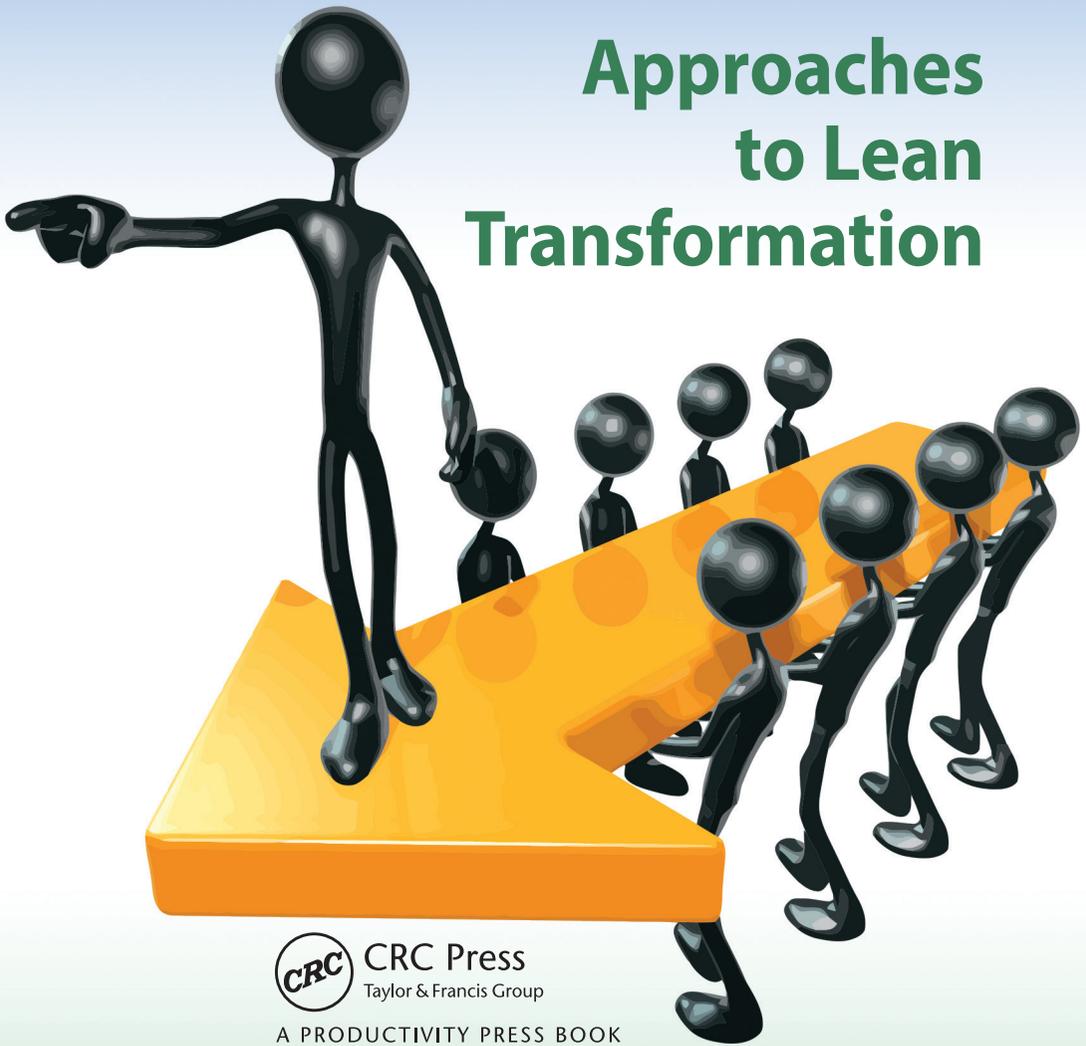


Lean Leadership for Healthcare

Approaches
to Lean
Transformation



CRC Press
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A PRODUCTIVITY PRESS BOOK

Ronald G. Bercaw

Foreword by John P. Poole, SVP, ThedaCare Improvement System

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Boca Raton London New York

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Taylor & Francis Group, an **informa** business

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CRC Press
Taylor & Francis Group
6000 Broken Sound Parkway NW, Suite 300
Boca Raton, FL 33487-2742

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Version Date: 20130321

International Standard Book Number-13: 978-1-4665-1555-0 (eBook - PDF)

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Foreword

Leadership and management competencies are necessary to ensure organizational vitality. These two competencies should be specified for each assignment with responsibilities to serve the members who directly create value for the customer. The competencies must include the curriculum for *knowledge*, direct observation of *skill*, repetitive practice of *behavior*, and *judgment*. Specifically, these assignments must bring clarity to the development and improvement of both people and processes for the purpose of delivering products and services to the customer.

The organization's purpose (the products and services) must be clearly defined. The strategy of what will be the organization's point of differentiation from its competitors and strategy deployment and the creation of those new competencies to support strategy also must be clearly defined.

In a Lean organization, every member should have the competencies for their assignment specified. All assignments have clear processes from recruitment to succession. The supervisors must ensure that their reports on development match the requirements of the processes to which they are assigned.

A system of highly organized work, divided by value stream, process, and steps to deliver products and services to the customer, must be defined. Clear challenges are issued to promote improvement by the maintenance and innovation to this structure of highly organized work. Through this improvement work, the leaders and management develop their competencies and those they serve.

Leaders/managers must acquire the competencies necessary to focus the organization on the purpose, create and deploy strategy, and develop and improve people and processes. When done properly, an organization can deliver performance previously thought unattainable, and with far fewer resources.

Lean leadership is needed in healthcare to solve some of the chronic issues facing the industry today. Declining reimbursement rates, an aging population, a shortage of clinical resources, and less than acceptable clinical quality have taken our industry to a point where dramatic transformation is necessary. *Lean Leadership for Healthcare* is a book that can lead the way toward transforming

healthcare as we know it. The challenge within the industry is in having the right vision on how to achieve this elusive transformation. A leadership vision needs to be created to set the right direction, in an appropriate timeline to create the sense of urgency required to overcome the resistance to change.

Fortunately, there are a handful of healthcare organizations and a host of industrial organizations that have successfully transformed using Lean thinking. Using the transformed organizations presented in this book as a model, we can now understand how these transformational efforts were led, and we can leverage their lessons learned to take our industry to a better place.

John Poole

Senior Vice President

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Preface

In late March 2011, I completed the manuscript for my first book titled *Taking Improvement from the Assembly Line to Healthcare* (CRC Press). This book was my translation of the application of Lean within the healthcare industry. While not everyone was able to figure out what the assembly line had to do with improving healthcare, the book's title was an homage to the greatest management system in operation across the world today, the Toyota Production System.

Before the book was published, I had a chance to reflect on the message I intended to convey to the many dedicated healthcare professionals working hard to deliver worldclass care to the patients, families, and communities they serve. The book was a comprehensive approach to Lean improvement. Topics included understanding of the fundamentals of Lean improvement, understanding the tools and the applications of these tools to help us “see and eliminate” waste in the healthcare setting, and a review of several case studies that demonstrated the change that can occur in terms of both performance and culture when a focused team of individuals applies the Toyota Production System in the healthcare setting. I included the necessary steps an organization must take prior to applying the Lean model, and closed with a chapter on leadership behaviors essential for success.

Throughout the development of *Taking Improvement from the Assembly Line to Healthcare*, I simultaneously operated my consulting business. My company services a wide range of clients in creating a culture of improvement through the application of the Toyota Production System. The majority of this client base consists of healthcare organizations servicing patients and clients with the continuum of care. Although it was critical that our consulting practice dedicate a large amount of time to teaching organizations the tools and techniques of Lean improvement, I found that I was spending the majority of my time teaching organizations to lead change and my efforts were largely focused on leadership development. Perhaps the most important part of creating a culture of continuous improvement is “leading” the change. Despite this fact, there are few resources available that help to develop these skills at the various management

levels. This book, which you are about to read, *Lean Leadership for Healthcare*, was created to provide healthcare leaders a resource on how to *lead* transformational improvement within the healthcare industry.

Why leadership? Why not management? I frequently hear in my work that “our organization needs to better the job of managing improvement.” Rarely do I hear, “We need to do a better job leading improvement.” Organizations certainly spend a lot of time on management development, and universities and colleges teach myriad management courses. Fewer university courses and public workshops are dedicated to leadership, and organizations spend significantly less time on leadership development. What’s the difference?

Management is the set of work processes that keep a complex organization—one filled with departments, people, and technology—operating effectively and efficiently. There are many aspects of management, including planning, budgeting, staffing/scheduling, and controlling. Organizations spend a lot of time and resources optimizing these management systems. *Leadership* is the set of processes that creates organizations and then helps these organizations change to meet ever-evolving business conditions. The key aspects of leadership include creating a future vision (the direction of the organization), aligning the resources, and then inspiring people to realize this new future.

In creating a culture of improvement, are we trying to create a management system to plan, budget, organize, control, and staff our way to improvement? Or, are we trying to create a new direction for the organization, aligning the resources and then inspiring our people to realize this vision in spite of the obstacles we are sure to encounter along the way?

In reality, we do need some management systems to be successful. I will discuss several of the management systems, tools, ideas, and behaviors necessary to foster a culture of continuous improvement. However, we also need plenty of leadership. This book will provide you with many Lean leadership approaches, thoughts, visual tools, and applications to put your healthcare organization on its way toward world-class performance and culture.

This is a place your organization has likely never been, and any transformation process will require great leadership. Done well, you can create an environment where worldclass healthcare quality, patient safety, and customer service are the norm. The workplace can be transformed to one where medical staff are engaged in their work and inspired to do better and be better every day. You can help shape a healthcare system that delivers more “value.” Value from a healthcare system perspective is broadly defined as outcomes divided by cost. My goal is to help you create a healthcare system that, through your people, continually improves outcomes at lower and lower costs.

There will be plenty of skeptics along the way, and perhaps some of you who are reading this book are already skeptical. “Lean” is not common sense; rather,

it is counterintuitive. It takes a long time to learn and a lifetime to master. But, those organizations that have applied Lean thinking to their processes, with the diligence of effective management and strong leadership support, are already realizing the benefits of their efforts. And, many of the benefits far exceed what was thought possible just a few years ago. If you speak with a “Lean” hospital, “Lean” clinic, or “Lean” healthcare service provider, they will tell you the reward far exceeds the efforts. To be successful, these organizations had to provide the leadership to create their future state. I hope to leverage many of their leadership stories, successes and failures, plus a few of my own, to help you transform your organization using Lean leadership.

Acknowledgments

The final product you will be reading has been enhanced by review and contains valuable Lean input from Scott Brubaker. He spent many hours critiquing and editing the manuscript, and he has my gratitude. Heather Wood policed my grammar and made my attempt at writing “readable” by the rest of the world. The writing of the manuscript took about ten months and went back and forth between Heather and me several times. Thanks, Heather, for all your help.

Taylor & Francis Group senior editor, Kristine Mednansky, and project coordinator, Kathryn Everett, made my job much easier than it could have been and provided countless valuable insights on the process of writing and publishing. I am thankful to have them and their valuable guidance.

I am grateful to Rouge Valley Health System in Toronto, Ontario; Mackenzie Health in Richmond Hill, Ontario; and Spectrum Health in Grand Rapids, Michigan, for providing photographic and illustration copy for the book. These three organizations are doing some fantastic Lean work and their patients, medical staff, and management are all better off because of these efforts.

For the many organizations that are using Lean management systems, you have my respect. Lean enterprise transformation is very difficult. I know, having gone through three different transformations as a leader, and having helped dozens of organizations over the past twelve years. I can promise you that if you stay true to the Lean principles and avoid taking any shortcuts, your organization, your patients, and your staff will be rewarded for your efforts. I know it doesn't always feel that way throughout the process, but doing things the right way and for the right reasons will always be rewarded.

To John Poole and Kurt Knoth, two friends and great Lean leaders, thank you for your words of wisdom about the book.

Finally, to my wife, Tami, and family (Heather, Ashley, Michael, and Ryan), thank you for allowing me to sequester myself in my office for days on end and letting me write this work. I love you all.

About the Author

Ronald Bercaw is the president of Breakthrough Horizons, LTD, a management consulting company specializing in worldclass improvement through the application of the Toyota Production System, more commonly known as “Lean.” With over twenty years of experience in operations, his Lean management experience was gained through multiple enterprise transformations in different industries including custom packaging, power reliability electronic assembly, and test and measurement products.

Educated at Purdue University, Bercaw learned the details and disciplined applications of Lean principles, habits, and tools from both the Shingijutsu Sensei and their first generation disciples. Working in both shop floor and above-the-shop-floor areas, he has vigorously strived to remove waste from businesses through the involvement and ideas of the people doing the work.

Bercaw has consulting experience in the healthcare sector (U.S. and Canadian health systems including primary care, acute care, and community applications of both clinical and back shop improvement), the commercial sector (administrations, manufacturing, distribution, supply chain, and engineering), and the public sector (U.S. Army, U.S. Navy, U.S. Air Force including maintenance, repair, and overhaul (MRO) assignments, Pentagon, and Surgeon General assignments). He is also the author of *Taking Improvement from the Assembly Line to Healthcare: The Application of Lean within the Healthcare Industry*, published by CRC Press (2012), which is the recipient of the Shingo Research & Professional Publication Award and has been recognized for advancing improvement knowledge.

Chapter 1

Lean at a Glance

Leadership and learning are indispensable to each other.

John F. Kennedy

What Is Lean Healthcare?

Lean is a management system, predicated on the Toyota Production System, which is used to deliver world-class quality and customer service to patients, caregivers, and their surrounding communities. The Toyota Production System (yes, the same Toyota that makes personal transportation in the form of cars, trucks, and sport utility vehicles) is the comprehensive business approach and corresponding culture Toyota embraces toward continuous process improvement to deliver compelling value to their customers. The words *Lean* and the *Toyota Production System (TPS)* are used synonymously. Technically, these two terms are not identical, but both words are recognized as being one in the same, so I will use the term Lean going forward. Before I describe what is meant by continuous improvement, it will be helpful to better understand a few essential Lean terms. After we understand these Lean concepts, we can more easily define Lean healthcare.

Value-Added

Lean improvement is based on two themes; Continuous Improvement (a different way to state elimination of waste), and Respect for All People (Figure 1.1).

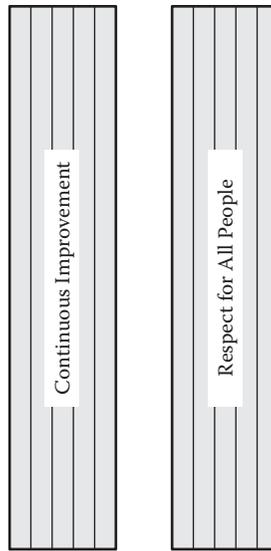


Figure 1.1 Themes of Lean improvement.

To understand the first theme, continuous improvement, it is necessary to understand the value-added/nonvalue-added principle. Every activity that occurs in any organization falls into one of two categories; value-added or nonvalue-added. A value-added activity when producing a physical product is easy to grasp. Activities that change the form, fit, or function of the product would be considered value-added. Another definition of value-added activity is any action (either product or service related) for which a customer is willing to pay. An industrial example of value-added activity might include drilling, painting, heat treating, or assembly of a product. For a service, a value-added activity might include help desk services offered on the telephone. Within healthcare, a value-added activity is any activity that directly meets the needs of a customer. An example of healthcare value-add would be the action of a surgeon completing a surgery. The need to have a problem resolved through surgery is directly meet.

Nonvalue-Added

Nonvalue-added is by default, the opposite of value-added, or any activity that takes time, space, or resources, but does not change the form, fit, or function of the product. Another definition would be any activity taking time, space, or resources for which the customer is not willing to pay. Examples of

nonvalue-added activity would include conveying a part from one machine to the next or counting inventory items to ensure accuracy of on-hand quantities. Within healthcare, an excellent example of nonvalue-added activity would be filling out insurance forms. No patient would “pay” to complete this activity. Filling out insurance paperwork doesn’t directly meet a patient’s need to receive assessment, diagnosis, and treatment for a medical condition.

A third category of activities that organizations perform are activities required by law or by business obligations (accreditation or third-party certification). These might include following Occupational Safety and Health Act standards (OSHA), or ISO standards, or Generally Accepted Accounting Principles (GAAP). While it can be tempting to classify these differently, at the end of the day, many of these activities are usually nonvalue-added to the end customer. Changing the classification of the activity doesn’t change the value-adding/nonvalue-adding principle.

In healthcare, the definition of value is slightly different. A value-added activity is any activity that *directly* meets the needs of the customer. In order to determine if a step is value-added, you need to be clear on two things: (1) who is the customer and (2) what are their needs? Many times, in healthcare the dialog jumps from the customer being the patient and/or the caregiver to the customer being the provider or the administration, etc. It is helpful to remember value is always specified by the *customer*. And, there can be only one.

One must determine who is creating the *pull* for the services needed in order to understand who the true, single customer is. So, if we are trying to figure who the customer is in a surgical procedure, we try to understand where the pull (need) for the service comes from. Because we would not need a surgical center, sterile processing, materials and supplies, equipment, surgical staff, a surgeon, a billing department, etc., without a patient needing surgery, the patient is the customer. In this surgical procedure, value will be specified by the patient, so value-added and nonvalue-added activity is from the eyes of the patient.

The second decision we need to make is to define what the customer *needs*. Healthcare professionals often have expertise and knowledge that can be very helpful in determining customer needs. However, it is not exclusively the role of the staff and provider to specify the customer’s needs; nor is it the insurance company’s role. With information available at a click of a mouse, many customers (patients) are quite capable of specifying their needs. As I tell healthcare professionals, when I work with highly skilled engineers designing new products, they are quick to articulate that the consumers do not know what they want/need. The engineers have to make those decisions for the consumers because they have the technical expertise. I think every consumer can determine the features and benefits he/she is looking for in a new product or service. It would be quite expensive, and impractical to drag an engineer around with us

every time we shop for a product. As a consumer, we have no problem specifying value-added and nonvalue-added activity within our purchases. This same theory holds true with patients when they seek medical services. Even though you may be the healthcare “engineer,” the patient is generally quite capable of determining his/her needs. Your job as the service provider is to identify the activities that directly meet those needs, as those are the value-added activities. To further illustrate the differences between value-added and nonvalue-added activities, let’s discuss a clinic visit to see your doctor. Being an outdoor enthusiast, you fell while skiing a black diamond trail during a recent snow skiing trip, and your knee is hurting. The physician provides an examination and gives a diagnosis of an ACL (anterior cruciate ligament) injury. To further refine this diagnosis, he or she orders you to get a CT (computed tomography) scan. When one gets a CT scan, one will likely need to schedule the exam date and time, register with someone when on arrival, and complete some paperwork. While all of these activities are common during a typical CT exam experience, none of them will directly meet your needs. So, the collection of all of the activities, as described, would be considered nonvalue-added activity.

To summarize, in order to determine the value-added activity, we need to identify the customer, specify his/her needs, and determine which activities directly meet those needs. The customer in this process is you, the patient needing the exam. Your “needs” include the examination and the corresponding results. The value-added activities would be the actual exam (which takes minutes) and the actual reading of the exam (which also takes minutes). But, what about the cleaning of the table, the preparing for the exam, the transcribing of the results, the charting of the activities, the sending of an invoice, etc. These are all classified as nonvalue-added activities. The understanding of value-added (VA) and nonvalue-added activity (NVA) is the first lesson that must be learned in improvement, and it is not always an easy lesson to understand. When we can understand both VA and NVA activity, we can start to look at the ratio between the two activities. A typical process is 95% NVA to 5% VA. World-class organizations understand this and take advantage of the insight this ratio provides (Figure 1.2).

Improvement using Lean fundamentals involves the identification and elimination of nonvalue-added activity. Another term for nonvalue-added activity is *Waste*. When 95% of the activity is nonvalue-added that leaves a *lot* of room for improvement. Focusing on nonvalue-added activity provides two benefits. First, the improvement potential is much larger. Would you rather pay attention to the 95% opportunity or the 5% opportunity? This is why Lean organizations can and do routinely show 25 to 50+% improvements. They understand the value-added/nonvalue-added principle and they choose to play in the 95% space. Secondly, the cost of the improvement is significantly less. When we focus on eliminating nonvalue-added activity, we are in essence “stopping” some

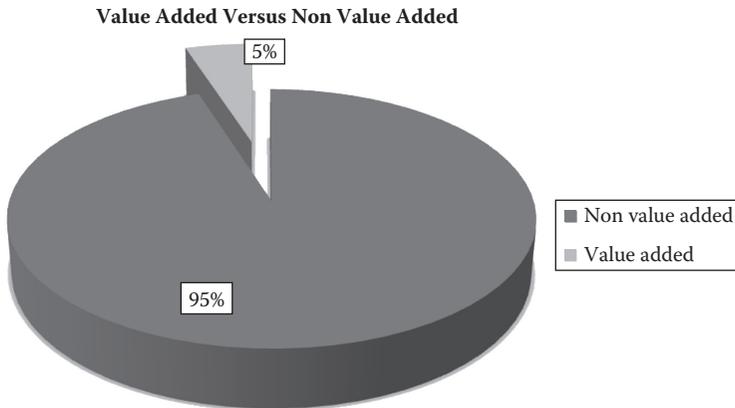


Figure 1.2 Value-added/nonvalue-added principle.

kind of work. How much does it cost to stop doing something? The definition of nonvalue-added activity is an activity taking time, space, and resources, but not directly meeting a patient's needs. So, if we eliminate nonvalue-added activity, then we free up time, space, and resources. These newfound resources can be used to add even more value to our customers.

First Theme of Lean Improvement: Continuous Improvement

Earlier I discussed that Lean improvement is based on two themes, continuous improvement (the elimination of nonvalue-added activity) and respect for all people. We just spent a fair amount of time discussing value-added and nonvalue-added activity. Understanding this concept is the foundation of continuous improvement. In the simplest terms, improvement consists of seeing nonvalue-added activity and eliminating it. Lean organizations frequently shorten this phrase to "seeing and eliminating waste."

The theme of continuous improvement, however, has two other tenets. Culturally, we want to create a work environment where we strive to meet targets using *courage* and *creativity*. Courage implies making individual and team decisions in the best interest of serving the customer. For example, clinic hours of operation may best serve their customers from 1 to 9 p.m. However, many clinics have been comfortable working from 8 a.m. to 4 p.m. A courageous decision would include altering work hours in the best interest of the customer. How many times have you given up your lunch break to get something accomplished, only to find out the organization is closed during traditional lunch hours?