, so to speak, may be politically untenable. Nonetheless, price-based rationing may be justified in part by its power to assist with medical decision-making. For example, when offering a subacromial decompression for pain relief, orthopaedic surgeons can never be sure how much shoulder pain their patients are truly experiencing. Conversely, if patients have to pay for their surgery, the willingness to "put their money where their mouth is" may demonstrate that the patients in question have truly reached an intolerable level of discomfort. However, that is not

to say that a willingness to pay is the best barometer of medical necessity. We must remain mindful of the possibility that patients who face large expenses may indiscriminately shun not only unnecessary treatments but needed ones as well, and, of course, when these decisions lead to contagion or disability from preventable complications of disease, we all lose.

Price-rationing is a blade that cuts both ways. It can be an effective means of allocating scarce goods to those who demonstrate the sincerity of their desire, but it also can be harsh. A hybrid model of rationing that reaps the benefits of this approach while tempering its rough edges may be best.

Rationing by Hassle

When goods are scarce and are not rationed by price, a method for allocation is still needed. The traditional mode is the old-fashioned queue: bread lines, gas lines, and the like. Queues have been employed for health care rationing too, especially in Canada. Waiting lines may be an inelegant method of limiting the consumption of health care, but it is an effective one. Some patients in line may get better on their own before they are called; others, impatient but not better, will drop out in despair, and, finally, some may simply die while waiting.

Formal queues are rarely used in America, although its general form, rationing by hassle, is all too common. Under a rationing-by-hassle model, patients cannot rapidly avail themselves of the health care they want or need; rather, they must invest a certain amount of time and effort (i.e., be hassled) to get it.

The gatekeeper model of primary care medicine was developed as a method of rationing by hassle. Although it has been suggested theoretically that a primary care physician could adroitly reduce health care utilization by offering specialist referrals only when truly needed, the true potency of the method is that it is a hassle for patients to get a referral, and, in turn, fewer such specialist visits will be made.

Rationing by hassle has an egalitarian appeal—it actually favors poor people, whose opportunity cost (i.e., the value of their time wasted standing in line) is lowest. On the other hand, it is clearly wasteful: the seller does not capture all of the costs paid by the buyer. Lining up for three hours to get two free tickets to "Shakespeare in the Park" is hardly free for someone who foregoes earning $50 per hour. The buyer pays $150, but the seller receives nothing.

Along with Dr. Andrew Jawa of Harvard University, I investigated the hassle-based rationing of pharmaceuticals, specifically the demand for a certificate of medical necessity or a medical history questionnaire to get insurance coverage for celecoxib (Celebrex; Pfizer) and rofecoxib (Vioxx; Merck) prescriptions. We compared the policies of third-party payers for Celebrex and Vioxx with those for nabumetone (Relafen; GlaxoSmithKline), a similarly priced nonsteroidal anti-inflammatory drug that is not a cyclooxygenase-2 inhibitor. At the time that this study was carried out, Celebrex and Vioxx were thought to be safer and more effective than Relafen and were heavily promoted. Our hypothesis was that there would be more stringent precertification requirements for Vioxx and Celebrex to repel the demand generated by advertising and word of mouth. The policies of fifty-two third-party payers were analyzed. We found that only 33% of the third-party payers demanded documentation to allow a patient to get Relafen, whereas 77% and 65%, respectively, had such a

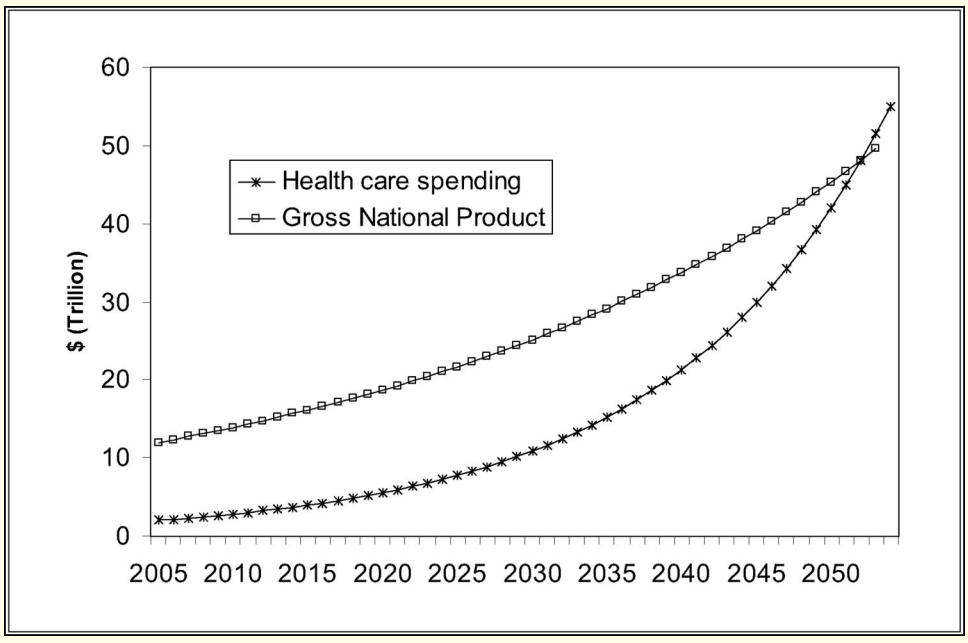

Fig. 2

Chart illustrating the projected growth of health care spending and the United States gross national product.

requirement for Celebrex and Vioxx. This can be explained, we argue, only on the basis of rationing by hassle.

Rationing by hassle can be effective and, when applied to palliative treatments (i.e., to relieve symptoms), it is a fair means of assessing the sincerity of the demand for health care. Rationing by hassle can be wicked when applied to health care that prevents complications from asymptomatic conditions (such as hypertension): taking advantage of patients' ignorance regarding the consequences of omitting care is immoral. Another ethical objection to rationing by hassle is that it is disingenuous. Third-party payers may coyly claim that "we did not deny you the drug; you just did not want it enough yourself to expend the necessary effort to get it," but that is hardly the whole truth and nothing but the truth, to be sure.

The problem with the hassle-based rationing of Celebrex and Vioxx, and not unique to it, is that the hassle is not imposed on the patient alone, but on the physician as well. This approach was probably chosen deliberately because the value of the physician's time is typically greater than that of the patient, yielding a greater net rationing effect. Moreover, the ire of patients who did not have their forms completed would be (mis)directed toward physicians and not the third-party payers who devised this policy. Although hassle may be a necessary component of the apparatus for allocation that is ultimately instituted, in its current form it is inefficient, deceptive, and may engender physician-patient animosity.

Rationing Supply

Although only approximately 20% of all health care spending is applied to physicians' fees, nearly all of health care consumption is dictated by physicians' decisions. Drugs require a physician's prescription, for example, and do-it-yourself surgery has not attracted a large following among the sane. Accordingly, health care spending could be limited by limiting the number of physicians or the amount of work they can do.

Rationing health care by limiting the supply of physicians may be very effective. For one thing, there is a physical limit on the total amount of work that can be done. (Even surgeons trained before the eighty-hour workweek still need some sleep.) The true power of rationing by limiting the number of physicians is that, even if one were to complain about the undersupply, nothing could be done about it in the short term. A person cannot wake up one day and say, "Orthopaedic surgery looks lucrative—I think I will plate some fractures today." At least six years of postgraduate education are needed merely to get a medical license; specialty training demands still more. The futility of complaining may, in fact, silence complainers altogether.

The major weakness of a plan to constrict the supply of physicians is that it is hard to put into place. Medical schools are in the business of turning out graduates, and, even if United States medical schools were to reduce their rolls, there is a seemingly unlimited supply of international medical school graduates (and hospitals willing to employ them). Clamping down on the number of specialists in particular is also futile because other physicians can shift their efforts in response. If the number of orthopaedic surgeons were reduced, for instance, plastic surgeons could do more carpal tunnel surgery, podiatrists could treat more bunions, and neurosurgeons could take over spine treatment. This shift would liberate the orthopaedic surgeons to concentrate on their exclusive domains.

Although it may not be feasible to limit the number of physicians in practice, the Canadian experience teaches us how to limit the productivity of (and expenses generated by) specialists: attack the ancillary supply lines. Most specialists cannot practice their trade—or at least the expensive facets of it—from a home office. They need a hospital, tools, assistants, and more. If the supply of any of these can be bottlenecked, then the specialists' hands would be tied. The weakness of this method is that a dearth of, say, operating rooms could be alleviated more rapidly than a shortage of physicians. Accordingly, political pressure to relieve the shortage may be applied to the point that the scheme is undermined.

A surreptitious approach to rationing the supply of physicians may be to change the way physicians are compensated. If all orthopaedic surgeons were paid a flat salary regardless of the amount of work that they do, it is safe to assume that less work would be done. Karl Marx was wrong: incentives matter. If you are paid more to do more, you will do more—and vice versa. Because the distribution of spending for orthopaedic surgical care is tilted heavily toward costs that the physician dictates but does not personally receive, paying the physicians not to operate—just as farmers are paid not to grow corn—may decrease overall spending even as physician fee spending increases[5].

Rationing by Ignorance

It may be true in business that the customer is always right, but in the medical marketplace, that is not so. In health care transactions, there is a vast asymmetry of information: the customer (patient) usually knows far less than the provider. This asymmetry can be exploited to ration health care and limit consumption. Rationing by patient ignorance can be implemented at two levels: the patient can remain unaware of the options for treatment, or the patient can be kept in the dark regarding the details of getting treatment. It was reported, for example, that total joint replacement may not be discussed with, let alone offered to, some people with radiographic and clinical findings that would warrant the operation[6]. From the perspective of resource consumption, this is tantamount to informing the patients of the surgical option and then explicitly denying it to them.

Rationing by ignorance regarding how to obtain health care is also commonly practiced. For example, the new Medicare Part-D drug benefit appears to have been designed with Byzantine rules and standards for the explicit purpose of limiting those who would persevere and actually enroll. As noted by columnist Robert Novak, the "hideous complexity of the scheme . . . has the effect of discouraging seniors from signing up."[7]

Stifling innovation is also a form of rationing by ignorance. If a technology is never developed (or never sanctioned for sale), it can never be consumed. The United States, of course, lacks a command-and-control economy in which the government dictates what is developed, but the United States government is far from powerless. Much biomedical research is funded by the National Institutes of Health, which could easily alter its current road map to discourage certain lines of inquiry. The United States government can also regulate what is allowed to enter the market, and even the mere threat of regulatory hurdles may dissuade firms from investing in new medical device technology.

Rationing by fostering ignorance of the treatment options offers at least one appealing feature: the victims are, well, ignorant—oblivious to the fact they have been denied care. Patients with arthritis who do not know about joint replacement are functionally hindered by that lack of knowledge, but at least they do not feel deprived. However, rationing by ignorance is a risky policy; once the information barrier is breached, there may be a deluge of demand. A better policy may be to require the sharing of all knowledge, pro and con. Perhaps some countervailing information will temper demand. Rationing by education would demand that the doctor not only discuss the alternatives to treatment (as required currently when obtaining informed consent) but also the nature and strength of the evidence on which surgical recommendations are made. (The clues from the literature suggest that such education would generate more demand for arthroplasty[8] but less for spine fusion[9], for instance, but this is, of course, a conjecture.) Part of the appetite for health care stems from the myth that all innovations represent progress and that all offered treatments are scientifically proven. If patients are taught to question this dogma, they might seek health care with a bit less avidity.

Bedside Rationing

Health care can be rationed by doctors at the bedside. Ubel and Goold[10] defined bedside rationing by the following criteria: the physician withholds a service that is in the patient's best interest, the motivation for withholding the service is primarily to promote the financial interests of someone other than the patient, and the physician has control over the use of this beneficial service.

Examples of bedside rationing in orthopaedics would include not only the esoteric and expensive (such as choosing activated prothrombin complex concentrate for a patient with hemophilia and a hip fracture over the more expensive recombinant activated factor VII[11]), but also the mundane, such as, perhaps, the use of a cheaper femoral stem for an arthroplasty done to treat hip fracture in an elderly person or the withholding of a magnetic resonance imaging scan for back pain until an arbitrary number of weeks have passed.

The argument favoring bedside rationing is that, compared with rationing by price or hassle, it employs physician expertise regarding the patient at hand and thus is more likely to limit unnecessary care preferentially. Yet, as noted by Capozzi et al.[11], bedside rationing is fraught with difficulties. For one thing, it places physicians in conflict with their patients. Medical ethics dictate that physicians must do all they can for the benefit of their patients. A service that has even a small chance of benefit must be offered without consideration of third-party costs. Also, the theoretical justification for bedside rationing, namely, that withholding some less-needed health care liberates resources to provide more-needed health care, is hardly assured: the money saved by the denial may simply represent increased profits for an insurance company. Additionally, even physicians who are able to perfectly sort their patients according to need have no idea necessarily how their patients compare with a larger group. The patients who are the least sick in one physician's inner-city geriatrics practice, for example, may indeed be sicker than the most severely ill patients in another physician's suburban practice catering to healthy young adults. If both physicians were to ration health care to the group representing the sicker half of their practice, it would be the case that, globally, this bedside rationing fails the test of fairness.

The key to fair implementation of bedside rationing is uniformity—a standard that is typically not met at present. Without some assurance that all physicians are following the same mandates, it is uncertain whether individual instances of withheld health care lead to a greater societal good. Unless and until there is a central mechanism to ensure that bedside rationing decisions will be applied consistently, the practice must be shunned.

Conclusions

If rationing is inevitable, which mode is best? No rationing method is perfect. The ideal mode of rationing is one that is affirmatively chosen by society, blending individual choice and responsibility with compassion for the needy (which includes just about all of us, when we are sick). Creating this hybrid will require an open dialogue on the costs and benefits of each approach. I would argue that orthopaedic surgeons must take a leadership position in this debate.

With any mode of rationing, there will always be identifiable individuals who are denied a treatment that is apt to help them, and this will induce in some a certain sense of queasiness—if not outright disgust. But squeamishness is not the basis of rational decision-making. As pointed out by economist Steven E. Landsburg[12], the outrage expressed when life support was terminated for a patient at Baylor Hospital because she could not pay for her care was not matched with a call for "guaranteed ventilator support insurance" for poor people. Support for ventilator support appears only when there is a face on the recipient.

There is a logic to our illogical thinking: we prefer our health care rationing like we prefer our sausage-making—the fewer details the better. In their book, *Tragic Choices*[13], Calabresi

and Bobbitt imply that our society can practice medical rationing only to the extent that the details are hidden from public scrutiny[14]. Because of our unwillingness to confront tough issues, we opt de facto for inefficient solutions: money for ventilator support in the intensive care unit must be shunted (indirectly but no less certainly) from funds otherwise available for the outpatient indigent clinic.

It is, of course, reasonable to ask why participating in, let alone leading, the discussion of rationing is the special responsibility of the orthopaedic community. After all, orthopaedic surgeons represent fewer than 5% of all of physicians; we are a small voice, if that, in the chorus of American medical advocacy.

Two reasons come to mind. The first is practical: indiscriminate rationing of health care is apt to preferentially target orthopaedic practice. When the whining about "spend[ing] much more per person on health care than any other nation, yet [having a] lower life expectancy and higher infant mortality than Canada, Japan and most of Europe"[15] reaches a fevered pitch, a modest proposal will emerge: eliminate the health care that (a) costs a lot and (b) does not affect life expectancy and infant mortality. By my estimation, nearly all of orthopaedic practice falls into that category. To prevent fatuous plans like this, we need to participate vigorously in the discussion on health care spending and allocation.

The second reason the orthopaedic community must lead the discussion on medical rationing, more subtle but no less important, involves protecting the vision implicit in our work: the advancement of the quality of life. Orthopaedic surgery rarely is life-extending, but it is very much life-enhancing. Consider, for example, total joint replacement. This surgical procedure can add many quality years to an impaired patient's life, but when taking into account the perioperative mortality risks, it may actually decrease life expectancy. And yet we deem joint replacement to be an unqualified boon to patients—as it is.

When health care dollars evanesce, there will be a tacit but fierce struggle between those who want to fund the life-enhancing practices of medicine and those favoring the life-extending practices. On the one side will be the many Americans who are like Yossarian, the hero of Joseph Heller's novel *Catch-22,* vowing "to live forever or die in the attempt." Rivaling them will be those for whom it is less important to add years to their life and more important to add life to their years. Of course, the great majority of us would prefer both long and full lives, but we do have to choose, however tragically. Extracorporeal membrane oxygenation may sustain life, but the money spent for that procedure cannot be spent on elective knee ligament repairs. We have to choose, however tragically.

Orthopaedic surgeons in particular can add to this discussion in a way no other specialists are able. We frequently witness the value of life-enhancing treatments, and we have an obligation to tell that story. Needless to say, the orthopaedic surgery community does not paternalistically impose its point of view itself; it simply must provide the information to society to allow it to choose wisely. Along those lines, we have a further responsibility to hone our skills regarding surgical indications and outcomes research and to tell those paying the bills which patients stand to benefit most from our work. If society imposes a limit on how much work we can do, we must be sure that we offer the greatest possible returns for that effort. We need to be able to answer as rigorously as possible the question: "Whom can we help the most and how can we help them?"

Averting our eyes from the consequences of tragic choices is a luxury. Health care costs will continue to rise without bounds until society is ready to confront these choices. At some price for health care—25% of the United States gross national product?—rationing will escape from the shadows. The crisis will be declared, the demagogues will have the floor, and we will be forced to ration explicitly and with the imprecision that comes with haste. It is far better to begin this discussion now. The question remains: What sort of health care system will we have when the music finally stops? Orthopaedic surgeons can help to answer this question, and we have a responsibility to do so.

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