

**Jonathan Schechter – “Corpus Callosum” Column  
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*“Facts are stubborn things; and whatever may be our wishes, our inclinations, or the dictates of our passion, they cannot alter the state of facts and evidence.”*

John Adams

Two weeks ago, President Obama addressed the nation about health care reform. He estimated the cost to be around a trillion dollars over 10 years – \$100 billion/year – much of which would come from eliminating waste in the system.

Critics immediately pounced on that figure, describing as pure fantasy the idea that such sums could be saved simply by eliminating waste.

In a very narrow sense, these critics are right. But such criticisms betray a lack of understanding of the nature of waste, both in health care and in general.

Oversimplified, the creation of waste can be viewed along a spectrum of intent. At one end is the waste generated by well-intentioned people trying to do the right thing, but who simply make a mistake or, more commonly, are thwarted by the system in which they’re working. Let’s call this “positive waste.” In the medical world, examples of positive waste are when the wrong drug is delivered to a hospital patient, or a bill is mis-calculated because someone entered the wrong code. Pretty boring stuff, but it happens all the time and results in lots of wasted resources, including the time necessary to make things right.

At the other end is the spectrum is the waste generated by ill-intentioned people who put their own interests ahead of others by deliberately taking advantage of the system. Let’s call this “negative waste,” the sort of waste which, when taken to an extreme, produces scandals, if not crimes. Examples of negative waste are deliberately mis-billing insurance companies, or performing unneeded procedures simply to generate revenue. This is the sort of stuff newspapers and politicians sensationalize, and prosecutors crusade against; it’s what we classify as “waste, fraud, and abuse.”

In between positive and negative waste are gradations. An example of this is when doctors order redundant tests to reduce their legal liability. Another example is the push to develop electronic medical records (EMRs).

From a positive waste perspective, EMRs are being touted because we as a nation fetishize technology. In this case, we know that medicine involves a lot of data, and we know that computers are good at handling data. Therefore, the logic goes, we should enter all our medical data into computers.

From a negative waste perspective, EMRs are being touted because they represent a huge market, in which a lot of companies can make a lot of money. Not coincidentally, some of the leading EMR cheerleaders are just such companies.

There’s probably a rough balance between the positive and negative waste perspectives on EMRs, so let’s call it a wash and call the result “neutral waste.” But what does any of this have to do with waste? One simple thing: EMRs don’t work, and spending money on things that don’t work is a huge source of waste. In this case, study after study shows that, whatever their promise, EMRs decrease efficiency, increase cost, and don’t improve the quality of care. That’s if they work at all, which they often don’t. Worse still, almost invariably they end up costing a lot more than initially budgeted.

Most wasteful of all, though, is another stubborn fact: all of the benefits EMRs are supposed to

provide can be gained by simply re-working current systems, a far cheaper and more efficacious process. As a result, there are truly huge savings to be gained from EMRs, but only from not buying them in the first place. To think otherwise is to base decision-making on something other than facts.

So here we start to see how reducing waste can actually produce the trillion dollars needed to reform the health care system: There's a lot of money to be saved by reducing positive and neutral waste.

Focusing on negative waste alone won't do the trick – addressing it is too expensive (think of the cost of our regulatory and legal systems), and there simply isn't that much of it. In contrast, there's a virtually limitless amount of positive and neutral waste – this is the low-hanging fruit, and by systematically addressing that, we can save hundreds of billions a year.

How? By recognizing two simple facts.

First, like any complex system, health care can be thought of as an on-going series of interactions between a large number of variables. In such systems, things are always changing, and things are always going wrong. This creates not only a bottomless well of positive and neutral waste, but also a bottomless well of opportunity to eliminate waste.

Second, because change is incremental, so too must be our efforts to address change. In a complex, rapidly-changing environment, big fixes don't work because, by the time they're implemented, there's a good chance the core problem has morphed into something different. As a result, big-fix changes often end up creating more waste than they successfully address.

Decades ago, Toyota recognized that these realities define automobile manufacturing. In response, they created the Toyota Production System (TPS). TPS uses the scientific method to address even the smallest problems: first they clearly define the problem; next they develop and test a hypothesis; finally, if the test proves successful, they implement the solution. Employing this method, Toyota makes hundreds of thousands of small changes each year; employing this method, Toyota has been so successful at systematically reducing waste, increasing efficiency, and improving quality that they have become not just the biggest and most efficient car maker in the world, but one which, until this past year, had been profitable for over 50 consecutive years.

What does this have to do with reforming health care? Everything. Years ago, while serving as a trustee of St. John's Medical Center, I got to know Dr. John Kenagy, a surgeon who became convinced that hospitals could deliver better care at lower cost. His genius was in recognizing that the way Toyota viewed car manufacturing – as an on-going series of interactions between a large number of rapidly-changing variables – also described medicine. As a result, he's spent the past decade applying the principles of the Toyota Production System to health care. Using an approach he calls Adaptive Design®, he's produced some amazing results..

For example, one hospital used Adaptive Design to make an average of one small waste-reduction change per day. Each change systematically addressed a relatively minor example of positive waste, but those minor changes added up – after 13 months, the hospital calculated it had saved a total of \$1.7 million, or \$42,500 per bed. Multiply that out by America's 956,000 hospital beds, and it yields a savings of \$40 billion per year, 40 percent of what President Obama thinks health care reform will cost.

And it gets better. The more experienced a hospital becomes at Adaptive Design, the more effective it becomes. Another client found its two year savings to be \$125,000 per bed per year, suggesting the second year's savings were substantially higher than the first's. Extrapolate this finding across every American hospital, and it produces a nationwide savings of \$120 billion per year. Do the math, and it's clearly possible to finance health care reform's \$1 trillion price tag simply by reducing waste.

Better still, because these savings come from reducing – not eliminating, but merely reducing – positive and neutral waste in the health care system, it means the savings will only continue to mount, making it possible to afford further reforms in the future.

Best of all, along with the elimination of this waste came marked improvements in patient care. This is the Holy Grail of health care reform – better care at lower cost – and Dr. Kenagy's work shows this Grail is more than just fantasy.

So what's the catch? A simple yet profound one: We have to be willing to change, something we don't like doing and often find difficult.

For Adaptive Design to work people must not only work differently, but think differently. As a rule of thumb, this is pretty easy for front-line employees, for they quickly realize that Adaptive Design both honors their knowledge and makes their jobs easier. But for an entire hospital to transform itself requires higher-ups to subsume their egos, fiefdoms, and traditional ways of doing things to support a higher calling: giving patients better care at lower cost. Presumably this is why professionals got into health care in the first place, but this higher calling tends to get lost in our all-too-human resistance to change. As a result, many hospitals – St. John's among them – have tried Adaptive Design and failed: they liked the goal, but weren't willing to fundamentally change a system which, however broken for patients, works well enough for those in the organization.

And if it's hard to change a single hospital, it's orders of magnitude harder to change the entire health care system. That's because while everyone can agree that the American health care system doesn't work well, the "American health care system" is a pretty abstract concept. Far more tangible is the wildly synergistic combination of egos and economic interests with a stake in maintaining the status quo. And because the current system's shortcomings are externalized while its benefits are internalized, few working within the system are truly motivated to fix it. As a result, the status quo usually wins out.

So what to do?

Start with three stubborn facts.

First, the U.S. health care system is tremendously expensive, doesn't work very well, and leaves tens of millions under-served or, in many cases, not served at all. If left unchanged, this trifecta of misery will, at best, soon force tens of millions more people into the ranks of the under- or un-insured; at worst it will bankrupt the nation.

Second, there are proven methods out there – Adaptive Design is one; the Mayo Clinic model is another – which deliver higher quality care at lower cost.

Third, in all the debate, not much attention is being paid to the most essential player in health care: the patient. Insurance and pharmaceutical companies; hospitals and doctors; ideologues and zealots; all these and more have a vested interest in maintaining the status quo, and are fighting to do just that. In so doing, however, each player puts its own interests ahead of patients', each puts its own interests ahead of the very reason their jobs exist in the first place. Perverse, but that's our current health care system.

Given such mis-placed priorities, any truly successful health care reform effort will have to do two things: focus on patients, and incent providers to constantly reduce waste.

Much of the reason the health care debate is so contentious is because the patient focus has been lost. Without such a unifying pole star, every special interest falls back on protecting its own turf; with it, special interests have a much harder time putting their own interests first.

How to put the focus on patients? Make sure every health care reform proposal begins with the statement of ideal at the heart of Adaptive Design: *Every patient, every time, will get the care they need, at exactly the right time, with no waste, in an atmosphere of complete safety for all involved: patients, providers, and families.* Make supporting this statement like one of those “I won’t increase taxes” pledges candidates are asked to sign – it would be a brave politician indeed who would say “I’m agin it.”

Yet some might, citing financial reasons. Such an emphatic statement of ideal suggests both universal coverage and far more comprehensive care, and providing that could be very expensive. However, as Dr. Kenagy’s work shows, it doesn’t have to be. That’s why meaningful reform also needs to incent providers to reduce waste.

Right now, nearly all the incentives in health care reward providers for doing more, and in so doing create waste. Turn that around by properly incenting providers to simultaneously reduce waste and improve patient care, and watch the private sector respond. When it does, the American health care system will soon return to being the best in the world. But absent the right incentives – absent a national framework which incents using a fact-based method to continuously improve care and reduce waste – we’ll never come close to meeting that potential.