

Chapter I – Kaizen and Continuous Improvement

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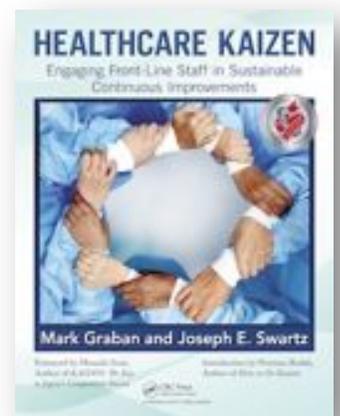
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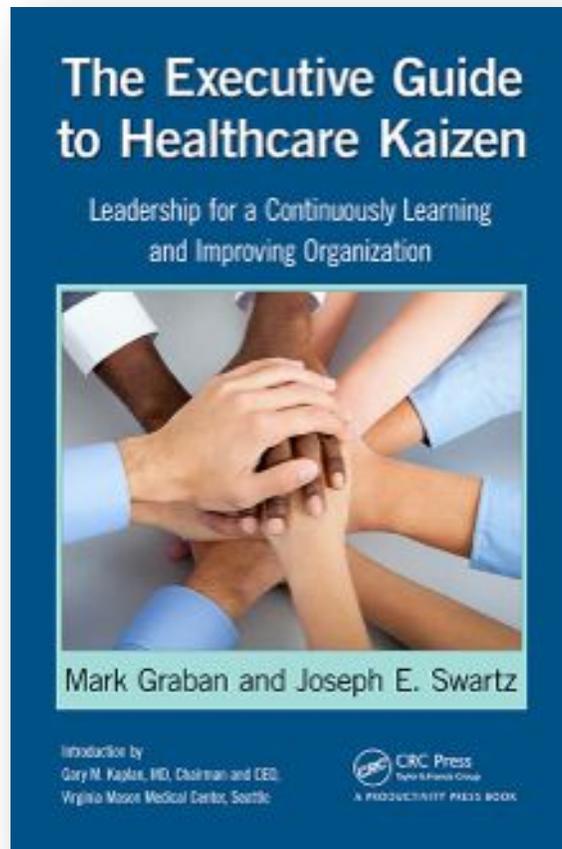
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Kaizen for Healthcare: Engaging Front-Line Staff in Sustainable Continuous Improvements

by Mark Graban and Joseph Swartz

Released July 2012

Healthcare Kaizen focuses on the principles and methods of daily continuous improvement, or “Kaizen,” for healthcare professionals and organizations. Kaizen is a Japanese word that means “change for the better,” as popularized by Masaaki Imai in his 1986 book [KAIZEN](#) and through the [books of Norman Bodek](#), both of whom contributed introductory material for this book.

In 1989, Dr. Donald M. Berwick, founder of the Institute for Healthcare Improvement and former administrator of the Centers for Medicare & Medicaid Services, [endorsed the principles of Kaizen in the New England Journal of Medicine](#), describing it as “the continuous search for opportunities for all processes to get better.” Healthcare Kaizen shows how to make this goal a reality.

Healthcare Kaizen shares some of the methods used by numerous hospitals around the world, including Franciscan St. Francis Healthcare, where co-author Joe Swartz has led these efforts. Most importantly, the book covers the management mindsets and philosophies required to make Kaizen work effectively in a hospital department or as an organization-wide program.

All of the examples in the book were shared by leading healthcare organizations, with over 200 full-color pictures and visual illustrations of Kaizen-based improvements that were initiated by nurses, physicians, housekeepers, senior executives and other staff members at all levels.

Healthcare Kaizen will be helpful for organizations that have embraced weeklong improvement events, but now want to follow the lead of ThedaCare, Virginia Mason Medical Center, and others who have moved beyond just doing events into a more complete management system based on “Lean” or the “Toyota Production System.”

It’s often said, without much reflection, that “people hate change.” The experiences shared in this book will prove that people actually love change when they are fully engaged in the process, they get to make improvements that improve patient care and make their day less frustrating, and when they don’t fear being laid off as a result of their improvements.

PART I: WHAT IS KAIZEN?

1. Intro to Kaizen

- This chapter introduces the reader to Kaizen as a continuous improvement model and how Kaizen follows the Plan-Do-Study-Adjust (PDSA) cycle and the scientific method. Kaizen starts with small changes, focused on engaging everyone in their own improving their own work in a way that matters for patients and staff.

2. Kaizen History

- This chapter discusses the roots and evolution of employee suggestion systems into present day healthcare. A large emphasis is placed in the differences between traditional “suggestion box” models and the practices of Kaizen.

3. Types of Kaizen

- This chapter discusses the “three levels of kaizen” as adapted from Toyota, ranging from large strategic changes to weeklong events to daily kaizen. This chapter also attempts to explain the differences between Kaizen and so-called Kaizen events and how these approaches are built on PDSA and how they are complementary, not competing.

4. Kaizen Culture

- Drawing heavily on the experiences of Franciscan St. Francis, what does a “kaizen culture” feel like for staff, leaders, and patients? What are some of the mindsets required to start kaizen and make it successful?

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PART II: KAIZEN METHODS

5. Quick and Easy Kaizen
 - Provides a description of the method used for encouraging, documenting, and sharing kaizen improvements at Franciscan St. Francis, with many examples (including some from other organizations). The basic model of “QnEK” is to find, discuss, implement, document, and share improvement ideas, focused on small changes that can be done quickly and easily.
6. Visual Idea Boards
 - Description of the method used for tracking and implementing improvement ideas, as originally written about in David Mann’s *Creating a Lean Culture* and in Mark Graban’s *Lean Hospitals*. Many examples are shared to illustrate method and the ways managers can coach employees in kaizen.
7. Sharing Kaizen
 - Illustration of different methods for documenting and sharing Kaizen improvements, including the “Kaizen Wall of Fame,” A3 reports, and other variations of simple summaries of Kaizens. Sharing improvements gives recognition to staff members, helps spread good ideas, and inspires more improvement.

PART III: KAIZEN LESSONS LEARNED

8. The Art of Kaizen
 - A discussion of shifting from what might be seen as organizational “barriers to Kaizen” to models for engaging different types of staff members in continuous improvement.
9. The Role of Leaders in Kaizen
 - What should be the specific role and actions of leaders at different levels: top-level, middle, and front-line managers? How can leaders participate in Kaizen – promoting, supporting, coaching, and sharing improvements?
10. Creating an Organization-Wide Kaizen Program
 - This chapter covers how to create an organization-wide program with examples from Franciscan St. Francis and several other hospitals. Additional lessons and pointers are shared, including the pros and cons of different reward systems for Kaizen, as well as methods for the electronic documentation and sharing of Kaizens.
11. Lean Methods for Kaizen
 - Discusses the incorporation of broader “Lean” improvement methods into the practice of Kaizen, based on Franciscan’s staff education and experience.
12. Kaizen at Home
 - A chapter on the application and adoption of a “Kaizen lifestyle” with examples generated at home and outside the workplace by Franciscan staff members and other healthcare professionals.

CONCLUSION

- A brief summary of Kaizen principles and call to action for readers and their organizations.

PRAISE FOR HEALTHCARE KAIZEN

See more at <http://www.hckaizen.com/about-the-book/reviews/>

From the Foreword and Introduction:

I believe that Kaizen is essentially a “human business.” Management must meet diversified requirements of its employees, customers, stakeholders, suppliers, and its community. In this sense, the healthcare profession can probably best benefit from Kaizen because its central task is people. I am honored to write a foreword to this book by Mark Graban and Joseph Swartz.

Masaaki Imai
Author of [KAIZEN](#) and [Gemba Kaizen](#)

To get started with Kaizen, you should do the following. First, read this book. Second, ask your employees to read the book. Third, ask your employees to begin a Kaizen system. It is just that simple. You just ask, and you will get what you ask for. Just do it and learn from the process.

Norman Bodek
Author of [How to do Kaizen](#)

Endorsements for Healthcare Kaizen:

I hope you will discover, as we have, the incredible creativity that can be derived by engaging and supporting each and every employee in improvements that they themselves lead.

Robert J. (Bob) Brody
CEO, Franciscan St. Francis Health

At a time when many hospitals and health systems have relegated Lean to the “Project of the Month Club”, Graban and Swartz remind us of the fundamentals that help organizations keep their Lean initiatives alive and thriving. I hope everyone reads this book and recommits to the fundamentals of Lean, particularly the involvement of frontline staff in process redesign.

[Fred Slunecka](#)
Chief Operating Officer, [Avera Health](#)

Unleashing the energy and creativity of every employee to solve problems everyday should be the sole focus of every healthcare leader. Unfortunately, there are only a handful of examples where this is happening. [Healthcare Kaizen](#) provides examples of front line staff coming up with solutions to problems on their own and implementing them. Healthcare leaders need to read this book to understand that their management role must radically change to one of supporting daily kaizen if quality safety and cost are to improve in healthcare.

[John Toussaint, MD](#)
CEO, [ThedaCare Center for Healthcare Value](#)
Author, [On the Mend](#) and [Potent Medicine](#)

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In Healthcare Kaizen, Mark Graban and Joseph Swartz show us that Kaizen is more than a set of tools. What we have learned through our application of the Virginia Mason Production System is that Kaizen is a management methodology of continuous improvement that must permeate the fabric of the entire organization. Front line staff must know, understand, embrace and drive Kaizen and its tools to achieve incremental and continuous improvements. This book will help health care organizations around the world begin and advance their journey.

***Gary Kaplan, MD, FACP, FACMPE, FACPE
Chairman and CEO, Virginia Mason Medical Center***

The healthcare industry is in the midst of truly fundamental change, and those organizations that engage their front line staff in developing the strategies for improving care, enhancing satisfaction, and streamlining processes to reduce unnecessary variation and expense will be well positioned to thrive in a post-reform environment. In their book [Healthcare Kaizen](#), Graban and Swartz create a roadmap for using incremental, staff driven changes to inculcate performance improvement into the culture of an organization in a sustainable manner. This book represents a wonderful resource for healthcare leaders looking to foster innovation at all levels.

***[Brett D. Lee, Ph.D., FACHE](#)
Senior Vice President, Health System Operations
Children's Healthcare of Atlanta***

Healthcare Kaizen is a practical guide for healthcare leaders aspiring to engage frontline staff in true continuous improvement. Graban and Swartz skillfully illustrate how to foster and support daily continuous improvement in health care settings. Health systems struggle to move beyond improvement work being extra work done in "special projects" facilitated by experts. This book can guide organizational transformation so that continuous improvement becomes part of the daily work of frontline staff.

***John E. Billi, M.D.
Associate Vice President for Medical Affairs, University of Michigan***

When healthcare organizations take initial steps on their Lean journey, they often focus very heavily on tools and grand solutions, which may create new barriers to innovation. In Healthcare Kaizen, Mark and Joe remind us of the great power of daily problem solving. Their examples reinforce that learning is a result of the repeated tests of changes that are often small and simple, and less often by hitting the home runs of improvement. The story of Franciscan St. Francis Health is compelling, where leaders created the opportunity for great people at the frontline making great improvements for patient care.

***Michel Tétreault, MD President and CEO
Bruce Roe, MD, Chief Medical Officer
St. Boniface Hospital, Winnipeg, Canada***

In the last decade, implementation of the lean production model in a healthcare setting has produced remarkable outcomes and revolutionized the way we deliver care. Using examples from Franciscan Health and other forward-thinking medical groups, the book contains valuable strategies for organization-wide cultural transformation to create an more efficient, patient-centered healthcare system dedicated to continuous quality improvement.

Donald W. Fisher, Ph.D.
President and CEO, American Medical Group Association

We are challenged with improving the health of individuals and populations while reducing costs. Mark and Joe provide real-life examples of how those who do the work provide ideas for small changes that add up to BIG results. Healthcare Kaizen is a must for leaders whose focus is the patient and how to effectively and efficiently deliver quality and safety with improved outcomes. The methods shared are foundational in changing our healthcare system for the better.

Betty Brown, MBA MSN RN CPHQ FNAHQ
President, National Association for Healthcare Quality

At Beth Israel Deaconess Medical Center, everybody improving every day is a critical aspect of our Lean and quality improvement efforts. Healthcare Kaizen, is full of relatable examples as well as practical ideas that will inspire staff, clinicians and leaders at all levels.

Alice Lee
Vice President, Business Transformation, Beth Israel Deaconess Medical Center

For the past 7 years I have been leading a successful lean healthcare transformation at Chugachmiut, the non-profit organization I lead in Alaska. During that time, I have learned that respect for the people who work for you is key to any transformation. Mark Graban and Joseph Swartz do a great job of capturing this truth in their book, [Healthcare Kaizen: Engaging Front-Line Staff in Sustainable Continuous Improvements](#). Every employee can learn the tools of lean, and improve processes as a result. However, sustaining a lean transformation and resisting entropy requires engaging front line employees in a long term vision for serving their customers and in true continuous improvement. Employees who work in a culture that removes blame and shame, operates on facts and seeks improvement continuously have great leadership and will respond with incredible results. This book is a long needed addition to my growing lean healthcare library.

Patrick Anderson
Executive Director
[Chugachmiut](#)

The term 'kaizen' has been interpreted in many ways since we learned of the Toyota Production System in healthcare. Mark and Joe demystify the term, help us understand its real meaning, and help us see how using kaizen can help us improve in healthcare and, frankly, how we can use kaizen to save lives. The philosophy, tools and techniques discussed in the [book](#) work, and work well, in any environment. We in healthcare must improve - we owe it to our patients and communities - and Mark and Joe are helping to show us the way.

Dean Bliss
Lean Improvement Advisor
[Iowa Healthcare Collaborative](#)

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The healthcare industry has long struggled to tap one of the biggest sources available to it for ideas to improve outcomes and reduce costs – its front-line staff. Healthcare Kaizen lays out a step-by-step approach that any healthcare organization can use to get the dramatic results that come when its workforce is fully engaged in kaizen activities on a daily basis. This inspirational book is packed with examples and is informed by the authors' years of experience on the "front-lines" themselves, helping leading healthcare organizations around the world to build successful kaizen programs.

[Alan G. Robinson, PhD](#)

Professor, Isenberg School of Management at the University of Massachusetts

Co-author, [Ideas Are Free](#) and [Corporate Creativity](#)

What Mark Graban and Joseph Swartz have done in [Healthcare Kaizen](#) is to bring hope and light to a part of our society that is facing increasing challenges. Full of examples and illustrations from hospitals and healthcare professionals leading the way in the journey to patient-centered, error-free care delivery, this book makes it easy to connect with this very powerful concept of kaizen. By putting kaizen within the broader tradition of quality improvement, shedding light on its historical development and pointing out potential pitfalls in its application in healthcare, the authors provide a great service to the healthcare community. I was especially impressed by the authors' important insights on what a kaizen culture feels like, and how people at all levels can and must engage in daily improvement. [Healthcare Kaizen](#) will be a reference on the subject for many years to come.

Jon Miller

CEO, [Kaizen Institute](#)

At last, a crystal clear description of Kaizen as a philosophy and a work culture, not another top-down tool. Graban and Swartz show, in unequivocal detail, that Kaizen need not be viewed as a formal, five-day event, requiring X, Y, and Z participants, components, and steps. The compelling examples from Franciscan Health and others paint a picture of a hospital culture steeped in respect for people and continuous improvement—the very elements of Lean, Kaizen, and scientific inquiry. By busting the myth of the five-day “event,” the authors show the true, sweeping potential of Kaizen in the healthcare workplace.

[Naida Grunden](#)

Author, [The Pittsburgh Way to Efficient Healthcare](#)

Co-author, [Lean-Led Hospital Design: Creating the Efficient Hospital of the Future](#)

Years ago, an elderly Japanese gentleman asked, "How will you engage team members, Pascal-san?" This engagement is arguably the leader's greatest challenge. Fixing health care may be our generation's great test. We'll need to engage all the good people who currently work in broken systems. Mark and Joe have helped to show us how.

[Pascal Dennis](#)

[Lean Pathways, Inc.](#)

Author, [The Remedy](#) and [Andy & Me](#)

The vision of a world in which our healthcare institutions operate with a universal discipline of relentless, patient-centered improvement remains a vitally important yet distant dream. In ***Healthcare Kaizen***, Mark Graban and Joseph E. Swartz illustrate just how to make that dream a reality.

[Matthew E. May](#)

author of [The Elegant Solution](#) and [The Laws of Subtraction](#)

“One of the greatest leadership and cultural challenges when embarking on a Lean transformation is the shift that MUST occur where the frontlines have the skills for and are authorized to make daily improvement. This shift not only accelerates results, but it fully engages the workforce, a precondition for achieving organizational excellence. Graban and Swartz present the kaizen philosophy in the most accessible way I’ve seen yet. They present a powerful model for preparing managers for their new role as improvement coaches and the frontlines for taking a far more active role in delivering greater value to the healthcare industry’s various customers. THIS is the missing link in healthcare reform.”

Karen Martin

Author, *The Outstanding Organization* and

The Kaizen Event Planner

About the Authors



Mark Graban is an author, consultant, and speaker in the field of lean healthcare. He is the author of *Lean Hospitals: Improving Quality, Patient Safety, and Employee Engagement* (2nd edition). Mark has worked as a consultant and coach to healthcare organizations throughout North America and Europe. He was formerly a senior fellow with the Lean Enterprise Institute and continues to serve as a faculty member. Mark is also the Chief Improvement Officer for KaiNexus, a startup software company that helps healthcare organizations manage continuous improvement efforts. Mark earned a BS in Industrial Engineering from Northwestern University and an MS in Mechanical Engineering and an MBA from the MIT Sloan Leaders for Global Operations Program. Visit his website at www.MarkGraban.com and his blog at www.LeanBlog.org.



Joseph E. Swartz is the Director of Business Transformation for Franciscan St. Francis Health of Indianapolis, IN. He has been leading continuous improvement efforts for 18 years, including 7 years in healthcare, and has led more than 200 Lean and Six Sigma improvement projects. Joseph is the co-author of *Seeing David in the Stone* and was previously an instructor at the University of Wisconsin. Joseph earned an MS in Management from Purdue University as a Krannert Scholar for academic excellence.

WHAT IS KAIZEN?

Chapter 1

Kaizen and Continuous Improvement

It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change.

—Charles Darwin

Paula Stanfill's husband had open-heart surgery. Paula is the manager of the neonatal intensive care unit (NICU) at Franciscan St. Francis Health, a three-hospital system in Indianapolis, Indiana. In the recovery room, Paula's husband could not speak because he was intubated with a breathing tube. He was trying to communicate by furrowing his eyebrows and squinting. He knew sign language and was motioning at his arm and trying to use his fingers to tell Paula something, but he could not make his hands do what he wanted them to do. Paula remembers her panic in realizing that something serious might be happening to her husband. He also began to panic, thinking the surgery had caused a serious problem with his arms. They were deeply distressed until the anesthesia wore off and he could speak again.

Paula learned her husband's arms and hands were numb. He was a big man, and when the surgeons performed the procedure, they had leaned over his arms and put pressure on them, reducing the blood supply and causing the numbness. His arms remained numb for several weeks.

After this episode, Jessica Clendenen, a nurse in Franciscan's cardiac operating room, learned that several other patients had experienced similar postoperative numbness. She decided to do something about it. In January of 2011, Jessica found some sled positioners that could be used to help tuck the patients' arms in place in a way that allowed the IV lines to be seen through the clear material, as documented in Figure 1.1.

This small, simple improvement can be described as a "Kaizen." It was an improvement that made a difference to open-heart patients at Franciscan and was

Open Heart Arm Protectors				
Before		After		
Patients' arms were tucked with a sheet for open heart procedures. Patients had noticed numbness in the hands.		Found arm sled positioners that could be used to help "tuck" their arms in place without placing too much pressure on the arms. Clear, giving visual to the IV lines.		
Effect				
Prevents pressure from leaning of the surgical personnel. Results in less pressure on the patient, improved quality, patient safety and patient outcomes.				
Name	ID #	Dept #	Supervisor	Date
Jessica Clendenen		Cardiovascular Operating Room	Victoria Pratt	1/20/2011

Figure 1.1 A simple improvement that can be described as a Kaizen.

one that Paula will never forget. When she started making these improvements, Paula never realized it would touch her so personally. But, after her husband's experience, Paula realized that the heart of Kaizen is the difference it can make in people's lives. Kaizen was no longer just a concept or a program to her; it had become a way of life.

Kaizen = Change for the Better

The word Kaizen is translated from Japanese in a number of ways, most simply as "change for the better."¹ The Japanese characters are shown in Figure 1.2.

Breaking down the word:

- "Kai" means "change."
- "zen" means "good."

A "Kaizen" is a small improvement that is made by those who do the work. It is a small, low-cost, low-risk improvement that can be easily implemented.² Kaizen is an ongoing methodology and philosophy for challenging and empowering everyone in the organization to use their creative ideas to improve their daily work.

The word Kaizen, the way it is typically used, is synonymous with the phrase "continuous improvement." An effective Kaizen approach is about making improvements that are connected to measurable results and a deeper purpose. Children's Medical Center (Dallas, Texas), has a process improvement campaign that asks the simple question, "Is there a better way?" Clay York, manager of the



Figure 1.2 "Kaizen" in Japanese kanji characters.

core laboratory, and other leaders help tie the department's local improvement efforts to the organization's mission and purpose by asking team members if proposed changes will help provide "better care for kids."³

Beyond the measurable results, Kaizen organizations value the personal and organizational learning that results from the improvement process, as well as the personal pride and satisfaction of all who are involved.

IU Health Goshen Hospital has saved more than \$30 million since 1998 with a program called "The Uncommon Leader" as part of its broader improvement program. In 2009, CEO James Dague promised to shave his head if employees generated ideas that saved \$3.5 million that year. The hospital more than doubled that savings goal, so Dague shaved his head in front of his colleagues. The culture at Goshen has shifted to one where every person is empowered to make improvements to his or her daily work, making suggestions that can impact cost, quality, and patient care. For example, an emergency nurse educator saved \$4,000 by changing the type of napkins used on patient trays and the GI department saved \$22,000 by switching from disposable paper gowns to cloth gowns.⁴ Goshen has gone 17 years without layoffs, undoubtedly being a key reason its employees are so enthusiastic about improvement.⁵ Goshen was also named one of the top ten large employer workplaces in Indiana, in part due to its "workplace culture where employees feel valued."⁶

Bubbles for Babies

Hope Woodard, an ultrasound tech at Franciscan St. Francis Health, noticed that her young patients were often uncomfortable when she pressed the cold hard ultrasound probe to their skin. They had difficulty staying still during the procedures. The parents would get frustrated and often could not find a way to calm their child down.

Hope thought about how she could create a better experience for her little customers. She brought in a small bottle of bubbles from a wedding she had attended and asked the parents to gently blow them over the top of the child to calm and entertain them, as documented in Figure 1.3. The bubbles were a real crowd pleaser, as they kept the babies calm for their procedures. Happy, distracted children allowed Hope and the other techs to capture better images for the radiologist that were obtained more quickly, making it better for the patient, for the parents, and for the ultrasound techs. In the course of making her job easier, Hope was also adding value to the customer experience. Her Kaizen was

Bubbles for Babies			
Before	After		
<p>Our little patients under 5 years old are often screaming and won't be still or lay down during Ultrasound procedures. The parents are frustrated and many times cannot find a way to calm the infant down.</p>	<p>We now have tiny bottles of "wedding" bubbles and we ask the parents to gently blow them over the top of the child to calm and entertain them.</p>		
			
The Effect			
Happy babies make for happy parents, which make for happy staff, resulting in Joyful Service, and peace of mind.			
Name	Supervisor	Date	Estimated Cost Savings (Optional)
Hope Woodard	Gina Bonner	5-9-07	Priceless!

Figure 1.3 A simple Kaizen that improved staff and patient satisfaction.

a win for her and a win for everyone involved. It created more joy in her work life every time she used bubbles for babies.

These first examples of Kaizen have several things in common. They increase customer and patient satisfaction while, at the same time, improve the productivity and the quality of healthcare delivery. Small, low-cost improvements can indeed make a difference to patients while increasing the pride and joy felt by healthcare professionals.

Kaizen: A Powerful Word

The largest room in the world is the room for improvement.

—Author unknown

Kaizen. It is a strange-looking word. It might seem a little difficult to pronounce. Said out loud, it sounds a lot like “try-zen,” and we can equate it with the idea that we can try to improve and make things more zen-like in the workplace. Yes, Kaizen leads to a calmer, better-organized, more productive workplace that provides better patient care. Kaizen seems like a simple concept, really. But is this Japanese word intimidating to people in healthcare workplaces outside of Japan? Does the broader idea of improvement scare or intimidate people at all levels?

Hang in there, as this little word might be one of the most powerful words and concepts for improving healthcare processes and quality. Hospitals around the world are using this concept, often as part of a broader “Lean management” initiative. The period of “Lean healthcare” adoption that started around 2000 has proven that hospitals and healthcare organizations can improve when we have a highly engaged workforce focused on providing value to patients and minimizing waste in the delivery of care.

“Lean healthcare” is a set of practices, a management system, and an organizational culture based on “Lean manufacturing” or the Toyota Production System.⁷ It might seem strange for healthcare organizations to learn from a manufacturing company like Toyota. The idea is to make our healthcare organizations the best they can be by building upon the proven quality improvement methods and aspects of Lean. Lean healthcare works tirelessly to provide ideal patient care—improving quality, reducing waiting times, and minimizing costs, all while furthering and enhancing the mission and caring nature of healthcare.

Many organizations embrace the idea of Kaizen and practice its specific principles, but they call it Continuous Improvement, Process Excellence, or Plan-Do-Study-Act (PDSA) instead of Kaizen. That is perfectly fine; what we call it does not matter as much as the patient benefits, staff engagement, and organizational improvements that we achieve with these practices.

This is a book about improvement—the sort of improvement that occurs every day in leading hospitals around the world. One of these organizations is Franciscan St. Francis Health. In 2005, after several years of declining margins and a flat-lined quality improvement record, Dr. Paul Strange, the organization’s vice president of quality, convinced the leadership team to launch a “Lean Six Sigma” program. Robert J. Brody, president and chief executive officer (CEO) of St. Francis Health, and Keith Jewell, the chief operating officer (COO), brought in a team of people from the outside, including one of this book’s coauthors, Joe Swartz, along with professors from Purdue University. Their Lean Six Sigma journey began in 2006, and Franciscan added a formal “Quick and Easy Kaizen” program in April 2007. Throughout this book, we will be sharing stories from Franciscan and other hospitals to demonstrate how they engaged their staff in small improvements and how it made a difference for all of their stakeholders: patients, employees, physicians, and the organization itself.

Everybody knows that healthcare organizations and professionals around the world are under a lot of pressure to improve. The need for improvement includes the dimensions of quality and patient safety, cost, waiting times, and the morale of healthcare providers and employees. Kaizen is proving to be part of the solution to these problems.

Kaizen Is Not Just Change, It Is Improvement

With Kaizen, we want more than a lot of activity and change; we really want improvement and learning. Improvement comes when we can state that things have been made better in one or more dimensions, including safety, quality, productivity, or having a less frustrating workplace. Not all changes are necessarily improvements. For example, a change to a process that makes it harder for nurses to gather the supplies needed to start an IV would likely not be considered an improvement, because it would delay patient care and cause more work for the nurses.

Kaizen involves finding a better way to do your work and changing the method you use to do your work. Kaizen is not about cutting corners. If you cut a step out of your work, you will want to talk to your coworkers to ensure that cutting out that step does not negatively impact the patient or someone else in the process. For example, it would not be a Kaizen if a nurse decided to save time by checking only one patient identifier instead of two when giving a medication, because this would increase the risk of errors and harm to the patient.

A planned improvement should be proposed as a hypothesis to be tested in practice. For example, a materials management team might propose, “If we rearrange the clean utility room to stock items in the order of their computerized order number, then it reduces the amount of time required to restock rooms each day.” After testing that change for three days, the materials management team might conclude that they, indeed, saved 30 minutes per day, in addition to the hours spent rearranging the first utility room in which they tested their change. As their test confirmed their expectations, the materials team might decide to share this change with other units.

Large, complex organizations, such as those in healthcare, need to be aware that one area’s improvement may cause side effects in other areas. For example, if the change benefitted materials management but made work more difficult for the nurses who take items (often urgently needed) from the supply rooms, then, when looking at the big picture, the change might not be an improvement after all.

We Often Succeed as the Result of Failing More

In organizations that do not practice the philosophies of Kaizen, a change that does not meet improvement goals or targets (or an idea that just flat out does not work as expected) might be considered a *failure*. This might be a source of shame, embarrassment, or punishment for the people who had the idea that was deemed a failure.

Some small changes have a clear, indisputable benefit. For example, a laboratory medical technologist rearranges supplies and equipment on her workbench so that the most frequently used items are at arm's reach instead of being buried in ankle-height drawers. This change saves time and improves ergonomics, leading to faster test results for the patient—this is a change for the better.

Later on, this same technologist might decide, unilaterally, to run a certain low-volume test just one day a week instead of once each day. The technologist's idea is to save the waste of unused reagents in a test pack, as the kit costs the same whether it is used for one test or three. The technologist is trying to save money by making better use of each kit. Unfortunately, a local cost saving like this might not be a change for the better of the overall system if the batching of the tests causes delays in medical decision making or extends a patient's length of stay.

In a culture that embraces Kaizen principles, this sort of “failure” is seen as a learning opportunity for individuals and the organization. These failures are really an opportunity for leaders to coach people so they can understand the broader impact of their improvements. Leaders need to recognize the effort and desire to improve while teaching people how to make better improvements in the future. The Kaizen approach to management requires that leaders' daily actions encourage ongoing improvement rather than stifle it.

Fall seven times. Stand up eight.

—Old Japanese Proverb

Kaizen, PDSA, and the Scientific Method for Improvement

Plan-Do-Study-Act (PDSA), sometimes referred to as Plan-Do-Check-Act (PDCA), is often known as the “Deming Cycle” or the “Shewhart Cycle,” after Dr. W. Edwards Deming and his teacher, Walter Shewhart. The word “Act” is sometimes replaced with the word “Adjust.” PDSA (or PDCA) is an iterative learning, improvement, and problem-solving model based on the scientific method. Since the term PDSA seems to be the more commonly used in healthcare than PDCA, we will use that term through the rest of the book.

The PDSA steps are:

- **Plan:** Initiating a change by understanding the current situation and root cause of problems; developing a change and stating a hypothesis about what will occur with the change
- **Do:** Carrying out a small-scale test, or pilot, of the change
- **Study:** Testing the change and its hypothesis: gathering data, observing the changes and outcomes
- **Act:** Based on those results, deciding to accept, adopt, and spread the change, or making adjustments (or trying something different)

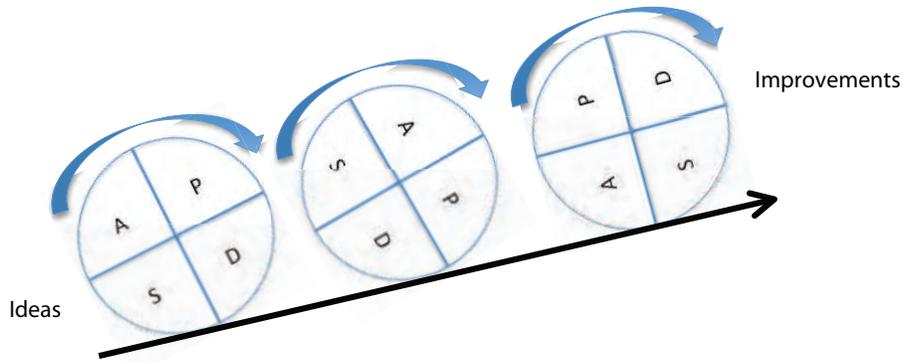


Figure 1.4 Illustration of a sequential or serial PDSA Model.

PDSA is an iterative model, so even a successful change leads us to a new starting point for continued improvement. Our process for spreading a change will include testing it in a larger area or in different conditions, learning from each successive cycle. This sequential or serial PDSA model is illustrated in Figure 1.4.

If the Study phase shows that a change was not really an improvement, we need an environment where people are not punished for their attempts at Kaizen. If we have fear and punishment, people will be afraid to suggest changes or they will become incredibly cautious, only proposing those things that are certain to work. Quoting Mike Rother's book *Toyota Kata*, "The idea is to not stigmatize failures, but to learn from them."⁸

Failure is only the opportunity to begin again more intelligently.

—**Henry Ford**

Even without the fear of punishment, some people are afraid that they will be embarrassed by trying something unsuccessfully. Instead of PDSA, we might observe the following dysfunctional cycles in an organization:

- **P-D:** Plan-Do—not studying to see if the change was really an improvement; just assuming things are better as the result of a change
- **P-D-J-R:** Plan-Do-Justify-Rationalize—knowing, but not being willing to admit, that our change did not lead to improvement

It is sometimes said that Toyota is successful on a larger scale because they have a high tolerance for failure in small improvement initiatives. In the long run, using a failure as an opportunity to learn creates a stronger organization.

We know we've turned the corner [with Kaizen] when staff get excited about a PDSA test failing.

—**Ray Seidelman**

Manager of performance improvement, Iowa Health System

Changing Back Can Be Better for Babies

In early 2008, the Franciscan maintenance department replaced the manual paper towel dispensers in the NICU with hands-free automatic paper towel dispensers. One automated dispenser located near a group of babies made a loud grinding noise each time it dispensed a paper towel and nurses noticed babies flinching when this happened. Occasionally, the noise would wake one of the babies and the nurses knew how important rest was for recovery. Most of Paula Stanfill's nurses chose a career in the NICU because of their passion and compassion for babies.

After some debate, her nurses suggested they go back to the manual dispensers. Paula wondered if she should let them because it seemed as though they were going backward. Then, her staff measured the decibel level of the automatic paper towel dispenser and found it was greater than 50 decibels. Paula was convinced. She approved having the automatic dispenser removed and replaced with the old manual paper towel holder. It was not as fancy, but it was better for the babies under their care. The babies were happier and healthier, which led to happier staff, which made Paula happy. Their Kaizen Report is shown in Figure 1.5. Paula learned that she needed to listen carefully to her staff and that sometimes going back is the way to go forward.

Paper Towel Kaizen			
Before		After	
Automatic paper towel dispenser was very noisy, located very near the newborn babies' bedsides. They would be exposed to the loud grinding noise hundreds of times a day as people washed and dried their hands.		New manual paper towel dispenser was put back into place, located in Neonatal Intensive Care. This decreased the noise level greatly, enabling the premature babies located nearby to get better undisturbed periods of rest.	
			
The Effect			
Decibel level of the automatic paper towel dispenser was greater than 50 dB. It was very disruptive to infants in critical care. Removing the automatic and replacing with normal towel holder has improved the patients' environment.			
Name	Supervisor	Date	Estimated Cost Savings (Optional)
Shawna Owen, RN	Paula Stanfill, NICU Unit Manager	4-28-2008	Preemies need rest to decrease caloric expenditure so they gain weight and get home sooner! One less hospital day in critical care can save over \$2,000!

Figure 1.5 A Kaizen that reversed a previous change in a NICU.

Kaizen = Continuous Improvement

Again, one common translation of Kaizen generally means “change for the better.” These changes can include team projects, such as “Kaizen Events” or “Rapid Improvement Events” (RIEs). As we will discuss in Chapter 3, there is certainly a time and place for these events, which typically occur over the course of four or five days, but, as Kaizen guru Masaaki Imai emphasizes, Kaizen should be practiced by everybody, everywhere, every day.⁹

*Our own attitude is that we are charged with discovering the best way of doing everything, and that we must regard every process employed in manufacturing as purely experimental.*¹⁰

—Henry Ford

In this book, we will use the term Kaizen in the context that is often least practiced and least appreciated in healthcare (as well as other industries)—continuous improvements that happen without the formal structure of a large team or a major project. ThedaCare, a healthcare organization in Wisconsin, refers to this Kaizen and PDSA process as Continuous Daily Improvement (CDI). ThedaCare conducts weeklong RIEs, but they also use daily Kaizen methods to reach their goal of every person being a problem-solver each and every day.¹¹

Newton Medical Center (Kansas) has recognized the value of employee engagement, saving \$1.7 million in a year as the result of 121 ideas that came in after leadership asked people for improvements that would reduce costs or eliminate waste. For example, two surgeons met with the OR teams to find several thousand dollars' worth of supplies that were redundant. Val Gleason, the senior VP of physician services emphasized, “It was not management imposing its will; it was management saying, ‘Here’s the problem we face, here’s the external environment, how are we going to respond to this?’” Furthermore, a hospital spokesperson said, “The ideas allowed them to save money, protect patient care, and protect the integrity of the work force by not having to have any layoffs.”¹²

Kaizen should not be just a one-time flurry of ideas, nor should it be just a one-time reaction to an organization facing financial pressures. A so-called “burning platform” or crisis might prove motivating to some, but the pressure of a crisis might also harm creativity and have people hold back ideas if they fear they could be associated with job cuts that might occur in a tough economic environment. Ideally, the crisis would be an opportunity to learn and practice Kaizen methods that would continue even after the crisis has subsided.

Kaizen Starts with Small Changes

Within the theme of continuous improvement, Kaizens tend to be small, local changes at first. In many organizations, the focus of improvement is on innovation or larger scale improvements, or home runs, to use a baseball analogy. An organization might traditionally focus energy on one major initiative or innovation, such as a new building or a new electronic medical record (EMR) system, which gets positioned as the solution to most of the hospital's problems. Remember—when a baseball player swings for the fences in an attempt to hit nothing but home runs, he usually strikes out a high percentage of the time.

The secret of getting ahead is getting started. The secret of getting started is breaking your complex overwhelming tasks into small manageable tasks, and then starting on the first one.

—Mark Twain

A Kaizen organization supplements necessary and large, strategic innovations with lots of small improvement ideas—the equivalent of singles and doubles in baseball. The expectation is that a large number of small changes leads to an impressive impact to an organization's core measures. Small changes, which can be completed more quickly than major projects, can build enthusiasm and problem-solving skills that people can then apply to larger problems.

There are no big problems, there are just a lot of little problems.

—Henry Ford

In many large organizations, employees can feel intimidated by the overwhelming number of people with whom they must coordinate to make large-scale improvements. Kaizen encourages employees to start with small changes that do not require coordinating with a large number of people—changes focused at the worker level and the space in which their work is performed.

Be the change you want to see in the world.

—Mohandas Gandhi

In a Kaizen approach, we do not start by trying to improve what others do. Instead, we start by improving what we individually do. Start with something that is quick and easy. Often, a good place to start is simply moving something in the workspace closer to the work, making each day easier. Once benefits accrue from a few small improvements, motivation and confidence will grow, allowing people to tackle more difficult, more time-consuming improvements. The best way to get started is to make it quick and easy and then just do it.



Figure 1.6 An angel sign that warns against intruding on grieving families.

A Small Kaizen with Great Meaning

At Riverside Medical Center (Kankakee, Illinois), housekeeping, dietary, or maintenance staff would sometimes face the awkward situation of entering a patient room to find a grieving family with a patient who had just passed away. During an initial Lean and Kaizen program, Darlene, a member of the housekeeping team, made a simple yet effective and beautiful suggestion to prevent that from occurring again. She created an angel sign, pictured in Figure 1.6, that could be placed on the door when a patient passed away. Ancillary departments were instructed to look for the sign so they could remain respectful of the deceased and their family. The sign was also a subtle way to maintain privacy and dignity for the families, because other visitors might just think the sign was a decoration.

Kaizen = Engaging Everybody in Their Own Change

Kaizen allows leaders to get everybody involved in continuous improvement—this means front-line staff as well as leaders at all levels. Kaizen is not an approach that is limited to managers or improvement specialists from a central department. Kaizen is for everyone. Kaizen is the improvement of anything, anywhere. When applied in organizations, Kaizen is a way to improve the way the work is performed, while also improving employee morale. When embraced as a philosophy, people inevitably find opportunities to apply Kaizen in their personal lives and work lives, at home (see Chapter 12) and on the job.

The Kaizen philosophy assumes that our way of life—be it our working life, our social life, or our home life—deserves to be constantly improved.¹³

—Masaaki Imai

A common workplace cliché, often used by managers, is that “people hate change.” The expression often goes unchallenged, as leaders use it to complain that people will not do what the boss wants them to do. This cliché can become an excuse and something to hide behind. With Kaizen, we learn that people love their own ideas and they love change when they initiate it.

While some people are happy and find comfort in eating the same food at the same restaurants as part of a routine, many people like trying new things, like new restaurants and new vacation destinations. Think of a time you chose a new restaurant. You were probably excited to try it. Now, think of a time when a coworker forced you to go to a new restaurant with an unfamiliar type of cuisine without getting your input. Totally different experiences, right?

The great management thinker Peter Scholtes said simply, “People do not resist change, they resist being changed.”¹⁴ This book will show you some of the necessary mindset and practical mechanisms for engaging people in improving their own work, showing leaders how to collaborate with people in a way that benefits all healthcare stakeholders.

Kaizen Upon Kaizen Upon Kaizen

Kaizens can be improved upon over time, like stair steps, with each improvement moving you closer to your work being flawless—the best it possibly could be. The following examples illustrate how staff-driven Kaizen can be iterative and cumulative over time.

In July of 2008, staff in the Franciscan NICU added Velcro® brand hook and loop fastener strips to tie back the privacy curtains when not in use, which prevented them from getting in the way of staff, while improving the aesthetics of the unit, as shown in Figure 1.7.

In June of 2009, they improved on the idea by adding signs to the curtains, as pictured in Figure 1.8.

Then, in February of 2011, they added black clips to ensure the curtains did not have gaps that could reveal a mom breastfeeding her baby, a Kaizen that is documented in Figure 1.9. Over four years’ time, the NICU staff members continuously made simple improvements to change their privacy curtains for the better. This series of Kaizens nicely demonstrates the compassionate concern the NICU nurses have for continually improving the care experience for both babies and parents.

It would be counterproductive to look at the final improvement from 2011, and then ask, “Why didn’t you come up with all of those improvements back in 2008?” Improvements often seem very obvious in hindsight, but the opportunities may be less obvious when mixed into the busyness of our daily work. All three of the above Kaizens should be celebrated in their own right. It goes to show when you embrace Kaizen, it can be very difficult to stop improving—at home or in the workplace. One small improvement begets others in a positive cycle.

Velcro for Curtains			
Before		After	
<p>The privacy curtains were added in Neonatal Intensive Care Unit at our renovation. They aid in patient privacy, however, they also created clutter. The nurses would pull curtain up and tuck on the counter to get it out of the way.</p>		<p>Velcro strips were added to counter edge, then tie backs were sewn onto the curtain at the proper height. This allows the curtain to be neatly tied back when not in use.</p>	
			
The Effect			
Neater appearance and safer environment.			
Name	Supervisor	Date	Estimated Cost Savings (Optional)
Paula Stanfill, RN, NICU Unit Manager	Lori Warner	July 2008	

Figure 1.7 A Kaizen that improves patient privacy.

Kaizen Closes Gaps between Staff and Leaders

In a primary care clinic that was once a client of coauthor Mark, staff members complained that they spent too much time searching for the thermometer. Yes, *the* thermometer. Surprisingly, in a clinic with five or six nurses, three physicians, and 10 exam rooms, everybody was wasting time looking for the one and only digital thermometer.

This thermometer was supposed to be kept at the central nurses' station, which was inconvenient for all, because it meant walking from an exam room to get the thermometer when needed. It was a greater frustration, causing delay for patients, when the thermometer was inevitably being used by another nurse or medical assistant. In the course of brainstorming small improvements, the clinic team asked for a thermometer for each room, which would reduce the walking, waiting, and frustration for under \$100 per room.

When senior leaders were given this proposal for spending approval, they expressed their shock and surprise. "What do you mean there is only one thermometer for that entire clinic?" asked one director. The clinic staff said they had never thought to ask for more thermometers, because they generally were never asked for their ideas on improving clinic operations, and they knew budgets were tight. The leadership team was not aware of the problem because they were rarely, if ever, present in the clinic and were unfamiliar with the details of the clinic's daily work.

Thanks to this discovery, the story did not end with only the approval of a \$900 purchase request. This moment helped health system leaders realize that they also needed to apply Kaizen to their own schedules and management

NICU Privacy Curtain		Franciscan ST. FRANCIS HEALTH		
Before	After			
<p>We would pull the curtain for the parents when they need some time alone with their babies. Most of our NICU beds are in an “open patient bay area” design. This gave us some challenges to insure parents privacy with their babies especially with breastfeeding or Kangaroo Care time.</p>				
Effect				
<p>This sign will provide the parents more privacy when they are breast feeding or bonding with their babies. It informs visitors and other staff that this time is for the babies and parents. Parents share that they enjoy some time alone with their baby! We will monitor parent satisfaction as related to “attention to personal and special concerns for their baby and for them”.</p>				
Name	ID #	Dept #	Supervisor	Date
Patricia Deanna Kindred		NICU	Paula Stanfill, Manager	6-9-09

Figure 1.8 A Kaizen that builds upon previous privacy improvements.

priorities. This would help ensure they could continue closing the awareness gap to better support clinic staff and their patients over time.

Creativity before Capital

There is a commonly used expression in the Lean management approach that says we should value “creativity over capital.”¹⁵ Kaizen thinking emphasizes finding simple, low-cost countermeasures and solutions. Shigeo Shingo, one of the creators of the Toyota Production System, chastised “catalog engineers” who

Ensuring Our Patients' Privacy 				
Before		After		
Privacy curtains from bedside station to station do not completely surround moms and babies for breastfeeding or skin-to-skin sessions. Sometimes moms position their chairs to have their backs to the 3-4 inch opening between curtains. Passers-by in the open room unit can see into what should be a private space for couplets.		We will provide large binder clips (aka "black spring clips") in the top drawers of each bedside station. When moms want privacy, 1 or 2 clips can be easily accessed to clip the curtains together to ensure privacy for the families of newborns.		
				
Effect				
Parents are happier knowing that no one can see them while disrobed. Having the clips accessible at the bedside means moms don't have to wait to breastfeed until their nurse returns with a clip to secure the curtains. It also saves staff time in locating clips.				
Name	ID #	Dept #	Supervisor	Date
Donna Palmer		NICU	Paula Stanfill	4/15/2010

Figure 1.9 A Kaizen that reduces staff walking and improves patient privacy.

simply bought solutions out of catalogs. In healthcare, there is a long-standing bias that the solution to problems automatically requires one or more of the following:

- More people
- More space
- More equipment

All of those options require more money. The Kaizen mindset does not mean we never spend money—sometimes, you do need more thermometers, for example, as the bare minimum requirement for effectively treating patients. We need to ensure people have what they need to provide proper patient care. But, we can challenge ourselves to first come up with creative solutions before spending money.

In 2011, Masaaki Imai said, “If you have no money, use your brain ... and if you have no brain, sweat it out!”¹⁶ The vast majority of Kaizens at Franciscan were implemented for less than \$100. People working on Kaizen are requested to use their creativity to find and test low-cost solutions before they resort to spending substantial sums of money.

In one hospital lab, the technologists requested that the manager purchase a “rocker,” a mechanical device that repeatedly tilts tubes of blood back and forth to keep the specimens ready for testing. Instead of just approving the request, which would have cost approximately \$500, the manager asked why the rocker was needed. The team replied it was because specimens sat too long before testing. The manager asked why that was, and the team replied that the specimens are carried back to the testing area in large batches. The large batches and long delays—not the lack of a rocker—were the real root of the problem. The team was able to change its processes and work assignments to have the

specimens delivered more frequently, eliminating the delay and the need for the rocker. In the long term, the lab's physical layout was changed to shorten the distance to the testing area, reducing the amount of labor time required to transport the small batches.

A different hospital considered purchasing an electronic bed and patient tracking system that would include software and multiple plasma screens. Before selecting one of the competing systems, leaders encouraged the team to manually simulate bed tracking by using a whiteboard and magnets. The intent was to use the manual board to learn, in an iterative way, what information would be needed and how that information would be used by the unit. The thought was this experience would guide the team toward a better software decision than if they had not used a manual method first. As it turned out, the unit decided they liked the simple usability, visibility, and flexibility of the magnetic board. If they wanted to make a change, it could be done immediately, rather than waiting for a change order (or being told “no” by the vendor).

Many of the examples in this book are cases where staff members were creative in making something that met their needs and solved a problem instead of buying something expensive that may not solve the problem perfectly. Figure 1.10 is an example from Akron Children's Hospital (Akron, Ohio) where an X-ray technician created an adjustable patient shield from items they already had in the hospital.

On a larger scale, there is a growing literature of cases where hospitals have used process improvement methods to avoid expanding their facilities or building

X-ray		Akron Children's Hospital	
Before	After		
When completing diagnostic, upright radiographs, Technologists were forced to wrap Velcro straps around patient waists to place appropriate shielding devices on patients. This not only required a considerable amount of time, but also increased the risk of spreading infections from patient to patient.	An IV pole stand was modified to support a shield which could be raised and lowered according to patient height.		
Effect			
The device does not require contact with the patient to be effective and is much faster than the traditional method. This type of device was available in a catalog, but the department was able to quickly build two of them for a fraction of the cost.			
Name	Dept #	Supervisor	Date
Russell Maroni, RT	Radiology/X-ray	Ron Bucci, Director	7-8-11

Figure 1.10 A Kaizen that demonstrates the practice of “creativity over capital.”

new space. One such example is Seattle Children's Hospital (Seattle, Washington), which has avoided \$180 million in construction costs by improving throughput and capacity through process improvement.¹⁷ Delnor Hospital (Geneva, Illinois) was able to eliminate a planned \$80 million expansion by making process improvements that prevented discharge delays, thereby reducing length of stay and freeing up capacity in a far less expensive way than the construction would have been.¹⁸

Expensive Mistakes Made without the Kaizen Mindset

At one hospital that Mark visited a few years back, the chief medical officer described how she had forced through the acceptance of a construction project to expand the number of emergency department exam rooms as an attempt to deal with overcrowding and having patients waiting in the hallways. Once the rooms were built, patient flow did not improve. At best, patients now had a room to wait in instead of a hallway. The executive admitted that her change (more rooms) did not lead to the improvement she desired (better patient flow). Hers was an example of rushing into an expensive, “big bang” solution. She considered it to be an expensive lesson learned, one she wished other hospitals would not repeat.

A Kaizen approach would have involved clinicians and staff members instead of being just a top-down executive decision. Through Kaizen, a hospital could experiment with a number of small-scale changes in a series of inexpensive and low-risk tests. A cross-functional team might learn that the root cause of emergency department waiting time was found far away—it is often the inpatient discharge process that is full of dysfunctions and delays.

Kaizen and Lean: Related and Deeply Interconnected Concepts

Over the past ten years, Lean methods and mindsets have been embraced by healthcare organizations around the world, with some of the most highly regarded Lean healthcare organizations including ThedaCare, Virginia Mason Medical Center (Seattle, Washington), Seattle Children's Hospital, Denver Health, Flinders Medical Centre (Australia), and the Royal Bolton Hospital NHS Foundation Trust (England).

Lean is often considered to have Japanese roots, but core elements of the approach came from Americans, such as Henry Ford and Dr. W. Edwards Deming, as well as other historical writers, philosophers, and industrialists from around the world. It cannot be said that Lean and Kaizen are strictly a Japanese system, because Toyota has spread its corporate culture to factories around the world, and many others have successfully adopted these methods.

People Are the Ultimate Competitive Advantage

While Toyota has facilities, capital equipment, and software that make its company work, Toyota's people and their role in Kaizen make a difference. Toyota's website once stated: "Every Toyota team member is empowered with the ability to improve their work environment. This includes everything from quality and safety to the environment and productivity. Improvements and suggestions by team members are the cornerstone of Toyota's success."¹⁹

A Toyota group leader from the Georgetown, Kentucky, factory said, "Toyota has long considered its ability to permanently resolve problems and improve stable processes as one of the company's competitive advantages. With an entire workforce charged with solving their workplace problems, the power of the intellectual capital of the company is tremendous."²⁰ While it is a cliché to say employees are your greatest asset, Toyota invests in people and their development because Toyota views its people as "an appreciating asset,"²¹ while machines and buildings only depreciate over time.

In recent years, Toyota leaders have often referred to their approach as the "Thinking Production System,"²² as they teach that every employee has two jobs:

1. Do your work.
2. Improve your work.

In hospitals, staff members complain far too often that they are expected only to show up, keep their heads down, and do their jobs. By not engaging healthcare professionals in the improvement of their work, leaders waste a huge opportunity to improve patient care and the organization's bottom line. Hospitals can all hire the same architects, buy the same diagnostic equipment, and outfit operating rooms in the same way as some other leading hospital. Ultimately, however, healthcare performance is about people—not just their clinical skills, but also their participation in ongoing quality and process improvement.

Kaizeneer: Franciscan uses the term "Kaizeneer" for staff members who practice Kaizen—a term that is a combination of the words Kaizen and engineer. Engineers are designers, and those who do Kaizen are essentially designing or redesigning their world around them. If Disney has "Imagineers" who design their theme parks, why can't healthcare have Kaizeneers who redesign the healthcare work environment?

High-Level Kaizen Principles—The Kaizen Mindset

Kaizen uses a defined set of principles that guides the problem-solving and improvement processes. Kaizen requires more than just putting a group together

in a room and telling them they have time to make improvements. Ideally, leaders at all levels should be able to coach and guide employees and lower-level managers about these principles and mindsets to ensure the most effective and most sustainable improvements. The best way for leaders to learn how to coach others on Kaizen is to practice it in their own work.

Pascal Dennis, author and former Toyota manager in Canada, defines “Kaizen spirit” as:

1. **Cheerfulness:** the conviction that things will be better tomorrow, no matter how tough they are today.
2. **Go See:** The desire to get out of the office and experience things first hand; the willingness of leaders to work with front-line staff with humility and openness.
3. **Get Your Hands Dirty:** We roll up our sleeves and try improvements with our colleagues.²³

Kaizen is not a series of tricks, tips, or techniques that can be copied easily; it is primarily about a culture and a way of thinking. Kaizen is not a matter of chasing external targets and performance benchmarks; it is about your employees’ internal drive to come up with their own improvements that allow them to be the best they can be.

At a high level, Kaizen is about:

- Asking all employees to search for and identify improvement opportunities
- Empowering all employees to implement small improvements to their daily work
- Recognizing employees for those improvements
- Sharing and spreading improvement ideas throughout the organization, along with lessons learned

Principle 1: Asking

The title of Norman Bodek’s 2005 book, co-authored with Chuck Yorke, is instructive: *All You Gotta Do Is Ask*. There are additional things that leaders need to do to encourage Kaizen, but it starts with asking people to come up with ideas to make their work easier. As they bring those ideas forward, they participate in improving the broader system in which they work.

As one of Mark’s clients was getting started with Kaizen and Lean, a nurse said she was happy that the organization was starting to seriously engage front-line staff members in improvement. Yet, she shared some frustration that this seemed to be a new concept in the organization, saying, “I’ve worked here for six years and this is the first time anyone has asked me what I think about anything.” There might have been a bit of hyperbole in the statement, but she thought it was generally true.

Principle 2: Empowering

Kaizen is a mechanism to empower all employees to make improvements in their work environment. After asking all employees to make improvements, leaders need to allow people to take action. Early in Kaizen efforts, supervisors and managers might be uncomfortable, for a number of reasons, with allowing their employees to make changes. Empowerment should not be viewed as a win-lose equation for managers. Leaders can (and should) be involved in these improvements in a collaborative way. In a Kaizen culture, managers look good when their employees make improvements. Kaizen also requires leaders to get involved when their employees require assistance, including times when they want to make improvements that go beyond the scope of their own work or their own team.

Principle 3: Recognizing

Recording an improvement and displaying the results allows the person or team who made the improvement to receive the recognition they deserve. Various methods for documenting, displaying, and sharing Kaizen improvements will be described throughout this book. Managers and supervisors may recognize improvements locally in their departments. Selected ones might be posted prominently in high-visibility areas for others to see, such as in hallways or in the cafeteria. Many leaders often think first about direct financial rewards to employees who participate in Kaizen, but there are other ways to provide recognition that might avoid some of the possible dysfunctions that occur with financial incentives, a topic we will discuss in Chapter 10.

Principle 4: Sharing

The real power of Kaizen occurs when ideas are shared. Sharing enables others to benefit from the ideas and realize that they, too, can make similar improvements to their work. This helps spread good ideas throughout the organization, engaging everyone in improvement. Ideas can be shared by posting Quick and Easy Kaizen reports on bulletin boards or by highlighting ideas in hospital-wide emails, as we will show in Chapter 5. There are other methods for documenting Kaizens, as illustrated in Chapter 7, that also allow people to “steal shamelessly” (as Bodek would say) and take good ideas back to their own work areas.

A growing number of healthcare organizations, including Franciscan, are using web-based software platforms make sharing easier across the entire hospital or broader health system, as described in Chapter 10.

This Is Not a Suggestion System—It Is an Improvement System

Sometimes when people hear about Kaizen, they say, “We already do that—we have a suggestion box!” The Kaizen approach is very different from traditional suggestion box systems in many ways. In a traditional suggestion system, someone writes down an idea on a form and drops the form into a box that hangs on the wall. Sometime later, someone else opens the box, collects the papers, and puts them in a place for managers to review. The suggestion may sit for a long period of time before it is reviewed, if it is reviewed at all.

Additionally, some staff suggestion programs are framed as a “winner takes all” contest, where one idea is selected for implementation, with a prize awarded. Unfortunately, in a setting like that, all of the other great ideas are deemed losers, which is bound to be demotivating to those who did not have their valid ideas acted upon. With Kaizen, an organization can implement virtually every idea, large or small, and everybody can receive recognition for each of his or her improvements.

At one hospital Mark worked with in the early days of a Lean journey, he found a suggestion box on the wall of the laboratory. Mark took the box down from the wall so the team could talk about what, if any, ideas had come in from employees in the past. One of the team members left to go find the key to the locked box, returning 20 minutes later to announce that none of the managers could find the key! This story became a very clear illustration to the laboratory staff and leaders about why the suggestion box did not work and how their new approach to Kaizen would have to be different.

Why is there a lock on your suggestion box? Are you afraid that the competing hospital across the street is sending people over to steal your good ideas?

—Mark Graban

Ray Seidelman emphasizes that Kaizen is not a suggestion system, where proposals might include “I need another computer.” Rather, it is an approach where people identify problems that get in the way of ideal care, or what they call “signals.” An example might be a staff member saying, “I couldn’t find the information I needed about this medication in the record,” and then responding by following the scientific method for improvement.²⁴

Kaizen Has an Impact on People and Performance

At Franciscan, the adoption of Kaizen grew gradually, yet impressively, over the first few years since the launch of the Kaizen program in 2007. In the year 2011, 46% of the staff had participated during that year, and 53% of the staff had participated sometime since the launch. In 2011, 82% of all departments had at least

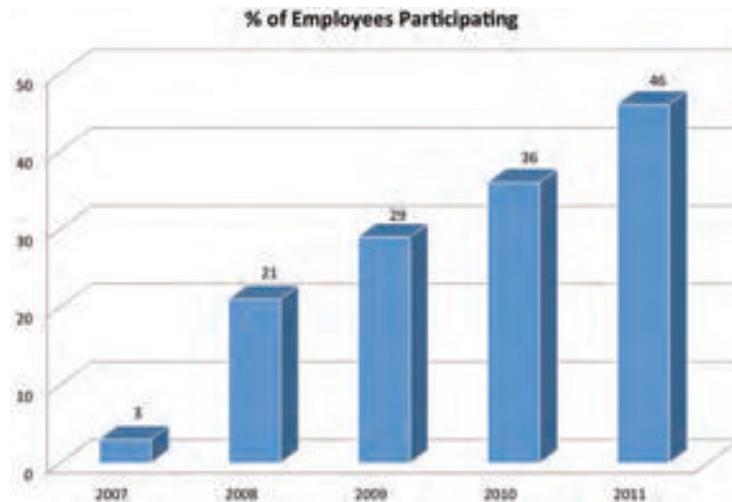


Figure 1.11 Number of employees at Franciscan St. Francis Hospitals with a formally submitted Kaizen in each year.

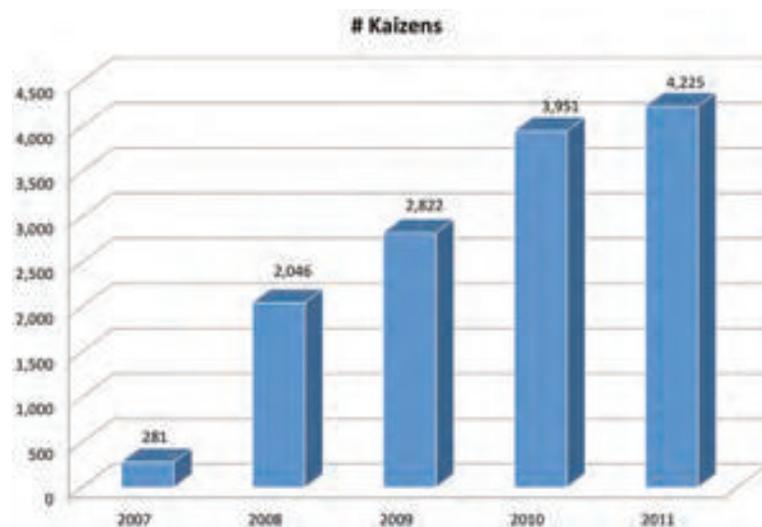


Figure 1.12 Number of formally submitted Kaizens each year.

one person participate in Kaizen. The growth in employee participation is shown in Figure 1.11.

As a benchmark, Toyota receives an average of 10 improvement ideas per person each year, after decades building their culture.²⁵ The number of Kaizens implemented each year at Franciscan has increased, as shown in Figure 1.12, up to 1.7 per full-time equivalent in 2011. The number at Franciscan is significantly higher than most healthcare organizations and they work to increase participation each year.

At Franciscan, the Kaizens in 2010 resulted in a total documented savings of over \$3 million. Of that, about \$1.7 million in savings was money that flowed directly to the “bottom line,” and about \$1.4 million of that was “potential” dollar savings through, for example, the saving of someone’s time. Beyond these documented savings are the benefits from small Kaizens, where it is hard (or not

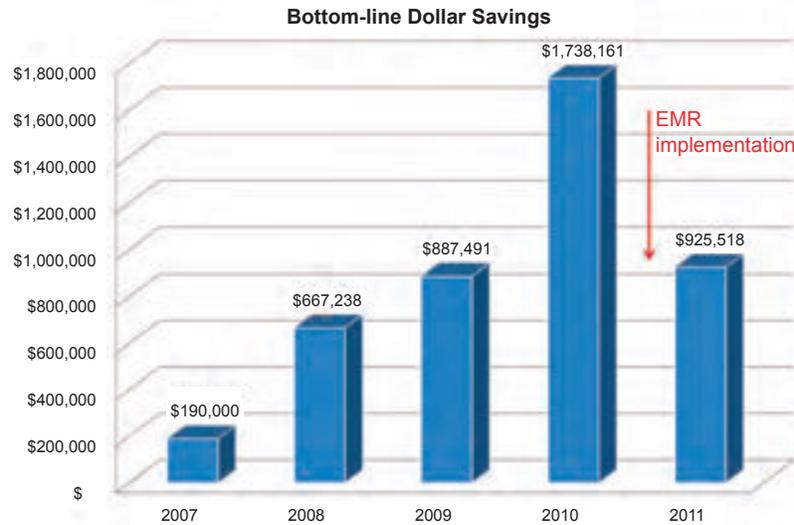


Figure 1.13 Bottom-line “hard” dollar savings from 2007–2011.

worth the time) to calculate a savings. The last four years of savings are shown in Figure 1.13. It should be noted that, while participation increased in 2011, total savings decreased as Franciscan staff were busy upgrading 12 computer systems to one system-wide EMR system.

Again, bottom-line savings and return on investment (ROI) are not the only things that matter, but they are an important part of the picture for healthcare organizations that are under significant financial pressures.

The most significant benefit at Franciscan has been the difference Kaizen makes for patients and staff, as the Kaizen examples in this book will demonstrate. The softer benefits related to patient safety, outcomes and satisfaction, along with staff safety and satisfaction, can be hard to quantify but cannot be emphasized enough.

Baptist Health Care (Florida) has a Kaizen program called “Bright Ideas” that was established in 1995 to engage all employees in improvement and innovation. Since 2008, every employee has had the expectation of implementing three ideas per year that will improve patient outcomes, save time, or improve safety. More than 50,000 ideas have been implemented since 2000, and although cost savings is not the primary goal, there has been a total estimated cost savings and avoidance of \$50 million. In 2008 alone, almost 14,000 ideas were implemented, or more than two per employee, contributing \$10.5 million in cost avoidance and \$5.5 million in cost savings. Additionally, turnover is relatively low, at just 11% annually, and the system has been on the FORTUNE 100 Best Places to Work for in America for the last seven years.²⁶

Conclusion

Both co-authors have seen first hand and believe strongly that healthcare professionals:

- care deeply about their patients
- want to provide the highest-quality ideal care to each patient
- have the ability and the desire to use their creativity to improve their workplace

Healthcare, as an industry, has a 100-year-long track record of trying to adopt and emulate quality improvement methods from manufacturing, aviation, and other industries. Yet, daily continuous improvement, or Kaizen, seems to be more a goal than a reality in a vast majority of healthcare organizations.

People want to improve. Rather than pointing fingers at individuals—front-line staff, managers, or senior leaders—leaders should understand the systemic barriers and the oft-unspoken mindsets that interfere with making continuous improvement a reality. Your organization may have tried other improvement methodologies in the past, including Total Quality Management and Six Sigma. If past attempts at continuous improvement did not work out, it might be helpful to stop and reflect upon the systematic root causes of those struggles before moving forward with this book or with Kaizen.

This book shares some of the methods, along with the required management mindsets, for facilitating effective Kaizen. We hope you are inspired by the examples shared in this book and that you will build upon, rather than copy, the methods described herein. Your patients, your colleagues, and your organization depend on it.

Discussion Questions

- If your organization has tried other improvement programs that did not work, what are some of the root causes of that?
- Does the word “Kaizen” cause problems or discomfort to people, to the point where you have to call it something else in your organization?
- What do you think is a reasonable goal for the number of Kaizen ideas implemented per person each year in your organization?
- How do you strike the proper balance in talking about benefits to patients and staff, which are sometimes hard to quantify, and cost savings or other financial benefits?

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Healthcare Kaizen

Engaging Front-Line Staff in Sustainable Continuous Improvements

Mark Graban, Chief Improvement Officer, KaiNexus, San Antonio, Texas, USA
Joseph E. Swartz, Director of Business Transformation, Franciscan St. Francis Health

This book focuses on daily continuous improvement, or *Kaizen*, for healthcare professionals and organizations. It shares some mechanics for facilitating Kaizen, but more importantly covers the management mindsets and philosophies required to make Kaizen work effectively in a department or as an organization-wide program. All of the examples are real healthcare examples shared by Franciscan Alliance Health System and other leading organizations, with many color pictures and illustrations of Kaizens. This book will be helpful to healthcare organizations that have embraced weeklong improvement events, but now want to move beyond just doing events into a more complete Lean management system.

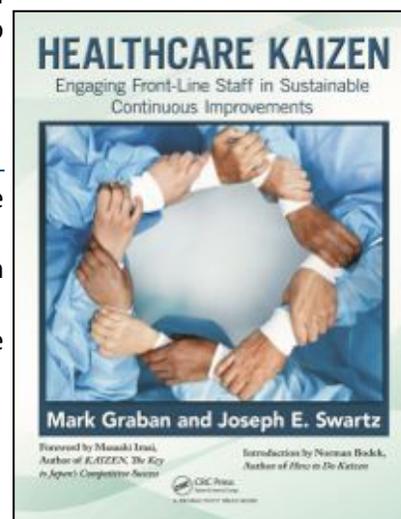
Key Features

- Provides examples of documented Kaizen improvement from multiple healthcare settings
- Discusses the three levels of Kaizen—daily Kaizen, Kaizen events, and system Kaizen
- Focuses on daily Kaizen methods for staff engagement in the healthcare setting
- Includes a Foreword by Masaaki Imai and an Introduction by Norman Bodek
- Offers templates that are available for download at www.HCKaizen.com

Selected Contents

What is Kaizen? Kaizen and Continuous Improvement. The Roots and Evolution of Kaizen. Types of Kaizen. Moving Toward a Kaizen Culture. **Kaizen Methodologies.** Quick and Easy Kaizen. Visual Idea Boards. Sharing Kaizen. The Art of Kaizen. **Kaizen Lessons Learned.** The Role of Leaders in Kaizen. Organization-Wide Kaizen Programs. Lean Methods for Kaizen. Kaizen At Home. *Each chapter includes a Conclusion, Discussion Questions, and Endnotes.*

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The Executive Guide to Healthcare Kaizen

Leadership for a Continuously Learning and Improving Organization

Mark Graban, Chief Improvement Officer, KaiNexus, San Antonio, Texas, USA
Joseph E. Swartz, Director of Business Transformation, Franciscan St. Francis Health

Some healthcare organizations have learned about daily kaizen, but they struggle to move from platitudes to practical action. This book is an introduction to kaizen principles and an overview of how to create a kaizen culture. It is specifically written for senior leaders and managers who need to understand the power of this useful Lean tool. These are the executives and senior-level managers who need to inspire and motivate their organization—leadership which is critical in sustaining improvement and moving their organization into the future.

Reviews

“I hope you will discover, as we have, the incredible creativity that can be derived by engaging and supporting each and every employee in improvements that they themselves lead.”

-Robert J. (Bob) Brody, CEO, Franciscan St. Francis Health

“Unleashing the energy and creativity of every employee to solve problems everyday should be the sole focus of every healthcare leader...Healthcare Kaizen provides examples of front line staff coming up with solutions to problems on their own and implementing them. Healthcare leaders need to read this book to understand that their management role must radically change to one of supporting daily kaizen if quality safety and cost are to improve in healthcare.”

-John Toussaint, MD, CEO, ThedaCare Center for Healthcare Value, Author, *On the Mend and Potent Medicine*

“In Healthcare Kaizen, Mark Graban and Joseph Swartz show us that Kaizen is more than a set of tools...Front line staff must know, understand, embrace and drive Kaizen and its tools to achieve incremental and continuous improvements. This book will help health care organizations around the world begin and advance their journey.”

-Gary Kaplan, MD, FACP, FACMPE, FACPE, Chairman and CEO, Virginia Mason Medical Center

Selected Contents

The Need for Kaizen. What is Kaizen? Types of Kaizen. Creating a Kaizen Culture. Daily Kaizen Methods. The Role of Senior Leaders in Kaizen. The Role of Other Leaders in Kaizen. Organization-Wide Kaizen Programs. Conclusion.

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The Executive Guide to Healthcare Kaizen

Leadership for a Continuously Learning and Improving Organization



Mark Graban and Joseph E. Swartz

Introduction by
Gary M. Kaplan, MD, Chairman and CEO,
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Lean Hospitals

*Improving Quality, Patient Safety, and Employee Engagement,
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Mark Graban

Chief Improvement Officer, KaiNexus, San Antonio, Texas, USA

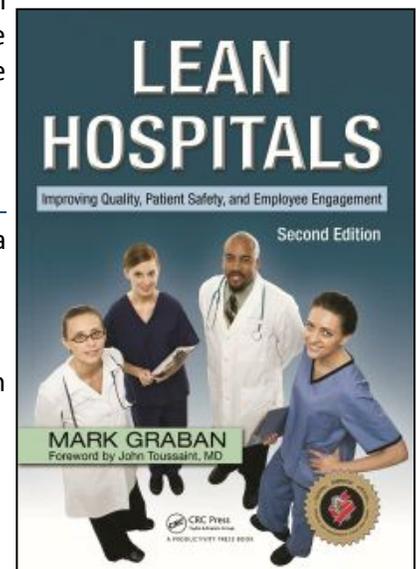
Building on the success of the Shingo Prize-Winning first edition, *Lean Hospitals, Second Edition* explains how to use the Lean management system to improve safety, quality, access, and morale while reducing costs. Lean healthcare expert Mark Graban examines the challenges facing today's health systems, including rising costs, falling reimbursement rates, employee retention, and patient safety. This edition includes new material on process audits, performance measures, employee suggestion management, and strategy deployment. It contains new and updated case studies as well as revised chapters on patient safety and medical errors.

Key Features

- Provides an overview for healthcare leaders interested in embarking on a Lean journey
- Includes new and updated case studies and Lean tools
- Contains new material on strategy deployment
- Covers process audits, performance measures, and employee suggestion management
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Selected Contents

The Case for Lean Hospitals. Overview of Lean for Hospitals. Value and Waste. Observing the Process and Value Streams. Standardized Work as a Foundation of Lean. Lean Methods: Visual Management, SS, and Kanban. Proactive Root Cause Problem Solving. Preventing Errors. Improving Flow. Strategy Deployment. Getting Started with Lean. A Vision for a Lean Hospital.



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