"Developing and implementing leadership standards, visual management, and problem-solving tools used together would systematically take us to a new level of performance—places where our teams see defects, eliminate waste, develop people, and continuously problem solve to improve both processes and performance."
—Barnas (p. 393)

Joint Commission Resources

Developing a Business Management System for Continuous Daily Improvement

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Performance Improvement

ThedaCare's Business Performance System: Sustaining Continuous Daily Improvement Through Hospital Management in a Lean Environment

Kim Barnas

In 2003, the senior leadership team at ThedaCare, a community health system in Wisconsin, began a journey to apply Lean manufacturing tools to some of our health care processes. During the first five years of this journey, ThedaCare achieved significant improvements in quality and the elimination of waste—the hallmarks of Lean thinking[1]—through the development of the ThedaCare Improvement System (TIS), which included Value Stream analysis, rapid improvement events, and projects applied to specific processes.[2] However, we did not meet our goals for continuous daily improvement, particularly our goal of increasing productivity by 10% annually. We then concluded that we needed to change the way our managers (including unit leaders) in ThedaCare's hospital division conduct and manage their daily work. In the past two years, we have addressed that issue, and we believe that we have begun to solve the problem. We have changed the way we manage so that it is commensurate with Lean thinking by developing what we call ThedaCare's Business Performance System™ (BPS) to achieve and sustain continuous daily improvement. Before an organization embarks on the process of developing its own BPS, however, it first needs one or two years of experience in Value Stream and rapid improvement work to be able to understand the need for management work.

Our experience mirrors what other observers have found about the implementation of Lean. After initial successes, improvements seem to plateau. As Shukla has noted, "Industry reports and research indicate that while most organizations have a reasonable understanding of the technical pieces of the lean puzzle, they struggle to realize its promise."[3(p. 1)] In Womack and Jones's view, managers in such organizations are "drowned in techniques"[(p. 10)] while not seeing the "whole" of the Lean system.[1] What they were missing, as we also found, was a Lean *management* system that was commensurate with the Lean techniques and individual process improvement efforts. Managing in a Lean environment "requires an almost completely different approach to *day-to-day and hour-to-hour management*."[4(p. v)] If Rule Num-

Article-at-a-Glance

Background: For 2003–2008, ThedaCare, a community health system in Wisconsin, achieved significant improvements in quality and the elimination of waste through the development of an improvement system, which included Value Stream analysis, rapid improvement events, and projects applied to specific processes. However, to meet its continuous daily improvement goals, particularly the goal of increasing productivity by 10% annually, ThedaCare needed to change the way its managers and leaders (in its hospital division) conduct and manage their daily work. Accordingly, it developed its Business Performance System™ (BPS) to achieve and sustain continuous daily improvement.

Building the BPS: ThedaCare devised a multipart pilot project, consisting of "learning to see" and then, "problem solving." On completion of the 15-week alpha phase (6 units) in July 2009, the BPS was spread to the beta pilot (12 units; September 2009–January 2010) and then to cohort 3 (10 units; September 2010–January 2011).

Results: Each alpha unit improved performance on (1) the key driver metric of increasing productivity from 2008 to year-end 2009 (by 1%–11%) and (2) its respective safety/quality drivers over the respective 2008 baselines. For 2010, improvements across the alpha, beta, and cohort 3 units were found for 11 of the 14 safety/quality drivers—85% of the 11 customer satisfaction drivers, 83% of 6 people engagement drivers; and 48% of 23 financial stewardship drivers.

Conclusions: The tools developed for the BPS have enabled teams to see, prioritize, and pursue continuous daily improvement opportunities. Unit leaders now have a structured management reporting system to reduce variation in their management styles. Leaders all now follow leadership standard work, and their daily work is now consistently aligned with the hospital and system strategy.

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ber 1 for Lean is that "all work shall be highly specified as to content, sequence, timing and outcome,"[5(p. 98)] our question, then, centered on the work of managers. What were its content, sequence, timing and outcome, day-to-day and hour-to-hour? Although Mann helped us answer that question in general, we had no guides for answering it specifically for health care. We had to find the answers to that question ourselves—in the process described in this article.

Originating the Journey to the Business Performance System

Setting

The BPS originated as a project to advance the TIS improvement activities undertaken at Appleton Medical Center (AMC) in Appleton, Wisconsin, and Theda Clark Medical Center (TCMC) in Neenah, Wisconsin—2 of 4 community-based hospitals in the ThedaCare Health System. The system also includes 3 rural, critical access hospitals; a cancer center; a heart institute; a Level II trauma center; a stroke center; an acute rehabilitation unit; 22 physician offices; 6 behavioral health locations; 3 home care facilities; 3 employer health centers; 1 skilled nursing facility; and 1 senior living facility. In 2010, we cared for more than 24,000 inpatients and 375,000 outpatients and had more than 70,000 emergency department visits. ThedaCare has 6,300 employees, making it the largest employer in the area. To date, 3,600 of our employees have been involved in the BPS.

Coming to Lean: The ThedaCare Improvement System

At the time we began our continuous improvement journey in 2004, ThedaCare was one of a few health care systems attempting to adapt Lean thinking and tools to health care. We had come to Lean after trying other quality improvement approaches and finding them not adequate to our needs. Under the leadership of the chief executive officer at the time (Dr. John Toussaint), we had come to realize that health care was not improving its quality at a rate equal to manufacturing and other industries. Even though our own system consistently ranked in the 95th percentile on many hospital quality measures, we knew that was not sufficient.

Under the leadership of Dr. Toussaint, along with that of the vice president (VP) for quality (Scott Decker) and our chief learning officer (Roger Gerard), we began developing our TIS, which had Lean thinking and Lean tools at its core. At ThedaCare, the charge of the chief learning officer is to create a "learning organization." He or she leads a team of organizational development specialists and is responsible for developing oppor-

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Table 1. Sample Improvements in Operations

- **The Collaborative Care Delivery Model.** With a focus on improving care at the bedside, a defect-free admission medication reconciliation process was created, resulting in a reduction from 1.25 defects to zero defects per chart, a length-of-stay reduction of 16.4%, and an average decrease in cost per case of 22%.

- **Improvement Work on Code ST-segment Elevation Myocardial Infarction (STEMI).** Begun in 2005, this work significantly reduced the time it takes for a patient who arrives in the emergency department (ED) with a heart attack to have cardiac vessel blood flow restored in the catheterization laboratory. In 2005, the industry standard was 120 minutes and the benchmark was 90 minutes; our average time was 91 minutes. After a Value Stream and rapid improvement event in 2008, the average time to intervention was 40 minutes for patients presenting directly to the ED; it is now 35 minutes.

- **The Staffing to Patient Demand Value Stream.** Focused on the right staff at the right place at the right time, this Value Stream demonstrated a 7.3% improvement, which translated into $895,000 salary savings in nursing hours per unit of service.

- **The Open Heart Value Stream.** Focused on coronary bypass grafting process improvement, this Value Stream reduced mortality rates from 2% (the benchmark in the United States) to zero for isolated coronary bypass grafting patients, while reducing length of stay by 21%.

- **The Radiation Oncology Value Stream.** Focused on access and process improvement, this Value Stream improved productivity through a 30% improvement in clinical hours per unit of service, increased gross revenue by 24%, and reduced the average total flow time from referral to treatment from 16 to 7 days 56%).

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tunities for learning improvement and education for the system, which was critical to the development of our BPS. We also had the help of a *sensei*—that is, a teacher and mentor—from a consulting firm and with the support of our board, we trained 30 of our people to be facilitators and teachers and to conduct Value Stream analyses, rapid improvement events, and projects. Facilitators serve on the TIS team for one to two years and then return to operations. In this way, we continuously build a community of problem solvers. We also train people in how to use the tools and have them go back into the workforce with that knowledge. A "hiring cell" hires new facilitators to "back fill" those who go back into the system, with the goal of maintaining 30 facilitators at all times.

Between 2004 and 2009, using our system of training facilitators and teachers, we conducted 6 to 10 rapid improvement events each week. In that time, we achieved significant, breakthrough improvements in our operations; a sample of these improvements are shown in Table 1 (above). Financially, ThedaCare achieved bottom-line savings of $25 million by 2009

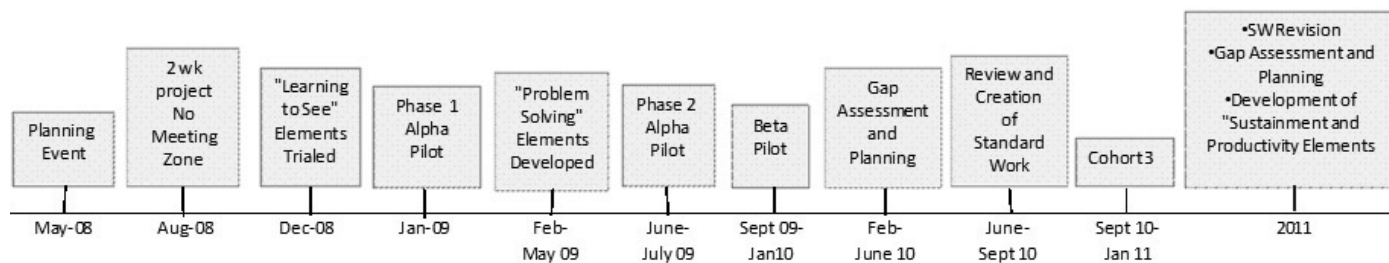## Business Performance System Timeline, May 2008–2011

Figure 1. *The timeline shows the sequence of the continuous improvement journey, starting with a one-week planning event in May 2008 and a second, two-week planning event in August 2008, and extending through pilots and subsequent revisions. SW, standard work.*

directly attributed to the TIS. These savings were accomplished with our no-layoff philosophy intact. However, what we did not achieve was consistent continuous daily improvement. We continued to fall short of the basic goal we set—improving our productivity annually by 10%—when we began our work with TIS. We knew that continuous daily improvement was crucial—in agreement with Imai: While innovational events were attention getters, a gemba-based,* common sense, low-cost, incremental improvement approach would pay off in the long run[7] and we set out to find such an approach.

FINDING THE PROBLEMS WITH OUR TIS RESULTS

Assembling a Project Team. To examine where our TIS journey had taken us and probe possible causes for the gap between initial success and long-term sustainability of improvement, in May 2008 (Figure 1, above) we assembled a project team to develop a PDSA (Plan, Do, Study, Act) tool—the A3[†6]—and "own" the following problem: "every manager at ThedaCare manages his or her own way. There is no one system for managers to see their performance. There is no consistent approach to respond to problems."

The team consisted of a sensei, a VP [K.B.] as the sponsor, two TIS facilitators (a registered nurse and a physical therapist), and a group of eight operations managers (including human resources and finances). As all project team members learned, the elements of a Lean management system, according to Mann, consist of leader standard work, visual control, daily accounta-

* *Gemba* is "the place where work is done and value added." (Imai M.: *Gemba Kaizen.* New York City: McGraw-Hill, 1997, page xxiv.)

† An A3 is a central Lean tool and way of thinking that is used to lead people through the scientific method of studying an issue, proposing countermeasures, and implementing changes.

bility processes, and leadership discipline.[4] Mann notes, "most prescriptions for lean production are missing a critical ingredient or lean management system to sustain it."[4(p. 3)]

Reverse Fishbone Analysis. The team participated in a reverse fishbone analysis to better identify gaps between our current state and our desired state for a management system. Whereas a fishbone diagram is normally used to identify components of a problem and explore all potential or real causes that result in a defect or failure, a reverse fishbone asks what are the components you need to have to determine what the "good" would look like.[8] In our case, we used the reverse fishbone to ask what are the pieces of standard work that you would need in place to have an effective management system. Drawing on Mann's four elements, the team devised four "spines" of a reverse fishbone, as follows, which constituted the foundation of the management system that we wanted to develop:

1. Leadership standard work
2. Visual control of improvement
3. Problem solving and corrective action
4. Leadership discipline

The project team then added a fifth component—leadership development—on the basis of the work of ThedaCare's Human Development Value Stream (HDVS). HDVS created 22 core competencies to apply to all of ThedaCare's managers.

These five components then became the core of our BPS. Our work up to this point led us to believe that we needed to focus the management system on "how" we delivered the work. As a result, we wanted the system to accomplish three key goals:

1. Help our managers understand their performance.
2. Help them meet their targets.
3. Build effective teams to sustain improvement.

Focus Groups. The project team then further tested its think-

ing by conducting two focus groups with unit leaders at the two hospitals. At least three members of the project team, including the facilitator (as leader), participated in each focus group. They asked open-ended questions such as, "Tell us your greatest asset, your greatest weakness, what kind of fears do you have?" and "If we are considering a new process, what are the important things to you that should be included in a new system?"

The focus groups revealed that even our experienced managers could not sustain many improvement results. We could not achieve daily, continuous improvement, despite the successes we had had. As our focus group participants pointed out, "Nobody is telling us how to sustain improvement." The managers voiced their own frustration about not achieving continuous daily improvement, with comments such as the following:

■ "Telling us to sustain improvement with these new tools is like putting new wine in old skins."

■ "We do not have the ability to meet the expectations of the change [as a result of the Lean tools]."

■ "The lack of a management system is the leading cause of death in a transformation like this."

These comments confirmed our belief that we needed to help our managers understand how to sustain improved performance.

Our managers also told us that all of a sudden they were responsible for things that they had not been responsible for until now, such as understanding market share and productivity. In the past, as is typical in most hospitals, they were simply responsible for hitting a budget. In contrast, quality and employee engagement and satisfaction were now as important as the budget. So there were fears about "How do I know if I'm going to hit my target? How do I know it's the right target? How do I know if I'm failing? Who will help me and what are my resources?"

According to managers, we had changed the way we do the work with the Value Streams and the rapid improvement events. However, we had not changed the way we manage. We achieved a breakthrough in our focus group work when, in one session, managers stated that "the ultimate arrogance is to change the way people work without changing the way we manage them." We realized then that at ThedaCare, in implementing TIS, the expectations of our people changed but the way we supported them had not.

The most surprising finding was that even the most experienced managers expressed fear that the TIS tools alone would not help them lead their teams to achieve and sustain the improvement goals. The focus group findings led to our realization of the need for a structured management reporting system that would set clear performance expectations within defined leadership standards.

True North Metrics

Safety/Quality
• Preventable Mortality
• Medication Errors

Customer Satisfaction
• Access
• Turnaround Time
• Quality of Time

People
• OSHA Recordable Injuries
• HAT Scores (wellness)
• Employee Engagement Index

Financial Stewardship
• Operating Margin
• Productivity

Figure 2. *The True North Metrics, which include patient ("customer") satisfaction and safety/quality (including mortality and medical error), employee engagement, productivity, and financial stewardship, are the few critical measures that guide everyone in the organization toward the same purpose and ideal. OSHA, (U.S.) Occupational Safety and Health Administration; HAT, a 20-item health assessment tool developed ThedaCare's human resources department.*

The managers also reported that activities undertaken as continuous daily improvements felt unconnected to the larger strategic drivers and metrics—our "True North Metrics"—at ThedaCare (Figure 2, above). The True North Metrics, which include patient satisfaction and safety/quality (including mortality and medical error), employee satisfaction, productivity, and financial stewardship, are the few critical measures that guide everyone in the organization toward the same purpose and ideal. Activities at the hospital have to connect with those True North Metrics through the strategic A3s.

That "disconnect" between ThedaCare's True North Metrics and continuous daily improvement work made sense to the project team because, typically at that point, continuous daily improvement was driven by the facilitators rather than members of the unit leadership teams. At the units, the facilitators would explain that they were there that day not to do Value Stream analysis or conduct rapid improvement event work but to teach how to see and eliminate "waste" in the work. However, they did not have a systematic way of doing that, and we lacked an infrastructure to deliver continuous daily improvement.

Typically, a facilitator would identify a defect on a unit and then support the work to eliminate the defect. For example, a defect might be that people were not answering their call lights in a timely fashion. The facilitator would start an A3 and begin to

monitor those events. Then the unit would agree on targets, put up a production control board, and say, "Here's the target; let's take a look at how to improve this process." However, after the facilitator left, it would not be anyone's project. It was the facilitator's project. The unit staff did not have buy-in or a method to prioritize the many other defects they were seeing. So they stopped monitoring and measuring—and improving—performance on the call-light target as other issues emerged. They were trapped in a fire-fighting cycle.

The project team determined that, in the absence of a systematic management approach, the managers were unable to:

■ Clearly identify problems

■ Manage corrective action plans/countermeasures

■ Reach clear performance objectives aligned with the system's strategic A3 objectives

Updating the A3: Barriers to Sustaining Continuous Daily Improvement. Given the focus group findings, the project team met about updating the A3 around why we were not able to sustain continuous daily improvement. The initial A3 revealed the following fundamental issues with sustainability:

■ Teams were not positioned to see, prioritize, and pursue thousands of identified improvement opportunities.

■ Unit leaders had significant variations in management styles with no structured management reporting system.

■ Managers were struggling to sustain improvements using the TIS tools alone.

■ Each individual leader had his or her own way of managing a business.

—Many leaders did not consistently know their performance.

—There was high variability in approaches to problem solving.

—Improvements were not consistently sustained.

—Performance improvement work was not consistently aligned with strategy.

Our experience with our TIS confirmed what we had learned from others' experience outside health care—namely, that the lack of a Lean management system is the leading cause of the failure to sustain Lean process improvement and productivity gains. Yet we also knew that we could not "borrow" a management system blueprint from manufacturing but would have to devise one on our own.

FINDING A SYSTEM: DEFINING THE STANDARD WORK OF THE BPS

Rapid Improvement Event. In August 2008, following the focus groups and root cause analysis, the original project team ran a two-week rapid-improvement event to begin defining the standard work of the BPS—work that would eliminate variability among our managers to help them prioritize improvement work and to align them with ThedaCare strategy. That project was run as a rapid improvement event, and we used our TIS tools to develop it.

Steering Committee. Following the rapid improvement event, we replaced the project team with a steering committee to further develop the work and move us into the pilot-testing stage. The steering committee consisted of all 12 members of the original project team, as well as a third facilitator, who had just joined us from manufacturing and served as the "fresh eyes" on the project.

With the sensei's guidance, we selected members of the steering committee on the basis of the following criteria:

■ We had to be able to speak frankly to one another about the results—good and bad.

■ We had to be able to trust one another so that we could challenge one another's thinking.

■ We had to agree that nothing was off limits.

In other words, we had to be exceptionally trusting and vulnerable with each other. As our sensei observed, "You won't get very far if you can't make mistakes and feel okay about learning from them." Following that guidance, we invited steering committee members on the basis of their ability to learn and be vulnerable. They also had to be able to live with ambiguity because we were pioneering this work. Several members of the committee had known and worked with the VP for many years, including TIS events, which greatly helped the selection process.

Leadership Standard Work. We then established two developmental laboratories to begin to flesh out the leadership standard work, in particular the "learning to see" elements. The leadership standard work consisted of the following:

■ How to prepare a daily stat sheet

■ How to manage a daily huddle—a 10- to 15-minute daily review in which unit leadership and staff focus on process improvement to identify current work-flow defects, create assignments, and establish the discipline of daily follow-through as a team.

■ How to have leadership standard work that helps leaders know what to do throughout the day

■ How to teach, coach, and mentor

■ How to collect the data for the monthly performance review meeting

■ What a monthly performance review meeting is, with a standard agenda

■ How to create and deploy countermeasures—the activities

taken to correct a problem—and how to communicate a countermeasure deployment

■ How to share the information, report it, and, if necessary, escalate—that is, elevate it to the next organizational level—a problem

A case study on using standard work to root out knee infection is provided in Sidebar 1 (right). Appendices 1–4 show examples of the leadership standard work: VP Morning Standard Work, Manager Morning Standard Work, Supervisor Daily Work, and Floor Lead Standard Work (available in online article).

Building the BPS

PILOT PROJECT

As the next step in creating the management system that became our BPS, we devised a multipart pilot project, consisting of "learning to see" and then, "problem solving," after a unit and its leader had truly learned to see the work.

In addition, we conducted an alpha test in which the first group of unit leaders and their VPs went through the creation of the management system, and a beta test, in which the second group of units learned the program and were taught, in part, by the managers who had been part of the alpha group.

We limited the number of operational units in the alpha pilot to six because of the complexity of the project. These units—obstetrics, radiation oncology, collaborative care (medical/surgical), cardiovascular, neuro/surgical, and inpatient oncology—were drawn from Appleton Medical Center and Theda Clark Medical Center. The goal of the pilot was to (1) develop and execute work processes on the units that would create effective leadership standards and problem solving and (2) teach those processes in a systematic model that supported people's development, the recognition and solving of problems, and improvement of performance. All learning and teaching in this phase was also designed to support and strengthen the VP/manager dyad.

The initial working hypothesis for the pilot was as follows:

> In order for the business management system to succeed and grow, leaders (VPs) must fully engage in the process first so they can learn to mentor, support, and teach their teams. A developmental team must support their learning.

Operationally, that meant that in the first 2 weeks of the 15-week alpha pilot, the steering committee worked exclusively with each hospital's three VPs and chief operational officer (COO), teaching them the tools, processes, and standard work that make up "learning to see." We did that so that they could serve as the teachers in the pilot. We had much discussion at this point about

Sidebar 1. Case Study 1. Using Standard Work to Root Out Knee Infection, Appleton Medical Center Surgical Unit

Early on in our piloting of leader standard work, which makes up the core of the ThedaCare Business Performance System, we had a clear demonstration of its value in identifying and solving defects in the way we provide care. The incident took place in the surgery department at Appleton Medical Center. The unit manager and her leadership group had begun the day reviewing the stat sheets to determine, among other things, what risks to quality and safety might have taken place during the previous shift. There had been another knee infection on the unit.

When the unit manger led the daily huddle at 9:45 A.M. with the full staff, she reported this finding to the group and confirmed that there had been four class 1 knee infections in the last nine months on the unit. She then took two standard actions, as follows, triggered by this situation:

1. She put in place a containment plan to immediately determine if the unit could prevent further knee infections. This plan called on the manager or a supervisor to observe all knee surgeries to try and understand the cause of the complication.

2. She asked for volunteers to pull together a smaller work group from the staff to go offline from the huddle and develop an A3 to get at the root cause of the problem, stated simply as "We've had four knee infections in the last nine months, resulting in potential risk to the patient." The goal was to get to zero knee infections on the unit. This work team, led by the unit supervisor, used all the appropriate Lean problem-solving tools, including fishbone analysis, and stratified the data by physician, time of day, operating room in use, and so on. The process led the team to suspect sutures as the problem. In interviewing the physicians, the team learned that one physician had never had an infection case in his whole career. The team observed him to determine if he was doing anything significantly different from other physicians that could account for the infections on the unit, and they discovered that he was using a different type of suture.

The A3 analysis took about three months to complete, during which time the unit supervisor reported progress at each daily huddle. At the same time, the unit manager reported on progress at the monthly performance review meeting with her vice president; the knee infections had been elevated to a safety/quality driver on the unit's safety/quality scorecard. At the end of the investigation, the team determined that the problem was related to the kind of sutures that two individual physicians were using. The countermeasure was to change the suture used. After six months, in the absence of any recurrent class 1 knee infections, "knee infections" were removed as a driver on the unit's safety/quality scorecard.

being vulnerable, letting people fail, and not blaming or judging. That was difficult because VPs are promoted on their ability to quickly solve problems, but at this stage all we wanted them to do was really see the work within their units.

The success of this phase of the project was enhanced by the

fact that the hospitals' leadership had been involved, hands-on, in our TIS work and therefore knew the gap between initial success and sustainability; and was committed to creating sustainability and therefore was willing to help us build a new management system. Those factors helped us get past the tendency to rush to problem solving.

By the start of the third week, the VPs were ready to be joined by the unit leaders, whom they would teach to use the tools of "learning to see." These unit leaders constituted the team members chosen to begin defining the standard work of the BPS. The team members were selected on the basis of the following criteria:

■ Show evidence of existing improvement work

■ Have a structure in place that could support the levels of learning

■ Have a vice president to mentor the unit

■ Have an improvement mind-set

■ Have a desire to be in the alpha pilot program

■ Facilitator support

Learning to See. During this phase we established for the two pilot hospitals what we call our daily "No Meeting Zone"—a two-hour block of time at the beginning of the day in which no meetings could be called that could interfere with the BPS work.

In the first hour of each day, the VPs and the two "developmental laboratory" managers (one obstetrics and one radiation oncology manager)—taught the standard work. In the second hour, the VPs and the unit leaders went to the unit floors for the practicum part of the program. This (seven-to-eight-week) phase of the pilot, which took place on the hospital units, was designed for a VP and a manager to truly see the business before attempting to be problem solvers. PDSA cycles were completed around each piece of standard unit work—that is, the work that would be standard in each unit. Our aim was to attain consistency in the processes used in each unit. The processes that we developed became components of our BPS. The first three processes—the tools of learning to see—were as follows:

■ A daily stat sheet completed by the unit leaders on which they communicate issues, problems, and successes so they can proactively plan the work of the day and see trends of defects that help them reduce "firefighting" (see the VP Daily/Weekly Sheet, available as Appendix 5 in online article)

■ A daily performance and defect review huddle—a gathering of unit leaders and staff to review progress to targets, defects, or problems from the previous day (see the Daily Performance Defect Review Huddle, available as Appendix 6 in online article)

■ Unit-based leadership teams that usually include the unit leader and his or her lead and supervisor; and finance or quality representatives, and anyone else who could contribute to the team. The team meets monthly to review and inform performance (see the Manager Monthly Performance Review, available as Appendix 7 in online article).

After the alpha group had completed the learning to see curriculum, the group moved into the pilot stage of problem solving. In this stage, problem-solving tools were developed and taught and then incorporated into the leaders' standard work. We also discovered, seven or eight weeks into this phase of the pilot, that we wanted to include a second working hypothesis in the pilot, which came directly from our experiences on the units:

> Developing and implementing leadership standards, visual management, and problem-solving tools used together would systematically take us to a new level of performance—places where our teams see defects, eliminate waste, develop people, and continuously problem solve to improve both processes and performance.

These results, we thought, would be reflected in our monthly performance reviews and the outcome metrics.

Sometimes the daily stat sheet and/or huddle can trigger additional standard work for the day, as described in Sidebar 2 (page 394).

Learning to Problem Solve. The second half of the pilot in the alpha hospital units was devoted to teaching our managers to problem solve as part of their daily work on their units.

We developed a Standard Daily Work Calendar as a first step to structure each unit leader's day at the executive level. The calendar specifies what a leader should be doing daily, weekly, and monthly. Its purpose is to make the work of the day transparent and remove the waste in a leader's time management, thus creating the capacity for problem solving with the unit team. A sample Standard Daily Work Calendar is provided in Appendix 8 (available in online article).

As the work gets closer to the bedside, the calendar actually becomes unit-guided standard work, and it might specify that the unit lead will confer about a stat sheet with the supervisor at 8:00 A.M.; that at 8:30, the unit lead will talk to the unit about the communication needs of the day; and at 8:45, the unit lead will hold the team huddle, and so forth. The standard work is very specific about what the leader actually does, and we have found it to be an extremely powerful tool. Now everyone not only has a job description but a clear map of what the work of the unit leaders is to be during the day.

The Tools of Problem Solving. We then asked the managers to look at the unit standard work, audit to it—that is, check to see if the standard work was being done—and problem solve with

Sidebar 2. Triggering New Standard Work

Case Study 2. Obstetrics

One morning at 7:30 A.M., during the no-meeting zone, the manager of the obstetrics unit at Theda Clark Medical Center began preparing her daily stat sheet. The items she was paying attention to and would shortly go over with her team leads included how they would deliver care; staffing models; factors that would affect finances, such as over- or understaffing; and what was happening on the unit that would affect risk, quality, and safety. She had added an item on how many antenatal patients were on the unit as a trigger to the stat sheet, as well as how many of them had been there for more than seven days. In reviewing the stat sheet during the daily huddle with her staff, it was determined that there were four antenatal patients on the unit that day, one of whom was now on her seventh day. A seven-day stay, now visible on the stat sheet, requires newer standard work, and so, a case conference with perinatology, neonatology, and the obstetrics and nursing staff was convened for midday by the nurse responsible for the patient's care that day.

During the patient's stay on the unit, the nurse had learned that the patient was afraid to ask questions. The nursing staff knew that the patient wanted to go home, but they also knew that she wouldn't say so to the physicians. The nursing staff was able to ask questions on her behalf regarding the next steps and was able to help the patient understand that she would be able to go home if she met specific criteria. As a result of both the standard work process triggered by the stat sheet and the nurses' understanding of the patient, it was determined that she was not able to go home that day. She gave birth seven days later.

Case Study 3. Radiation Oncology

At the radiation oncology unit of the Martha Siekman Cancer Center at Appleton Medical Center, John Toussaint, then president and CEO of ThedaCare, and Kim Barnas, vice president, hospital operations, had come to the gemba—-the place where work is done—-in the radiation oncology department. The unit manager was going over the stat sheet with the two radiation therapists and asked the standard question, "Was there anything on your unit today that would cause a quality or safety concern?" The therapists said that there was. They said that the next patient on the list for treatment that day had been scheduled for a positive emission tomography (PET) before the radiation treatment. Because of the radiation associated with a PET, they didn't know if it was appropriate for them to come in and perform a radiation treatment after that. What their question revealed was a defect in the process of the standard work for how you schedule a patient for a PET scan and the sequencing of care. In this case, we didn't treat the patient that day; we moved him to the next day.

The radiation therapists talked to the physicians about their concerns and improved the daily work standard so that this concern would not arise again. The change they made was not to schedule patients for a PET before a radiation treatment when different physicians ordered the tests. In this change, which was intended to address a communications problem in the existing standard work, they improved the communication by writing a question into the standard work of scheduling a PET for a cancer patient, "Do you have a radiation treatment scheduled for today, for the same day as your PET?" If the answer was "yes," the PET would be rescheduled.

Case Study 4. Creating and Improving Standard Work Around Patient Flow

In one instance we had the good fortune of being able to establish new standard work in a unit at the same time the unit was being renovated. We knew that we were going to move into a new obstetrics unit at Appleton Medical Center, which featured two new cesarean-section (C-section) rooms. In preparation for the move, we started working a year ahead to change the work process so that we would always meet the national standard of 30 minutes or less for a stat C-section.* A stat C-section means the mother or the baby is in jeopardy; you have just 30 minutes from the decision to do the C-section to when the actual incision is made.

During this preparation time for the new unit, the staff on the obstetrics unit, using an A3, worked in project teams to write the standard work. Every morning, they would review the stat sheet and ask, "Did we have any stat C-sections last night? Do we have any today that are at risk?" In the daily huddles, they would debrief on how the last one went and on what they learned. Then, when there was actually a stat C-section, the supervisor would pull out the standard work and observe the whole team together.

As a result of this constant observation of the standard work before the move into the new unit, the team made two significant changes in standard work that helped cut down the time for stat C-sections. First, it changed the way that the C-section team was notified of a stat C-section. In previous practice, the nurse had to call every individual on the care team—the anesthesiologist, the pediatrician, the obstetrician/gynecologist, the respiratory therapist, and so—to alert them to the stat case. In the new standard work, the nurse only had to call a "44" number, to reach an operator, who then called everyone on the team at once, freeing up the nurse to stay with the patient. The time it took to assemble the care team and begin the C-section decreased to an average of 21 minutes (it has been as low as 11 minutes).

The second change was to "5-S" both new C-section rooms to ensure that all the equipment necessary for a C-section was in the rooms and in exactly the same place in the rooms. Using this Japanese-based system of stocking and sorting enables the teams to know where everything is every time. They don't waste time looking for equipment.

With these changes, the new standard work for stat C-sections corrected a defect from how work had been done—and enabled the new facility to represent a new step forward in performance.

* American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG): Fetal heart rate monitoring. In *Guidelines for Perinatal Care*, 6th ed. Elk Grove Village, IL: AAP, and Washington, DC: ACOG; 2007, pp. 146-147 (Level III).

the unit leadership team by completing PDSA cycles around each of the following tools:

■ Stat sheet (in this phase we now learned to see defects and trends in our daily stat sheet and began to problem solve as we proactively planned the day)

■ Daily performance and defect review huddle with plans to address defects

■ Leader and supervisor daily standard work

■ Audit standard work tools and processes

■ A3 management and thinking

■ Visual tracking of progress to target and review any "andons"—a method for stopping and convening a team to problem solve immediately—and escalation (notifying the chain of command that assistance is needed).

In this phase, we moved from seeing to problem solving on the daily work of the unit. The seeing phase helps control the urge to jump in with solutions before the problem is truly understood. The knee-jerk reaction is one reason why we had problems sustaining improvements. Someone on a unit would fix something, and if it did not work, then the work would just stop. Now we do PDSA thinking around a problem. Then, when something does not work, we say, "Now isn't that interesting. Why didn't that work? Let's go back to the A3 root cause analysis and see what the next top contributor to this problem is."

ACHIEVING CONTINUOUS DAILY IMPROVEMENT

Making Identification and Correction of Deficits Part of the Daily Work. The tools of problem solving help us achieve continuous daily improvement because they make identifying and then correcting defects a part of the daily standard work of the unit leaders and the unit leadership team. Leaders use the stat sheet to identify trends in defects, for example, falls, which constitute a safety driver metric from the system A3. They then use the daily huddle to make the unit aware of the trend and to probe for more information about falls. One of the questions the leader probes at this point is whether everyone on the unit is following the standard work. The probe can come in the form of questions to the unit or by seeing whether the unit's actions are consistent with the standard work. For example, we can go into a patient's room, watch the process, and see if it followed the standard work to identify risks. By following this process, we observe and audit the standard work.

The results of the audit and stat sheets roll up into the unit leadership meeting, where the group will determine if falls need to now go on its performance score card. Then that determination and the data behind it become part of the monthly performance review between the unit leadership team and the

manager. If the problem, for instance falls, is a driver metric, it will also be discussed at the monthly performance review meeting with the manager and the VP. Driver metrics are those that affect the True North metrics, and problems that affect driver metrics are addressed with a PDSA to align the solution with the True North metrics.

If a problem comes to the level of a driver metric, a countermeasure summary will be presented, which would entail the VP posing the following questions:

■ Are you meeting target, improving, consistent?

■ What is your stratification (data analysis) telling you?

■ What are the top contributors to the problem? (And how did you find them?)

■ What will you do in the next 30 days to improve performance?

The VP will especially want to know if members of the staff were using standard work. If not, why? If yes, why did they not achieve their desired outcome? If the desired outcome is not achieved, then the unit leader will revisit the standard work and change work with the staff to improve the standard work. We consider new standard work to constitute an experiment on the unit, and this metric would be reviewed again at the next monthly meeting to see if the experiment produced the desired performance improvement.

Because falls are a safety driver metric from the system A3, as stated, a hospital VP owns a "baby" A3 as a sponsor for the hospital division and assigns an A3 owner—usually a manager who is looking for a challenging assignment as part of her personal development plan. The A3 owner leads a team focused on falls and monitors the experiments from this work throughout the hospital. The idea is to run experiments to find the best standard work and then spread this work across the units. Case Study 3 (Sidebar 2, page 394) provides additional insight into how this process works.

Each month the metrics from this work are shared with the hospital leadership team at their monthly performance review meeting. If the hospital is not meeting its target, the VP reports the countermeasures summary to the hospital leadership team. The goal is for the countermeasures to produce improvement over the next 30 days. Then the VP continues to monitor falls until the desired outcome is achieved.

Shifting Attention Among System Drivers; "Catch Ball." Conversely, the BPS makes it possible for a unit to shift its attention from a system driver to one that matters more to the unit. We have told our managers that we want them to focus on four to six drivers for their unit rather than the list of 30 to 40 "must dos" that hospital leaders often come up with. That means we

promise our managers that if they can deselect a system-mandated driver, such as falls, in favor of a driver that is more relevant for them, such as central line–associated infections. Through a "catch ball" process with their VP they can change their drivers and begin a new A3 analysis. "Catch ball" is really a negotiation between a VP and a manager, who supports her or her request with data. When we deselect something for them, this process supports them in prioritizing their work. That is extremely powerful.

Through the BPS we are making progress toward our ideal of being able to know our business performance on an hourly, daily, and weekly basis. Using this system, we believe that we will be able to advance improvements, make early course corrections when problems are identified, and sustain gains. Yet waiting for month-end reports does not allow us the kind of flexibility we need. In our ideal state, the CEO would be able to drill down to unit levels and understand the priorities and performance for the day. We are getting close to that ideal.

Results

Results can be reported in terms of process and outcome. Process results come from the feedback from managers and VPs participating in the alpha pilot. Outcome results concern productivity (the key outcome measure stipulated at the beginning of the project); performance on the quality and safety drivers selected by each unit participating in the pilot; and employee engagement, as defined by five core engagement questions on the annual employee opinion survey.

PROCESS

Working Hypotheses. The feedback from program participants comes from weekly focus group-like sessions, called "Friday Reflections." These sessions were particularly useful in assessing the validity of our two working hypotheses (see pages 392 and 393).

Hypothesis 1. The managers in the alpha pilot have reported that the leadership standard work that they developed helps them view their business units with a much clearer understanding of targets, measures, and expectations. Conversations between the manager-VP dyad deepened the working relationship and spilled over into the unit leadership teams. The pilot team rated the strengthening of that dyad as exceptional. Further evidence of the success of that aspect of the pilot has been the multiple requests or "pull" received from managers outside the alpha pilot to enter the BPS. As a result of managers and VPs learning to see and problem solve together, an intentional habit of daily contact between a manager and a VP through the leadership

standard work and stat sheet was formally established, and all team members recognize its value.

Hypothesis 2. Preliminary results from the pilot (alpha) units indicate that managers had begun to see defects, understand the top contributors to those defects, and develop PDSA cycles around performance improvement with more confidence. These managers now:

■ Had a standard process to manage their business through leadership standard work

■ Consistently knew their performance

■ Had diminished variability to their approaches to problems and how problems are managed, using Lean tools and standard work

■ Had performance improvement work consistently aligned with strategy through the performance review process.

Further evidence of these results was seen in work using visual management, dialogue, escalation of problems, and metrics improvements. The quality of countermeasures improved and created a new meaningful level of discussion at metrics review meetings.

Managers also reported less "firefighting" on their units, reflecting their better understanding of the risks and opportunities for the day following completion of their stat sheets each morning.

Outcomes. Outcomes also bear out the effectiveness of the BPS we are developing. Each of the units in the alpha group was able to improve performance on the key driver metric of increasing productivity from 2008 to year-end 2009, as follows:

■ AMC Inpatient Oncology—1%

■ AMC Inpatient Cardiac (cardiovascular)—4%

■ TCMC (neuro/surgical)—4%

■ Radiation Oncology—5%

■ AMC (medical/surgical)—11%

(The TCMC obstetrics unit did not work on productivity). Despite what is now being called the "great recession" and losses of volume in three of the five units, we achieved significant productivity improvements in four of the five units. (The one unit—AMC inpatient oncology—with the lowest improvement also changed its staffing model during the year, somewhat "contaminating" its results). In one of the units (AMC medical/surgical), we exceeded our goal of 10% improvement.

Other outcomes measures also point to the effectiveness of the BPS during this alpha phase. For example, all units in the alpha pilot program in 2009 improved their respective safety and quality drivers over the 2008 baselines (Figure 3, page 397). In some cases, the improvement was dramatic, as follows:

■ A 9% improvement in first-call bed access for AMC Inpa-

Percentage of Improvement for Business Performance System Managers: Safety/Quality Drivers, from 2008 (Baseline) to Alpha Project (2009)
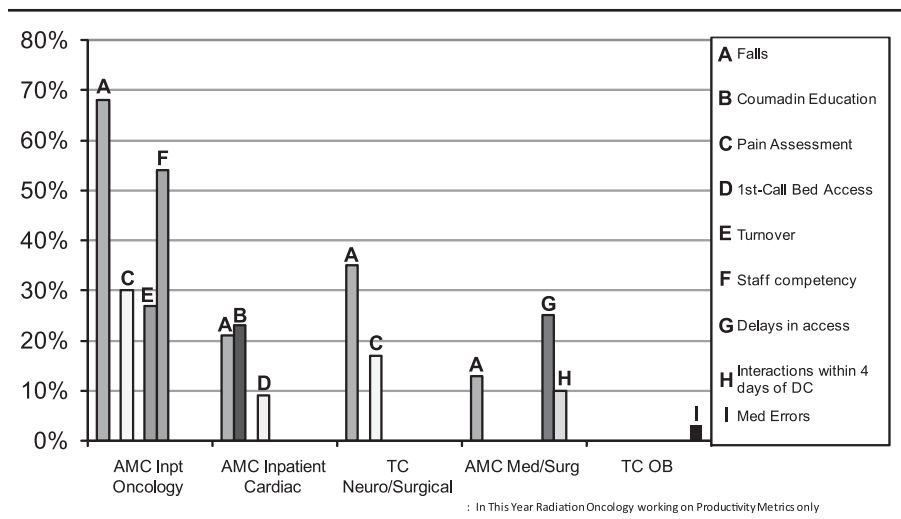

Figure 3. *All units in the alpha pilot program in 2009 improved their safety and quality drivers over the respective 2008 baselines. Each unit had a different set of drivers, totaling three to six. (In 2009, radiation oncology worked only on productivity metrics.) DC, discharge; AMC Inpt, Appleton Medical Center inpatient; TC, Theda Clark (Medical Center); OB, obstetrics.*

tient Cardiac (cardiovascular)

■ A 35% improvement in falls for TCMC (neuro/surgical)

■ A nearly 25% improvement in coumadin education for AMC Inpatient Cardiac (cardiovascular)

■ A nearly 70% improvement in falls for AMC Inpatient Oncology

Finally, the units in the alpha phase showed marked improvement in earning employee engagement as measured by our annual employee opinion survey, especially compared with the units that had not gone through the BPS yet (Figure 4, page 398). Scores for our alpha units were in nearly every case higher on the core questions we use to measure engagement:

■ I would recommend this organization to my friends and family as a great place to work.

■ This organization inspires me to perform my best.

■ I am likely to be working for this organization three years from now.

■ I am willing to put in a great deal of effort in order to help this organization succeed.

The alpha units' scores were also higher on a fifth question we added this year to measure how well our employees thought they understood the alignment between their daily work and the organization's strategy and mission. Here, too, scores were much better for our alpha units than for units that had not gone

through this process yet—affirming our view that BPS clarifies the alignment between work and strategy.

The Beta and Cohort 3 Phases

IMPLEMENTATION

After we completed the alpha phase in July 2009, we spread it to two more groups in two phases—beta pilot (September 2009–January 2010) and cohort 3 (September 2010–January 2011). The curriculum remained the same for the 15-week training program. As in the alpha phase, the participants had to meet the criteria and go through the training with their direct supervisors. Even though direct supervisors, essentially the VPs, had been through the course once, they still had to go through it with their own managers because they were the "one up" from the manager. Going through the course together was one important way of strengthening the VP-manager dyad, one of our critical goals.

The beta participants were taught by those who had completed the course—that is, the alpha phase participants. The beta participants in turn taught the cohort 3 participants. One consequence of teaching the course after completing it was that those participants better understood and became more committed to it.

One difference between the alpha and subsequent phases was that the participants in the beta and cohort 3 phases were each assigned an additional mentor, who helped the participants with their learning and assignments. The participants also conducted their observations in their mentor's unit. For example, when they wanted to see how to do a tracking center, they would go to their mentor's tracking center to see how the process worked. The mentor would then help the participants establish the element in their own unit.

RESULTS

True North Drivers. At the end of the training of all three groups, we found that we achieved improvements similar to those we achieved with the alpha group alone. For example, for 2010, improvements (as compared with 2009) for the True North Drivers were found for the following:

■ 11 (88%) of the 14 safety/quality drivers

■ 9 (85%) of the 11 customer satisfaction drivers

■ 5 (83%) of 6 people engagement drivers

■ 11 (48%) of the 23 financial stewardship drivers

Unit Improvements. Given that our goal in introducing the BPS was to engender continuous improvement, we measured the number of improvements achieved by the two groups—alpha and beta—in 2010. Our objective was to introduce 300 improvements per unit during the year. We met that objective, with a total of 3,663 improvements in the 18 units participating in the BPS programs (Figure 5, right).

SUBSEQUENT WORK

Even with these achievements, we discovered that we needed to develop two more pieces of standard work if we were going to sustain productivity—unit-level Value Stream mapping to remove waste and the process observation calendar to sustain standard work.

Unit-Level Value Stream Mapping. We are now conducting pilots in two units to identify and eliminate waste in the process and achieve continuous productivity improvement. For example, if a desired 3.1% productivity improvement in a given year will be realized by either eliminating full-time-equivalent (FTE) positions or by looking at the process to find and remove the waste.

Process Observation Calendar. We are piloting a process observation calendar on all units to sustain standard work. The calendar is used to chart all the standard work on a unit. Every day a unit leader pulls up a piece of standard work and observes his or her people performing it. The purpose is not to correct them

Percentage of Improvement for Employee Opinion Survey: Business Performance System (BPS) Alpha Units (2009) Versus Non-BPS Units (2008)
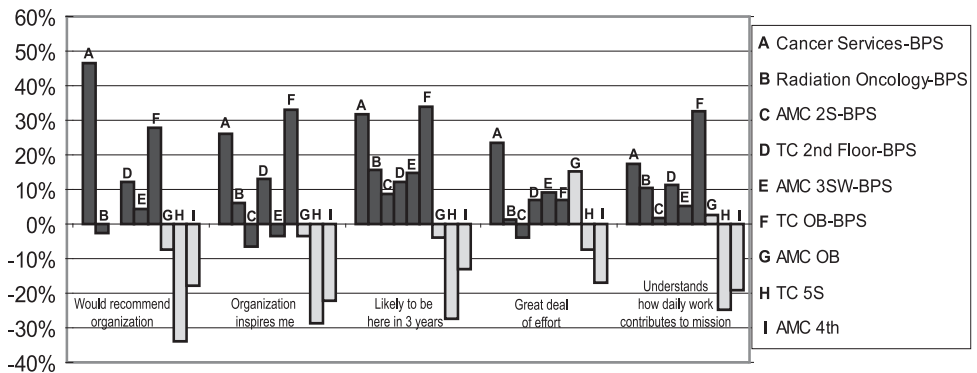
Figure 4. *Scores for the alpha units were in nearly every case higher on the core questions used to measure engagement. 2S, medical-surgical unit; TC, ThedaClark (Medical Center) 2nd floor, medical-surgical unit; 3SW, medical-surgical unit; OB, obstetrics; Rad Onc, radiation oncology.*

3,663 Unit Improvements Documented in 2010
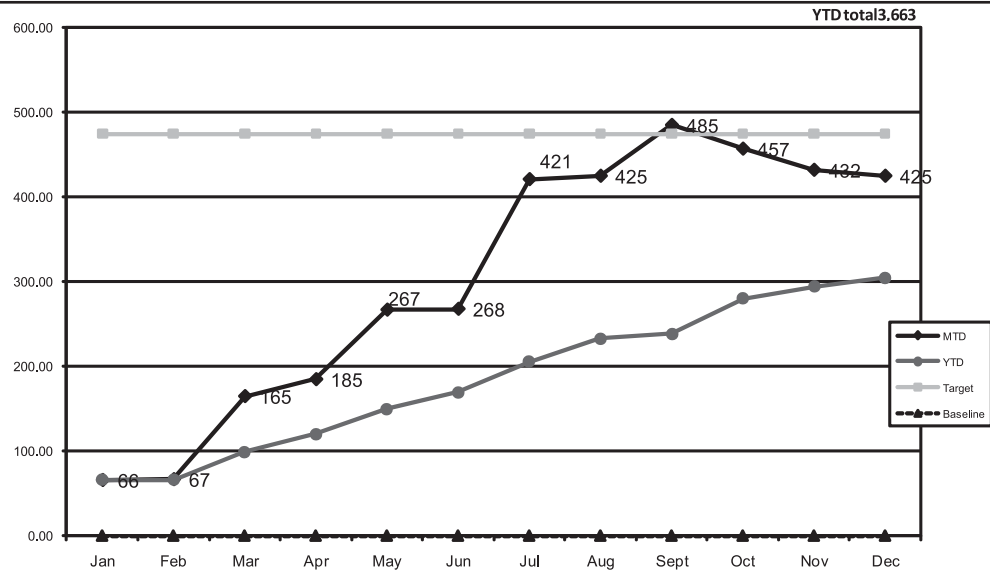
Figure 5. *A total of 3,663 unit improvements were achieved by the alpha and beta groups in 2010, with the 18 units exceeding the target of 300 improvements per unit. MTD, month-to-date; YTD, year-to-date.*

or use the observation as a weapon but rather to improve the standard work and make sure that people are using it—and that it is the right standard work; that is, work that eliminates variation and waste in its processes. In that sense, it is more of a quality metric. The observation also becomes an opportunity for the leader to mentor and coach.

Discussion

Although we have more testing and refining to do, we believe the outcome and process results so far show that we are on the right path to achieve continuous daily improvement by implementing a management system that fits into a Lean improvement environment. The tools that we have developed for our BPS have enabled our teams to see, prioritize, and pursue the continuous daily improvement opportunities before them. Our unit leaders now have a structured management reporting system to reduce variation in their management styles. Leaders all now follow leadership standard work, and their daily work is now consistently aligned with the hospital and system strategy. As a consequence, our managers and teams can sustain daily improvement in a way that they were unable to do using the TIS tools alone.

In developing the ThedaCare BPS, we have learned the following lessons:

■ You have to have clear and firm criteria to select the participants in this process for both the teams leading the change and the managers selected for the pilots. The one time that we departed from this principle, the manager "excused" into the program was unable to complete it.

■ Leaders have to be willing to get "dirty hands" and manage *with* the team.

■ Spreading the BPS process throughout the organization requires a well thought-out process that encourages managers to want it and pull for it.

■ Introducing the BPS is not a stand-alone process but rather needs to be integrated with the human resources processes and the Lean learning system process.

■ In introducing the BPS process, you can try to make the teaching go faster, but people cannot learn faster. We have been working with other systems on implementing a BPS in their organizations. Some have tried to divide the teaching into short-term modules; others have spread the process over a full year. In either case, the actual learning process takes about 15 weeks.

■ As has been frequently stated for any fundamental change in an organization, success depends on the ability of the organization and the high levels of its leadership to commit to it. The CEO or COO can create the capacity—the sheer "workspace"—for the other leaders participating in the program and their direct reports to work on the change for a period of time and to hold that time sacred. That is necessary because you are changing the way you manage your business and you are raising expectations. You have to teach everyone to function at the higher level of those raised expectations. That takes time and personnel—the kind of time and personnel commitment that only the chief of operations can make. **J**

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See the online version of this article for

Appendix 1. VP Morning Standard Work

Appendix 2. Manager Morning Standard Work

Appendix 3. 3 Southwest Supervisor Daily Work

Appendix 4. 7A–7P 3 Southwest Floor Lead Standard Work

Appendix 5. Daily/Weekly Stat Sheet

Appendix 6. Daily Performance Review/Defect Huddle-Standard Work

Appendix 7. BPS-Monthly Performance Review-Manager

Appendix 8. Daily/Weekly/Monthly Standard Work Calendar

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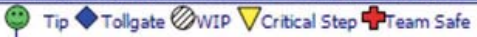
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Appendix 1. VP Morning Standard Work

VP Morning Standard Work

Last Updated	03/22/10	Owner	Kim Barnas	Performed By	Vice President	Work In Process
		Revised By	Patsy Engel	Rev. Number	3	
Takt Time		Trigger	Between 0800-1000 each morning or variable times	Done		

Standard Work

	Major Steps	Details (if applicable)	Time	Diagram, Work Flow, Picture, Time Grid
1		**General Definitions:** **Coaching/Mentoring** o Use Socratic approach when asking questions, do not give answers or directives o Reinforce link to system vision and strategies to department initiatives o Encourage problem solving the team and bring forth potential top contributors and solution approaches o Model PDSA thinking o Support continuous learning o Model-Coach-Improve Standard Work **Observe:** o Stand in the Circle, and observe the flow. o Seek to understand, identify defects and other wastes. o Bring supervisor and/or manager into circle with you. o Learn to see together o Focus on flow.		☺ Tip ◆ Tollgate ◉ WIP ▽ Critical Step ✚ Team Safe
	Observe STAT sheet exchange	Observe, coach and mentor each manager and supervisor on the daily stat sheets **(at least once/week)** • Remove barriers- If the barrier needs escalation you own it until it is resolved- Document needed follow up on *VP Morning Standard Work Open Issues Template* • Provide recognition to individuals on the unit who are doing great work		
2	Observe Defect Huddle	Join Unit teams *at least weekly* to coach and develop the manager, supervisor and team Observe these processes during huddle and coach as needed: • Creating assignments • Establishing daily priorities with the team • Establishing the discipline of daily follow through as a team. • Setting the tone of the day by asking: What do you intend to improve today?		

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Appendix 2. Manager Morning Standard Work

Manager Morning Standard Work

Last Updated	10/15/09	Owner	Kim Barnas	Performed By	Manager	Work In Process
		Revised By	Patsy Engel	Rev. Number	2	
Takt Time	2 hours	Trigger	0800 each morning	Done		

Standard Work

	Major Steps	Details (if applicable)	Time	Diagram, Work Flow, Picture, Time (
1	Stat Sheet	Update stat sheet with Supervisor Remove barriers-escalate when appropriate	0800-0830	😊Tip ◆Tollgate ◍WIP ▽Critical Step ✚Team
2	Defect Huddle	(See huddle SW) • Identify defects • Create assignments • Establish daily priorities with the team • Establish the discipline of daily follow through as a team.	0830-0845	
3	Go to Gemba	**Understand the work of the day** **Tone should be uplifting and supportive-** • Stand in the circle and observe the flow, seek to understand. Identify defects. Develop a plan to share with the team. • Bring supervisor at least weekly to stand in the circle with you – Learn to see together. Focus on Flow. • Team Building – recognize staff for good work **Communication:** • Plan a intentional conversation with individual staff that shows you support them and their work • Provide positive reinforcement and/or constructive feedback **Coaching/Mentoring:** • Reinforce link between work staff are doing to unit goals • Encourage them to problem solve defects with the team and bring forth potential top contributors and solutions approaches • Model PDSA thinking • Supports continuous learning • Model-coach-correct Standard Work • Teach in the work **Audit: Will need a process to audit priority SW** • Everyday audit a piece of SW and twice a week do it with your supervisor • Identify actual errors/defects	0915-1000	

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Appendix 3. 3 Southwest Supervisor Daily Work

3 Southwest Supervisor Daily Work

Last Updated	12/1/09	Owner	Leah Gassner	Performed By	Clinical Supervisor	Work	1
		Revised By	Shana	Rev. Number	4	In	
Takt Time		Trigger	0700	Done	1530	Process	

Leader Standard Work
- Start new Standard Work sheet for each shift
- Document item completed in ☐ column
- Record comments for not completing during scheduled time and other defects noted
- Complete daily tracking and pareto

Standard Work

Time	Major Steps	Details	✔☐	Comments
Ongoing and Various	Attend meetings	-Adjust standard work to attend scheduled meetings		
Ongoing and Various	Attend assigned discipline GEMBAS	**Monday's at 3pm:** Weekly huddle with core Collaborative Care representatives (CM, RPh, Hospitalists, Nursing); mostly done at 3SW tracking center **Tuesday (2nd of each month) at 10:30am:** IT GEMBA on 3 SW to review IT issues list (posted on the 3 SW break room door) **Wednesday at 3pm:** Care Management, huddle in Alcove 1		
0700-0703	Check phone messages	-Identify if there are any key issues needing to be followed up on (prioritize if multiple)		
0703-0705	Audit upcoming patient/nurse assignments	-Validate that the resource/clinical lead has made appropriate assignments for patient census and acuity along with staff working -Assure that team assignments are even with experience/less experience -Make any real time adjustments/changes as needed with coaching/mentoring		
0705-0710	Review Tracking Center	-Look at activated lanes to see trends or identify barriers -Review bundle compliance and follow up with any misses or ask questions if unknown -Initial on the sign in log		
0710-	Audit Tollgate	-Follow up with the night staff if tracking is incomplete		

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Appendix 4. 7A–7P 3 Southwest Floor Lead Standard Work

7A-7P 3 Southwest Floor Lead Standard Work

Last Updated	12/1/09	Owner	Leah Gassner	Performed By	Lead RN	Work In	1
		Revised By	Shana Herzfeldt	Rev. Number	12	Process	
Takt Time	12 hours	Trigger	New Shift begins	Done	Lead report to next shift		

Leader Standard Work   DATE: _____
- Start new Standard Work sheet for each shift   INITIALS: _____
- Document item completed in ☐ column
- Record comments for not completing during scheduled time and other defects noted
- Store in Lead Standard Work binder in Alcove 2

GOAL: 1) All Clinical Leads to perform consistently so staff know what to expect
**   2) Learning to see**
**   3) Attempt to be proactive versus reactive**
**   4) Support staff**

Time	Major Steps	Details	✔☐	Comments
Start of shift	Welcome any Flex Staff	-Review welcome flex staff binder with flexed staff (located in Alcove 3). Be sure to answer any questions the staff member may have. -Determine mentor (if needed) for flexed staff and be sure survey is completed with flexed staff and mentor at the end of the shift (Heartbeat/Webs/Flexible Staffing) -Refer to policy #818: Flexible Staffing Guidelines as needed.		
0700-0725	Patient Report	- Ensure standard work is being followed with shift change report; follow up with staff as needed, real time if able. -See Lead and Staff Report Standard Work		
0725-0730	Defect/Review Huddle	-Gather at the tracking center to discuss one driving metric for the unit (see Tier Two Daily Performance/Defect Review Huddle Standard Work)		
0730-0735	Ensure Tollgate and PCB tracking is complete	-Be sure there is completion of tollgate tracking from previous shift -Identify discharges, tollgates not met and delays -Approach night shift staff as needed to complete tracking -See Tracking Tollgate Standard Work -See Production Control Board Standard Work		

AP4

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
Appendix 5. Daily/Weekly Stat Sheet						
VP Daily/Weekly Stat Sheet	**Department: Inpt Oncology**					
Dates	Monday	Tuesday	Wednesday	Thursday	Friday	**Notes**
Daily Measures						
Safety						Monday
How many Patients/Families or staff are at Risk?						
Quality						
Any Quality Opportunities or concerns? Falls, bundles, med rec/errors						
Patient complaints/Follow Ups						Tues
People : Any Staff with Problems/Barriers?						
Who needs the most support today						
Any Physician or Leadership issues?						Wed
Any thing, staff or provider to recognize or celebrate today?						
Delivery						
Any areas that Demand exceeeds Capacity						
For Oncology- Any non- oncology pts on the floor ?						Thurs
How many filled beds ?	16 beds	16 beds	16 beds	16 beds	16 beds	
How is care management helping to progress care today						
How many discharges planned today?						
How often do we get our discharges out by noon??						Friday

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Appendix 6. Daily Performance Review/Defect Huddle-Standard Work

Daily Performance Review/Defect Huddle-Standard Work

Last Updated	1/26/2010	Owner	Patsy Engel	Performed By	Manager, Supervisor, Leads and Staff	Work In Process
		Revised By	Kim Barnas/Patsy Engel	Rev. Number	4	
Takt Time	10-15 min	Trigger		Done		

Standard Work **Purpose:** This daily review is focused on process improvement. To identify defects, create assignments, and establish the discipline of daily follow through as a team

	Major Steps	Details (if applicable)	Time	Diagram, Work Flow, Picture, Time Grid
1	Manager, superviosr, leads and staff gather at Improvement Center			Tip Tollgate WIP Critical Step Team Safety
2	Manager or Supervisor shares learnings from morning stat sheet.	• Based on stat sheet what are the lead, supervisor and manager working on today?	1-2 min	**General Questions to Ask About Any Issue**
3	Briefly review with team the previous day's performance. This discussion should center around both the driver metrics and daily key processes being performed by the staff.	Ask the team these questions: • "What happened yesterday in your work that was a defect that we could improve to make your work flow better today?" • "What happened yesterday that we could improve on to make the patient experience better today?"	5 min	✓ Did the process perform as expected? ✓ Did any new defects surface? ✓ Were any process changes implemented since last huddle? ✓ Any new changes to standard work? ✓ What is working in the process or not working based on the tracking? ✓ What additional information might be helpful to understand defect(s)? ✓ Can we get that information?
4	Based on above discussion, add possible solutions, "just do its", or agreed upon experiments to actionable items log or wait work board with assignments for follow through	• Involve the team in ownership and experimentation. • Use a PICK chart to prioritize solutions or experiments. • Develop a problem statement, gap analysis and countermeasure to experiment with in the next 2-3 days. (This should be a rapid cycle improvement using PDSA thinking) • Document using a PDSA template; don't worry about using it perfectly. • Study the defects you are already working on, do not have more than 2-4 in play at one time. • Use prioritization and work wait board to capture defects waiting to be worked on.	5 min	✓ Do you anticipate any potential defects? ✓ What could go wrong today? ✓ Any barriers today? ✓ Are we ready to have a good day today

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Appendix 7. BPS-Monthly Performance Review-Manager

BPS-Monthly Performance Review - Manager

Last Updated	09/02/09	Owner	Patsy Engel	Performed By	Manager	Work In Process
		Revised By	Patsy Engel	Rev. Number	3	
Cycle Time	60-120 mins	Trigger		Done		

Standard Work

#	Major Steps	Details (if applicable)	Time	Diagram, Work Flow, Picture, Time Grid
1	Monthly Performance Review should be scheduled between the 4th and 5th business day of the month. Those attending will be that Manager's leadership team.	VP SHOULD BE INVITED TO THIS MEETING EVERY QUARTER	PLAN	😊 Tip ◆ Tollgate ◉ WIP ▽ Critical Step ✚ Team Safety
2	The agenda for this meeting is this Standard Work. Note that the agenda intentionally follows the format of the metrics Safety, Quality, People, Delivery (Service and Timeliness), and Cost.		PLAN	
3	Begin the meeting with reflection on the last meeting, to include review and follow-up to any commitments from the previous meeting.		DO	
4	At this time each Driver Metric Owner will report out.	Beginning with the Safety lane. Driver title is _____ Target is _____ Actual for the month of _____ is _____ which does/does not meet target. Year to date is _____ which does/does not meet target.	DO	
5	If the Driver Metric target is being met (GREEN), feel free to share any celebration, then move on. If this is the first month the Driver Metric does not meet target (RED), share the top contributing reason why and the amount of the gap this contributor covers and move on. (Must cover 80% of gap.) Manager to ask metric owner if they have tools and resources to work on metric. If this is the second month the Driver Metric does not meet target (RED), share countermeasure summary.	This meeting time is not used to problem solve, but may be used to deploy resources, make specific team decisions, or ask for support. Watch Indicators: Only discuss those that are out of control. All though all watch indicators need to be updated EVERY month. Only those that have been RED for 2 months should be discussed. Again this is not problem solving, however the top contributor will be shared, by the metric owner, and a decision to move or not move the metric to a Driver will be made.	DO	
6	Next the manager will report out the current results (month and Year-To-Date) for the Hospital Leadership Team Drivers.	NOTE: this should be informational, not problem solving. Clarifying questions only.	DO	

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Appendix 8. Daily/Weekly/Monthly Standard Work Calendar

Daily/Weekly/Monthly Standard Work Calendar

Rev. 5
08/28/09

Daily Standard Work

Daily Checklist:	Monday	Tuesday	Wednesday	Thursday	Friday
- Spend Time at the Gemba Listening to Understand - Ensure Daily Stat Sheet is up to date (data collection) -Daily Performance Review/Defect Huddle - Ensure proper support with Leadership Team - Review email and respond. - Review voicemail and respond. - Review and work personal "To-Do List". - Build relationships. **NOTE:** to advance to the next line within a cell hold "ALT" and press "ENTER" key					

Weekly Standard Work

Weekly Checklist:	Week 1	Week 2	Week 3	Week 4	Week 5
- Review next weeks activities and calendar. - Modify next week standard work based on activities. - Ensure Monthly Scorecard is populating					

Monthly Standard Work

Monthly Checklist:	- Lead Monthly Performance Review - Ensure Updates to Monthly Scorecard - Developmental Meeting with 1-Up	- Developmental 1:1 meeting with direct reports. - Personal development time -	- - -

Quarterly Standard Work

Quarterly Checklist	- -

Annual Standard Work

Annual Checklist:	- Site Celebration	- -	- -