

Engaging Doctors

By the time lean healthcare arrived at Dr. Joyce Bauer's door in the Kimberly Clinic, it had a mixed reputation. Already, one member of the clinic's tight-knit staff had been moved to a different facility when her job operating the switchboard was deemed unnecessary. It was like losing a family member.

Lean facilitators promised a better experience for patients at Kimberly, and all four doctors were in favor of that. But lean facilitators were trying to implement what they called the "Perfect Patient Experience" with stopwatches and odd ideas. They talked about batches and flow. That might be fine for laboratory work or some clerical work, but Dr. Bauer did not like the idea of it coming between her and her patients.

On the Monday morning of the rapid improvement week that focused on Dr. Bauer's patient flow, the team hung a digital clock and a graph on her door and showed her where to mark down the time she entered the room to see a patient and where to note the time she left.

"I told them I wasn't touching it. My assistant could write it down if she wanted, but I thought it was a waste of my time. I didn't go to medical school to do that," Dr. Bauer said.

The time spent in each appointment would be pivotal, however, to standardizing the process. During pre-event data collection, the improvement team found wide variation in Dr. Bauer's appointment times, compared to her colleagues. One doctor at the Kimberly Clinic gave every patient between eight and 12 minutes, consistently. Dr. Bauer's appointments ranged from eight minutes to 35. But she was happy with her style of practice. She might spend more time in one appointment with a chronic disease patient learning about the source of some emotional troubles, she said, and keep the next exam brief, if possible. Dr. Bauer would often run late, but her patients seemed to understand, even appreciate her willingness to spend extra time with others.

Her days were long but Dr. Bauer, who grew up on a dairy farm an hour's drive from Appleton, developed a system that had worked for her for years. She saw patients all day, one after another; dealt with questions and phone calls at the end of the office day; and then at home, after her two boys were in bed, she finished her notes and closed out the day's medical charts.

On that Monday evening, after being studied by the RIE team all day, Dr. Bauer sat down at home and started a list. She wrote down everything she hated about being measured and judged, and about the recommended changes in her workday for this proposed Perfect Patient Experience. Then she listed a few good points that could come of it. Both she and the clinic staff might be more efficient. She would probably apologize less for lateness. She definitely approved of keeping track of quality measurements and looking for ways to improve. Data would help her—all of them—see what needed changing. Lean seemed to offer better, if not *perfect*, patient outcomes. The “good” list was outweighing the “bad.”

“I did a little self-analysis,” Dr. Bauer said. “I decided to try and think of Craig Clifford (Kimberly office manager) as a coach instead of a judge. He said that the goal was not to change the doctor, but to change the process of delivering the care. I decided to trust that.”

Over the next three days, Dr. Bauer found she could abbreviate appointments by having a medical assistant better prepare each patient and ask more questions—especially about what medications were being taken at what dosage and with what regularity, about which Dr. Bauer is exacting. She learned to ask an assistant for help getting additional information for patients during the appointment, instead of getting it herself later.

In this way, Dr. Bauer was learning to disconnect the primary work—diagnosis—from incidental work such as hunting down files or information. Once the tasks are seen individually and ranked in importance, it is far easier for a physician to choose which work to do and which pieces of business to relegate to staff. In manufacturing, this might also be called “load leveling,” or spreading tasks out more equitably, so that one person is not overly taxed, bogged down and holding up the entire working group.

Dr. Bauer also learned that “one-piece flow” simply meant doing all the work surrounding a patient’s visit in real-time whenever possible, instead of saving her charts to finish up at the end of the day.²⁵ That meant if an appointment took eight minutes, she had the rest of that allotted time to make follow-up phone calls or finish documenting her notes into the chart.

After the medical assistants were trained to predict questions and treatments using standard templates, Dr. Bauer’s appointments were reliably shorter and followed a set pattern: 10 minutes for acute visits (colds,

25. Dr. Bauer reports that she still takes home about half her charts, but has less work to do on each chart. “We’re constantly tweaking the process and changing how we work with the team,” she said.

sprains, etc.), 25 minutes for chronic illness like diabetes, and anywhere from 15 to 27 minutes for physicals. Knowing this, the Kimberly staff now sets appointment times more accurately.

By involving the staff more and documenting chart notes during the patient appointment when possible, Dr. Bauer started to understand what Craig Clifford meant by one-piece flow. Batch work was not better or easier, it was just a long-ingrained habit.

Friday came and Dr. Bauer's improvement team joined five other teams, plus an audience of more than 100, in the junior college auditorium where Friday RIE reports are presented for all of ThedaCare. When it was her team's turn, Dr. Bauer took the stage and looked out into the rows of faces. In the style of a penitent at an Alcoholic Anonymous meeting, she said, "My name is Joyce Bauer, a doctor at Kimberly Clinic, and I am a batcher."

The room erupted in laughter and applause. When Dr. Bauer completed her report, a man stood up in the audience and said, "My name is Dr. Mark Hallett and I am a batcher, too."

The Roots of Autocracy

To understand the chasm that lies between most doctors' expectations about medical practice and the type of practice needed for lean health-care, it is helpful to have some sympathy for how doctors are trained. Medical education is still based on an apprenticeship system that goes back to ancient Greece. Young doctors are trained by specialists, who pass along great knowledge in concert with their idiosyncrasies.

Loyalty to one's teacher is highly prized. In fact, the Hippocratic oath does not begin, "First, do no harm," as popularly believed. Those words are not in the oath at all. The first promise is, "To hold him who has taught me this art as equal to my parents and to live my life

in partnership with him, and if he is in need of money to give him a share of mine, and to regard his offspring as equal to my brothers in male lineage and to teach them this art—if they desire to learn it—without fee and covenant; to give a share of precepts and oral instruction and all the other learning to my sons and to the sons of him who has instructed me and to pupils who have signed the covenant and have taken the oath according to medical law, but to no one else.”²⁶ Most medical schools have given up the practice of having doctors recite these promises, or use an updated version of the Hippocratic oath, but some sense of this fealty remains and physicians still tend to be more loyal to their specialty and mentors than to their co-workers and hospital.

The men and women who do well in medical school are also perfectionists, great believers in delayed gratification, and are often lacking some essential people skills, says Dr. Hallett, a sports medicine specialist, confessed batcher, and ThedaCare Physician’s senior medical director. Long hours and overwork in medical school and residency programs encourage quick, decisive judgments and little collaboration. Psychologists call this a kind of asynchronous development: exercising the logical brain without developing emotional or social intelligence.

“Medical school, residency programs, all of that is like living inside a tube,” Hallett says. “We spend our twenties in libraries and hospitals while other people are experimenting with who they are and having fun. Meanwhile, we’re breaking all sorts of cultural taboos, like dissecting dead bodies and examining the genitals of strangers.

“Life inside the tube is filled with experiences that are rich and rare—like giving a cardiac massage to a man while another doctor sews up the bullet hole in his heart. In the tube, we don’t make any money and most of us rack up a lot of debt, but we’re all told that when we get

26. Edelstein, Ludwig; Owsei Temkin, C. Lilian Temkin (1987). Owsei Temkin, C. Lilian Temkin. ed. *Ancient Medicine*. Johns Hopkins University Press. p. 6.

out of the tube it will be worth it. So we delay gratification, take pride in our perfectionism, and are encouraged to cover up mistakes for fear of malpractice lawsuits.”

Not every doctor would describe medical education as *being in the tube*, but most will describe the same sense of isolation from nonmedical people and pursuits, delayed gratification, and debt. According to the Association of Medical Colleges, 87% of medical school graduates have outstanding loans; 79% of those graduates owe more than \$100,000. A lucrative career is a doctor’s only avenue to climbing out of that hole.

Admitting Error

In a lean environment, doctors and nurses must allow mistakes to be visible in order to perform root-cause analysis and fix the process. But showing mistakes hits most medical providers in a vulnerable place—right in the collective fear of lawsuits and a highly conditioned need to be heroic.

Doctors are deeply reluctant to point out the mistakes of others, much less officially reprimand one another—knowing that they all hide mistakes, and being sympathetic to the pressures faced by colleagues. To issue an official reprimand is to risk destroying the career of a doctor. So errors are not discussed, except in the rumor mill. (We will discuss ways to eradicate the most common form of reprimand, shame and blame, in the next chapter.)

Moving doctors from their hard-earned autocracy into becoming team players, where they share responsibility and—to some degree—decision-making is no simple matter. As ThedaCare’s lean initiative spread across hospitals and clinics, leaders of the movement made mistakes and learned a few lessons worth sharing that can be summed up in three words: data, urgency, and trust.

Data Drives the Scientist

Deep within every doctor, a scientist lurks. Trained in data collection and usage, taught to rely on the scientific method, doctors are most comfortable with arguments that include numbers. Unfortunately, the fear of malpractice and damaged reputations has made medical professionals profoundly reluctant to publicly release scores on critical quality markers. That fear must be conquered.

A lean healthcare initiative always begins with data collection and dissemination. What data is collected, and how it is presented, will change over time as an organization's needs and focus changes, but getting and broadcasting the facts is always necessary because data can cause people to change behavior.

For instance, shortly after that early improvement week in Labor & Delivery—when a young mother helped redesign the birthing process—a group was taking a closer look at the neonatal value stream and noticed that a surprising percentage of babies were delivered earlier than the normal gestation time of 39 or 40 weeks. Preterm birth is defined as occurring at or before 37 weeks and 12.7% of U.S. babies are born preterm, exposing them to medical complications and developmental delays. However, a number of recent studies have shown that babies born even a bit too early—at 37 or 38 weeks—have a greater chance of chronic respiratory disease and learning disorders than children born at 39 weeks or later.²⁷ At ThedaCare, 35% of babies were born during this “early term” period.

An improvement team dug deeper into the data, made additional inquiries and found that many of these babies were delivered early on purpose—by inducing labor at a prearranged date agreed on by mother and doctor. It may have been convenient for physicians and

27. “Many Women Miscalculate Time to Full-Term Birth,” from the website Medline Plus, a service of the U.S. National Library of Medicine and the U.S. Institutes of Health, Nov. 9, 2009, http://www.nlm.nih.gov/medlineplus/news/fullstory_92133.html

families, but it put those babies at higher risk of complications at birth and often resulted in weeks spent in the neonatal ICU. (ThedaCare tracks babies' time spent in the neonatal ICU as one measure of the relative health of premature babies.) The team worked with staff and doctors to create new protocols, including setting a 39-week lower limit for inducing labor.²⁸

Adherence to the new protocols was spotty at first. Then, physician performance data was posted on walls in the Obstetrics departments, with every physician's name over his or her track record, meaning no labor was induced prior to 39 weeks gestation for scheduling convenience. There was 100% compliance on the new protocols within a month. As a result, premature babies requiring intensive care now spend an average of 16 days in the ICU instead of the previous 30.

Doctors are competitive by nature. It is a necessary attribute to getting through medical school and then earning desirable residencies and fellowships. Making data public—if the data is honest and relevant—taps into every doctor's competitive nature. Presenting unblinded physician performance like management did in Labor & Delivery caused some grumbling, but it also ignited a drive to be the best.

Data Can (and Should) Drive the Patient

For the public, straightforward comparative data is difficult to acquire. Even simple statistics such as the rate at which patients are infected during a hospital stay can be difficult to find. Disclosure laws vary state by state and even when hospitals are required to report infection rates to an independent oversight organization, the information does not necessarily get reproduced in a public-friendly way. Data can confound as easily as it can inform, after all.

28. Cherouny P.H., Federico F.A., Haraden C., Leavitt Gulio S., Resar R., "Idealized Design of Perinatal Care," IHI Innovation Series White Paper, Cambridge, MA, Institute for Healthcare Improvement (2005). Available at www.IHI.org.

Data accessibility needs to change—and become standardized—to give healthcare providers impetus to improve. Currently, hospitals with poor quality records can be financial winners, as long as their performance remains unknown. If people are informed as to the quality and safety records of all hospitals, however, the hospital that focuses on improvement should have the advantage.

In Wisconsin, a diverse group of hospitals, physician groups, and health plans now provide data voluntarily to the Wisconsin Collaborative for Healthcare Quality. The Collaborative includes the largest healthcare systems in the state and makes all information it collects available on an easily searchable website, with quality data available by provider and condition type (www.wchq.org).

A woman with a heart condition who is shopping for a healthcare provider could look at all participating systems in her area for both cost and quality of care, based on standard quality markers. If looking at data from 2007, for instance, she would find that Theda Clark and Appleton medical centers had the best quality/price ratios in the state for congestive heart failure care, but that the higher-cost Gundersen Lutheran Medical Center in Lacrosse had slightly better quality scores (98.5 to Theda Clark's 97.6).²⁹

Comparatively Number 1

One important note, as Dr. Hallett points out, is that comparative data is good for the consumer, but not always good for making the lean healthcare argument to physicians. Consider diabetes care. There are three main goals in treating diabetes: controlling blood sugar, blood pressure, and cholesterol. Any member of ThedaCare Physicians³⁰ could call up the Wisconsin Collaborative's comparative chart for

29. http://www.wchq.org/reporting/quadrants.php?category_id=0&topic_id=17&providerType=0®ion=0&measure_id=22&disclaimer=1

30. The organization of family, internal and pediatric physicians that are employed by ThedaCare.

diabetes care and see that his group was best in the state on keeping patients' sugar, blood pressure, and cholesterol in control. If ThedaCare Physicians is ranked first, why change?

What the chart does not show is that only 25% of ThedaCare's diabetes patients have all three measures in control. Indeed, 75% of patients have one or more measures over the limit, leaving them at increased risk of blindness, limb loss, and death. Knowing this might leave potential patients with a different idea of the quality that those top-ranked physicians are offering.

Therefore, lean healthcare advocates like Dr. Hallett prefer to judge physician performance against perfection (an absolute), instead of against one another (which is to say, relatively). To do this, he and others use defects per million opportunities—like Six Sigma measures in manufacturing. This way, the patient shopping for a doctor could see, for instance, what percentage of diabetes patients were in a safe range on all measures. At last, potential patients could have objective information.

Urgency

If a man is disinclined to swim in a lake, one quick way to make the activity desirable is to set fire to the platform on which he stands. Swimming then becomes not just desirable, but necessary. To get anyone to leave a comfort zone and strike out in new directions, a burning platform is required.

In healthcare, the burning platform can often be defined as provider frustration. Doctors are almost universally aggrieved these days by growing paperwork, longer hours for less money, and patient anger. ThedaCare has had some success identifying that frustration, getting doctors to air their grievances, and then channeling it into improvement activity.

Also: “Never let a good crisis go to waste,” to quote Rahm Emanuel, White House chief of staff. The H1N1 swine flu virus was a good opportunity for ThedaCare to create an organization-wide disaster plan. Staff used PDSA cycles to help organize a massive project into manageable pieces, which helped further embed PDSA into the working habits of staff.

Or, for an extreme example of a burning platform for change, let’s go to Orthopedics Plus. In 2006, while many doctors were struggling with lean healthcare, the eight independent orthopedic surgeons who comprised the orthopedics practice at Appleton Medical Center packed up their bags and their patients—representing a major chunk of revenue for this hospital—and formed a competing orthopedics surgery across town. It was both a major setback, and a great opportunity.

Using lean tools such as 2P (Process Preparation)³¹, a team started from scratch to design a better model for musculoskeletal care. The team wanted a more integrated approach, based on the type of care journey a patient actually takes through orthopedics. So instead of employing eight very expensive and independent surgeons, Orthopedics Plus now employs three surgeons and four primary care/sports medicine doctors who collaborate on the different stages of patient care. Four doctors specializing in rehabilitation—where a patient might spend the bulk of his time on the path to getting better—were moved to Appleton Medical Center from another location so that musculoskeletal care could be concentrated and expertise could be cross-pollinated. The new, more integrated unit was christened Orthopedics Plus and opened for business in 2006, around the same time that the competing private orthopedic surgery opened across town.

31. 2P (Process Preparation) is an event in which a cross-functional team investigates a work area, and then reorganizes the physical layout and work sequence to remove waste and create better flow. A 2P is often used when designing a new layout that requires construction.

Dr. Hallett and other designers of the unit—including Jenny Redman-Schell, now vice president of Physician Services and Orthopedics Plus—spent weeks visiting primary care doctors all over town, making a case for the integrated care model. Those referring doctors would be key, they knew, to retaining at least some fraction of orthopedic surgery. But they were up against eight very well-known surgeons.

While the first two years were occasionally rocky, Orthopedics Plus patient satisfaction surveys quickly showed stellar results. Scores were in the 76th percentile nationwide in 2006 and 2007.³² Appleton's primary care doctors have continued to show a preference for Orthopedics Plus, referring about 80% of all orthopedic patients there.

In the first two years of the new model, Appleton Medical Center was able to retain about 60% of its revenue from orthopedic surgery. The unit's income has now stabilized to the level it was at before the surgeons walked out—although it is expected to exceed the old model—and teams are continuing to ask how this integrated practice can better serve patients.

Trust

Here are a few important, remarkably simple rules for converting physicians into lean healthcare advocates: never lie; be willing to admit management mistakes; ask for opinions and take their advice seriously; be forthright about intentions. Perhaps most important: be clear about the process of care delivery and how it needs to work.

In 2006, around the same time that Appleton's orthopedic surgeons left, morale problems were becoming evident with the majority of physicians. ThedaCare hired a consultant who interviewed physicians over a few months and revealed to management some hard truths.

32. The survey was altered after 2007 and comparisons are not available.

First, leaders in the lean transformation had not adequately explained lean healthcare or widely sought physician help with initiatives because it was thought doctors would reject lean as being a “manufacturing thing.” Leaders had not made the case for needing change and, without good data for comparison, most doctors thought they were doing fine on quality. Change seemed like a discretionary activity.

Second, focus on the patient had led leadership away from thinking about the healthcare provider as the center of the universe. That was fine in one way, but it meant that leaders had missed an opportunity to apply lean tools to fix the concerns of providers, such as on-time starts for surgery, ease of access to medical records, and accuracy in lab results.

In physician interviews, the consultant did find a deep current of loyalty to John, who was seen as committed to improving quality and burnishing the image of ThedaCare. But doctors were still suspicious of the methods being employed.

In a series of meetings with medical staff following the interviews, 12 physicians committed time to form a special joint committee of the medical staff and the ThedaCare Board of Trustees to identify the most important elements the doctors wanted fixed, and then set out a plan to make it happen. ThedaCare’s CEO, hospital president, chief medical officer, and senior executives of marketing and IT were all involved, sending the message that leaders were serious about changing the environment for physicians.

One critical piece of intelligence that came out of the joint committee was that physicians, no matter how committed to quality healthcare and positive change, kept falling back to the same argument against lean: “healthcare cannot be standardized.” Doctors feared that lean would institute “cookbook medicine” and force their medical practices into someone else’s mold. To counter this, leaders developed the concept of *the middle flow*.

In every healthcare journey, there are three distinct movements: upstream, middle flow, and downstream. Upstream is everything that happens before a doctor sees the patient, from setting appointments to getting vital statistics, laboratory tests, and asking why the patient wishes to see the doctor. These activities directly affect physician effectiveness and can be improved greatly by lean teams. The downstream flow includes getting additional information to the patient, running follow-up tests, dispensing prescriptions, and setting new appointments. Again, all of these activities affect both doctor and patient, and can be improved to increase accuracy, patient satisfaction, and remove waste.

The middle flow, where doctors examine the patient and have a dialogue about care, cannot be standardized. It is not the goal of lean healthcare to make physicians all behave in the exact same way; doctors are not robots.

With the help of an improvement team, Dr. Bauer found some useful tactics to help her middle flow become more effective and predictable, which ultimately helped lighten her workload. But nobody told her what to do and mostly, improvements in the Kimberly Clinic happened to the upstream and downstream flow. Those improvements include the on-site laboratory, enabling physicians to get test results during the patient's appointment. Assistants and nurses, now trained in the protocols of care for chronic disease, are more like team members than order-takers.

It is critical to explain to everyone this concept of the middle flow, before rumors and anxiety have doctors convinced that lean healthcare's goal is to interrupt the relationship between doctor and patient.

"I would never go back to the old way of doing things," Dr. Bauer said, after working one day at a different clinic that had not yet implemented the New Delivery Model (renamed from Perfect Patient

Experience to acknowledge the improvement for doctors and staff, as well). “Working as a team and using standard work is much more effective. Most important, the quality of care is better and the value to the patient is greater.”

Bringing Everyone Along

After a critical mass of doctors had moved toward the lean side of the fence, isn't it logical to hope that others would follow? At our most optimistic, leadership hoped that an enthusiasm for lean would sweep through the organization as people saw changes occur that were in the best interests of patients and themselves. However, changing the behaviors of a large, multisite organization requires more than just buy-in from leaders and physicians. As we show in the next chapter, a lean conversion also requires understanding the current culture and creating effective countermeasures.