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Better, more affordable health care

In “Better U.S. Health Care at Lower Cost” (*Issues, Winter 2010*), Arnold Milstein and Helen Darling make an excellent case for improving U.S. health care by applying techniques developed during numerous studies, some of which have been used successfully in clinical settings. What has prevented them from being applied to Medicare and Medicaid? The government is already paying almost half of U.S. health care costs, so it should have the leverage to insist that these techniques be applied, at least in selected test scenarios.

Perhaps more feedback from the recipients of Medicare would help. My wife and I have been covered by Medicare for 16 years. She is quadriplegic, survived breast cancer, and is fed through a gastrostomy tube. We watch with amazement the data flow from bill to Medicare to supplemental insurance carrier. There appear to be standard treatment codes, but no relation between the amounts billed and paid. We’re encouraged to report discrepancies, but hospital bills include a (very large) lump sum for supplies. It takes special effort to request an itemized bill and then it is difficult to interpret. Payment for the skilled surgeon was reduced sharply, but unnecessary nursing consulting services were paid in full.

Our most ridiculous case is plastic syringes for my wife’s feeding that are billed at \$150 each, can be purchased at retail for less than \$20, and are paid by Medicare at \$5.93. Even then the vendor tries to persuade us to use more of them, once asserting that Medicare insisted on providing one per day. My wife’s nourishment, Jevity, is billed at \$10.79 per can with Medicare paying \$1.95. I’ve complained to both the vendor and Medicare. They both say it doesn’t matter what is billed, because they’re only paid the agreed amount. So why is it billed at a ridiculous amount? Such anomalies usually indicate a flaw in the system somewhere.

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We've avoided most of the duplicate tests, because we use a set of physicians that usually cooperate. Nevertheless, rather than Celebrex, which insurance would not reimburse, my physician recently prescribed a generic for Voltaren. He didn't know that four years ago another physician's Voltaren prescription caused my hiatal hernia. I learned that it was a Voltaren generic only after a diagnosis of stomach bleeding.

When my late father was hospitalized by an emergency 12 years ago, the hospital refused to consult his primary physician because he was not on their staff. They were unaware that he needed Aricept, a medicine to slow the progression of dementia, because he had forgotten why he was taking it!

These experiences support many of the authors' recommendations. I recommend incorporating more feedback from Medicare and Medicaid recipients into planning improvements. While Congress debates expanding care to the presently uninsured, and counts on Medicare savings to provide part of the funds, they must ask why such improvements have not already been made, or at least tried, in Medicare. Does the United States have to incur trillion-dollar deficits before we are motivated to fix the system?

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Calming nuclear jitters

For more than a decade, foreign policymakers and international relations academics have lamented the growing gulf between their fields. The foreign-policy people have complained that the academy remains aloof, ignoring real world problems and instead focusing on increasingly abstruse theorizing, ornate formal models, and quantitative noodling.

The other problem, though, is that policymakers show little interest in investigating the cause-and-effect assumptions that underpin their policy decisions. Although spelling out and scrutinizing these theoretical assumptions is important for good social science, foreign-policy people paid little attention to the work of the few academics who are doing work on policy-relevant subjects. Compounding matters further is the fact that many policy-focused academics

haven't thought much of U.S. foreign policy in recent years. What this means is that policymakers might listen to academics' advice on how to take a hill, but not whether to invade the country in the first place.

Accordingly, reading work like John Mueller's is at once refreshing and frustrating ("Calming Our Nuclear Jitters," *Issues*, Winter 2010). A judicious academic who writes in clear English prose and focuses on policy problems, Mueller has much to offer the policy establishment, but it seems unlikely they will accept it. Building on his previous work highlighting the declining incidence of interstate violence and the inflation of the threat posed by terrorism, Mueller now aims to "calm our nuclear jitters."

The great service Mueller does in his book is a sort of "naming and shaming" exercise, cataloging the many erroneous predictions of doom and disaster that have constituted the bulk of popular commentary on nuclear weapons. Although most analysts are smart enough to shroud their arguments in nonfalsifiable rhetoric, Mueller documents the range of frenzied projections and uses these as a jumping-off point for examining the arguments of today's doomsayers. In particular, his analysis of the likelihood of an atomic terrorist threat, the focus of the *Issues* article, is a bright bulb in a dark room.

That said, Mueller's analysis of the atomic obsession fits uneasily with some of his earlier work. For instance, the takeaway lesson for Mueller is that "whatever their impact on activist rhetoric, strategic theorizing, defense budgets, and political posturing," nukes remain "unlikely to materially shape much of our future."

In prior work, however, Mueller has argued forcefully that ideas—presumably including activist rhetoric, strategic theorizing, and political posturing—are primary causes of material outcomes. For example, in describing how and why the Cold War ended, Mueller challenged the realist view, wondering whether "domestic changes that lead to changes in political ideas may be far more important influences on international behavior than changes in the international distribution of military capabilities."

If ideas are as important in influencing material outcomes as Mueller has suggested in the past, then it is curious to see him acknowledge that nukes have profoundly influenced our thoughts, only to suggest that this influence has contributed—and will contribute—only trivially to outcomes.

This puzzle aside, the country would be well served if the policy establishment deigned to take up Mueller's contrarian arguments about our atomic obsession.

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Perennial crops

I endorse the concerns about the sustainability and productivity of modern agriculture mentioned by Jerry D. Glover and John P. Reganold in “Perennial Grains: Food Security for the Future” (*Issues*, Winter 2010). High-input monocrop farms that embrace frequent tillage are undermining the natural resource base needed to sustainably double food production by 2050. The sowing of perennial grain crops, as suggested by the authors, can reduce some environmental impacts; however, most benefits will be felt on marginal farm lands, such as hillsides, drylands, and degraded soils. Although perennial crops can make an important contribution to these areas, Washington State University, CIMMYT, and other organizations have been studying and promoting conservation agriculture—minimum tillage, crop rotations, and retention of crop residues—which is compatible with and provides many of the benefits suggested for perennials, but can be adapted to almost all farming situations.

Topping the research challenges for perennial grain crops is the most basic requirement for success: high yields. Though perennial wheats can produce as much as 70% of the yield of elite annual wheats, on average their yields are lower, especially if one takes into account that the yields of perennial grains tend to progressively decline each year after sowing.

Another concern about perennial crops that must be addressed is their potential contribution to the development and spread of diseases, as they are an ideal green bridge to transfer diseases from one year to the next.

IN THIS
ERA OF
ESCALATING
DEMAND,
WATER
AND
PHOSPHORUS
RESOURCE
DEPLETION,
PRODUCTIVE
LAND
SCARCITY,
GLOBAL
WARMING,
AND
INCREASING

Perennial wheats will need resistance to many biotic threats, including cereal rusts, viruses, and soil-borne diseases, the latter being a particular problem in wheat monoculture.

The concept of perennial grain crops is interesting and is one of many important agricultural research topics such as trait mining, enhancement of photosynthesis, conservation agriculture, and precision farming that deserve a massive increase in R&D investment.

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I strongly support the visionary thinking espoused in the article. In this era of escalating demand, water and phosphorus resource depletion, productive land scarcity, global warming, and increasing weather extremes, food security and sustainability must be placed higher on the world's agenda. The remaining years until peak food demand around 2050 will test the ability of our species to think beyond the next election cycle and support research for the future. Our complacency about food security is leading to a crisis far worse than today's financial problems.

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Jerry D. Glover and John P. Reganold present a convincing case for public funding of perennial crops. Congress would do well to pay attention to their work. However, can Congress, a body that knows a decent amount about health care but cannot enact any meaningful health care legislation, actually respond to a call to fundamentally shift the direction of agriculture—a field

more foreign to members of Congress after every election cycle?

I believe Glover and Reganold should consider altering the nuance of their appeal. Their work of perennialization has been to protect and restore the health of our natural resources. The productivity of perennial grains has been increasing rapidly, and the two authors confidently demonstrate how yields can rise to the point where perennial grains can play a significant and viable role in a management sequence. However, as long as Congress is asked to determine public funding in agriculture based on the crops themselves, members have little incentive to move beyond questions of yield, which favor traditional annual methods.

At its roots, the *raison d'être* of perennial grain research is soil science. This is where Glover and Reganold can attract significant congressional attention. Commodity yield has the strong force of the free market behind it, making public funding less and less important. Soil science, however, needs the public body as an advocate and public financing as a catalyst. The realities of global population growth will preserve the economy for agriculture, and Congress needs to recognize that freedom and instead begin to craft farm bills that start to transition toward a focus on natural resources. As the article points out, our problem isn't protecting a future market for cereal grains; it is protecting our natural resources so that we can continue to widely produce cereal grains.

The budget considerations proposed in the article are minimal within the entire federal appropriations process. Although Congress has not shown much interest in funding perennial research, they are clearly willing to wrestle with questions of our natural resources. Glover, Reganold, and other scientists with valuable knowledge in this field ought to point Congress in the direction of our soil and our water. Public funding for perennial grain research waits for them along that path.

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I am delighted to see this paper published. It should be on the front pages of the *New York Times*, *Washington Post*, and other influential papers. The message it carries is very important: that society has major problems with our food system and that one of the main ways to address these problems is to develop perennial grain crops. The paper gives all the good reasons to do this, which I wholeheartedly support.

I also strongly support their call to support Wes Jackson's 50-year breeding program. Coming from corn and soybean Iowa, educated through the Land Grant System in Iowa and Wisconsin, it was hard for me to see Jackson's vision. The Land Grant vision is to make "Illinois safe for soybeans," as so well put in an essay by Aldo Leopold. This vision will be hard to change, but it must be addressed.

The Land Grant–Agriculture Research Service system has largely evolved to be dependent on the current highly entrenched input-marketing-processing complex that dominates our food system. The annual grains support this complex. Fertilizers, biotech-generated seeds, planting and harvest equipment, intensive animal production, international grain marketers and processors, etc. have increasingly come to control the marketplace. The farmer becomes the slave to these masters. Although the problems of market dominance have long been known, the United States has failed to address these in existing antitrust legislation. What has this to do with perennials? Everything. Getting viable perennial grain crops widely adapted to the various biomes of the world would take away this power. It is not likely that the entrenched agribusiness moguls would let this happen without a fight. And they have the money and power.

When I first heard of Jackson and the Land Institute, I was as skeptical as the next agronomist. Then I got the chance to work in the perennial agriculture of New Zealand, and in 1988, to direct the premier Land Grant–based sustainable agriculture program, the Leopold Center. I connected the dots professionally and realized that the Land Institute was right. Now John Reganold is showing how perennial wheat can address the huge problem of erosion in the Palouse.

I hope society does the right thing: get behind the funding of perennial grains R&D. Another big drawback is the lack of trained plant breeders. Classical plant breeding has become almost a thing of the past, as genomics takes over. That is where the money is. So parallel to Jackson's 50-year plan must be a major uptick in funding for graduate training, and of course, a guarantee of good jobs for the time spent.

While the grain breeders are at it, emphasizing the

development of nutritional perennial grains should be a continuing emphasis. This would lessen the consumption of meat in the Western diet, a win-win if there ever was one. And win-wins are hard to find in this day and age.

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