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ThedaCare Center for Healthcare Value
100 W. Lawrence Street
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createvalue.org

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All Tish wanted was a little less winter. The cold Midwest was hard on her scoliosis and arthritis plagued her nights. Sleeping pills helped some, but what she really needed was sunshine and warm, balmy nights. So she and her husband of more than half a century, Ted, went south.

A few weeks into their stay in a Florida condo, Tish started coughing. She coughed so long and hard she was nauseous and feared pneumonia. At the immediate-care clinic, a doctor prescribed an antibacterial drug and steroids for what was probably a nanovirus¹ and told Ted to take her home to rest. But Tish could not keep the pills down and her coughing got worse. They called the doctor, but he never called back.

Three days later, Tish was in an emergency room, severely dehydrated. Then she was admitted to a medical unit where she developed a urinary tract infection, was repeatedly stuck with a needle, and was ignored when she complained about a skin tear above her elbow. In 48 hours she was discharged, still nauseous.

Things did not get better from there. Tish and Ted were back at the ER and the clinic more than once, hoping against hope. She was given antibiotics, a steroid, and potassium. Then she developed a staph infection in her elbow, which swelled up like grapefruit; this required rehospitalization. Then she watched in horror as nurses, technicians, and cleaning crews in the hospital routinely ignored the quarantine

1. Nanovirus was prevalent that year and almost certainly the cause of her symptoms, making these drugs exactly the wrong treatment.

posted on her door—failing even to wash their hands in her room. She knew enough about medicine to know it was wrong, but she was at their mercy and was raised to be polite.

When Tish was finally discharged to a nursing home, her daughter Susan was given a quick overview of her mother’s medications—now ballooned to 20 separate prescriptions—and sent on her way.

Tish was a college counselor and helped many young people find their way in life. Along with Ted, an architect, she raised three daughters and served on the boards of several museums and theaters in her Iowa town. At 80, she still had all of her faculties and had the help of her very intelligent, educated daughter. Despite these advantages, it would take her another week to unravel this dangerous bag of sometimes-conflicting medicines—one of which was not even her prescription—to get her sleeping pills administered at night instead of in the morning, to have her original symptoms treated, and to finally get home. Tish was lucky to get out of medical care alive.

When she told me this story, the question Tish asked was typical of her. Instead of being angry, she was worried about others who might be more frail. She asked, “What would happen to a patient in that situation with dementia? What if he couldn’t ask questions?”

These are questions that keep me up at night. They should keep you up, too, because this is what you need to know: this happened in your hospital, your clinic, your convalescent care facility. Also, it happened in mine.

The other thing you need to know is that Tish is my mother-in-law and Susan is my wife. I dedicate this book to these two loving and important women in my life. I am hoping you will join me in making healthcare safe for them and your family, as well.

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Delivering Better Healthcare, an Introduction

Tish is not alone. Every day hundreds or thousands of people like her come to medical providers with illness and injury only to be mistreated and overcharged. Ninety-eight percent of the time this harm is not the fault of individual caregivers but of our healthcare system in general. Our processes for treating people are so fundamentally broken that mistakes are inevitable.

The debate over whether the nation has a sustainable healthcare system is over. Decades of rising costs and poor quality proved it does not.²

The question has been how to address the problems. This is no small query. Not only do we need to mend our disjointed processes for delivering care, we in healthcare need to respond to an array of changing laws, new payment proposals, and quality measures. Those who are not adaptive are about to get run over.

2. In just one example, the United States ranked last in quality out of 11 industrialized nations in a 2014 Commonwealth Fund study. We also were last in measures of efficiency, access to care, equity, and healthy lives. Accessed January 7, 2014. <http://www.commonwealthfund.org/publications/press-releases/2014/jun/us-health-system-ranks-last>

In response, some healthcare organizations have begun to learn and apply improvement techniques. Even the proudest physicians and medical institutions have had to admit flaws and launch coordinated efforts to remove waste and thereby improve quality and reduce cost in the system. That is the good news.

So many hospitals and health systems are using lean tools that *lean healthcare* has become a movement of sorts. Sometimes it is a punch line, unfortunately, because the bad news is that these programs have a fundamental flaw that threatens to derail even the most muscular efforts. In one hospital after another, I see the quest for positive change isolated as a discrete project, divorced from the daily work of managers, separate from the “real” business of the organization. People are stopping at reform when a revolution is required. The result is a vicious cycle of energetic hope followed by failure to create sustainable change.

In the six years since I left my position as CEO of a major cradle-to-grave health system in Wisconsin in order to help others achieve the kind of breakthrough transformations we built at ThedaCare Inc., I have spent most of my time in other people’s hospitals and clinics. Every time I am invited to lecture or present findings to executive boards, I have one stipulation. Part of the visit must include a substantive visit to the units or offices where care is taking place.

After more than 145 such visits in 15 countries—and continuing at a rate of two or three new sites every month—I understand why I am seeing hope and failure in nearly equal measure. Teams of clinicians and administrators using lean thinking are making breakthroughs every week as they increase quality and reduce costs. But the essential transformation of the organization is not happening due to some basic misunderstandings about lean in healthcare.

The most common problem I see is that leaders fail to recognize the magnitude of change that will be required and that change extends to the leaders on a personal level. People set out on a lean journey thinking that improvement work will be the job of a few staff experts or consultants who will guide some projects. These projects will improve operations; people will learn how to initiate new improvements; and gradually, the theory goes, the organization will become lean. When I see this kind of attempt taking place, it always looks to me like the leaders have simply handed over the keys to the consultants or the improvement staff and expected them to return with something new, high performing, and sustainable in place of the old organization. This does not work.

Lean cannot be grafted onto an organization like the limb of a different tree. As anyone who has studied a little horticulture knows, a grafted limb will not transform the host tree into something new.

So, for the record, lean healthcare is not an improvement program. It is an operating system within a management system that requires a complete cultural transformation³. In a lean hospital, the job of every frontline caregiver is to practice medicine and to find and solve problems; every manager and executive is there to support the work of the frontline caregivers. Those are the two jobs available in a lean organization: problem solver and problem solver support staff. The CEO is support staff; his or her job is to identify and remove barriers so that problem solvers, such as inpatient hospitalist physicians and the newest x-ray technicians, can see and solve problems.

Most healthcare organizations could not look more different from the lean model. Management thinking is mostly descended from Alfred Sloan, the General Motors CEO and dominant force in twentieth-century

3. An illustration of a lean healthcare organization, where the management system provides structure for the operating system, is available in the appendix, figure 1.

business practices in the United States. Sloan's method—innovative at the time—relied on financial statistics to guide the business, emphasized clear chains of hierarchy, and focused on return on investment. Sloan philosophies created Management by Objectives. This common style of leadership creates a situation in which a CEO tells a senior leader, “Go out and start a lean initiative. Do whatever it takes. Go fast. We will judge you based on lean's success.”

And that is the beginning of a lean healthcare failure.

I know how it happens. With the best intentions, I also did this as CEO. My former employer, ThedaCare, is a complete cradle-to-grave health system with five hospitals, dozens of clinics, home healthcare, mental healthcare, hospice, and innovative new programs all the time. It is the largest employer in northeast Wisconsin. In the early 2000s, we knew that a lean transformation would be a very big job, but I was enthusiastic and eager to be started on our lean transformation.

For the first three or four months, I led the lean effort by getting regular updates on our progress and encouraging the lean experts to think big. I told our lean consultant that he had my full support, and then I went back to my real job: fighting fires, developing strategic plans, and reviewing financial reports. That was the role of the CEO as I understood it.

Then our lean expert, or *sensei*,⁴ told me to get out of my office and get involved. So, I did. I joined cross-functional teams—alongside physicians, nurses, patients, pharmacists, and complete outsiders—on rapid-improvement events. Sometimes, we were improving the flow of patient care in a Labor and Delivery unit. Or, we were mapping the route that patients took through our system and imagining a better way, with fewer hand-offs, less waiting time, and less waste.

4. A Japanese term meaning an expert who teaches and mentors.

At the front line of care, working on teams, I saw that lean would utterly transform our culture if we did this right. Here was an improvement methodology that engaged our frontline people—the same ones who knew the problems intimately. I had a heady glimpse of an organization filled with problem solvers. But I still did not yet know what I did not know, including how I might need to change.

ThedaCare produced some breakthrough results in those early years, when we were running three to five rapid-improvement events per week throughout the organization. Teams used lean tools to cut in half the number of minutes it took for a cardiac patient to receive a life-saving angioplasty. In the spirit of continuous improvement, subsequent teams cut the time nearly in half again. Teamwork reduced time-to-treatment for stroke victims. Another team nearly eliminated incidence of babies born too early due to induced labor.

Cutting waste out of processes produced real savings. At one time, we were saving an average of \$45,000 for every rapid-improvement event we did, week in and week out.

Even then, however, we were setting ourselves up for failure. Our leaders should have been learning strategy deployment, visual management, and how to support the model cell.⁵ We should have been redesigning the tasks and patterns of our work lives. Instead, we were using old leadership methods and expecting new results.

Right around year three of our lean journey, we began realizing that we were hitting walls. Quality was uneven and stubbornly unimproved in some areas. Some projects that were celebrated as breakthroughs could not be sustained. Employee satisfaction was down, and people kept

5. A model cell is an area where lean thinking and organizational resources have been intensely focused to create transformation that is mission-critical. The model cell is used as a demonstration and teaching tool for the rest of the organization, to learn about the coming changes.

falling back into old patterns. Unit managers complained of getting squeezed while trying to manage two ways at once. Meanwhile, after three years and hundreds of rapid-improvement events, many of our people still did not even know the meaning of *lean*.

Now, I know from visiting dozens of hospitals and clinics struggling with the exact same issues that these are the symptoms of management by objectives in a lean environment, which simply does not work.⁶ Lean demands real, system-wide change by every manager, starting at the top. Senior leaders cannot delegate a profound cultural shift; they cannot expect others to embrace change while they continue working in the same old command-and-control style, checking the numbers without really understanding how the numbers were or were not achieved.

These are the biggest problems I see as I visit healthcare organizations: failure of leadership to engage in the substance of change and mistaking the lean operating and management system for a quick improvement program. In many ways, these are two faces of the same problem. Fortunately, I have also seen enough organizations launch productive, energetic lean initiatives—or correct the course of a stalled effort—that I am confident there is a right way to go about this.

For many years, I have been reluctant to prescribe a single best way to launch and conduct a lean effort. I was a student alongside so many others, discovering the role of lean in healthcare. At this point, however, an awful lot of data have accumulated. Over the past decade, hundreds of healthcare organizations around the world have been experimenting with lean, and I have been privileged to get an insider's view of the arc of many of those journeys.

6. In a lean environment, we follow more closely the ideals of “management by process,” described by W. Edwards Deming in his 1982 book *Out of the Crisis*.

Now I am ready to say that there is a right way to embark on a lean journey. We—by which I mean me and leaders from dozens of health systems committed to lean transformations—have discovered a model for a lean transformation that works, and this book describes it through the people who are doing the work. It is a story of many journeys joined together and told through the best practices and fresh ideas found in hospitals and clinics across North America. The organizations in these pages have not all followed precisely the steps I will lay out in this book, but what others and I have learned from their journeys has helped inform this path.

For instance, we can travel to California's Bay Area, where the Palo Alto Medical Foundation has 27 clinics and 1,000 physicians in 38 specialties serving 780,000 patients. When I met senior leaders there in 2011, they had a name brand, great practitioners, and good patient satisfaction scores. But leaders were worried. A very well-regarded HMO was moving aggressively into their Silicon Valley territory, and leaders were pretty sure that they were not financially competitive. There was a lot of waste in the system, and those 27 sites—the result of a recent merger of three companies under a new corporation—often had 27 wildly different personalities. Leaders knew they needed unity and better processes to meet the threat.

By this time, a few organizations had discovered the power of beginning a lean transformation with a model cell. So, Palo Alto Medical Foundation's senior leaders focused their energy on a large multispecialty clinic in the industrialized suburb of Fremont.⁷ To make the project manageable, they opted to first transform half of the operation, comprising the 50-physician primary care clinic.

7. Palo Alto leadership did a good bit of planning and prework before launching into a model cell, of course. We will explore the necessary foundational work in chapter 2.

Cross-functional teams, including doctors, assistants, nurses, patients, and administrative staff, began redesigning the workflow and offices in late 2011. Specifically, they wanted to know whether they could simultaneously improve service to their patients—measured by better outcomes—cut waiting time, and create better work flow in order to take some of the pressure off of their often overworked staff.

Working with the doctors, the teams took some radical actions. They removed all individual physician offices in favor of a central seating area for medical staff where every doctor sits beside or across from a medical assistant in order to aid the flow of communication.

Every morning there is a quick huddle with the core team of physicians and assistants to talk about the day ahead, review staffing issues, and highlight problematic cases. Using this time to collectively anticipate problems has reduced the amount of firefighting the staff must do during the day.

Incoming telephone call traffic was also completely reimaged and designed, eventually enabling clinic staff to resolve 50% of new questions or requests on first contact, as opposed to the previous rate of near-zero resolution on first contact. New systems also dramatically improved patients' access to same-day appointments.

Newly designed processes helped physicians complete all note taking and close patient files while still in the exam room with the patient. Physicians agreed that their documentation was better in this new process, since they did not have to remember the details of many appointments over a busy day.

Within a few months, doctors were going home on time, their work completed. The daily accumulation of tasks in their in-baskets was cut in half. All this was accomplished without hiring new employees and while the clinic was steadily gaining new patients.

Once physicians were happy with the changes and could brag to colleagues about getting out of the office at a decent hour, spreading model-cell design to all the clinics was a lot easier. By mid-2012—less than a year after the redesign began—leaders were spreading out to the 25 other Palo Alto Medical Foundation clinics. In 18 months, the core components of the model cell were up and running in every clinic in the system.⁸

In February 2014, *Consumer Reports* rated Palo Alto Medical Foundation as the best medical group in the crowded San Francisco/Bay Area.⁹

“Lean has been a tipping point toward cultural integration for us,” says Michael Conroy, MD, chief medical officer for the organization and a leader of the transformation efforts. “We always had a culture focused on service. Now, we all know how to make improvements, too. Physicians, assistants, nurses—they know how to identify a problem and create an action plan. We are speaking a common language.”

This is the reason that building a model cell is the first order of business on the lean journey: with a life-sized, three-dimensional working model that people can gather around, touch, talk about, and work through, employees develop a common understanding of lean and continuous-improvement practices.

Now let’s say your first model cell is working great and your employees are gathered around gazing in wonder and one physician who is new to the ideas turns to another and asks, “Why are we doing this?”

At this moment, you need people who can answer that question with a core message. To do that, you need clearly stated values and principles,

8. The best practices discovered while spreading the model-cell work to every clinic in the system will be discussed in chapter 6.

9. 2014 was the first year that *Consumer Reports* rated and ranked medical groups in California.

and so the next step in a transformation is developing and teaching these core ideas and guidelines.

Values are the highest beliefs and aspirations of the leaders; these are what steer the company. They might include putting the customers first, finding joy in work, or continuous learning. Principles guide behavior, which should always lead toward satisfying the organization's values. The scientific method should be a principle common to all lean transformations, as this is what guides improvements and decisions.

If physician 2 in the example above replies, "It's for a new focus on quality; we're using the scientific method to find and correct errors in care delivery," you are one giant step closer to getting everyone on board. Clearly stating the organization's values and principles should reassure employees who fear change.¹⁰ Adhering to those values is part of the pact that needs to be formed between senior leaders and staff; it is the promise that change will be to everyone's benefit.

For instance, when Paul O'Neill took over as CEO of Alcoa, the world's largest aluminum producer, in 1987, he told a room full of anxious Wall Street investors that the top concern for his administration would be worker safety—not shareholder value or return on investment. The safety of all workers would drive Alcoa, he said.

At Alcoa sites around the world, O'Neill told employees they were part of an effort to achieve perfect worker safety through process improvement. Whether employees were processing expense sheets or raw bauxite, the goal was zero workplace injuries, he told everyone. O'Neill, who later became secretary of the U.S. Treasury, backed up his belief with a relentless focus on improving conditions and turned

10. Some employees will fear the word "lean," which got a bad reputation in some quarters due to failed efforts by companies looking for a quick fix. Some organizations opt not to use the term "lean." I will continue to do so, however, because lean thinking, which arose out of the Toyota Production System, is exactly what I am talking about.

Alcoa around, financially and culturally. To investment analysts this was amazing. Without seeming to focus on shareholder value, he achieved it to a remarkable degree.

We will dive more deeply into best practices surrounding the adoption and teaching of values and principles further on, but for now, remember that values should strike at the heart of our humanity. “Becoming lean” is not a value.

Next, build the infrastructure for your effort with a team of lean facilitators. Some organizations call this group internal consultants or a lean promotion office. Whatever they are called, these people are the human engine for your effort. Like step two—stating the values and principles—this step will naturally occur in conjunction with the model-cell planning phase.

There are many good examples of well-planned lean improvement teams, and they tend to have a few things in common. Robust teams comprise about 1% of the FTE¹¹ workforce and offer two-year rotations on the team as a clear path for advancement, and the team leader reports directly to the CEO. This is not a back office in which to park a few earnest but ineffective improvers. If it is, nobody will take the effort seriously. I know from long experience that energy and magnetism are required to move people out of their comfortable ruts.

The next step is perhaps the most challenging: redesign your management system to support the lean transformation. This is the step that most companies either ignored or never really understood during the initial decade of the lean movement in North American healthcare. Senior leaders acted as though lean was a transformation for the improvement

11. Full-time equivalent. At ThedaCare, we had 5,500 employees on the payroll, and many of those people were working part-time, adding up to 3,700 FTEs. So, the ThedaCare Improvement System office usually had about 36 team members during my tenure.

staff and the front line only. This often left managers at all levels trying to serve the needs of two systems: old-fashioned and lean.

A real transformation means bringing everyone along and making sure all efforts are aligned with the business' strategies. At ThedaCare, Kim Barnas, who was a vice president and then president of the hospitals division, led the effort to redesign the work content and schedule of every supervisor, manager, and executive, introducing standard work,¹² known goals, and clear accountability for every leader. Then, she taught other healthcare organizations to do the same, replicating the system across North America.¹³

Do you remember that great model cell? By this point, with your management system redesign in place and the model cell up and running, word has spread about the new ideas, the leap-ahead in improvement. The manager and director of that area are stars, and there is mounting pressure from other parts of the organization for a model cell of their own. Only now—after the model is running smoothly, values have been stated and spread, the central improvement team is up and running, and your management system is redesigned—should you actually spread the work of that model cell.

Let the demand for this exciting new system build. Encourage advocates to tell their colleagues and direct reports about the model cell; feed stories about progress of this work into any available communications channels. The model cell that has been designed for everyone's benefit should help sell itself.

12. Standard work is a written set of step-by-step instructions for completing a task using the best-known methods. Standard work is written and agreed upon by a team and should be changed only by a team that has found a better method.

13. Kim Barnas's book describing this work is *Beyond Heroes: A Lean Management System for Healthcare* (ThedaCare Center for Healthcare Value: 2014).

If you doubt that, think about Dr. Conroy in Palo Alto. In just 18 months, 450 physicians in his organization agreed to give up their personal offices. They were not bribed or strong-armed. Those doctors looked at a better system, saw that their colleagues were going home on time with the day's work finished, and decided they wanted those benefits as well.

This does not mean that spreading the work of the model cell throughout an organization is without challenges. I have seen organizations face many unforeseen hurdles to spreading the work over the years and, luckily, some of those leaders have come up with valuable ideas to share in the chapters ahead.

And now we cross a threshold. To this point, most of the work of a lean journey has been focused at *gemba*,¹⁴ creating frontline teams of problem solvers, embedding the scientific method into the culture and practices, and creating new ways to work. It will quickly become apparent, however, that your shiny new model cells are living in hostile management environments, where long-established policies and habits suited to management by objectives seek to destroy or undermine your good work. So, the threshold we cross in this book's section II is into the boardrooms and executive suites where system-wide changes need to be addressed in support services, especially in human resources, finance, and information technology.

After personally witnessing a few epic battles between lean change agents and the good people of human resources, I recommend that you forge an early partnership with HR. You will need their help with new training regimes, succession planning, hiring criteria, and all kinds of organizational development activities. I will go into depth on the changes that

14. A Japanese word often used by Toyota Production System practitioners, "gemba" means the place where real value is created. In a hospital, gemba is located wherever caregivers are directly helping patients.

need to be made in the chapter on HR in the new world, but for now, let me just say: prepare for a closer working relationship. Remember that every change made in clinical or administrative processes will reverberate through the organization, sometimes in surprising ways.

For Rachelle Schultz, CEO of Winona Health Services, the surprise was how the annual budget started sticking out like a sore thumb. Her organization began its lean initiative in 2008, and by the third year, teams had made great improvements by producing and using real-time data to learn the truth about work flows and processes and to find improvement opportunities.

The entire organization was getting accustomed to seeing now (the current condition) instead of then (the past, sometimes the distant past). For a few weeks every year, however, they would set aside their current information systems in order to produce a budget—the future seen through the lens of the past—that was wrong from the moment it was published.

“Since we could never accurately predict everything, we were spending more time explaining the budget variances than we were calibrating the business and figuring out how to get to where we wanted to go,” Rachelle says.

“Meanwhile, we were forecasting the near-term future from up-to-date data, and that proved to be far more accurate and agile. Having a budget too was like keeping electronic medical records and a paper patient file, as well. It didn’t make sense to do both.”

Rachelle worked with her board of trustees, executives, and department managers on needs and expectations. She and her team investigated what forecasting software could and could not do. Within a little more than a year, they had retired the annual distraction of creating a budget. At the same time, they are able to produce forecasts based on current

conditions for six or eight quarters into the future, thus helping leaders make decisions now.

This is one of the hallmarks of a lean transformation: support services—HR, finance, IT—shift focus from producing their own inward-looking reports to actively supporting the organization’s improvement efforts. Instead of producing budgets, Rachelle’s finance team started providing unit managers with personalized accounting services to help them understand business reporting.

At Salem Health in Oregon’s Willamette Valley, a lean transformation meant that information technology experts could begin focusing on projects that directly benefit patients, such as reducing hospital-acquired infections.

Salem Health is a not-for-profit system of hospitals, clinics, and outpatient services. It is the largest private employer in Oregon’s capital city and has the busiest emergency department in the state. Like a few other healthcare organizations, it had put considerable energy into integrating operations data with analytics¹⁵ to create something we refer to as clinical business intelligence.¹⁶ In 2013, while studying operations data, the clinical business intelligence team saw a real opportunity to improve patient care. The rate of hospital-acquired *Clostridium difficile* infections, commonly referred to as *C. diff*, was stubbornly high. Using previously collected and new data, a team of physicians, administrators, and lean experts targeted a medical unit and a surgical unit that, together, had been responsible for 99 *C. diff* cases in 2012.

15. Analytics is the search for, and study of, meaningful patterns in data.

16. “Hospitals Are Finally Starting to Put Real-Time Data to Use,” *Harvard Business Review*. Last accessed January 8, 2015. <https://hbr.org/2014/11/hospitals-are-finally-starting-to-put-real-time-data-to-use>

The new annual goal, the team decided, was zero. Using the problem-solving cycle plan-do-study-act (PDSA) and analytics, the team developed a four-pronged approach to tracking, treatment, and prevention. In the two months after the team's plans were fully implemented, the two units reported a total of one *C. diff* case. Next, the team moved on to using clinical business intelligence to identify the infection cases that originated in the community versus the hospital in order to track the problem to its sources and attack it there.

This is why everyone in a healthcare organization goes to work everyday: to save lives, to restore health, to avoid harm. Work in support departments—to create budgets, collate data about the past, and process internal forms—is not anyone's end goal or life's work. People in support services want to be more involved in the work of healing people and improving systems. And frontline caregivers need their help.

Over the past decade in hundreds of healthcare organizations, this is the path we have discovered for transformation: lay the foundation, build a model cell, establish the values and principles that will guide the work, create a central improvement office, redesign the frontline management system, and spread the work throughout the system. Then realign the organization's policies and practices, especially in human resources, finance, and information technology, to support this work. There will be barriers and curveballs, such as new payment schemes and a medical education system that keeps churning out heroes instead of team players, but we will work through those, too.

This path goes beyond the action plan that I laid out in my 2010 book, *On the Mend*,¹⁷ to focus more clearly on management and the entire organization. I have learned much in the past five years. I have been privileged to meet with hundreds of healthcare leaders anxious to change

17. John Toussaint, MD, and Roger A. Gerard, PhD, *On the Mend: Revolutionizing Healthcare to Save Lives and Transform the Industry* (Lean Enterprise Institute: 2010)

and then follow their journeys through the successes and setbacks. I have expanded my focus and emphasized the managerial and organizational elements of successful transformation journeys because I have learned how fragmented healthcare organizations are. The individual units sub-specialties and clinics are usually like marbles in a box; they bang into one another without ever working together for the good of the patient. This is true everywhere. As new methods and technologies have emerged, hospitals have simply added them in on the fly without reconsidering upstream and downstream processes. The resulting disorganization does not best serve the patients.

Individual hospitals and organizations across the country have certainly made great strides in helping many people some of the time. But the achievements are isolated to certain areas or therapies. Leaders rarely consider changing the interconnected *system*. Just as a patient's health is not limited to a heart or kidney alone, it is true that healthcare improvement is not just about new cancer therapies or central-line infection reduction projects. Lean healthcare is about creating a biologic organism in balance. Let's get started.