

Lean Healthcare and Quality Management: The Experience of ThedaCare

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ThedaCare, an integrated healthcare delivery system in Wisconsin, introduced lean, or the Toyota Production System, to its five hospitals and 27 physician clinics in 2003. Lean implementation at ThedaCare has changed the role of quality management from a system that was reactive to crises and quality issues to one that proactively pursues methods, processes, and strategies to improve quality for the patient and prevent future crises. The changes in quality management at ThedaCare are a product of a culture change, visual management, and the inclusion of front-line workers in daily continuous improvement.

Key words: healthcare, lean, transparency, visual management

INTRODUCTION

Healthcare must change from a “craft” method of providing service, where the physician provides a unique service based on his or her view of the patient’s presentation. A new approach to care that is based on scientific evidence of efficacy is needed. Consumer demand for improved outcomes, and pressure on providers and payers to reduce costs, have led healthcare organizations to adopt the methodology and culture of lean. Lean, developed by the Toyota Motor Company, is a set of principles and a quality improvement ideology (Toussaint and Berry 2013).

Lean methodology has been applied in manufacturing for many years, and recently lean has been shown to be effective in healthcare (Toussaint and Berry). Lean applies the rigor of the scientific method to solve problems, and requires a different approach where management’s role is to facilitate, mentor, and coach frontline workers to identify and solve problems every day. In healthcare, the challenge to lean adoption is that the quality manager’s role within the hospital must change from one of identifying and tracking adverse events, to one of reducing the risk of adverse events and assisting nurses and doctors with the redesign of processes to improve quality.

The lean transformation began in 2003 at ThedaCare, an integrated healthcare delivery system in Wisconsin with five hospitals and 27 physician clinics, but the goal was never to just improve a single metric like quality. Successful lean implementation improves every aspect of the patient experience while delivering improved quality, lower cost, and improved staff morale.

HOW THEDACARE HAS CHANGED

ThedaCare used to benchmark its performance to that of other organizations to measure its success. Dr. Mark Hallett, senior medical director at ThedaCare, considered benchmarking to be dangerous because it only compared ThedaCare's outcomes to the best performing organization. So, if the best performing hospital had patients receiving inadequate or even harmful care, ThedaCare might not learn about its need to improve. Instead, ThedaCare defined the outcomes they wanted to achieve, such as defects per 1 million opportunities. "Now, we are looking at the results we want to achieve as specified by our True North, and to achieve those results we look at the processes we need to work on to achieve those True North goals," says Hallett. True North contains ThedaCare's key performance indicators. These measures are things that really matter to patients such as preventable mortality, as well as how often a patient is readmitted to the hospital. The measures are the basis for all improvement work systemwide. Approaching performance in this systematic way allows improvement work to be focused on specific goals across ThedaCare.

Each unit has a board that has a designated area for new improvement ideas and improvements that are being implemented. The board is a visual tool for the unit manager, the quality manager, and the unit staff to use *daily* in brief unit meetings called huddles. When a new idea is placed on the board, the entire team will discuss three things at huddle about the improvement idea to ensure the work is aligned with the overarching goals and that resources are best used to serve the mission of the hospital. Those three questions are: How does this improvement benefit the patient? How does this improvement align with the True North? How difficult will it be to implement the improvement?

Despite the tools and culture in place at ThedaCare, it is still a daily challenge for quality leaders to maintain clarity and focus in improvement work. Many issues and improvement ideas can be reported, but it is quality management's role to keep the focus on the most important opportunities that align with True North.

Quality managers go to the "gemba," or to where the work is done, to observe work at the source where they can examine the unit-specific metrics and metric performance. From there, quality managers can decide if more training is needed, if the processes surrounding the metrics need adjustment, if the metrics could be tracked or measured more effectively, and so on. Decisions are not based on what managers or unit members think is happening; decisions are based on data.

TRANSPARENCY AND VISUAL MANAGEMENT OF THEDACARE

Lean culture requires transparency and openness. Employees, at all levels, must feel safe bringing forward quality concerns. This openness allows for more issues to be addressed because employees can openly identify and resolve quality concerns. The first step to creating a lean culture is to remove the blame from the individual and focus on the process. Once the process is the focus, employees will begin to feel safe to present concerns and improvement ideas without fear. Employees, however, must be given a safe forum and a designated place to submit and discuss improvement ideas. Lean culture is not built in a day, and it requires the support and engagement of senior leadership as well as tools such as the improvement boards used in huddles. Without complete support of senior leaders and daily improvement work at huddles, it is far too easy for managers, leaders, and staff to slip back into old habits.

Displaying metrics in departments and units was a significant change. Each unit has unique goals that relate back to ThedaCare's True North. Quality becomes transparent when goals and performance are visible. Unit metrics and performance are no longer hidden in a computer or manager's office. The goals and performance of a unit can be accessed and understood quickly by quality managers, unit managers, and unit employees.

The success of gemba is partially dependent on visual management. Quality managers go to gemba and they can quickly ascertain what metrics and goals each department is working toward and how they are

performing. According to Dan Collins, director of quality at ThedaCare, *gemba* is crucial to managing and maintaining improvements. *Gemba* allows quality managers to continue to observe performance on existing and past metrics, and identify new opportunities for improvement. The quality manager's role in *gemba* is to ask questions of the managers and staff, observe the processes of the unit, and observe audits; quality managers act more as facilitators rather than the lead problem solver at *gemba*. There are also quality coordinators who will observe and bring forward potential issues to units that need to be addressed.

Another visual indicator that has been adopted systemwide is the persona of "Lori." Although Lori is just a persona, she takes quality issues out of the abstract and allows all employees to visualize the impact on quality for the patient. Lori is the central focus of the True North at ThedaCare; her photo is in the center of the True North graphic, which is displayed at every huddle board. As Collins said, "She is your mother, sister, aunt, wife, or neighbor, and she puts a face to all of the work that we do. Instead of talking about an incident by saying, 'every 1 in 1,000 cases,' we can say, 'this impacts Lori in this way.'"

Lori was developed in 2010—seven years after the lean transformation began. The marketing department at ThedaCare held focus groups comprising customers and noncustomers to develop a patient profile, and based on their research, Lori was created. Lori serves as a subtle but important reminder that all of the improvement work is done to improve the quality and value of care for the patient.

QUALITY AT THE SOURCE

In the past quality was "inspected in," says ThedaCare's former CEO and internist John Toussaint. "We employed a number of people in our quality department that did nothing but check what nurses did every day." Questions on the "check form" included: "Did the patient receive aspirin during heart attack care in the emergency room?" Or, "Did the doctor order an echocardiogram (ultrasound of the heart)?" This work was retrospective analysis and provided no method to understand why tasks were or were not performed.

In 2006, ThedaCare's retrospective approach was discarded, and the pilot started for inpatient care redesign—named "collaborative care." Using lean principles, standardized work was created for every step in the process of patient care for pneumonia, serious infections, heart problems, and other issues. Standardized work is the best-known way to care for patients. Care is based on scientific evidence as well as the consensus of caregivers where evidence does not exist. Patient care is updated at least every three months based on periodic review by physicians and nurses and new knowledge from experiments.

Quality components are built into standardized work. For example, it is known when a patient with pneumonia is admitted to the hospital a blood oxygen level of 90 percent is critical to a good outcome. Therefore, the standardized work of pneumonia care at ThedaCare is to make sure that upon admission the optimal level is achieved before moving the patient to the next "tollgate" of care.

The tollgate process ensures that every important quality component of the patient's experience and care is achieved. If all components are not achieved, the RN will ask why the targets were not met, and then the answer will be built into the process to improve quality. According to Toussaint, "Inspectors are not necessary if every frontline staff member is in charge of quality." ThedaCare quality managers have become the facilitators of creating the best-known way. They do not inspect anymore—they work with frontline staff to understand problems, ask why, and support improvement.

THE MANAGEMENT SYSTEM

At ThedaCare, a lean management system known as the business performance system (BPS) has been developed to provide support to quality managers, and to assist in sustaining improvements. "Management systems allow you to focus all of your efforts to react and prioritize your available time and resources," says Marta Karlov, director of education at the ThedaCare Center for Healthcare Value. The BPS requires leaders to choose metrics for their unit based on True North, and it gives leaders a methodology

and standard work to measure, experiment, improve, and sustain improvements.

What Is Still Unknown

A potentially controversial topic in the lean healthcare world is physician engagement. In the beginning of lean implementation, physicians can be overlooked as other processes are changed for a variety of reasons. Quickly, all of the processes around physicians change without any physician involvement, which leads to a rift between the physicians and everyone else. Limited involvement from a large stakeholder, such as physicians, will negatively impact improvement work, experiments, and quality.

While physicians are systems thinkers and although they are taught to use the scientific method, physicians may only see the clinical picture, or the systems involved in directly treating the patient. The next challenge in quality management is to help physicians see the other systems around them and translate lean concepts and improvement work into medical terms for physicians, and to translate medical systems thinking into process improvement and lean terminology for lean practitioners.

Customer satisfaction is another piece of the quality puzzle that has yet to be clearly understood. The customer piece is complicated because each patient is a unique case, and it is difficult to know what portion of the continuum of care influences a patient's opinions. The challenge with improving

customer satisfaction measures is to determine how to accurately capture which department, service, or interaction influences positive and negative ratings. At ThedaCare, leaders are out of their offices speaking with patients to get their feedback and to check on their experience. Surveys are another tool used to understand at what point in the process dissatisfaction occurred. As more information about patient satisfaction becomes available and is understood at a higher level, quality measures will likely be developed or adjusted to continue to improve care, delivery, and satisfaction.

REFERENCES

Toussaint, J. S., and L. L. Berry. The promise of lean in health care. *Mayo Clinic Proceedings* 88, no. 1:74-82.

BIOGRAPHY

Melissa Mannon is an independent contractor specializing in healthcare policy. As a data consultant with Linn County Public Health, she collected health statistics on women, children, and adolescents for the Regional Health Assessment required by the state of Iowa. She worked with The United Way of East Central Iowa in 2011 and 2012 researching the effect of the Patient Protection and Affordable Care Act on women, children, and mental health service providers in Iowa. In 2013 she worked for ThedaCare Center for Healthcare Value as a lean healthcare intern. At ThedaCare she worked closely with Dr. John Toussaint on the topic of publicly reported health outcomes and their positive impact on value. She also developed and implemented a project plan to redesign and update the private member network website — Healthcare Value Network — which ThedaCare operates. She has a bachelor's degree from Cornell College. She can be reached by email at mpmannon@gmail.com.