

## Inside the Black Box

Every time you walk into a hospital or clinic in the United States, you take your life in your hands. Whatever your condition, you will probably be cared for by people who are overworked and hobbled by wasteful systems. With 15 million incidents of medical harm<sup>1</sup> in the United States every year, such as drug errors, wrong-site surgeries and infection, there is a good chance you will be hurt in this interaction. Medical professionals like us are horrified every time we cause harm, but even the best intentions do not change facts.

Meanwhile, government policy makers argue about the healthcare crisis and focus almost exclusively on money—who pays, how much, and from what budget. From the sidelines, we have been repeatedly struck by how little the players seem to know about how healthcare is actually provided. It is as if they are talking about a black box they have never cracked open to investigate, so they can only talk about

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1. The Institute for Healthcare Improvement, <http://www.ihi.org/IHI/Programs/Campaign>

the environment surrounding the box—about changing payment systems to providers, insurance coverage for patients and reporting requirements for healthcare organizations. These prescriptions are based on one abstract theory or another with no real insight into why healthcare costs so much. With few exceptions, the debaters assume that healthcare costs are fixed, that America's proud history of medical care and innovation comes with a staggering bill.

We know different.

Governments can tweak payment systems and probably get some temporary fiscal relief. But until we focus reform efforts on where most of the money goes, which is healthcare delivery, we will remain stuck in a revolving door of near disaster and narrow escapes. To get to the point where all people have access to high-quality healthcare, affordably, we must focus our attention on how the healthcare delivery system determines costs and quality. Then we need to change that delivery model entirely.

In fact, hospitals, physicians, and nurses—all of healthcare—must change. First, we must emphasize the science of medicine over the art. This means turning to evidence-based medicine, which is already underway in some sectors. But we are also talking about evidence-based delivery, work that has barely begun.

In the hospitals and clinics of the ThedaCare medical system in Wisconsin's Fox River Valley, we have learned that every medical act is a series of steps that can be examined and improved. By investigating these steps, and the path that patients take through our hospitals and clinics, we have learned to identify value from the patient's point of view and to start getting rid of the waste that clogs the system of healthcare delivery.

In doing this work, we have made life better for our patients. In 2002, for instance, mortality rate for coronary bypass surgery at ThedaCare was nearly 4%—about 12 deaths per year.<sup>2</sup> After several improvement projects in cardiac surgery over seven years, in which we typically removed 40% of wasted time and effort with each pass, cardiac mortality was reduced to near zero.<sup>3</sup> Also, a patient's average time spent in hospital fell from 6.3 days to 4.9 and the cost of a coronary bypass declined 22%. Teamwork like this has saved us more than \$27 million and ThedaCare has passed those savings along, becoming the overall lowest-price healthcare provider in Wisconsin.<sup>4</sup>

Seven years in to the revolution at ThedaCare, a not-for-profit system of hospitals, clinics, nursing homes and other services that offers cradle-to-grave care, we have also doubled our operating margin. We have become better custodians of the public health dollar.

What we have discovered over the course of this work is that a different kind of healthcare is possible—care that is patient-focused, with less waste and cost and better medical outcomes. Using the improvement model popularized by the Toyota Production System,<sup>5</sup> we have arrived at *lean healthcare* and three organizing principles—focus on patients, value, and time—that are built upon a foundation of continuous improvement and respect for people. We have learned how to apply these principles to a large medical system with striking results.

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2. Nationally, mortality rates for cardiac bypass surgery ranged between 3.44% and 2.3% from 1993 to 2003, with the numbers generally improving, according to the U.S. Department of Health and Human Service's Agency for Healthcare Research and Quality.

3. Out of ThedaCare's 350 cardiac patients in 2009, there was one death attributable to coronary bypass surgery.

4. Wisconsin Hospital Association. View full results at [www.wipricepoint.org](http://www.wipricepoint.org)

5. The Toyota Production System has been studied and replicated all over the world by companies in every industry striving to produce better-quality products with fewer resources. In 2010, Toyota suffered multiple setbacks for failing to quickly address quality problems, a core tenet of the Toyota Production System. We do not consider this a repudiation of Toyota's principles, but instead a reminder of the consequences of failing to adhere to those principles.

By starting with the value being delivered to patients and thinking carefully about the delivery process for creating this value, we have proved that it is possible to enhance patient experiences while dramatically improving medical outcomes and lowering costs. Finally, we have distilled our experiments into an action plan that the senior management team of any healthcare organization can follow to achieve similar results.

One of us, John Toussaint, practiced internal medicine for 17 years before serving as chief medical officer and then chief executive officer of ThedaCare. He is now president of the ThedaCare Center for Healthcare Value. Co-author Roger Gerard, ThedaCare's chief learning officer, has been deeply involved in organizational development and change-management issues within this large organization for 19 years. We are stepping forward, encouraging others to expand on the work we have done, because we believe this is the path we must take to get better care to more people.

In telling our story, we sometimes have adopted an unusual voice. We have worked together in the same organization for many years but sometimes on different issues from different points of view. So in the pages ahead when we say *we*, we mean John and Roger. And when we say *John* or *Roger*, we are indicating that one of us took the lead in some activity.

Throughout this book, we are speaking directly to the people involved with delivering healthcare. We do not mean to suggest, however, that the external environment of healthcare—payment systems, insurance coverage, and regulations—does not need to be overhauled. It is a badly broken system requiring major surgery. But we are convinced that the healthcare debate needs to start from a deep understanding of how healthcare value is actually delivered.

This is an understanding we all need—policy makers and patients, as well as medical professionals. We all have a role to play in reforming healthcare. Caregivers need to rethink their priorities and remake their working environments. Lawmakers need to rewrite the rules to ensure that value is rewarded instead of waste. And patients must understand how healthcare works in order to demand truly effective change.

Only when we all have clear insight into the work going on inside the black box can useful reforms be crafted. We will return to this point in the concluding pages with a few additional thoughts about the health-care policy debates ahead. But for now let's begin where we started 10 years ago: with the patient, at the point of care.