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Eliminating Waste in US Health Care

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The need is urgent to bring US health care costs into a sustainable range for both public and private payers. Commonly, programs to contain costs use cuts, such as reductions in payment levels, benefit structures, and eligibility. A less harmful strategy would reduce waste, not value-added care. The opportunity is immense. In just 6 categories of waste—overtreatment, failures of care coordination, failures in execution of care processes, administrative complexity, pricing failures, and fraud and abuse—the sum of the lowest available estimates exceeds 20% of total health care expenditures. The actual total may be far greater. The savings potentially achievable from systematic, comprehensive, and cooperative pursuit of even a fractional reduction in waste are far higher than from more direct and blunter cuts in care and coverage. The potential economic dislocations, however, are severe and require mitigation through careful transition strategies.

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No matter how polarized politics in the United States have become, nearly everyone agrees that health care costs are unsustainable. At almost 18% of the gross domestic product (GDP) in 2011, headed for 20% by 2020,[1,2] the nation's increasing health care expenditures reduce the resources available for other worthy government programs, erode wages, and undermine the competitiveness of US industry. Although Medicare and Medicaid are often in the limelight, the health care cost problem affects the private sector just as much as the public sector. Both need serious relief.

Obtaining savings directly—by simply lowering payments or paying for fewer services—seems the most obvious remedy. Programs designed to make cuts of this kind appear across the policy spectrum, from many, carefully sequenced provisions of the Patient Protection and Affordable Care Act (ACA), favored by the Obama Administration, to draconian proposed shifts of Medicare costs to beneficiaries and reductions in payments to physicians and hospitals, favored by several Republican congressional proponents.

The ACA, for example, gradually phases in well-warranted decreases in payments to Medicare Advantage plans. Some in Congress have proposed caps on federal Medicare payments (with beneficiaries picking up the difference). Many states, reeling from unprecedented budget deficits, are reducing Medicaid benefits and payments.

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The cost reductions in the ACA are necessary and prudent, but if other initiatives to cut spending are taken too far or too fast, they become risky. Vulnerable Medicaid beneficiaries and seniors covered by Medicare with marginal incomes may find important care services out of reach, either because they cannot afford the new cost-sharing, because clinicians and hospitals have withdrawn from local markets, or both.

Reducing Waste in Health Care Spending

Here is a better idea: cut waste. That is a basic strategy for survival in most industries today, ie, to keep processes, products, and services that actually help customers and systematically remove the elements of work that do not.

The opportunity for waste reduction in health care is enormous. The literature in this area identifies many potential sources of waste and provides a broad range of estimates of the magnitude of excess spending.[3-8] Six categories, at least, seem large (although this list is likely not exhaustive). The Table shows estimates of the total cost of waste in each of these 6 categories both for Medicare and Medicaid and for all payers.

1. **Failures of Care Delivery**: the waste that comes with poor execution or lack of widespread adoption of known best care processes, including, for example, patient safety systems and preventive care practices that have been shown to be effective. The results are patient injuries and worse clinical outcomes. Better care can save money.[10] We estimate that this category represented between $102 billion and $154 billion in wasteful spending in 2011.[4,11-16]

2. **Failures of Care Coordination**: the waste that comes when patients fall through the slats in fragmented care.

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Table. Estimates of Annual US Health Care Waste, by Category[a]

	$ in Billions					
	Annual Cost to Medicare and Medicaid in 2011[b]			Annual Cost to US Health Care System in 2011		
	Low	Midpoint	High	Low	Midpoint	High
Failures of care delivery	26	36	45	102	128	154
Failures of care coordination	21	30	39	25	35	45
Overtreatment	67	77	87	158	192	226
Administrative complexity	16	36	56	107	248	389
Pricing failures	36	56	77	84	131	178
Fraud and abuse	30	64	98	82	177	272
Total[c]	**197**	**300**	**402**	**558**	**910**	**1263**
% of Total Spending				**21**	**34**	**47**

[a] Table entries represent the range of estimates of waste in each category from sources cited in the text. The total waste estimates are simply the sums of the category-level estimates. This simple summing is feasible because the categories are defined in such a way that wasteful behaviors could be assigned to at most 1 category and because, like Pacala and Socolow,[9] we did not attempt to estimate interactions between or among the categories.
[b] Including both state and federal costs.
[c] Totals may not match the sum of components due to rounding.

The results are complications, hospital readmissions, declines in functional status, and increased dependency, especially for the chronically ill, for whom care coordination is essential for health and function. We estimate that this category represented between $25 billion and $45 billion in wasteful spending in 2011.[14-17]

3. **Overtreatment**: the waste that comes from subjecting patients to care that, according to sound science and the patients' own preferences, cannot possibly help them—care rooted in outmoded habits, supply-driven behaviors, and ignoring science. Examples include excessive use of antibiotics, use of surgery when watchful waiting is better, and unwanted intensive care at the end of life for patients who prefer hospice and home care. We estimate that this category represented between $158 billion and $226 billion in wasteful spending in 2011.[4,11,12,18]

4. **Administrative Complexity**: the waste that comes when government, accreditation agencies, payers, and others create inefficient or misguided rules. For example, payers may fail to standardize forms, thereby consuming limited physician time in needlessly complex billing procedures. We estimate that this category represented between $107 billion and $389 billion in wasteful spending in 2011.[4,5,18-22]

5. **Pricing Failures**: the waste that comes as prices migrate far from those expected in well-functioning markets, that is, the actual costs of production plus a fair profit. For example, because of the absence of effective transparency and competitive markets, US prices for diagnostic procedures such as MRI and CT scans are several times more than identical procedures in other countries.[23] We estimate that this category represented between $84 billion and $178 billion in wasteful spending in 2011.[4,7,11,22,24-27]

6. **Fraud and Abuse**: the waste that comes as fraudsters issue fake bills and run scams,[28] and also from the blunt procedures of inspection and regulation that everyone faces because of the misbehaviors of a very few. We estimate that this category represented between $82 billion and $272 billion in wasteful spending in 2011.[20,29]

For US health care overall, the sum of the lowest estimates is $558 billion per year, or 21% of national health expenditures; and the sum of midpoint estimates is $910 billion per year, or 34%.

A "Wedges" Model for Reducing Health Care Spending

How should efforts to reduce health care waste be organized? A helpful analytical model is suggested by the previous work of Pacala and Socolow[9] on a strategy for keeping atmospheric carbon in a sustainable range. These authors framed their approach by comparing 2 possible future trajectories of CO_2 levels over time—a catastrophic "business as usual" trajectory, in which little or no CO_2 mitigation occurs and an alternative that climate science predicts would stabilize CO_2 levels. Graphed over time, the area between the 2 curves is a "stabilization triangle," representing the carbon reductions required to avoid a climate catastrophe.

As Pacala and Socolow pointed out, no single carbon-reducing tactic is sufficient to fill the stabilization triangle. They proposed a portfolio of tactics, each of which fills a "wedge" of needed reductions over time. The authors listed 15 such wedges—greater use of solar power, reduced automobile emissions, better building insulation, increased nuclear power, and so on.[9]

The challenge to reduce health care spending is analogous. The "business as usual" curve of US health care expenditures is economically disastrous. A sustainable cost trajectory arguably lies close to overall GDP growth; that is, health care costs increasing no faster than the GDP, so that the percentage of GDP spent on health care remains constant. The stabilization triangle is the difference—$2.2 trillion in additional cumulative savings in US health care spending over 2012-2020—and numerous cost-reducing "wedges" are needed to fill it. The FIGURE, based on the model proposed by Pacala and Socolow, provides an analogous framing of US health care spending.

To illustrate one possible portfolio of programs that aims to broadly reduce

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wasteful health care spending of all types, the stabilization triangle shown in the Figure contains wedges for each of the 6 categories of waste described above—each shrunk proportionally to the fraction of its total theoretical size necessary to fill the stabilization triangle and reduce health care spending to exactly match projected GDP growth between 2012 and 2020.

Addressing the wedge designated "overtreatment," for example, would require identifying specific clinical procedures, tests, medications, and other services that do not benefit patients and using a range of levers in policy, payment, training, and management to reduce their use in appropriate cases. The National Priorities Partnership program at the National Quality Forum has produced precisely such a list in cooperation with and with the endorsement of relevant medical specialty societies.[30] The next needed step would be for stakeholders to adopt the waste-reduction goals for that wedge and combine efforts to change practice accordingly.

Realizing Savings in the Health Care System

The ACA includes provisions for cutting payments and raising revenues that will achieve about $670 billion of gross savings for the Centers for Medicare & Medicaid Services (CMS) as a payer between 2011 and 2019, according to the CMS Office of the Actuary.[31] These estimates focus on "direct" savings, which are realized whether or not physicians, hospitals, insurers, and other stakeholders in the health care system change their behavior; that is, they neither assume nor require reducing waste. The estimate of total savings theoretically achievable through waste reduction, as opposed to direct cuts, far exceeds that figure; it is more than $3 trillion for CMS in the same period and roughly $11 trillion for all payers. Eliminating on average an additional 4% of this waste each year—reaching a 37% reduction in annual theoretical waste by 2020—would achieve the goal of sustainability over this period.

The ACA does not ignore waste reduction; indeed, many of its provisions aim for it. For example, value-based purchasing can encourage hospitals and physicians to adopt best practices, decrease patient injuries, and help reduce overuse of ineffective care. Accountable care organizations and bundled payment can give more patients the benefits of seamless care. Predictive analytics of Medicare claims and more aggressive enforcement ought to reduce fraud. Expansions of bidding procedures may lead to prices that better reflect actual production costs. If successful, these programs and others like them will reduce overall health care expenditures, provide a windfall of "indirect" savings to CMS, and all the while improve patient care. By contrast, broad payment cuts and benefit cuts may harm patients and lead to a less ambitious and less equitable health care system. Reducing waste is by far the largest, most humane, and smartest opportunity for evolving an affordable health care system.

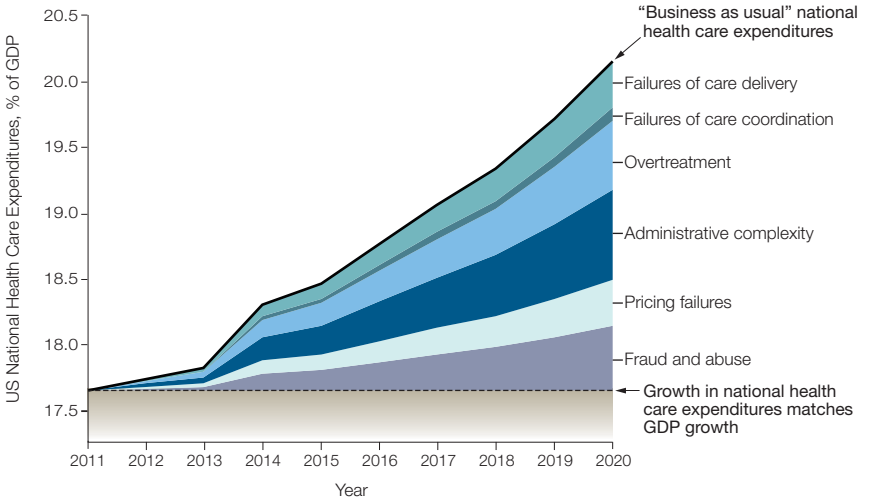
Additional Considerations

Effectively filling the health care cost stabilization triangle with enough wedges of waste reduction will require more than a list, however. It will demand a highly self-conscious and intentional leadership agenda, with bold and explicit goals, honest monitoring, and strong cooperation between public and private payers. Furthermore, its success will depend on committed leadership from health care professions, who can most accurately tell the difference between waste and what helps.

Instantaneously reducing health care waste at the theoretically accessible scale—that is, 20% or more of total health care costs—is neither practical nor, from the viewpoint of economic stability, desirable. But the opportunity is so enormous that achieving even a fraction of that amount in the short run could help health care turn the corner toward stability without harming patients.

However, extracting even a small fraction of the total waste from an in-

Figure. Proposed "Wedges" Model for US Health Care, With Theoretical Spending Reduction Targets for 6 Categories of Waste



The "wedges" model for US health care follows the approach based on the model by Pacala and Socolow.[9] The solid black "business as usual" line depicts a current projection of health care spending, which is estimated to grow faster than the gross domestic product (GDP), increasing the percentage of GDP spent on health care; the dashed line depicts a more sustainable level of health care spending growth that matches GDP growth, fixing the percentage of GDP spent on health care at 2011 levels. Between these lines lies the "stabilization triangle"—the reduction in national health care expenditures needed to close the gap. The 6 colored regions filling the triangle show one possible set of spending reduction targets; each region represents health care expenditures as a percentage of GDP that could be eliminated by reduction of spending in that waste category over time.

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dustry that represents nearly one-fifth of the US economy still poses a major threat of economic disruption. What would happen to people whose current jobs become unnecessary as a result? How could hospitals deal with their stranded capital—buildings and machines they no longer need? Major changes in culture, business strategy, and relationships would be required if hospitals were to shift from celebrating full beds to celebrating empty ones. The greatest technical challenge in removing waste from US health care will be to construct sound and respectful pathways of transition from business models addicted to doing more and more to ones that do only what really helps.

Nonetheless, if the United States is to reconstruct a health care industry that is both affordable and relentlessly focused on meeting the needs of every single patient and family, waste reduction (that is, the removal of non–value-added practices in all their forms) is the best strategy by far.

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