"I'll Take the Puron"

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"How good is technology if we can't afford it?"

Each one of us, whether a patient or physician, is interested in new technologies that offer a promise of superior and lasting therapeutic health benefits compared with available alternatives. None of us, as physicians, are blinded to the reality that these innovative technologies come at a cost. In fact, it is estimated that in the United States, the cost of new technologies has been responsible for an increase in health care expenditures over the last 40 years ranging from 20% to 40%, according to data from the Centers for Medicare & Medicaid Services. Health care costs in the United States grow at a pace greater than the increase in gross domestic product, in part driven by the continual adoption of newer technologies. Smart metals, bone growth factors, cell-based therapies, proteomics, genomics—we should have no delusion that these technologies will be inexpensive. Even contemporary metal and plastic joint implants are becoming prohibitively expensive, given shrinking margins.

The big question is, who should pay for these technologies? Whose burden is it? Who ultimately is responsible for ensuring access to innovative technologies once they've been proven effective? Is it the third-party payers? Hospitals? Government? Industry? Patients? In our current system, the upfront acquisition expenses of new technology and increased "cost of doing business" cannot be shifted to the consumers of health care, our patients, by adjusting hospital fees. Unless hospitals stop participating in a large number of insurance plans and collect out-of-network benefits or are paid cash upfront (both unlikely scenarios), only volume increases will offset the expenses and balance the ledger. In fact, Medicare continues to reduce reimbursement for common orthopedic procedures to both physicians and health systems, irrespective of the availability of new and innovative technology.

Our yearning for new technologies with all of the "bells and whistles" is pitted against the need to be responsible in the adoption of these technologies, in order to minimize the burden on the hospitals in which we practice, which now have more limited resources and smaller margins than they have had in decades past. Frustrating as it may be for the individual practitioner trying to champion the cause of new technologies, reflexive adoption of new technologies by hospitals without a thorough analysis of the clinical risks and benefits and return on investment is unlikely in the current environment.

Pennsylvania Hospital, where I spend the majority of my professional time, was founded by Benjamin Franklin and Dr. Thomas Bond in 1751, with a mission of caring for poor citizens of Philadelphia. That noble and altruistic goal, unfortunately, is no longer a practical primary option for a hospital trying to survive in a competitive market, particularly given the costs of health care and technologies in the 21st century. Like others, our hospital is also strapped with the typical challenges of shrinking reimbursement and expanding expenses. Our clinically robust hospital was experiencing a 9.94% annual growth rate in supply costs in 2002 and an additional 11.96% in 2003. Recognizing the potentially devastating impact of unchecked technology acquisition costs on the hospital margins, a committee was assembled at our hospital to regularly evaluate new and existing technologies. Since its establishment, the committee has successfully curtailed supply acquisition costs in excess of $7 million annually by scrutinizing physician-proposals for new technologies. This committee, on which I serve, has disapproved between 16% and 22% of proposed technologies for each of the past 3 years or has stimulated negotiation with manufacturers and vendors for better pricing.

My tenure on this committee has been satisfying on some levels, and distressing on others, depending on which cap I am donning. It is obvious to me that in the next few decades there will be some novel, sophisticated, and clinically beneficial

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technologies that may never make it to the marketplace simply because of their expense. How good is a technology if we can't afford it?

What are we to do? Unfortunately, I can't claim to have the answers to this complex question. Economists and policy makers have been struggling with this dilemma for quite some time. I've used an analogy for some of my enlightened patients, which may put this issue into practical terms, even for those loath to pay even a $20 co-pay:

This past winter when a 120-year-old tree fell during a storm and irreparably damaged two well-functioning air conditioning compressors at our home (among numerous other things), my wife and I were faced with the stark reality that the homeowner's insurance would only cover their replacement with a comparable Freon®-based system. However, the Federal Clean Air Act has mandated the phasing out of the manufacture of Freon-based air-conditioning units by 2010, in favor of Puron®, a refrigerant that is better for the environment, more efficient, but initially more expensive. As with many technologies, it is also unknown how Puron-based air-conditioning units will fare over the long run. Nonetheless, we opted to upgrade our entire system to the newer technology at a considerable additional personal expense, rather than sticking with a technology that will be obsolete and less efficient in a few years.

From my perspective, the writing is on the wall. If Medicare keeps cutting reimbursements, new technologies will be rejected more frequently in the future and consumers (patients) will be left to decide whether to pay out-of-pocket for those technologies. Third-party payers are unwilling to take from their surpluses to pay for such basic interventions as physical therapy, let alone novel technologies; and hospitals resist the urge to reach into their capital budgets to offset increased expenses while the operating margins continue to shrink.

As the public increasingly demands health care as an inalienable right, we must debate issues of access to physicians and technology. One solution, which would surely be unpopular amongst many, would require a paradigm shift in how society views access to health care technology, even though it is an approach that is typical of most developed societies, including ours. Perhaps we need to offer two tiers of technologies—Puron or Freon—one for those who are willing to pay for newer, potentially more effective, and more expensive interventions, and one for those who will accept the tried and true, but slightly obsolete technologies that will be covered by third-party payers. In many regions of the world, it is not unusual for patients to personally pay for more advanced technologies and services.

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While this is initially contrary to what many of us perceive to be our responsibility as physicians, in terms of providing care for the ill, there may be few solutions for hospitals absorbing the costs of technologies that will satisfy all parties—patients, payers, practitioners, and policy makers. We lament the slow, steady devolution toward universal health coverage, not because we don't think all of the population should receive care, but because we've seen the damaging effects from bureaucracy and access problems that have plagued the Canadian and some European health care systems. Tragically, as in those systems, new and innovative technologies may, in our future, be restricted to those who can afford them; other technologies may simply out-price themselves, their potential never to be realized. This is the challenge for policy makers, patients, and physicians—all with a vested interest in seeing that the quality of the health care remains not only cutting-edge and effective but also cost-efficient.

In our society, patients will continue to demand new technologies. Many patients equate competence of care with the complexity and cost of technologies utilized by a practitioner or a health system. While that is a naïve approach, those patients, who display a philosophy of consumerism typical in our broader society in general, may be likely to make more of a personal investment in themselves. Like it or not, with a dwindling pool of resources available for technology acquisition, ultimately a two-tiered approach to technology availability and access may become the norm—a privilege, not a right. The cost of innovative care may, in fact, need to be shouldered by those patients so inclined to pursue innovative technologies. Personally, given the options, I'll take the Puron.