

## Lean Leadership In Healthcare

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### Abstract

The key to understanding how to implement Lean healthcare successfully is to realize that Lean leadership is an integral part of the Lean Operating System, not an afterthought. The principles of Lean leadership can be applied in Healthcare, where 'Lean methods' can be used to realize the benefits predicted by the academic models. The principles are then developed into practical behaviors that can be demonstrated, understood and replicated using rapid learning techniques, with particular focus on team leadership.

Lean leadership is the missing link between theoretical solutions and application in practice. Instituting this link is the difference between superficial attempts at implementing Lean—where the tools and techniques are evident, but the behaviors haven't changed—and full transformational deployments where the entire organization embraces Lean from the bottom up and the top down.

The critical success factor for accelerating the adoption of Lean in healthcare organizations is leadership. The healthcare leader's key role in leading other stakeholders in the value stream is examined, and comparisons are made to leadership in various Lean operating systems.

Healthcare organizations have a growing number of opportunities to embark on the Lean journey, yet the claimed benefits often lack credibility. This leads to the danger that a "Lean" façade is bolted onto the existing operations to attempt to convince demanding insurance payers, regulatory agencies, patients, and doctors that they are forward-thinking organizations, and that their apparent skills in Lean will earn them another "tick in the box." This paper outlines the practical benefits of embracing Lean to fundamentally change the healthcare value stream, to improve the working systems of doctors and nurses, to provide compassionate care to their patients, and to deliver lasting tangible benefits to the community as a whole.

## INTRODUCTION

This paper suggests that those implementing Lean in healthcare should not be overwhelmed with the toolbox of Lean tools and techniques, but should focus on the leadership behaviors that are crucial for Lean to progress beyond limited pilot studies, allowing it to make a real impact on healthcare organizations and the wider industry as a whole.

There is some research and a few case studies on why Lean is applicable to healthcare. There is some understanding in the industry of Lean tools, techniques and terminology. There are some high profile success stories. Yet has Lean really made the impact on healthcare that is possible? Has it changed the culture and behavior of nurses, administrators, and doctors in the industry? Would the claimed benefits have been realized without Lean? Are partnerships, integrated development teams, and consistent project planning really Lean or just good clinical practice?

## WHERE DO I START?

One approach to start to answer this question would be to consider the definitions of “Lean” and “leadership.” Some key thoughts on characterizing these terms are outlined below.

### LEAN

The origin of the term is considered to be from the seminal textbook “The Machine that Changed the World.” Researcher John Krafcik, working on the International Motor Vehicle Program studied the differences between the Japanese and US motor industries, and commented that Toyota is Lean because it uses:

*“half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires keeping far less than half the needed inventory on site, results in many fewer defects, and produces a greater and ever growing variety of products.” (Womack, Jones and Roos, 1990)*

A more general interpretation of Lean healthcare is:

*The relentless elimination of waste in every area of operations with the aim of reducing inventory, cycle times and costs - so that **delivering higher quality patient services** can be provided in the most efficient, effective and responsive manner possible, while maintaining the economic viability of the organization.*

### LEADERSHIP

Trying to define “leadership” is an industry in itself, with a seemingly never-ending quantity of papers and books offering insights, sometimes new and often summaries of existing work. Just one definition, which has been used successfully in developing Lean leadership skills, is shown below:

*“Leadership is the capacity to influence others through a dynamic, reciprocal covenant aimed toward identifying and accomplishing collective purposes” (Parisi-Carew, 2000)*

### LEAN LEADERSHIP

There is a growing realization of the importance of leadership in Lean, but studies tend to either be too theoretical or simply “truisms” which reiterate common sense. This paper attempts to offer some original consideration to what Lean leadership is and why it is important in healthcare.

## THE PROBLEM

As noted above, it is difficult to agree on what Lean and leadership are. It is often easier to agree to what they are not. The above definitions serve some purpose, but there are still widely differing interpretations of what application of Lean leadership means in practice. For example, some proponents of Lean state that it's common sense or best practice. Others state that it is inherently counter-intuitive and that is why Toyota and other leading proponents of Lean remain so confident that the traditional West will never understand:

*"We are going to win and the industrial West is going to lose out: there's nothing much you can do about it, because the reasons for your failure are within yourselves.*

*Your firms are built on the Taylor model; even worse, so are your heads. With your bosses doing the thinking while the workers wield the screwdrivers, you're convinced deep down that this is the right way to run a business.*

*For you, the essence of management is getting the ideas out of the heads of bosses and into the hands of labor.*

*We are beyond the Taylor model. Business, we know, is now so complex and difficult, the survival of firms so hazardous in an environment increasingly unpredictable, competitive, and fraught with danger that their continued existence depends on the day-to-day mobilization of every ounce of intelligence.*

*(Konosuke Matsushita, 1979)*

Consequently there can be confusion at all organizational levels in many service-related industries. In healthcare, some see 5S, floor painting and Visual Displays as being Lean, while others see it as meaning reduced inventory through developing supply chain partnerships. Others claim that Lean is a toolbox and demonstrate proficiency in an exhaustive range of tools and techniques from Quick Changeover of operating room's and birthing suites to Value Stream Mapping, or from policy deployment to standardization.

Few understand what Matsushita means. It is so much more than technical tools and techniques; Lean is a profoundly different way to think and to behave, and is counter-intuitive to the Western mindset. For nurses and doctors, the care process is best changed "in the heart," where a culture can be created that encourages them to come up with ideas, which in turn, motivates them to quickly act on changes they initiate.

Evidence of the "Toolbox Lean" is all around us. Processes in waiting areas, labs, and patient care units have been mapped to death, events are run to demonstrate how much clutter can be removed from the workplace and supply cabinets, case studies are published, and best practices are shared. Yet seldom do we see a change in behavior, and thus often we find that the results of these well-intentioned activities are little more than fads, or at best short-range initiatives, and the results are disappointing and not sustainable.

"Toolbox Lean" is obvious to see once you know what to look for. The signs are a handful of advocates, often full of enthusiasm, and often some impressive and pragmatic implementation at the workplace, usually demonstrating improvements in space, wait-times, adverse events, and patient safety. The participants who have been involved in the implementation are also usually positive. Yet the acid test is to return a few months later and confirm if the effect had been sustained and if the scope of implementation had widened. The cases of successful sustainment are unfortunately limited. What is being observed is in effect a 21st century Hawthorne Experiment.

Real Lean is not obvious. Indeed it can be disappointing at first sight. This used to often occur when Western companies traveled to Japan (and it probably still happens today)—the worksites could be disappointing—the equipment would be old, the workers would be working slowly, and not all of the toolbox techniques were evident.

What is difficult to see at first glance is the missing link between “Toolbox Lean” and real transformational Lean: leadership.

## LEADERSHIP AND THE TOYOTA PRODUCTION SYSTEM

The origin of Lean is the Toyota Production System (TPS). Leadership is different in TPS, in terms of what leaders think, say and do. Starting with thinking, consider the quote below:

*“A Lean Operating System should actually be called The Thinking Production System. In essence to truly implement Lean the company has to learn to think differently. To be successful everyone must engage in thinking for the company all the time.”*

*(Terayuki Minoura, 2000)*

Leadership is of course fundamental for engaging this different approach in thinking. In this context, leaders are not necessarily top and senior management. Leaders are employees who influence the delivery of services in the PCU, at whatever level of seniority and responsibility. Of course many leaders are senior management and have high levels of responsibility, but leaders in the patient care process may be doctors, nurse managers, nurses or simply employees who are trusted and respected, and are leaders because they inspire others to follow. The leaders can only influence their followers by words or actions. These are summarized as Lean leadership behaviors.

Table 1: Nine Leadership Behaviors

Ref	Behavior
1	Teaches and engages workgroups
2	Respect for people
3	Process Focused
4	Support and Recognition
5	Lead by example
6	Deploy policy and objectives
7	Commitment to standards
8	Long term vision and principles
9	Support the change process

These behaviors have been distilled by experts in the Toyota Production System. However they are relevant for Lean leadership in any environment, including healthcare. To further explain this, these behaviors are defined in more detail considering the role of the doctors and nurses in Lean healthcare.

## WHY FOCUS ON DOCTORS, NURSES, AND SUPPORT TECHNICIANS?

There is a myriad of stakeholders in a typical healthcare organization including patients, doctors, nurses, consultants, suppliers, housekeeping staff, accounting personnel, support staff, etc. Lean always focuses on the value stream and the Gemba (where the work is done). The majority of the value adding occurs in the

patient care unit, and is completed by the nurses and doctors. Traditionally the stakeholder organization may be drawn as a pyramid, similar to an organization chart, with the director at the top, and the workers at the base. These workers can be highly skilled, and are sometimes very specialized. The principle is that directions are given from the top, in a command and control manner. In a Lean philosophy, the pyramid is inverted so that the workers are at the top and are supported by the rest of the stakeholders. The role of the Nursing team leader becomes critical, as this is the role that will be the focus of Lean leadership behaviors. They have the challenging role of being between the reality at the patient care unit and management, convincing their team members that Lean is not just another management fad that the director has read about in an aircraft magazine.

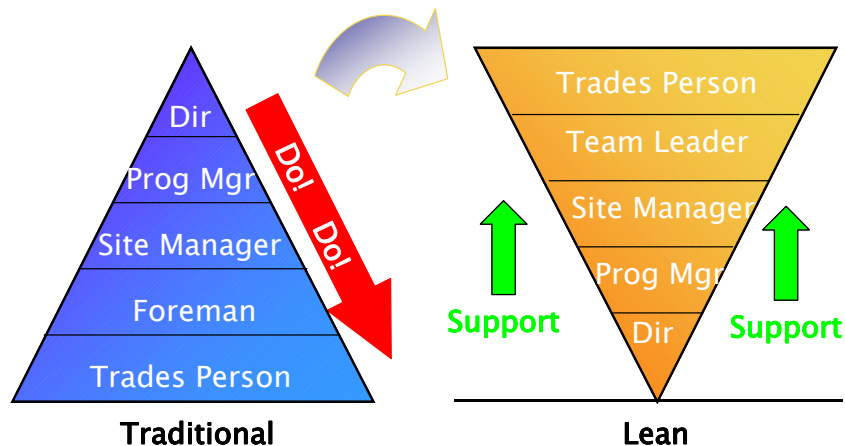


Figure 1: Human Centered Behavior

Being an effective leader at this level is the critical success factor of effective Lean healthcare. Lean leadership can contribute to an operating system in which:

- Rooms are ready when the patient is ready to check in, not waiting for housekeeping or environmental services to play “catch-up” during the shift.
- At a quick glance—the status of any room and patient is available.
- At shift change, the patient status is quickly communicated both visually and in writing.
- Pharmacy orders are accurate, timely and available at the point of use.
- Patients are discharged on time and all patients are confident and feel safe going home.
- Linens and other room supplies are ordered and available using a signal ordering system and all supplies are close to the point of use.
- Imaging tests and lab results are received on time; “stat orders” are not needed.

## HEALTHCARE LEAN LEADERSHIP BEHAVIORS

### 1. TEACHES AND ENGAGES WORKGROUPS

The leaders communicate with the team through systematic habitual site visits and audits of the process. They encourage people to challenge and be creative in their efforts to improve the process. Information is tailored according to members' needs. The leaders involve themselves in group activities (social etc.).

- A Best Practice is for senior team members to regularly go on rounds with physicians—this does include the CFO and CIO.

### 2. RESPECT FOR PEOPLE

The ethos that others are treated as you yourself would expect to be treated is practiced and evident. Leaders recognize that communication is a two-way process. Relationships in the team are developed on the basis of mutual trust and respect. Encourage a diversity of opinions and see errors as opportunities for learning.

### 3. PROCESS FOCUS

When problems are investigated, tackle the process first not the people. Do not blame. As Dr. Edwards Deming taught, "The process is always the problem, but management looks first to the people." Foster a deep understanding of the problem, by leading effective root cause analysis. Make improvements on the process and system. Live to the principle that it's OK to make mistakes as long as we learn from them.

*"Proposed changes should always be structured as experiments." (Spear, 2004)*

### 4. SUPPORT AND RECOGNITION

Encourage the use of a clear escalation process (Andon system) to inspire confidence that the work is valued and that leadership cares, that it is managed effectively. Be available for people, particularly when problems and difficulties are likely to occur (e.g. the start of the day). Likewise ask for support when you as a leader need it and be prepared to help other teams when necessary.

As a leader, direct all support by yourself and others, towards the point where value is added. Recognize individual and team efforts and achievements. Use training to support and develop your team.

### 5. LEADERSHIP COMMITMENT – LEAD BY EXAMPLE

Practice "Go, Look, See" philosophy – go to the point of cause of the problem as quickly as possible, while the evidence is fresh. Indeed, if you commit to spend a significant amount of time in the PCU, you may see the problem occur.

*"There is no substitution for direct observation."(Spear, 2004)*

Be prepared to do and practically demonstrate what you expect of others, yet admit your own mistakes to inspire respect and to encourage others to admit theirs. Use integrity, openness and honesty about abilities and knowledge. It may sound simple, but do what you say you'll do.

### 6. DEPLOY POLICY AND OBJECTIVES

Use and follow master schedules. Keep them visible and easy to interpret in the PCU, rather than remote in the office, on a computer, or in your back pocket. To be useful, it must be reviewed frequently and regularly. Guide and lead your people to understand their worth and their ideas to meet the wider program objectives.

*"Leadership is no longer a matter of motivating those who have subordinated their interest; rather it is working with them to reveal a new future." (Howell, Macomber, Koskela, Draper, 2004)*

## 7. COMMITMENT TO STANDARDS

Understand and use standards to define normal and abnormal conditions. Develop clear, user friendly, visual controls at all levels to help monitor and improve standards. Maintain personal discipline, direct and coach others to keep within standards and procedures. Always react to off-standard and off-target situations with immediate investigation and countermeasure. Don't allow shortcuts and tackle reasons why a standard is overlooked or neglected.

- A birthing center standardizes the way rooms are prepared for post-partum mothers, and is able to reduce labor costs in excess of \$55,000. This is the result of a one-day Value Stream Mapping session, leading to a 12-month implementation of Lean activities across all units.

## 8. UNDERSTAND LEAN VISION AND PRINCIPLES

Promote Lean concepts and principles by actions and decisions. In particular, promote visualization of information and processes. Continually challenge the current care practices. Always relate and confirm activities to the achievement of a clearly defined program and organization vision. Guide others to understanding and working towards a clearly defined vision. Review the team's work for its value and outcomes towards the vision.

## 9. SUPPORT THE CHANGE PROCESS

Understand and know what the changes are and take an active part in the change, demonstrating positive change actions yourself. Indeed where possible, lead the change, identify and remove roadblocks, checking that all the factors for change are in place. Stimulate others and inspire actions towards the future state vision. Identify your own inhibitors, be honest and communicate to help evolve methods to overcome lack of knowledge and confidence. Work one step at a time, check, confirm and then move on (Plan Do Check Act).

*"Workers and Managers should experiment as frequently as possible." (Spear, 2004)*

- At both Luther Middlefort and Mayo ISJ hospital—Dr. William Rupp drafted physician compacts that identified values in use and desired values; putting in place an agreement that met the needs of the physicians and the organization.

## FROM PRINCIPLES TO REALITY

There is no recognized "magic recipe" to transform from traditional leadership / supervision / management to Lean management. There are many books and papers published on leadership every year and many more consultants who will offer to assist. In the end, success is achieved through a consistent and continuous application of the leadership principles discussed in this paper.

The authors thus suggest that a pragmatic approach be taken: -

- Harness an early adoption of some of the Lean tools, gain some early and visible success and then make sure the effort does not become yet another case of "toolbox Lean", by developing practice in the nine Lean leadership behaviors.
- Work with the leaders and managers who have influence in the workplace and develop a vision for their Lean transformation.
- Translate this vision into some tangible metrics that measure the effectiveness of the work.
- Develop a Master Schedule to plan and manage activities required to deliver the change.
- Develop work standards and visualize the work through Visual Management.
- Develop a "Day in the Life" typical day of a Nurse, Team Leader, and Department Managers – use this to develop a consistent structure for these key roles.
- Develop a work confirmation system – a means to teach and engage, focus on the process, and demonstrate commitment to standards.

- Develop a self-assessment framework for each of the nine Lean behaviors, and then use it to develop personal activity plans for each leader and manager. Re-assess on a regular basis.

Take note of the statement there is “no such thing as organizational change, only personal change” (source unattributed). Lean Leadership in healthcare, as in any other industry, is dependent on the transformation and behavior of individuals. Training courses, culture change initiatives, rapid improvement teams, etc., will have only limited impact unless Lean leadership is developed on a one-to-one basis. The good news, however, is that behavior can change very quickly. Given the right support, the rest of the stakeholders will begin to mimic the Lean leadership behavior.

## CONCLUSION

Lean has the potential to radically improve healthcare organizations, yet its impact has often been limited. This paper stresses the importance of Lean leadership in making a larger and broader impact in healthcare. Recognizing the difficulties of defining Lean and leadership, never mind Lean leadership, the authors return to the origins of Lean, the Toyota Production System, and explain why “real” Lean is so much more than a toolbox of techniques. The emphasis in the Toyota Production System on human centered work is explained in the context of the critical role of the organizational leader in leading Lean healthcare. The leader role is used to illustrate how to progress beyond “toolbox Lean” using a framework for developing Lean leadership, called the Nine Leadership Behaviors. Finally, a pragmatic approach is summarized on how to turn these principles into meaningful action. The authors’ experience is that this can be surprisingly rapid and that the personal changes in leaders’ behaviors can both be infectious and astonishing. That is the definition of true Lean leadership.

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