KPMG

Creating a culture of excellence

How healthcare leaders can build and sustain continuous improvement

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A global report from
KPMG International's Healthcare Practice

Building and sustaining a culture of continuous improvement – global lessons from the front line

At a time when healthcare faces growing challenges globally, KPMG International set out to learn how leading healthcare organizations around the world are successfully building and sustaining a culture of continuous improvement. As part of this report we have produced a short series of video interviews with a number of international contributors, who share their perspectives and learning.

Watch a video summary of this report here: kpmg.com/healthcarequality

> It is a journey and it needs a roadmap. My one piece of advice is take the time at the very beginning to understand what this means to your organization and how it's going to be implemented over two to three years, not two to three months.

Kim Barnas
Chief Executive Officer
Catalysis, US

Catalysis

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Empowered and engaged healthcare staff provide better care

Globally, healthcare leaders are increasingly looking to embed the principles of continuous improvement in their organizations. Empowering staff to deliver safe, high-quality, reliable care can provide a step-change in results.

Healthcare providers around the world are facing unprecedented challenges, including increasing staff engagement, difficulty driving forward their improvements, ongoing cost containment, and clearly establishing and communicating their organizational objectives.

Continuous improvement helps address these obstacles by fostering a systematic and sustainable approach to enhanced quality of care and, in turn, better outcomes for patients. Organization-wide deployment of continuous improvement principles engages frontline staff and embeds a scalable methodology for growing and coordinating improvement activities.

The key challenge is to understand how to lead the implementation of continuous quality improvement tenets successfully and sustainably across large-scale and increasingly complex healthcare organizations to deliver the benefits it can provide. How have successful organizations achieved this? What can others learn from their journeys to date?

In this unique international report, KPMG International shares the deep experience of over twenty healthcare leaders who have successfully launched and sustained continuous improvement within their organizations. Drawing on interviews, site visits, an international roundtable meeting, and a literature review, we set out to understand the key enablers and success factors, explore the challenges and barriers, and share the perspectives and insights of those who have seen quality improvement take root successfully within their own organizations.

The report is based on interviews with:

20 healthcare leaders

Representing **15** healthcare organizations

In **8** different countries

This research identified 12 'foundational truths' for those looking to launch, or sustain, continuous improvement efforts in their organizations:

Twelve foundational truths for:

Implementing a continuous improvement culture

1 Create a new end-to-end management system — not just a process improvement team.

2 Get senior leaders' commitment to change themselves, not just others.

3 Go slower to go fast — balance thinking, planning, and doing over a multi-year journey.

4 Create a common language — communicate about patients, quality, and safety to get staff buy-in.

5 Tailor the training — anticipate staff engaging differently and plan ongoing coaching and support to develop the continuous improvement habit.

6 Demonstrate early impact — measure and report to both staff and patients.

Sustaining a continuous improvement culture

7 Choose a few priorities and stick to them — focus efforts to drive real change.

8 Embed continuous quality improvement at all levels — support middle managers to understand the change process.

9 Align the organization to deliver your 'True North' — ensure that improvement work on the shop floor reflects the overall strategy.

10 Engage and empower patients — help them to help staff focus on improvement work.

11 Digital technology can support — but get your management systems and culture in order first.

12 Remember that there are no quick fixes — allow time for your organization to understand, adapt, and reflect.

Foreword:

Dr. John Toussaint, MD

I have been a student of improvement and Lean thinking for close to 20 years. After having practiced Lean as a CEO for 8 of those, I spent the last decade visiting organizations around the world, and have been privileged to learn valuable lessons from many great healthcare leaders. In this document, you will learn from some of those leaders. The experience of transforming organizational culture to excellence includes many hard lessons. It is a journey not for the faint of heart. But the payback can be incredibly rewarding, as the following stories will illustrate. Underlying all of them is a common theme: leaders must change, moving from the typical autocratic management and leadership style to one of inclusion, asking questions, and mentoring.

Dr. John S. Toussaint M.D. is one of the foremost figures in the adoption of lean principles in healthcare. He is the founder and executive chairman of Catalysis, a nonprofit educational institute and the former CEO of the ThedaCare health system.

I think this change can best be summed up by a series of questions:

1 What is the underlying management philosophy of the organization? Do you act to unleash the creativity of everyone, or do you feel you have all the answers?

2 What is the management philosophy based on? Are there principles that have been laid out as the bedrock of this philosophy? Have the principles been clearly defined? Principles are the universal truths that underlie the operating systems of the organization. Leaders of healthcare organizations on the journey of creating excellence have defined specific principles to follow. It will be become clear in the examples to follow how principles underlie the work.

3 Does everyone in the organization understand how they are supposed to behave? That means everyone from the CEO to the frontline nurse. Rarely do I find that behavioral expectations have been established by healthcare leaders. Examples of behaviors include going

to see and asking questions, creating leader-standard work, and anointing a buddy to give feedback for personal improvement.

I have also found it is very difficult to learn this method without some external help. Catalysis is a not-for-profit educational institute, working to coach executive teams so everyone can learn what learning systems work the best. Catalysis then works to publish this knowledge in articles, books, and whitepapers to help improve the healthcare industry.

Catalysis have been coaching executive teams for years. Our intent is to create capability within the team as quickly as possible. Our motto is *Leader as Teacher*. That means the responsibility to teach the rest of the organization lies with leadership, not with external "experts." But this also demands full commitment from the leaders to be the learners capable of transferring new knowledge to everyone else. KPMG shares this vision with us. It's why Catalysis and KPMG member firms have had a long and successful

relationship in supporting healthcare transformation around the world.

Many of the leaders you will hear from have worked with both Catalysis and KPMG member firms. One thing we are certain of is there is no one right way. We believe that every transformation is different, because every situation is different. Therefore, we will always start with meeting leaders where they are at in their own knowledge. Many leaders have tried various aspects of Lean, but usually from a tools-based approach. We believe that looking at it from a principles and behaviors approach leads to long-term sustainability. So our coaching is very much behavior-based.

We hope the leadership examples we have documented from around the world will inspire you to consider taking the next step in learning. There is no question that the method described results in better patient and staff outcomes. But the question is how to do it. Both Catalysis and KPMG member firms stand ready to help in any way possible.

Introduction

From an enhanced patient experience to improved staff satisfaction, adopting proven and well-established continuous improvement methodologies offers a powerful opportunity for organization-wide change.

The challenge remains understanding how to lead a campaign of continuous improvement successfully and sustainably across complex healthcare organizations.

Creating the right conditions and setting and articulating the strategy are of course vital, but how have successful organizations built on this to change culture? What can they teach us about implementing change at scale?

In order to answer this, KPMG International interviewed senior health system leaders from healthcare organizations across North America, Europe, Middle East, Asia, and Australia. We aimed to describe how organizations have successfully achieved excellence, including how leadership within the organization must contribute. We also explored the opportunities, challenges and key factors in successfully implementing continuous improvement at scale.

Continuous improvement drives operational excellence

The term 'operational excellence' describes a way of working for healthcare organizations and systems. At the heart of this concept is delivering improvements in care quality and safety by the everyday, ongoing use of continuous improvement techniques that are driven and owned by frontline staff. Implementation of these techniques must be fully and enduringly supported by the entire organization and board; by specialized and ongoing training; and, where necessary, by external facilitators and supporters.

Correctly understood, achieving this objective requires a culture shift: nothing less than adopting a new philosophy about how to deliver healthcare. It is a learning journey for an organization in how to improve by becoming relentlessly self-analytical and self-critical. At a practical level, it works by identifying problems in

healthcare systems and processes, and encouraging and empowering frontline staff to identify the root causes and develop and implement solutions that address them.

It is also helpful to clarify what the journey is not. First and foremost, it is not a time-limited project. And it is very definitely not a turnaround-type 'quick fix'. To genuinely embed continuous improvement in healthcare is a long-term endeavor pursued over many years — one that requires commitment, investment and persistence. Operational excellence is not for the fad-chasing.

Continuous improvement is also not easy. It involves specific challenges to traditional cultural expectations, and specific ways of working for senior executives, managers and clinicians alike. To achieve operational excellence, the heroic, all-knowing problem-solver and answer-provider model of senior executive/clinician must evolve into a coach, facilitator and supporter of staff at all levels of leadership, driven by the goal of helping others learn how to identify problems and ask questions about root causes, and trusting them to develop, implement and review solutions.

Achieving operational excellence through the implementation of a culture of continuous improvement is both a challenge and an opportunity. By sharing a range of global experiences from successful healthcare organizations, this report aims to help all those embarking on the continuous improvement journey.

> "Fundamental to the principle of improvement is an understanding that those closest to complex quality problems (front line teams, patients and carers) are often best placed to find the solutions to them."
>
> —*The Kings Fund, 2017* [1]

> "The work that we're doing is addressing the real issues inside organizations, about how do we fundamentally create a culture of continuous improvement that makes things better for staff and better for our patients. That might seem a bit idealistic, but ultimately it's about how do we not just take that idealistic notion, but actually put the structures in place to make that real for people."
>
> —Gordon Burrill
> Partner, Global Operational Excellence co-Lead and Head of Healthcare KPMG in Canada

Methodology

In depth case studies, roundtable discussions and global evidence review

This study set out to capture practical learning points generated through detailed discussions with experienced international healthcare leaders who have initiated and led efforts to build a culture of continuous quality improvement within their organizations.

The methodology involved triangulation of three parallel research methods:

1 A rapid review of the published academic literature on implementing and sustaining a culture of continuous improvement in healthcare, with a particular focus on Lean methodology. Key findings are summarized in the Evidence Review section.

2 Expert insights from health leaders with significant personal expertise implementing and sustaining a culture of continuous improvement in healthcare settings. This included semi-structured interviews with 20 organizational leaders,

supplemented by the experience of professionals from KPMG's member firms. A roundtable meeting was hosted by KPMG International's Global Healthcare practice in Toronto, with a series of facilitated plenary discussions and themed break-out sessions, and an educational visit to the internationally renowned SickKids Hospital. In order to guide this report, we asked healthcare leaders the following questions:

— What have been the key enablers and success factors to achieving continuous improvement in your organization?

— What were the main challenges and barriers you encountered, and how were these overcome?

— How have you ensured the sustainability of your achievements?

— What were the key factors to gaining buy-in from your staff, including management and clinicians?

— How have you defined and measured success?

3 A global search for innovative and successful case studies from healthcare organizations with a track record of implementing and sustaining a continuous improvement culture. A two-way selection process was followed: first, KPMG International directly contacted organizations regarded as industry-leading and asked about their programs; second, we undertook a 'bottom-up' process whereby international experts were asked to identify suitable organizations to interview. For some organizations, this was supplemented by in-person site visits by the authors.

The findings from the three streams were analyzed through a thematic synthesis process, with key conclusions summarized in the following sections.

Evidence review

Implementing and sustaining continuous improvement in healthcare

As health systems are increasingly challenged to provide greater value for their patients, interest in continuous quality improvement and related approaches has continued to grow. Academic research is emerging showing a link between organizations committed to continuous improvement and their outcomes, however the challenge is how to embed and sustain this approach.

" Much of the mixed evidence on the impact of Lean on performance to date is likely due to differences in the ability of the organization to implement and embed Lean principles, practices, and tools in the DNA culture of the organization. This is an important area for further research. "

— *Stephen M. Shortell, PhD,*
MBA, MPH
UC-Berkeley

CLEAR
Center for Lean Engagement & Research in Healthcare

Berkeley Public Health

Evidence review continued

In the US, a recent survey of 1,222 hospitals found that 69 percent reported using Lean or a related transformational performance improvement methodology, although only 12 percent judged that it had spread successfully throughout the organization. [2]

Understanding how to propagate and sustain these efforts at scale is today's most pressing question. While the number of academic publications in the area of continuous improvement has doubled between 2005–2012 and 2013–2017 [3], many practical issues remain. The three key findings from this evidence review are described below.

1. Large-scale implementation research is just beginning

While there are some accounts of implementing continuous quality improvement methods over time at individual organizations, [4, 5, 6] large-scale research in this area is only just beginning. Key findings from a national study of implementation across US hospitals found that:

— The majority of hospitals start implementing some elements of continuous improvement in a small number of departments, but some begin hospital-wide.

— The average number of years implementing was 5, with 0–2 typically the startup stage, 3–5 years beginning to get traction, 5–7 spreading throughout the hospital, and 8–plus years fully embedding the concept as part of the organization's everyday culture.

— Two-thirds started with a 'model cell'; 75 percent had established a central improvement team, and 71 percent used an outside consultant to support implementation.

— Daily huddles, PDSA cycles, visual management, and standard work processes were the most frequent continuous improvement tools deployed.

— The emergency department, medical/surgical nursing unit, operating room, executive leadership and laboratory were the most frequent areas of application.

— Greater self-reported impact was associated with more years implementing, more units implementing Lean, number of tools used, greater leadership commitment, greater daily management system use, and greater education and training.

— The most frequently reported impacts were elimination of waste, improved employee engagement in their work, increased throughput in the emergency department, and reduced expenditures.

2. Measuring management interventions is complex

Management interventions in healthcare are difficult to measure in traditional quantitative studies, leading to mixed evidence of impact. This ambiguity is further hampered by low-quality study designs. The multitude of internal and external variables that impact complex healthcare and process outcomes, and the time taken for underlying culture change, means that more rigorous research is required to ascertain the effectiveness of different implementation methods.

Most of the published evidence comes from small-scale studies in one or a few hospital units, and is summarized in four published systematic reviews:

— A recent review of studies published between 2008 and 2018 identified 47 articles [3], with nearly all reporting positive results in regard to efficiency gains, cost reductions, patient satisfaction and quality of care. Many of these studies focused on processes of care, such as emergency department flow, patient wait times and medication errors.

— A second systematic review examined 22 studies[7], 15 of which also focused on processes of care. This review found no statistically significant associations with patient satisfaction and health outcomes; higher costs and lower worker satisfaction; and mixed evidence with respect to patient flow and safety. Positive relationships were found regarding staff improvements in hand-washing, staff checking patient ID bands, and giving patients safety brochures.

— A third review of 107 papers [8] focused primarily on the use of Lean tools; these were found to be largely similar across studies and applied superficially.

— A fourth systematic review focused on Lean leadership [9] attributes and competencies. Findings from 32 articles were grouped into five areas, including:

— fostering an improvement culture

— self-development

— empowering others

— recognizing frontline work (Gemba)

— defining and providing value through commitment to Lean.

3. Healthcare is still learning

Implementation science in continuous improvement remains emergent. While advances are being made, more studies are needed to develop greater knowledge of different organizations' implementation journeys over time. Important questions include:

— What is the relationship between implementation and the growing challenge of physician/staff burnout?

— What is the relationship between the degree of implementation and objective independent measures of cost, clinical quality and patient experience outcomes?

— How can an evidence base be generated that extends beyond hospital studies to include ambulatory, post-acute care, community and other healthcare settings?

Commonly reported improvements from implementing continuous improvement:

— improved staff engagement

— increased patient satisfaction

— time savings and improved timeliness of service

— cost reductions

— productivity enhancements

— improved patient flow.

The 12 foundational truths

A round the world, healthcare providers and systems are increasingly recognizing the benefits that come from adopting continuous improvement methods. Yet many also underestimate the difficulty in changing the behaviors and culture in an organization, and the length of time it takes to achieve this change.

To understand how different healthcare providers around the world have successfully introduced, and sustained, continuous improvement methods, KPMG International distilled 12 key themes from the interviews with 20 leaders at 15 different healthcare providers across eight countries, supplemented by the global experience of leaders within KPMG member firms. These dozen themes capture essential lessons for those looking to take their organizations on an improvement journey, and for those already on that journey and seeking to sustain and scale it.

This report examines each 'foundational truth' in detail, using as a basis KPMG member firms practical expertise of working with global organizations. We explore the nature of each theme, its significance for healthcare providers, and specific actions to reinforce each one.

Finally, we bring these themes to life through corresponding case studies with leading healthcare providers

from around the world who have successfully embarked on building and sustaining a culture of continuous improvement. Featuring interviews with key leaders involved directly in the process, these case studies describe real-life experiences of the continuous improvement journey, challenges and barriers faced along the way, and practical lessons for overcoming them.

1

Create a new end-to-end management system— not just a process improvement team

> "Create a Lean management system, rather than a process improvement team. Sometimes it's hard for people to understand the difference, but this is a vital cultural change to embed into the organization."
>
> — *Dr. Lucy Xenophon Radiologist & Chief Transformation Officer, Mount Sinai St. Luke's, USA*

The term 'management system' describes an operational set of behaviors, tools and techniques deployed to managers to help them react to issues and support frontline improvements.

Adopting and embracing this new management method is fundamentally important to supporting daily continuous improvement, sustainability, and the ongoing alignment of improvement efforts to an organization's stated goals (the 'True North'). It is best thought of as the engine for sustainable improvement.

As one of the most radical steps on an organization's journey to implement continuous improvement, the collective shift to this mindset is also one of the most challenging to understand and apply. Moving staff away from a traditional project-based management mentality to a system-wide approach to supporting continuous improvement involves a change in culture, behaviors and actions that may feel unnatural or counterintuitive. Many of the

skills associated with successful continuous improvement need to be taught or reinforced throughout the change period, supported by ongoing mentoring and coaching.

At the heart of this cultural and mental transition is helping managers understand how to support frontline workers in identifying and solving problems themselves. Changing the way managers manage in a continuous improvement culture ultimately involves changing the way they work. Learning new problem-solving techniques, training in the tools to deploy them, and developing the discipline to sustain this work takes time and effort. Managers adopting this new way of working need to understand that it is not an addition to their job, it is the job. Staff may find it challenging to adapt and naturally resist the change. Closely and proactively supporting them through this is key to delivering organization-wide success.

Key take aways for leaders

— Building and adopting a new management system is one of the most important steps for organizations looking to implement and sustain a continuous improvement culture.

— The cultural and mental shift required to embrace this new way of working is often one of the most challenging steps an organization faces in their improvement journey.

— It is vital to plan and support the change with ongoing training and coaching throughout the process.

Management system components can include:

- ✔ Status sheet exchanges
- ✔ Improvement huddles
- ✔ Visual management/boards
- ✔ Structured problem solving
- ✔ Unit leadership teams
- ✔ Unit-level scorecards
- ✔ Performance review meetings
- ✔ Process-standard work
- ✔ Leader-standard work
- ✔ Process observation and coaching

CASE STUDY

Western Sussex Hospitals NHS Foundation Trust, UK

Western Sussex Hospitals NHS Trust

Our hospitals are three years into an improvement journey. Despite performing well, they originally wanted to ensure this was maintained and improved — the hospital was in a good position but realized that if we didn't do something different, things were going to slip.

Following an influential visit to see a healthcare organization successfully applying continuous improvement methods, the chairman and executive team were also sent to visit. This was helpful in persuading the board to make the investment. It took some time — nine months — to get the board bought in. They have since been very supportive, making the necessary investments in time and resources, and KPMG in the UK have partnered to support implementation and staff training as well.

Western Sussex's successful implementation experience has combined top-down objectives and bottom-up 'What's important for front line staff?' to ensure that quality improvement is seen as a way of business, not just something you get around to when you've got time.

All frontline clinical units have been through training, and departments own their problems and develop their solutions, with divisions also using this approach for day-to-day business. It is not an added process — it is the system.

The results have spoken for themselves. The biggest has been receiving the national Care Quality Commission (CQC) 'Outstanding' rating, which reflects the commitment to improvement across the organization. This rating reflects the complete penetration of their 'Patient First' improvement program, which was recognized and understood by all staff, and a meaningful thread throughout the organization.

Staff engagement scores are also consistently increasing in our staff survey, with the organization now scoring in the top 20 percent of scores in the NHS nationally. Our breakthrough objectives — delivery of a fall reduction program — have also seen a 30 percent reduction. In critical care, our Discharge Delay Reduction Program has been one of the few to reach the national target.

These successes have not just been limited to operations and quality, as the organization has also seen a positive financial impact. If you get the quality right, then the money follows.

Dr. George Findlay
Medical Director
Western Sussex Hospitals
NHS Foundation Trust, UK
http://www.westernsussexhospitals.nhs.uk/

> " This isn't just a series of tools and projects, it's more about leadership and behaviors. Embedding a management system to deliver this takes time and executive commitment. "
>
> — *Dr. George Findlay*
> *Medical Director,*
> *Western Sussex Hospitals NHS*
> *Foundation Trust, UK*

Western Sussex Hospitals NHS Foundation Trust, UK

Western Sussex Hospitals NHS Foundation Trust is an award-winning group of three NHS hospitals in the UK serving a local population of around 450,000. Awarded the highest possible rating of 'Outstanding' by the national Care Quality Commission, this group provides a full range of services and employs over 7,000 staff with operating income of 437 million Great British pounds (GBP).

2 Get senior leaders' commitment to change themselves, not just others

> **"**
> What surprised us most was the amount of work required by executives and leadership teams. You have to think about how you make and sustain this. We didn't anticipate the level of change required. **"**

— Julian Emms
Chief Executive,
Berkshire Healthcare NHS
Foundation Trust, UK

Key take aways for leaders

— Ensure senior leaders are fully committed and understand the level of personal commitment and change required prior to embarking on implementing continuous improvement.

— Visit high-performing organizations that have successfully implemented continuous improvement to see what 'good' looks like, and engage senior leadership in the journey.

— Consider succession planning at an early stage to ensure stable, committed leadership over the time horizon needed to embed continuous improvement.

Support by executive leadership is vital to facilitate the culture change needed to successfully launch and sustain continuous improvement across an organization. Many leaders underestimate the level of commitment required to deliver the program in a way that penetrates an organization, and lasts. Put simply, senior leadership, along with the board, must understand and support the program, or it will have no chance of succeeding.

Demonstrating this commitment is critical in leading others through the journey, and different leaders that were interviewed demonstrated this commitment in different ways. From consciously acting as strong role models for the behaviors they expect from others to adopting a greater presence on the wards, it is clear that active and visual participation of the executive is critical. It enables leaders to see and hear what resources and support are needed on the frontline to build a problem-solving culture; it makes them more accessible; and it gives them a better understanding of challenges on the frontline that need to be addressed.

To be effective role models, leaders must display the same behaviors they expect of all staff, by following their own standard work, asking questions rather than handing down solutions, and acknowledging challenges facing the frontline. They must embrace problems as opportunities for improvement, and show how they are constantly trying to remove obstacles to success.

Adopting these behaviors isn't easy, and takes time. For senior leaders, shifting from a traditional command-and-control mentality and outcomes-led focus and starting over can be difficult.

Many organizations highlighted the need to show their board and senior hospital leaders what 'good' looks like through visits to high-performing organizations that have successfully adopted continuous improvement. Particularly for those initially unconvinced of the potential benefits of a continuous improvement shift, such visits can play a valuable role in fostering engagement and alignment.

Ensuring stable and long-term senior leadership commitment to successfully implement and sustain this new way of working is equally important. Many organizations that were interviewed highlighted the importance of succession planning by anticipating those who could replace current leaders several years out, thinking about candidates, and identifying or grooming up-and-comers early to make sure they are promotable at the proper time. Ensuring that staff with experience and understanding of continuous improvement are recruited and appointed plays an important role in sustaining the work.

Leadership behaviors are central to success

Personal A3 & self assessment

Constancy of purpose

True north — strategic aims

Transparency through visual management

Focus on the process

Scientific thinking

Lead with humility

Seek perfection

Ensure quality at the source

Think systemically

Leader standard work

Respect for every individual

CASE STUDY

Hospital for Sick Children, Toronto, Canada

SickKids

Based on some operational challenges and financial opportunities, SickKids adopted a 'Lean' approach to continuous quality improvement in 2012, after we had participated in a provincial program looking at Emergency Department performance. It was actually frontline staff that first identified the value, and then convinced our senior leaders to consider a Lean-type approach. At the time, there were pockets of effective process improvement practices across the organization but no coordinated, enterprise-wide approach. As individual units saw increasing success, the value of the methodology soon became clear, and it convinced senior leaders to look more closely. I visited ThedaCare, and returned inspired and excited by the opportunity to build a common management system across the organization that focused on enabling and empowering staff at all levels to solve problems on their own.

Our Daily Continuous Improvement Program (DCIP) is the SickKids Lean Management System, established in 2012 in collaboration with KPMG in Canada and ThedaCare. The program supports incremental continuous improvement by empowering staff to solve operational problems, resulting in process changes that enhance the patient experience and staff engagement. It bridges the gap between what patients, staff and other stakeholders value, and what the associated processes deliver. It also provides a medium to anticipate potential problems/risks before they occur, as well as giving frontline staff the tools to solve existing problems on their own and, crucially, take ownership of the process.

Now, approximately one in every seven members of our staff have been trained in the DCIP methodology, and we have a dedicated team of five FTE focusing on coaching staff to identify improvement opportunities, design efficient processes, and implement value-add, sustainable solutions. We started with two to three model units, and now over 60 clinical and non-clinical units have implemented the program. Having a central team has been critical to the program's success. Without these people driving the program centrally, it would have been very difficult to build momentum and spread as quickly as we have. Furthermore, the success of the initial units was critical in 'infecting' other areas with the value of the program.

The results speak for themselves. Frontline staff have solved over 5,000 problems to date, and staff engagement scores tend to increase by an average of 12 percent after implementation based on pre- and post-implementation surveys.

There are several stand-out examples. The percentage of on-time surgical starts has improved by 21 percent, and the total number of items or supplies needed to deliver care has been reduced by approximately 50 percent in dentistry. We've reduced waiting times and cancellations across many of our outpatient clinics. We've reduced our serious safety event rate by 62 percent, and I believe general situational awareness is 100 percent better across the enterprise as a result of Daily CIP. Last year, we focused on 'time from ED arrival to bed placement for admitted patients', set really aggressive targets, and far surpassed the metric. It surprised even our CEO!

But if we were to do this again, I'd amplify physician engagement, in greater numbers, much earlier. It would have accelerated our journey even more.

Jeff Mainland
Executive VP, Hospital for Sick
Children, Toronto, Canada
https://www.sickkids.ca/

> " Having sustained Lean for six years, people don't do it because they have to, they do it because they want to, and because it has become part of everyday practice. The fact that it's been sustained is probably the best result I could have imagined. "
>
> — *Jeff Mainland*
> *Executive VP,*
> *Hospital for Sick Children,*
> *Toronto, Canada*

SickKids — Hospital for Sick Children, Toronto, Canada

SickKids is an internationally renowned public hospital dedicated to improving children's health, and the second-largest pediatric research hospital in the world. With over 400 in-patient beds and over 11,000 staff, SickKids provides a comprehensive range of general and specialist pediatric services, with an operating income of 967 million Canadian dollars (CAD).

3   Go slower to go fast — balance thinking, planning, and doing over a multi-year journey

> "
> It's a long journey.
> Our reason for doing
> this was not dollars, it
> was to provide better
> and safer care for
> patients; it's not a short,
> quick, fix. It requires a
> different culture from
> the traditional ways
> that most healthcare
> organizations are run. "
>
> — *Don Shilton*
> *Former President,*
> *St Mary's General Hospital,*
> *Canada*

Changing the culture of an organization takes time and persistence, particularly in healthcare organizations that have seen many short-lived improvement initiatives come and go. Change fatigue, misunderstandings about continuous improvement, and the capacity and resources available to deliver change are just some of the most commonly reported barriers to overcome.

Building a continuous improvement culture is not a quick fix. Implementing the change to successfully forge and sustain this transformation can take years. With this in mind, it is important not to rush implementation; time must be taken to get it right. Some of the most important planning steps are described elsewhere in this report, for example, taking time to ensure the commitment of senior leaders, visiting high-performing organizations that have adopted continuous quality

improvement, and building a common language and communication strategy prior to starting implementation.

Once initiated, taking the time to plan and deliver training at an appropriate pace, using the resources available, becomes the priority. Working steadily to embed the new mentality, review progress, and adapt as required can mean a multi-year journey before staff and departments across the organization are fully trained.

Planning and deploying the change, together with supplying the essential training and skills transfer at the heart of it, can benefit from experienced external support. Nearly all of the successful healthcare organizations interviewed for this report had initially brought in outside parties to advise and help deliver initial implementation, with a gradual transition to self-sustainment.

Key take aways for leaders

— Continuous improvement is not a quick fix for an organization; training and coaching staff, embedding a new management system, and ultimately changing culture can take several years.

— Striking the right balance between planning implementation, rolling this out to staff across an organization, and working to embed and sustain the change can be challenging.

— Taking the time to get it right is important, and can benefit from experienced outside support; a failed implementation can be difficult to recover from.

CASE STUDY

Landspítali – The National University Hospital of Iceland

The impact of the global financial crisis was significant in Iceland. In 2008, our organization took its budget down 20 percent without losing quality or volume, but about 10 percent was from deferred maintenance, and the other 10 percent from efficiency. By 2011, the organization was struggling to implement further change, and in some areas, quality was not great.

As a result of this, our improvement journey began with help from an external Lean expert, and hospital leaders visited Cincinnati Children's Hospital to see an example of work in this area. From 2011, the organization started to use improvement tools. We now have 25 extensively trained Lean coaches internally, with an aim to have 100.

We're very pleased with the success we've seen. Hospital-acquired infections rates are slowly reducing as a result of one stream of this work, down from 8 percent to 6 percent. Another stream focuses on serious adverse events, and we recently had 181 consecutive days without one. The annual adverse event rate in the past decade has remained steady, despite our activity having risen over 60 percent. When we started back in 2011, 68 percent of the organization's leaders said it had good internal ideas for change, but only 5 percent rated it good at delivering change. By 2015, 85 percent said it was good.

Essential to the change has been the full involvement of the CEO and Executive Board. Leadership behaviour is having to change, from 'troubleshooting' mode to being leaders and missionaries for the work. The cultural change involved has been based on Lencioni: building on trust, constructive criticism and a 'single mission' rather than 'single answer' approach.

Clinician engagement is overall very good, and some leading clinicians are key promoters of the work. This has been helped by our communications team, who produced a series of short promotional videos about this work, called 'The Improvement Minute'. They have now been viewed over 70,000 times!

Language has also been important — the organization refers more to quality improvement than to 'Lean'. We talk about "What is your day job?" and "What is your continuous improvement?" We deliberately avoid talking about cost-cutting; the work is discussed in terms of safety and reducing waste.

For us, the key elements of this program have been:

1. Focusing on quality improvement and business process re-engineering rather than just talking about the 'Lean' improvement methodology.

2. Ensuring good clinician engagement with successful communications about improvement work via a series of promotional videos.

3. Recognizing that sustainability requires constant new impetus and stimulus; it's never finished — we use external experts and speakers to sustain and maintain that energy, with celebration events for coaches' results, and presentation at our AGM.

Dr. Páll Mathíasson
CEO, Landspítali, Iceland
https://www.landspitali.is/

" Start with the management system, engage your leaders, make sure everyone is clear that this is not about the end result, it's about the journey, because this is going to take a long time. Don't be shy about getting in external advisors, and develop a peer group of organizations that are in a similar place. "

*— Dr. Páll Mathíasson
CEO, Landspítali, Iceland*

Landspítali – The National University Hospital of Iceland

Iceland has a population of 350,000, with the additional challenge of approximately 2 million tourists visiting every year. Landspítali is the national hospital, and its only tertiary center and university hospital, providing about two thirds of secondary care for the country. It is the country's largest public organization, with almost 6,000 employees, 700 beds and an annual turnover of 700 million Icelandic krona (ISK).

4   Create a common language — communicate about patients, quality, and safety to get staff buy-in

> "One fundamental shift is seeing someone's role in an organization change from 'I deliver great care' to 'I deliver great care and I help improve the care for our patients in the future.' We support the behaviour change across the organization to shift from one that is often caught in a firefighting environment to one that is coaching and developing people, and making sure they are on board and addressing their issues at the root cause."
>
> — *Gordon Burrill*
> *Partner, Global Operational Excellence co-Lead and Head of Healthcare, KPMG in Canada*

Successful organizations make substantial efforts to communicate with their staff prior to implementing continuous improvement programs. Introducing new ways of working can be difficult, unsettling, and even threatening for some, and the importance of anticipating these potential obstacles and engaging staff early cannot be overstated.

When this is done well, staff quickly become champions to drive implementation forward; when it is done poorly, the resulting lack of staff engagement will cause the program to falter, or even fail, without ever delivering the desired patient, staff and organizational benefits.

Avoiding use of 'Lean' and associated management terminology is important, since, while this improvement language is commonplace in many industries, it often carries negative associations for healthcare staff. Misconceptions about cost-cutting and loss of autonomy can cause significant resistance. Overcoming these concerns through a carefully developed positive communication strategy is key, with some organizations running staff and patient communications campaigns for up to six months prior to starting implementation.

The majority of organizations interviewed have taken the time to develop their own language around continuous improvement so it becomes familiar and meaningful to staff. This helps create the organization's own continuous improvement 'brand' while avoiding management terms frontline staff don't understand. Often, this language is focused on patient benefits, especially quality and safety, such as the 'Patient First' program developed at Western Sussex Hospitals NHS Foundation Trust or 'MyCare' at Tan Tock Seng Hospital in Singapore.

Ensuring all staff come together during the launch and ongoing implementation to discuss solutions to common problems so that learning can be shared across units is crucial, as is communicating successes and early wins. Using success stories from other units in the organization can help alleviate concerns that might otherwise negatively impact adoption elsewhere. These are most effectively delivered by staff themselves to their own colleagues.

Ensuring staff understand that this is not just a passing fad, but an initiative strongly and visibly led by senior leadership, is a significant enabler for successful implementation.

Key take aways for leaders

— Anticipate misunderstandings, concerns, and skepticism among staff; plan a communication strategy starting in advance of implementation to try to prevent this before it has a chance to take root.

— Raise staff awareness and engage them early with positive communications in their own language, avoiding 'Lean' and management terms, and focus on patient and staff benefits rather than organizational issues such as restructuring or cost-cutting.

— Find and promote success stories and early wins, and use staff to tell these stories to their colleagues through a range of mediums, such as newsletters, roadshows and social media.

CASE STUDY

Berkshire Healthcare NHS Foundation Trust, UK

With a vision to consistently deliver great care, Berkshire Health recognized that building a continuous improvement approach could help move from a 'good' to 'outstanding' rating from the Care Quality Commission. With support from KPMG in the UK, the organization is now two years into that journey.

As a provider of nearly one million interventions per year in the community, the challenge was how to effectively launch a quality management system to geographically dispersed district nursing teams that hardly see each other.

Ensuring staff engagement in this setting was absolutely key. The organization prepared by ensuring the buildup was led by the medical and nursing directors, so that the program would be seen as a clinical rather than cost-savings initiative. With the Nursing Director acting as Quality Improvement (QI) Lead, and working together with the Medical Director, leaders visibly led the first year of implementation before handing off to dedicated QI teams.

Given this challenging community setting, communication was an important area of focus for Berkshire Health teams, who worked hard to avoid 'fancy terms' and created their own quality improvement lexicon in plain English using 'Berkshire Healthcare' language to help staff understand.

Patients have also been involved in this work, for example by raising improvement tickets and joining daily huddles. All of the improvement tickets, run charts, etc., are on public display in the healthcare facilities. This was felt to be particularly important in the mental health unit, which perhaps lend themselves more to this approach as people and carers are up and about and more easily able to join in. Patients were also encouraged to be involved in huddles.

Berkshire Health initially launched in tried-and-tested areas, starting with their in-patient Mental Health Unit, which was felt to be the best setting for an early win. This also helped the senior leadership team learn more about continuous improvement by 'doing it' and seeing how it worked.

The third wave of training finally reached the dispersed community teams. Working out how to adapt the new approach took time in order to ensure it fit their working lives. The teams knew they were guinea pigs, and would be co-developing this, and that approach helped. They started with the easiest things to adapt, for example, status exchange, which was run through teleconference and Skype. The setting meant a huddle couldn't be done every morning, but staff could come together for a longer period twice a week, which expanded the time together.

Julian Emms
Chief Executive
Berkshire Healthcare NHS Foundation Trust, UK
https://www.berkshirehealthcare.nhs.uk/

"
Fancy terms can exclude people. Use plain language to draw people in. We worked hard on the internal conversations, creating our own lexicon, and converting management terms to English and 'Berkshire Healthcare' language. "

— *Julian Emms*
Chief Executive, Berkshire Healthcare NHS Foundation Trust, UK

Berkshire Healthcare NHS Foundation Trust, UK

Berkshire Healthcare is a medium-sized community and mental health trust with over 4,500 staff. It provides a wide range of physical and mental health services across many sites, including homes and community settings.

5 Tailor the training — anticipate staff engaging differently and plan ongoing coaching and support to develop the continuous improvement habit

> " Our belief is that this is about coaching, not telling, and helping people discover improvements for themselves — so we aim to get them away from continuous firefighting and feeling that because you're a manager you have to tell someone how to fix the problem, and shifting that mentality to coaching and helping people fix their own problems instead. "
>
> — *Jason Parker*
> *Partner, Global Operational*
> *Excellence co-Lead and Head*
> *of Healthcare,*
> *KPMG in the UK*

Successfully introducing continuous improvement methods ultimately rests on staff understanding the new behaviors required, then applying these in their workplace. While simple in theory, the difficulty of this challenge is often underestimated.

Supportive coaching can make the difference between success and failure. Careful planning is required to help create the conditions for success. Ensuring support is responsive to staff needs, mirrors their pace, and continues long enough to ensure change is embedded are all important steps. A few training sessions alone will not bring the kind of far-reaching changes needed to create a sustainable improvement culture. Over time, staff can gain immense benefit from coaching to support them develop and apply the skills for process redesign, standard work and change management, and help build the practical discipline to apply these lessons and techniques.

Despite this, it is important to understand that staff will engage differently. Many organizations interviewed noted that nursing staff were often quick to understand and engage with continuous improvement methods. Their frontline roles allowed them to identify many opportunities for improvement. Coaching helps empower these staff to tackle problems in an environment where previously the same potential solutions might not have been possible.

In contrast, many organizations told us that their clinicians were frequently more challenging to engage. Conflicting priorities, heavy workloads, change fatigue and skepticism about the methods and results are all contributing factors. Meanwhile, managers benefit from coaching to help them role-model the new behaviors and create an environment where problems are seen as improvement opportunities rather than causes for blame or criticism.

Anticipating these differences allows tailored training to be deployed, for example, emphasizing the scientific approach to problem solving and data-driven results from continuous improvement efforts to win over clinicians. Often frustrated by a slow pace of change, they can be attracted by the opportunity to become closely involved in developing solutions, particularly where there is a clear and tangible link to patient quality and safety, as well as to their own working environment.

All staff are more likely to be enthusiastic about new processes that they have helped create. This sense of ownership can help increase the feeling of confidence that their solutions will result in better patient outcomes, and greater benefits for the organization.

Key take aways for leaders

— Engaging all staff at all levels within the organization is essential to ensuring a sustainable approach to continuous improvement.

— Nursing staff are often quick to engage and able to apply and derive benefits from the approach through the nature of their frontline work; they can become early and strong advocates.

— Medical staff may be more challenging and take longer to engage, requiring more coaching and tailored efforts to overcome resistance to new ways of working.

CASE STUDY

Isala Hospital, Netherlands

A key driver for starting was getting better value for patients. We were aware of lots of waste and wanted to look at ways of doing more for patients by addressing this. Moving to a new hospital in 2014 gave us the opportunity to try. We use Lean continuous improvement methods to support other initiatives in our new hospital, like delivering value-based care, not just as an instrument on its own. It has become our 'Isla on Course' program.

Terminology is important: staff didn't respond well to 'Lean,' so we talked about 'continuous improvement,' which was better received. Safety has also been a focus — it is a strong instrument to bind people together.

Not all doctors feel this is the best way to go forward. Some of the leadership of the medical staff have been cautious, and some think it's something for the hospital board. We take medical staff with us to visit high-performing hospitals which use these methods, and that has had a positive impact on engagement. We have now started special training for medical leaders, but we also use informal leaders with the guts to stand up for the troops.

On the other hand, nursing staff are more engaged than doctors. It is potentially easier for them to use Lean methods compared with doctors, and easier to see their role in it.

The key factors in gaining buy-in from our staff have been:

— going, asking why, and respecting people through the gentle art of asking instead of telling

— doing it yourself, and letting staff see this

— educating and training everyone

— using a common language

— focusing on continuous improvement and not (only) working more efficiently

— ensuring alignment between the overall strategy and on the work floor. A management system is necessary to coordinate all the different perspectives and to focus on the ultimate goal: added value for patients.

Now, we are proud of the enthusiasm and the ideas that people have on the shop floor that you encounter when you join them.

We've learned a lot on our journey, but if we were doing it again, we'd be more focused and look to do it even faster. A lot of time was spent thinking and analyzing, but you also need to 'just do it'.

Joke Wijnberger
Senior VP, Isala Hospital, Netherlands
https://www.isala.nl/

"
The key enablers and success factors have been strong ownership and involvement by the hospital board, patient involvement through our 'client panel', learning and continuously improving what we do, and discipline and perseverance. Making our results and projects visible, for example through storytelling, catch ball, and huddles, and understanding patient processes using visual management and patient flow have also helped. "

— Joke Wijnberger
Senior VP, Isala Hospital, Netherlands

Isala Hospital, Zwolle, Netherlands

Isala is a teaching hospital based across six sites in the Netherlands around Zwolle, including the main hospital, community center, and three outpatient centers, providing 1,100 beds in total. With an operating income of 690 million euros (EUR), it employs 6,250 staff, and is part of the collaboration of top clinical training hospitals (STZ). Isala is committed to facilitating the best possible recovery and support in order to enhance the quality of life of those who have been entrusted to its care.

6 Demonstrate early impact — measure and report to both staff and patients

> "We've harnessed quick wins: the success of our Children's Hospital has allowed internal staff to become the strongest advocates. They've spoken in internal forums as strong advocates and other sites are now connecting with them to say 'Can I see what you're doing?' to see how it works."
>
> *— Dr. Wes Stephen*
> *Executive Vice President of Clinical Operations and Chief Operating Officer,*
> *Hamilton Health Sciences, Canada*

Making results visible is important in engaging patients and staff alike, and harnessing this to help demonstrate positive impact through 'quick wins' can be a powerful tool to accelerate implementation. Through this, staff can become the greatest internal champions and ambassadors for positive results, particularly where they have helped devise and deliver them. Ensuring staff are able to say 'this works' to their colleagues, and communicating and celebrating successes throughout an organization can greatly aid and sustain adoption.

In the early stages, implementation process measures, such as the number of staff trained and number of improvement suggestions submitted, can help demonstrate uptake and engagement. As implementation matures and improvements begin to feed through, measuring and defining successes can shift to more objective clinical measures e.g., reduction in falls, improvement in hand hygiene, etc.

Using visual management techniques to transparently display results and performance metrics is equally important, and a powerful way of helping support continuous improvement efforts. Performance boards with checklists and run charts help share progress and provide clear feedback to staff, connecting them more closely to the results and helping facilitate wider discussions. This in turn can help stimulate new improvement ideas, further raising engagement levels.

While performance measurement in healthcare can be more nuanced and complex than in other industries, the goal is ultimately to demonstrate that patients receive the right care at the right place at the right time, by the right provider, and at the right cost. Over a multi-year implementation journey, positive communication and feedback of successes right from the start plays an important role in helping staff 'keep the faith.'

Key take aways for leaders

— Measuring results to demonstrate impact and transparently sharing them are powerful tools to help support and sustain continuous improvement efforts.

— Harnessing 'early wins' and helping staff communicate these across the organization allows them to become internal champions and ambassadors to support the work.

— While initial process measures, such as training uptake and the number of improvement suggestions made, are helpful, their impact can take time to be seen, and measuring this can be complex.

CASE STUDY

Southern Illinois Healthcare, US

Southern Illinois' approach to continuous quality improvement was inspired by exploring Lean approaches in 2011 with visits to ThedaCare, which provided an inspiring and eye-opening glimpse into the journey. Southern Illinois used an external firm to help start their Lean transformation. It took 18 months to roll out the first wave across their three facilities, following which a patient-care improvement board was set up to help continue the work.

Measuring results and sharing lessons

Data drives all durable improvements. After Lean had been rolled out across all sites for a year, managers noticed that units which 'got' Lean had strong employee engagement scores and low nursing staff turnover. Measuring this result and sharing it between departments and sites has been instrumental.

Ensuring staff buy-in

We experienced initial staff skepticism towards introducing Lean, with people seeing it as 'another flavor of the month'. This was tempered by: 1) explaining how Lean would allow them to shift the obstructions to working in the best way and improving care and 2) celebrating early small wins. Physicians were hard to bring on board with Lean. We found that two approaches were successful in helping us overcome this: 1) some quick wins and 2) seeing the management team show consistency of purpose about supporting Lean. Lean-type continuous improvement approaches are not a part of nurse/physician training, but should be.

Ensuring management buy-in

Senior management team buy-in was important. Over time, leaders developed a 'humble inquiry' approach to teams/departments, taking the approach of asking why current practices are as they are rather than dictating improvements.

Persistence is important, as is ensuring that managers understand the Lean problem-solving process. The patient care improvement board was seen as a 'managers' board': staff should own this from the start. Managers' role in implementing Lean is to provide the structure and give permission for staff teams to tackle their problems locally, and own the solutions.

Julie Firman
VP/System CNO
Southern Illinois Healthcare, US
http://www.sih.net/

"
The journey has taken time, and getting staff teams to become confident that they could take forward and iterate Lean approaches without external support took longer than expected. Celebrating early quick wins and letting staff share in them has really helped. "

— Julie Firman
VP/System CNO, Southern Illinois Healthcare, US

Southern Illinois Healthcare, US

Southern Illinois is a not-for-profit integrated health care system with over 3,700 employees across more than 20 facilities, including three main in-patient hospital sites. The system serves over 350,000 people, providing a comprehensive specialty service.

7

Choose a few priorities and stick to them — focus efforts to drive real change

> "We were getting huge results, we would see 40–50 percent improvement in access and reduction of costs, and improving the quality drivers we had. After the first two years of the process, we recognized we couldn't sustain it, and that we would hit a plateau. We took a year and worked with subject matter experts from outside, and realized we didn't have the 'secret sauce,' the culture and infrastructure around how you sustain and continuously improve."
>
> *— Kim Barnas*
> *CEO, Catalysis, and Former President, ThedaCare, USA*

Many healthcare organizations are overwhelmed by the sheer numbers of targets and outcomes they are monitoring and responding to. Without prioritization, staff bravely attempt to meet all of these and reactive 'firefighting' becomes the norm. This is ultimately counterproductive, with staff inevitably becoming demoralized and frustrated by a lack of improvement, with targets they struggle to meet, or even influence.

To truly 'move the needle' and achieve real, sustainable improvement takes focus, and efforts should be prioritized and concentrated as part of a longer-term continuous improvement system. Recognizing this, successful organizations adopting the approach highlighted the importance of culling vast numbers of their targets and moving towards a smaller set of priorities they could stick with to deliver breakthrough change.

While the ideal number can vary depending on an organization's position and resources, leaders that were interviewed typically recommended focusing on three to four organizational-wide priorities, and certainly no more than 10. These should be aligned with the organization's strategic goals, such as patient satisfaction, quality of care, staff satisfaction and financial efficiency, and then communicated to all staff to ensure clarity and shared direction.

Staying committed to these priorities and seeing them through once selected, often in the face of more immediate day-to-day challenges, is just as important, and requires real resolve and strong leadership.

Being realistic about the time required to drive improvement on complex and difficult challenges is a vital component of the transition. Understanding root causes, designing appropriate solutions, and deploying them takes time to get right, and one may not see immediate success.

Organizations interviewed recommended planning for a 12-24 month period of focus on selected priorities until targets are reached, at which point they can be deselected and others prioritized, while performance continues to be monitored to ensure it doesn't slip back.

Key take aways for leaders

— To deliver meaningful change, it is imperative that healthcare organizations select a few key priorities to focus improvement efforts on.

— Delivering significant change takes time, and strong leadership is required to ensure that the organization sticks with these priorities over a 12–24 months period to demonstrate impact.

— Clearly communicating these priorities is important to ensure all staff are clear about them and share in the direction.

CASE STUDY

St Mary's General Hospital, Kitchener, Canada

St Mary's General Hospital (SMGH) first used Lean continuous improvement thinking and tools to improve Emergency Department performance as part of an Ontario Health Ministry project. Having begun the work in 2011, we realized the gains weren't sustainable, because we didn't have a management structure in place. With a big deficit to close in 2012, the program unfortunately slipped.

Lean is so different from what we've been used to in healthcare that I don't think you can figure it out on your own. You need someone to guide you. In 2013, partnering with KPMG in Canada SMGH began a refresh, with the following goals:

— **Focus and alignment:** Aligning the Senior Team so that all efforts were made towards tangible improvements targeting their vision of "The safest and most effective hospital in Canada, characterized by innovation, compassion and respect."

— **Implementation of a management system:** A Management System to support daily continuous improvement and sustainability, shifting improvement from project– and event–based to being part of everyone's daily work.

— **Capability building:** Building the capabilities of staff and creating a culture and organization of problem solvers.

Understanding the importance of ensuring our leadership was on the same page around what is important and critical to the organization led us to create our 'True North' — a set of four long-term aspirational goals that supported the vision and mission. The key was to focus on these few priorities and stick with them throughout the year. Having a True North set the tone and provided direction. Staff knew what was important, how objectives would be measured, and how they could contribute to the achievement of them. Moving forward, all improvement efforts were aligned to SMGH's True North.

Our focus on reducing Total Patient Harm (measured as hospital standardized mortality rate, HSMR) and Total Staff Harm (measured by number of incidents) ensured this work was tangible. We then started to see results. We had aimed to get one of the lowest HSMR in Canada, and we now regularly achieve this. Another example is demonstrated by our improvements in reducing patient falls. We originally set a target of a 25 percent reduction. Within the first year, the figure dropped by 32 percent, and a further 25 percent the year after that.

As we've reflected on the journey to date, we've identified the following lessons:

— The fundamental shift is from seeing improvement as a series of projects to part of everyone's daily role.

— The critical element is a management system that supports daily continuous improvement, rather than improvement being an 'overlay'.

— Engagement from the Board of Directors is crucial, as their efforts are an expression of total commitment.

— Ultimately, the foundation for sustainment is the leadership behaviors and discipline at each level.

Don Shilton
Former President (2010–2018)
St Mary's General Hospital,
Kitchener, Canada
http://www.smgh.ca/

> " I would advise anyone who's even thinking about doing this to only do it if you want to improve quality and safety in your organization. If you're thinking that you want to save money, don't do it. I don't believe your staff will be fully committed if your priority is saving money. If you make it about quality and safety, staff will buy in. "
>
> — *Don Shilton*
> *Former President,*
> *St Mary's General Hospital,*
> *Kitchener, Canada*

St Mary's General Hospital, Kitchener, Canada

St. Mary's General Hospital is one of the safest hospitals in Canada, regularly recording one of the lowest standardized hospital mortality rates. Having first opened its doors in 1924, this 150-bed hospital employs nearly 2,000 staff and provides 24/7 acute care and a range of in-patient and outpatient services.

8

Embed continuous quality improvement at all levels — support middle managers to understand the change process

> "We try and focus people on the management system. Yes, we do the training, the tools, the techniques and all those things as well. But without the system, it doesn't work."
>
> — *Jason Parker*
> *Partner, Global Operational Excellence co-Lead and Head of Healthcare, KPMG in the UK*

Key take aways for leaders

— Many organizations overlook the important role middle managers play in helping cascade strategy from senior executives to frontline staff, thereby impeding change.

— The nature and content of the work performed by staff managing continuous improvement undergoes significant change, which some may find challenging.

— Ensuring that middle managers are supported and coached in the new behaviors and tools is important in ensuring that improvement initiatives don't stall or fail in the medium-term.

In moving to a culture of continuous quality improvement, organizations typically invest heavily in coaching executive leaders and frontline teams as implementation is rolled out. Too often, middle management can get left behind in the process, which inadvertently serves to block the necessary cascade of change throughout the organization. Changing the management system and the way people work without changing the way they manage will ultimately cause improvement initiatives to stall or fail.

Traditionally, managers typically manage in their own way, with no consistent approach to responding to problems and no clear system for them to review their own performance. Managing continuous improvement requires a different approach to work, systematically applying a new set of behaviors and tools and standardizing management styles.

Doing so transforms managers from firefighters into enablers — leading daily improvement huddles, managing the visual performance board, and helping guide staff to develop new ideas themselves rather than imposing solutions on them. This represents a material shift from top-down directing to enabling self-sufficiency, and coaching staff to lead improvements themselves.

Frontline managers are responsible for the majority of financial, quality, safety and service decisions, and should therefore be the main recipients of coaching, so that they can come to deliver sustainable operational changes on their own.

Without recognizing this role and the work of managers by providing support and development opportunities, organizations run the risk of having middle managers left behind in the change process. While the impact of this may not be immediate, the effect of middle managers continuing old management practices, or trying to adopt new ones on top of their traditional roles, will ultimately lead to their disengagement.

Many organizations interviewed realized this too late in the implementation process, when progress had already plateaued, or they had found themselves losing the buy-in of middle management staff, who were frustrated at the situation they found themselves in. This left a complex gap in the overall strategy deployment.

Successfully ensuring that middle management are bought into continuous improvement, and even more important, that they understand its value, can greatly aid in ensuring the shift in working practices is cultural as well as operational. Middle management's role in delivering this shift needs to be recognized and appreciated in order to produce long-term change.

CASE STUDY

Hamilton Health Sciences, Canada

The hospital first developed an improvement framework in the 1990s, so this has been on the hospital's mind for a long time. The previous CEO made a decision five or six years ago that this improvement framework should continue to move forward, building on previous work. There was recognition that quality does matter — not just for patients, but also for finance/costs.

A Lean approach to continuous quality improvement was launched three years ago, through a bottom-up approach with help from Catalysis. We're now on the fifth wave of implementation across five hospitals, and approximately 2 years away from full implementation across all departments. The hospital brands this as its Continuous Quality Improvement (CQI) program.

Visibility of senior leadership has been a key change facilitator. Our senior team have formal coaching and attend huddle boards across many units in clinical and non-clinical areas. The language is changing in the organization, even at the senior leadership level.

One issue we've been struggling with is around middle management, and we recognize we haven't done enough at that level in helping understanding about how it all fits together — going from strategic corporate initiatives driven down from the senior team to switching to a majority of activity at the front line.

Physicians are engaged and leading some meetings, but this is variable. While it's heartwarming to see them leave ideas on the huddle boards, they don't always see their role, since it's unit- dependent and manager- or leader-dependent. Equally, they can be physically there but not actually engaged; a manager's and/or leader's ability to connect with staff is key.

Another challenge has been that success has not been well defined for us yet: we're currently counting successful implemented initiatives and number of A3s completed. We need broad enough measures that everyone can relate to, but also to strike a balance and not be too broad or irrelevant, or put in place things that can't be measured.

We encourage patients to engage with the visual board — families or patients can stand and listen, it's done in a very public way, and on occasion they will speak about what's being discussed. This was initially very awkward for staff — they say this should be done in the back room! But it's been received very positively, because it demonstrates our commitment to improvement.

The pace of rollout has been a challenge, with a lot of thinking about how best to support and launch, but really we've been going out too slow — we've reached a point where demand to launch it outstrips our ability to do it!

Key facilitators for us have been:

— Visibility of senior leadership, aided by dedicated coaching.

— Empowering frontline workers — a cultural shift that has been well received, and about which we've seen genuine enthusiasm from staff.

— Formal education of many modules, with a full program to launch and sustain — we're a large organization and have spent a fair bit of resources on frontline units.

— Harnessing quick wins: the success of our Children's Hospital has allowed staff to become vocal and positive internal advocates, with other sites now connecting with them to see how it works.

Dr. Wes Stephen
Executive Vice President of Clinical Operations and Chief Operating Officer
Hamilton Health Sciences, Canada
http://hamiltonhealthsciences.ca/

> "One issue we've been struggling with is around middle management, and we recognize we haven't done enough at that level in helping understanding about how it all fits together — going from strategic corporate initiatives driven down from the senior team to switching to a majority of activity at the front line."
>
> — *Dr. Wes Stephen*
> *Executive Vice President of Clinical Operations and Chief Operating Officer, Hamilton Health Sciences, Canada*

Hamilton Health Sciences, Hamilton, Canada

Hamilton Health Sciences (HHS) is Ontario's most comprehensive healthcare system, with five hospital sites and five specialized facilities in Hamilton and West Niagara. As an academic teaching hospital with more than 1,400 beds and employing approximately 8,000 staff, HHS serves the health needs of approximately 2.3 million residents.

9 Align the organization to deliver your 'True North' — ensure that improvement work on the shop floor reflects the overall strategy

> "St Luke's has its own dashboard that supports our 'True North.' Summary meetings looking at this are not punitive: if you're missing targets, what is the real cause, and how can we help and support you?"
>
> *— Dr. Lucy Xenophon*
> *Radiologist & Chief*
> *Transformation Officer*
> *Mount Sinai St. Luke's,*
> *New York, US*

Building a culture of continuous improvement requires that an organization has clarity around what matters most to it. The handful of metrics which represent the goals an organization is targeting are often referred to as the 'True North': the true direction in which the organization should be travelling. Prioritizing and articulating this direction allows staff to rally around a common purpose and to focus efforts, making the best use of time and resources, and ultimately providing the greatest impact.

An example of 'True North' from a hospital organization interviewed was provided by Don Shilton, Former President of St. Mary's Hospital in Kitchener, Ontario:

— quality and safety: zero harm

— patient and family centered care: zero wait

— our people: 100 percent engagement

— financial stewardship: zero waste.

Typically, executive leaders will work to determine the key goals, the associated performance indicators, and the improvement targets. Getting this right is important, and prioritizing the few areas that matter most will involve considerable discussion, supported by evidence regarding where the most pressing problems lie.

However, none of this dictates how targets will be achieved, empowering staff to determine the incremental improvements that will help accomplish the goals, and giving them ownership of the solutions. It is this sense of ownership that forms the building blocks for establishing the continuous improvement work that will lead to achievement of the intended outcomes.

Ensuring that the 'True North' is clearly communicated across the organization helps focus staff on the collective aims. It provides a 'golden thread' through all of the improvement work and acts as a guide and filter to focus and align work, from the CEO down to frontline staff, connecting all of them to the actual work that delivers value to patients. The emphasis is on improving the work staff do, rather than just improving metrics.

Having these objectives clearly stated then encourages meaningful and systemic conversations about how the organizational objectives should be tackled. People's improvement efforts on the shop floor become appropriately focused on, and aligned to, the organization's strategic goals and priorities, and everyone understands how they contribute to the overall vision and strategy.

Key take aways for leaders

— Ensure that the organization's leaders are able to agree on and articulate a small number of goals, and the metrics for these, setting the 'True North'.

— Clearly communicate these goals and metrics to all staff across the organization in order to focus work on the shop floor and ensure it is aligned with the organizational goals.

— Remember that 'True North' isn't just about improving the metrics; it's about improving the work.

CASE STUDY

Mount Sinai St. Luke's, US

Awareness training has been foundational to help create communication and interest in our continuous improvement program. We talked it up to our executive team and delivered early wins with things we knew were going to work to create a buzz around and show a difference people would actually feel. It's important to make the work tangible and visible right away. As part of this, we've created a 'Lean lab' — a physical space different from the rest of the hospital, where people can feel it's different and relax, brainstorm and design new things. The creation of this new physical space is one of our major success points.

Lean can start as tool-based to get some wins, but it will become a slippery slope if you say it's only this. We've been trying to create a Lean management system rather than a process-improvement team. Sometimes it's hard for people to understand the difference, but this is a vital cultural change to embed into the organization. As part of this, St Luke's has its own dashboard that supports our 'True North.' Summary meetings looking at this are not punitive: if you're missing targets, what is the real cause, and how can we help and support you?

I was concerned about how staff would take to a Lean approach to continuous quality improvement, but frontline staff love it; they get it right away. The front line embraced this much more eagerly than physicians, but they, too, are starting to embrace Lean approaches, partly because they've now seen it deliver successes that affected them positively. Residents trained in this are now getting enthusiastic as well. As a result, we haven't needed to sell our Lean program to staff. When they first come in, it is a bit of 'shock and awe', but then they quickly get what we're doing and get interested in taking part. In fact, staff are not the problem — executives are!

Hospital executives are typically high flyers, and the concept of relinquishing control is something they are not looking to do. In our case, it needed the president to say, 'This is what we're doing,' and then explaining why. It's important to bring the exec team onto the same page when starting out. At a previous hospital I took all our senior executives together to have an experience of Lean at a successful center, and most came back if not converts, then at least with a common understanding and vision.

The program has already delivered significant impact. For example, we created a Discharge Command Centre, and have been able to consistently cut down the long stay list by 25–30 patients. We could close a unit and gain 6 million US dollars (USD) in cost savings. Also, getting patients out of the Emergency Room and up to in-patient floors — we started working on that a year ago, when the average wait time to admission was 10 hours. We've now brought that down to four hours, and are able to sustain a much better patient experience.

Despite this, there are ongoing challenges and roadblocks — it is not all rainbows and sunshine! For example, the initial introduction of huddle boards has been a failure, not because frontline staff didn't like it, but because leadership didn't know what to do with it, or were unable to see the value in such a low-cost tool.

Overall, I have been surprised at how hard Lean is: you have to be on all the time. I spent my career being trained to be the one with the answer. Being able to listen and allow people to fail and create that into a learning experience means using a whole different part of my brain.

Dr. Lucy Xenophon
Radiologist & Chief Transformation Officer
Mount Sinai St. Luke's, New York, US
https://www.mountsinai.org/

> " I had to spend so many years as a physician seeing waste, and I was very frustrated. I'm a very organized and visual person, and visual organization of Lean spoke to me in a way that was extremely appealing. "
>
> — *Dr. Lucy Xenophon*
> *Radiologist & Chief Transformation Officer,*
> *Mount Sinai St. Luke's*

Mount Sinai St. Luke's, New York

Mount Sinai at St Luke's serves as the principle care provider for the West Harlem and Morningside Heights communities in New York. Originally founded in 1847, it is now part of the Mount Sinai health system. With 495 in-patient beds and over 2,460 staff, the hospital provides a comprehensive range of clinical services and research, including a Level 2 trauma center.

10 Engage and empower patients — help them to help staff focus on improvement work

> We encourage patients to engage with the visual board — families or patients can stand and listen, it's done in a very public way, and on occasion they will speak about what's being discussed. This was initially very awkward for staff — they say this should be done in the back room! But it's been received very positively, and it demonstrates our commitment to improvement.

— Dr. Wes Stephen Executive Vice President of Clinical Operations and Chief Operating Officer, Hamilton Health Sciences, Canada

Key take aways for leaders

— Engaging patients is important in helping determine the priorities for continuous improvement work and testing potential recommendations.

— Some organizations are going further by actively encouraging patient participation in submitting improvement ideas and joining daily huddles.

— Healthcare staff may be cautious about sharing problems and performance with patients, but handled well, this type of engagement shows patients how an organization is striving to improve.

The ultimate aim of continuous improvement work should always focus on what matters to the patient. Ensuring they are engaged in the journey can in turn ensure work remains grounded in that reality. At a minimum, patients can play an important role in helping determine the areas for quality improvement work, test the potential ideas for delivery, and help evaluate results.

Some organizations have taken this a step further by actively encouraging patients and carers to become directly involved by suggesting improvement ideas and even participating in daily huddle meetings to review progress and performance.

The feasibility of this can depend on the healthcare setting and the ability of patients or careers to participate. Interviewers heard examples from pediatric hospitals in which parents are keen to engage, and from mental healthcare providers, where patients are more likely to be up and about on the ward.

Initially, staff have found direct patient participation awkward, and expressed concerns that discussions around performance, problems and improvement would be better undertaken separately. This reflects a concern that patients or carers will misunderstand discussions, or shouldn't be exposed to internal problems or poor performance.

None of the organizations interviewed has experienced problems arising from this; on the contrary, they found that patients were pleased to be privy to measurement and active discussion of improvements.

The real win from promoting patient engagement may come from the role it plays in helping keep staff focused on the ultimate reason behind successfully delivering continuous improvement work: helping the patients themselves.

Sidra's journey towards continuous improvement

Operational improvements

Focus on **tactical process improvements**.

SiP

Focus on making improvement part of the **daily work** and developing capabilities of staff

Culture of continuous improvement

Focus on developing leaders as coaches and **embedding improvement into the DNA**

| Post-activation stabilization | — 80+ nationalities — Qatar healthcare partners — Different work cultures | Developing a 'Sidra way' of doing things | Becoming 'Best in class' in improvement |

CASE STUDY

Sidra Medicine, Qatar

As a startup hospital, we talked about building a culture of continuous improvement early on. With over 85 nationalities coming together to build our new workforce of nearly 3,000 staff, we were very much aware of the need to develop a common way of working within Sidra, and a common approach to improvement. In particular, many of the hospital leaders were still settling in, and we recognized their need to develop the team's capabilities to help improve and sustain services themselves. We wanted to provide them with a structure they could use to develop their people and make the improvements self-sustaining.

We're working to build continuous improvement into an operating system for Sidra — the Sidra Performance System (SiP) — to help provide that common understanding and common language. We initially focused on creating some basic capabilities, raising awareness of waste and how to remove it, and targeted interventions to lift awareness of this.

Now that services are starting to mature, we're thinking about how to effectively capture efficiencies happening as a result of SiP. Not necessarily hard dollar savings, but quantifying the effort or hours saved by doing something, and not just about quality, but also turnaround times and the resulting efficiency gains.

We've come a long way on our journey to date, and I hope others can learn from our experiences.

First, I would suggest to others to really distil the language of the continuous improvement tools they are using so that it is completely intuitive, and to avoid overload with new terms and acronyms. There's always so much new training and so many new terms to learn in healthcare, lots to absorb really fast, and adding this new vernacular risks creating a unique jumble. It's important that continuous improvement doesn't get caught up among all the other training noise, so try and relate the language of the tools back to common language as much as possible while staying true to the principles of improvement.

Second, take time to make sure all the stakeholders are aware of the amount of investment in effort and change this is. While some organizations may have leaders who can gauge and understand this, it isn't always the case. Mapping out all the stakeholders and ensuring they understand this and buy into it is an important step. It's important they support it, and feel like there's a case to do this in their areas. Otherwise, it can become just another competing priority.

Third, there is a cultural dimension many organizations need to consider, and which is particularly important here with so many different nationalities working together. Appreciating that healthcare staff often come from different cultures, and how this may influence involvement, is crucial. Some may be more comfortable speaking up and participating in a group, while others may be more comfortable doing things without being singled out or having to present in front of a group. Consider what can be done offline, rather than a group huddle, so that you can still tap into the wisdom and experience of those individuals. It's important to adapt expectations to culture.

Shiraz Bajwa
Director of Business Process Improvement
Sidra Medicine, Al Rayyan, Qatar
https://www.sidra.org/

"

I'd recommend spending time with your units to get clear on how you want to deploy this beforehand, for example whether it is going to be nurse-led or operations-led. Take time to understand what reporting line you want to drive this, and understand the different dynamics. As much as we'd like to believe we can work outside reporting lines, in truth you need clear reporting lines to ensure accountability. "

— Shiraz Bajwa
Director of Business Process Improvement. Sidra Medicine, Qatar

Sidra Medicine, Qatar

Sidra is a new 400-bed, state-of-the-art hospital, medical education center, and biomedical research center in Al Rayyan, Qatar, formed as an initiative of the Qatar Foundation. Providing care to patients from Qatar and across the Gulf region, Sidra provides a full range of in-patient and outpatient services, including a special focus on specialty care for women and children.

11 Digital technology can support — but get your management systems and culture in order first

> " It's pretty ineffectual telling people to do certain things and expecting an outcome. You have to empower your staff to come up with solutions and deliver them. We're not going to tell them how to reduce falls, but we're going to ask them to use data to tell us how to reduce falls. If we wanted this approach to be successful, then it had to be data-driven. Working with our performance information team has been critical to ensure the information flow supports this. We display unit-level performance with driver metrics, and use this on a live basis. "
>
> *— Dr. George Findlay*
> *Medical Director,*
> *Western Sussex Hospitals*
> *NHS Foundation Trust, UK*

Digital technology can play a key role in supporting continuous improvement, but organizations interviewed stressed the need to recognize the importance of ensuring underlying management systems and culture are improved first. Technology should never be used as a plaster for fundamental issues; if you start with technology as a solution for these, you're likely missing the problem.

For any organization, improvement starts with an understanding of the current state. Making better use of data to understanding this is a starting point for harnessing digital technology effectively. Used intelligently, it can be a helpful companion to delivering continuous improvement. Real-time data and analytics can accelerate problem prioritization and root cause analysis, driving new insights and providing live performance measurement.

Getting this data into the hands of staff so they can use it to improve care can be game-changing. Several of the organizations interviewed have brought their key 'True North' metrics together into digital dashboards to improve visibility and reporting. The risk is that this can end up as merely a 'cool tool', whereby it isn't truly used to change anything.

Digital technology can also be part of the solution, from improving care to supporting system efficiencies and productivity. From accelerating patient-facing diagnostics and management to assisting with administration and back-office functions, the range of digital technology solutions in healthcare is growing significantly.

Key take aways for leaders

— Digital technology can play an important role in supporting continuous improvement, but not as a band-aid over broader issues that need to be addressed.

— Data and analytics can play an important role in helping select and prioritize areas for focusing improvement efforts, and for monitoring metrics and performance indicators.

— Digital technology solutions may form an important part of improvement activities, from patient-facing to administrative and back-office functions to reduce waste.

CASE STUDY Mercy, Missouri, US

Our Lean continuous improvement work in one sense started in 2004, with external help, but this was very expert-based and results-oriented, and didn't change internal culture at all. We started too big and too fast: a mile wide but an inch deep, rather than with a few 'Lean model cells.' Our real journey started following a visit to ThedaCare in 2014–15, with the move to a principles-based approach, not tied to a senior leader 'driving it.'

When our Chief Executive came to see ThedaCare, he got what Lean really is, and Mercy's senior management team got interested in this when they could see how Lean initiatives were revealing problems. Part of my challenge is to get top-level executives to understand it, and it's a cultural change for leaders.

It's hard for an executive leader to lead this, and not to resort to command-and-control. It comes back to behavior — it's still threatening for some leaders to say, 'we don't have all the answers.' Lean continuous quality improvement is about decentralizing and thinking differently for leaders: where there is certainty, may we sow doubt!

Humility and self-criticism in this is important. Initially, we made a ton of mistakes. We saw it as tool-based: I wasn't enabling my fellow leaders and co-workers' critical thinking. We've only recently got it to be process-based, rather than project-/results-based. We need to be constantly going out and learning from others.

For us, the practical impacts have particularly been around improvements in staff engagement and patient satisfaction. Cost structures have improved a great deal, and in one site, significant cleanliness improvements, too. Early quick wins have also been seen in departments like transportation and housekeeping, where leaders got Lean really quickly.

The key factor to getting staff buy-in was to get them to see what good looks like and understand it. This goes nowhere if staff are not delivering it on a day-to-day basis.

It's been challenging to engage clinicians: two to three years in, some clinicians, mainly younger ones, are getting it and bringing humility in their thinking. Self-criticism inherent in Lean should be part of the practice of medicine — younger clinicians are changing, whereas older generations were trained to be 'the expert.' Looking back, some of our key lessons have included:

— Lean is about decentralizing and thinking differently for leaders.

— There's no quick fix: Lean needs time for leaders to understand, mature and develop.

— The key factor to getting staff buy-in was to get them to see what good looks like and understand it.

Aaron Steffens
VP, Operational Improvement
Mercy, Missouri, US
https://www.mercy.net/

"

Analytics and real-time data are important but insufficient — Lean has been accompanied in Mercy by advances in getting real-time data into the hands of co-workers so they can use it to improve care. However, this can be just a 'cool tool': I've seen implementations of the data where it doesn't change anything. "

— Aaron Steffens
VP, Operational Improvement,
Mercy, Missouri, US

Mercy Health System, Missouri, US

Mercy is a not-for-profit healthcare organization headquartered in St Louis. Originally founded in 1871, it has grown to be one of the five largest US health systems. With 43 hospitals in four states and employs over 800 physician practices and outpatient facilities, the health system employs over 44,000 staff, treating millions of patients annually, with over USD5 billion in operating income.

12 Remember that there are no quick fixes — allow time for your organization to understand, adapt, and reflect

> " My advice to boards is always to think really carefully about what you're trying to achieve, and to go and see some different things, because there's lot of different flavors. It's important for senior teams — and I include the chair and non-executives — to go and see it for themselves so they actually understand what they're thinking of embarking on. Absolutely critical for me is willingness for change — the top team has to be up for the change and committed to the journey — and a commitment to stay and see it through. "

— Jason Parker
Partner, Global Operational
Excellence co-Lead and
Head of Healthcare,
KPMG in the UK

Continuous improvement is a philosophy, not a quick fix, and it isn't going to turn an organization's performance around overnight. It typically takes between two and five years for an organization to truly embed the new ways of working and a culture of continuous improvement across all levels. Success is achievable only via the entrenchment of a management system that supports frontline engagement, root-cause problem-solving, and ongoing continuous improvement.

This long-term approach can be a challenge for many healthcare organizations, particularly those struggling with performance or financial issues and who need rapid solutions. Continuous improvement has to be seen as a long-term investment in an organization's health, and a committed and stable leadership is required to drive this. Visiting other organizations that have successfully implemented and sustained such work can be helpful in understanding the potential benefits that can be derived from this investment.

Continuous improvement benefits from the time and space to grow in an organization. Starting with low-risk projects as vehicles to engage and train staff can help buy time for this. Positioned effectively, continuous improvement will be recognized by staff as an approach that can help address their daily work frustrations while at the same time achieving the organization's key objectives.

Making improvement part of everyone's daily work involves changing the nature of that work and equipping staff with new tools and skills. This requires behaviour change across the organization, shifting from a mentality of firefighting to one characterized by coaching and developing people, and making sure everyone is addressing issues at the root cause.

This deep culture change can be challenging, and can take years, but the ultimate return is far greater than that of any isolated improvement project.

Key take aways for leaders

— Sustainable continuous improvement isn't a quick fix; it requires deep cultural and behavioral change throughout the organization.

— Strong and stable leadership is required to drive the transformation over a period of years; leaders must understand what they are embarking on.

— Striking a balance between the desire to see change and the need for an organization to have time and space to understand, plan, adopt and reflect can be difficult, but it is important, and ultimately pays dividends.

CASE STUDY

Tan Tock Seng Hospital, Singapore

Tan Tock Seng Hospital (TTSH) began its journey in embracing the use of Lean to improve and transform care delivery in 2007. For a health system widely recognized as one of the most efficient in the world, these ongoing efforts to drive improvements are impressive.

Faced with complex healthcare challenges brought about by an ageing population, shrinking manpower supply, rising patient expectations and operational bottlenecks, TTSH's leadership launched the 'MyCare' organizational improvement program. The program is driven by the philosophy that staff are their most important asset, and that everyone can play a part as a problem solver. The principles guiding this improvement program are summed up in the 'MyCare Framework', with its core as 'Empowered Staff, Patients First'. The core essentially refers to empowering all staff to improve what they do every day to deliver 'patients first' care. The intent is to effect a mindset shift from the traditional problem-solving approach with teams of experts to a Kaizen approach with many people solving many problems. That way a continuous improvement culture can be nurtured in the organization.

Communicating this, and rolling out to the organization's 4,000 staff then was a challenge. Early system-level projects, deploying the use of Lean approach, had yielded results and helped to positively reinforce that the right direction was taken. Throughout the decade long Lean journey, senior leaders identified and led system innovations as project sponsors as well as faculty members in training of staff. They visibly led communication sessions and ongoing leadership presence at project briefing sessions, which helped spread the message. Staff are acknowledged by leaders for their improvement efforts. A Lean department, the Kaizen Office, was set up to facilitate improvement projects and develop organizational capability in Lean tools and their applications through the 'MyCare' training program. New staff are inducted to the continuous improvement culture during their orientation program. The hospital also mandated that any expansion or development of new clinical services must have a systematic review of the request. This is done through understanding the reasons for the actions, current processes, and target state, as well as co-creating the future state process with all relevant stakeholders.

In recent years, the hospital has integrated design with Lean to provide a deeper empathy-based dimension to complement its efficiency-driven care redesign efforts. Although culturally less common, this work is increasing the engagement of patients in co-creation. It encourages feedback to ensure that the redesigned care model is less provider-centric, and gets the needs of their patients, next-of-kin, and care-givers right.

Additionally, the hospital has taken a systemic approach to drive improvement and innovation, through the 'TTSH Innovation Cycle Framework'. Care and process redesign is one of the key elements of this effort. With care and process redesign to eliminate waste, opportunities arise to automate manual processes with robotics, automation and IT. This, in turn, provides the window for job redesign for staff to increase the value of their work through upskilling, job substitution or job expansion. It is important to keep pace with improvement and innovation to prepare the workforce for the future and to achieve sustainability in care delivery.

TTSH has found this work particularly helpful in driving improvement and innovation within and beyond the hospital. An example is working with community care partners to improve the transfer turnaround time of patients to nursing homes and community hospitals.

Lynette Ong
Associate Director, Centre for Healthcare Innovation
Director, Kaizen Office,
Tan Tock Seng Hospital
https://www.ttsh.com.sg/

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All of us have three jobs — to do our job well, to do our job better and to do our job differently "

*— Professor Eugene Fidelis Soh
Chief Executive Officer,
Tan Tock Seng Hospital, Singapore*

About Tan Tock Seng Hospital, Singapore

Tan Tock Seng Hospital (TTSH) is one of Singapore's largest multi-disciplinary hospitals with 1,700 beds, serving a population of 1.4 million residents in Central Singapore. Powered by 9,000 staff, the hospital has 61 clinical disciplines and four centers of excellence in Infectious Diseases, Geriatrics, Rehabilitation and Ophthalmology. TTSH hosts the Centre for Healthcare Innovation that is set to transform care through healthcare innovation, workforce transformation and learning andragogy. TTSH is AON Hewitt Best Employer (Singapore) 2013 and 2015; and Hay's Employer of Choice at HR Management Asia Awards 2018.

To help support the improvement and innovation culture, TTSH is working on a knowledge management platform to host a library of projects which staff and community care partners can learn from. This will be a valuable resource for building improvement knowledge to grow stronger together.

Maturity matrix

The following maturity matrix can help healthcare organizations understand where they are on their journey to implement and sustain continuous improvement. If you have any questions about the matrix, or your self-assessment, please contact any of the professionals listed on the back cover.

	Maturity Level 0	Maturity Level 1	Maturity Level 2	Maturity Level 3
Organizational Focus and Alignment	Organization has articulated Mission/Vision/Values but lack balanced set of corporate metrics for measuring performance.	Organization has a balanced scorecard with 50+ metrics aligned to Safety/Quality, Patient, Staff and Financial. The connections to department/unit level metrics and focus is often unclear.	Small number of True North metrics define the organization's long-term focus, and a well-structured annual strategy deployment process aligns operational breakthrough objectives to frontline units.	True North metrics are well understood at all levels of the organization with a robust strategy deployment process that aligns both operational and strategic initiatives at each level of the organization. Scope of annual improvement efforts are aligned to internal resources and capacity.
Leadership behaviors	Leadership team not aligned on need for change and maintains a traditional top-down 'command and control' approach.	2–3 members of the leadership team are leading the change. While pockets of new ways of working exist, organization usually reverts to 'top-down' approach on significant changes.	Change is led by the CEO, and the leadership team spends 30 percent + of their time at the frontline. Leaders role model the use of Standard Work and participate regularly at huddles and improvement events.	Leadership is fully committed and see coaching and developing staff as core to their role. They role-model the behaviors (e.g. root cause problem solving, humble inquiry) and have a personal development plan to improve.
Daily Management System	Management approach varies widely by unit or department, and is characterized as reactionary and focused on firefighting.	Common tools and scorecards are used across the organization, with the majority of improvement led by management, with limited frontline involvement. Visual boards are used for huddles and sharing performance.	Organization has developed a daily improvement approach that supports idea generation, staff engagement, coaching, and reducing firefighting. Approach is focused on the frontline and does not always effectively link up to the senior team.	Organization has a daily management system that connects True North to middle management and frontline units. Approach is not seen as an "add-on" by staff or managers but simply "how we work," and is integrated into new manager training and daily work of leaders.
People Development	No structured training and capability-building approach for improvement skills. Training largely ad-hoc and focused on small central team.	Staff have access to training (e.g. Yellow Belt), and small group of central resources support large improvement efforts.	Structured capability building approach for the organization, with coaching support post training. Training is a balance of both Lean, data analysis, project management and change management.	Improvement capability-building approach is fully integrated into HR competency model and role expectations. Tailored training approaches for Board, senior leaders, management and physicians.
Improvement Methods	Limited use of data-driven problem solving to resolve issues. Organization often addressing the same problem as root causes are not addressed.	Some application of DMAIC or Rapid Improvement Event approaches to address problems. Resourcing, coordination and sustainability of improvement efforts are seen as significant challenges.	Some larger initiatives focused on value streams (e.g. surgical flow). Focus of improvements largely driven by leadership and supported by central team. Frontline staff included in all events.	Organizational focus on end-to-end value streams rather than point-improvement efforts. Improvements are aligned to True North and breakthrough objectives for the organization. Patients are included in majority of improvement events.

Conclusion

The success of the health organizations highlighted in this report demonstrates the great potential for continuous improvement approaches in healthcare globally.

What distinguishes these institutions is a complete and long-term commitment across the organization to ensure sustainability, coupled with a desire to end the vicious cycle of short-term gains followed by a relapse into old ways.

They have placed a strong emphasis on making improvement part of everyone's daily work, as opposed to encouraging focus on an isolated set of projects. They have supported staff with on-the-job coaching to provide them with the skills and confidence to challenge the status quo.

Continuous improvement work makes the traditional 'cost versus quality' argument redundant. By improving clinical efficiency and quality of patient care, both public and private institutions can reduce costs.

The rigor and discipline required for a continuous improvement journey should be seen not as a straitjacket but as an enabler, helping to channel the undoubted passion of healthcare professionals into practical solutions that meet the 21st-century challenge to permanently raise quality and reduce costs over decades.

The authors hope that this report adds to the global dialogue on continuous improvement in healthcare, and helps healthcare providers successfully launch and sustain efforts to realize the valuable benefits for governments, system managers, payers, healthcare professionals and, most importantly, patients.

Maturity matrix

How KPMG can help

> "
> It's rare that an executive team will have all the knowledge that you need to actually implement this — so I think buying some expertise that can help you think about how can we do this in a very thoughtful and structured way is key. I don't think we could have done it without the external support that we had. "
>
> — *Dr. George Findlay*
> *Medical Director,*
> *Western Sussex Hospitals*
> *NHS Foundation Trust, UK*

KPMG member firms are helping healthcare providers and systems at national, regional and local levels successfully transform their services through building a culture of continuous improvement. Our global network of specialists, some quoted in this report, have detailed experience in supporting health systems.

If you would like more information about how KPMG member firms can help your organization or system, please contact the KPMG Head of Healthcare in your local region (see back cover), or email healthcare@kpmg.com.

How KPMG member firms will work with you

Shifting your improvement culture to one of continuous improvement means moving from 'top-down change' through a command-and-control approach to 'bottom-up change,' in which frontline staff are enabled and empowered.

KPMG member firm's tried-and-tested hands-on approach to delivering operational excellence in this area is made up of three components:

1. **Operational Improvement (OI)** is the more traditional continuous improvement methodology, which redesigns pathways and processes to eliminate waste and variation to standardize care. It embeds new capabilities with frontline staff, enabling them to solve problems and improve care on a daily basis.

2. **Operational Management (OM)** is a fundamentally different way of managing. OM creates a new "Board to ward" management approach and culture. Staff are trained to work with new tools and routines and are coached to adopt new behaviors. This creates a "golden thread" that drives performance improvement, delivers sustainable results, and creates a culture of continuous improvement at all levels within your organization.

3. **Operational Design (OD)** is the redesign of enabling processes, such as technology and systems, infrastructure and people roles, and reward systems within an organization. This design is based on the performance-led approach and hence comes last in the OE approach.

The KPMG approach is different

Deployment of the elements within the OE program is built around our principles of skills transfer involving Training, Practice and Coaching. KPMG member firms provide support using a "boots on the ground" approach to ensure new skills and techniques are fresh in the minds of trainees as they deploy improvement tools and develop their capabilities.

1 Strategy deployment

Strategy deployment focuses on defining 'True North' a set of strategic priorities and cascading them across the organization, ensuring that all staff know how they contribute to them. Key elements include; metrics, visual management for performance, standard work for leaders including Executive portfolio reviews.

2 Operational Management System

The Operational Management System is a set of behaviors, tools and techniques that support daily continuous improvement, sustainability and alignment of improvement efforts to True North — this is the engine room for sustainable improvement. KPMG member firms will work with a group of your departments to create 'model cells' which then act as an internal reference point for rolling out to other departments. This is key to sustainability as it engages staff across the organization in cultural change.

Executive Team

Divisions   Divisions   Divisions

Centre of Excellence

Specialties   Diagnostics   HR   Finance

Wards   Departments   Theatres   Pathology   Estates

Centre of Excellence 4

KPMG member firms can help you implement a centre of excellence, that includes a structured approach for improvement, a toolkit and the skilling up of a central team that will support the organization to continue the journey of improvement.

3 Operational Improvements

KPMG member firms can help deliver improvements through value stream analysis and rapid improvement events for key processes to both improve performance, building capability in staff to support continuous improvement.

> "We support organizations from the very beginning, when organizations are thinking 'how do I stop firefighting, how do we have a sustainable model'?, so we help them with the thinking and road-mapping. On some occasions we join organizations when they've already started a program and have hit what we call 'the wall'. Sometimes this happens after two years of a program and they encounter some problems and have to refresh or restart."
>
> **— Jason Parker**
> Partner, Global Operational Excellence co-Lead and Head of Healthcare,
> KPMG in the UK

Glossary

1. **A3 thinking:** A scientific and structured approach to solving problems.

2. **Breakthrough objectives:** A set of key objectives derived from the Organization's True North to which the whole organization can align and focus their improvement efforts.

3. **Five whys:** A tool in problem solving in which one asks 'why' a number of times until deriving the 'root cause' of an issue.

4. **Gemba (the real place):** The place where work is actually done and value is created for the patient.

5. **Hoshin Kanri (policy deployment):** Policy of strategy deployment. The management process by which the strategy is cascaded and the entire organization comes to understand how it contributes to the organization's True North.

6. **Kaizen (continuous improvement):** Japanese word literally translated to change (kai) — good (zen). Is it a term used in Lean organizations to describe the act of continuous improvement.

7. **Muda (waste):** The activities in a process that do not create value to the patient/customer. The eight types of waste are transport, inventory, motion, waiting, overproduction, overprocessing, defects and skills.

8. **Process map:** A pictorial map of the steps taken to deliver/execute a process.

9. **Rapid improvement event:** A short event (3–5 days) in which a cross-functional group comes together to solve a relatively large problem. It is designed to ensure the structured improvement process and all changes to the process/way of working (countermeasures) can be agreed by all relevant stakeholders prior to implementation. This subsequently allows for 'rapid improvements' to be delivered through focused work.

10. **Root cause analysis:** A section of the A3 where root causes of the problem are identified.

11. **Six sigma:** A disciplined, data-driven methodology for eliminating defects (driving toward six standard deviations between the mean and the nearest specification limit) in any process.

12. **Standard work:** A simple documented set of instructions on how to perform a specific process. It is considered the best way to carry out a process, and is the baseline on which further process improvement is based.

13. **Value stream mapping:** A pictorial map of the steps taken, both value-creating and non-value-adding, to deliver a product or service to the customer.

14. **Visual management:** An approach to managing information, decisions, workflow plans, and people. Anyone can tell at a glance whether everything is normal or abnormal or if there is a problem and what should be done next.

15. **Toyota Production System (TPS):** An integrated socio-technical system developed by Toyota that comprises its management philosophy and practices. The TPS organizes manufacturing and logistics for the automobile manufacturer, including interactions with suppliers and customers. The system is a major precursor of the Lean management systems in other industries. Taiichi Ohno and Eiji Toyoda, Japanese industrial engineers, developed the system between 1948 and 1975.
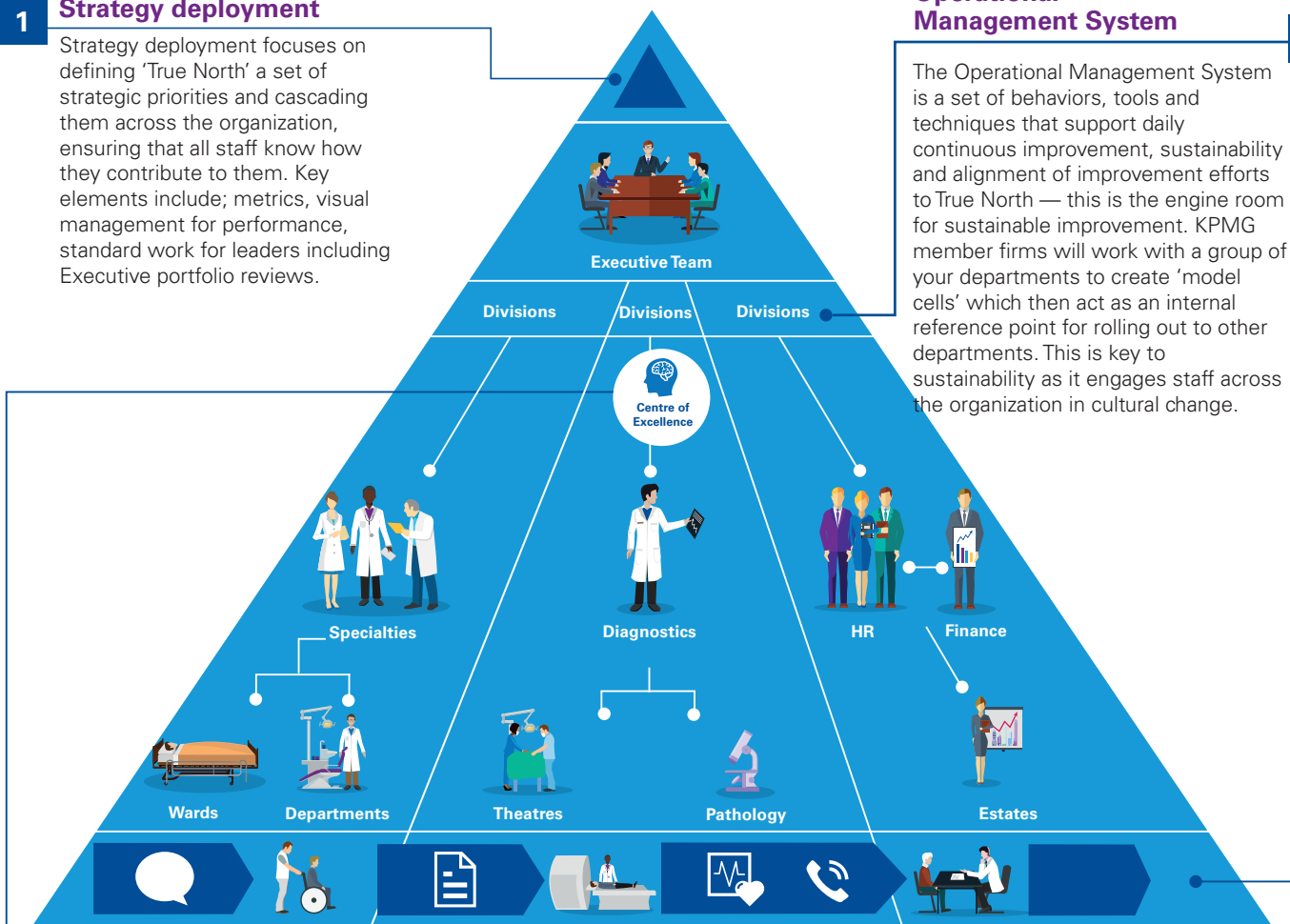
16. **Strategy deployment:** A focus on defining the 'True North' — a set of strategic quality priorities — and cascading them across the organization, ensuring that all staff know how they contribute.

17. **True North:** Clearly articulated organizational goals, which act as a guide to focus and align strategy, from the CEO to frontline staff, connecting everyone to the work that delivers value to patients. Having this work clearly stated encourages meaningful and systemic conversations about how the organizational goals should be tackled.

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Through the looking glass: Transparency index

To understand the global picture of health data transparency, we looked at 32 of the world's major health systems and measured what data was being published and how well it being communicated. Explore the results in this report and learn more about what can be done to make transparency a powerful tool for improvement.

What works: The triple win

Global governments faced with the practical and strategic challenges of the UN's 2030 goal of universal health coverage, are asking how it can achieved and who can help them.

What works: The trillion dollar quest

Healthcare is one of the largest sectors in the world, with an estimated value of US$9 trillion (and climbing). This report found that healthcare organizations with the best leadership and management are able to unlock up to 15 percent in productivity gains. But how can others replicate this success and what role do management and leadership development programs play?

Value walks

Unlike most other industries, healthcare has proved to be particularly stubborn when faced with radical change. There is a better way. We firmly believe that the five successful habits that we have identified for improving workforce motivation and productivity can produce better quality at lower cost.

Digital health: Heaven or hell?

Smart healthcare organizations are using technology to transform the way care is delivered and realizing considerable gains in efficiency and quality as a result. This report highlights key healthcare trends and opportunities, with seven ways technology can reduce costs and improve patient experience and quality of care.

What works: Partnerships, Networks and Alliances

Based on two years of extensive research into healthcare consolidation from around the world, this report reveals, "healthcare with a purpose" — the intersection of improved service quality and cost effectiveness.

What works:
As strong as the weakest link

This report provides healthcare systems and providers with a roadmap for the transformation process with a Value maturity matrix that outlines changes across five areas that are crucial to creating value-based health systems.

The primary care paradox

Leading edge practitioners are enhancing care by transforming organization models and delivering both health and social care. This report also identifies four new design principles — access and continuity, patients and populations, information and outcomes and management and accountability — that may help frame future developments.

The more I know,
the less I sleep

In studying how successful organizations are developing their clinical and corporate governance, it becomes apparent that for a board to be 'in control' means having a culture devoted to quality, responsibility and accountability of staff, optimized and standardized processes, and systematic, real-time measurement.

What works:
Creating new value with patients, caregivers and communities

Over the last two decades many industries have changed their value proposition by developing their customer's capacity to create value. Healthcare is only just understanding how this might transform its own value proposition. Here, using our experience across the world, we outline the answers you need to develop to fully realize the value inherent in better patient involvement and communities to improve care experience and quality of care.

What works:
Paths to population health

This report describes the practical steps that organizations need to go through to reshape themselves and their services. We look at both coordinated and accountable care systems designed across a defined population

What works:
Staying Power

Key insights from KPMG International's global healthcare conference of 65 healthcare leaders from 30 countries.

Something to teach,
something to learn

This report aims to provide a snapshot of the thinking and learning that emerged from KPMG International's Global Healthcare summit held in Rome.

Accelerating innovation:
Global lessons in eHealth implementation

The case for eHealth has never been more compelling yet its performance globally has never been more mixed. Our research, which covers many executives working across many different countries, points to successful examples of both the conceptualization and execution of value adding eHealth initiatives

KPMG's global healthcare network

Healthcare systems around the world are facing unprecedented challenges that require policy makers, payers, providers and suppliers to rethink how they work. With deep industry experience, KPMG member firms can provide guidance and support to clients, helping them to successfully navigate this rapidly changing environment to transform the way that healthcare is provided.

KPMG healthcare practices operate in the following countries, regions and jurisdictions

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Member firm health practices

4,500+
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Equipped and experienced advisory teams across the global network

How **KPMG** can help your healthcare organization

KPMG's Global Healthcare practises have over 4,500 dedicated professionals with skills in strategy development, cost optimization, financial management, clinical performance improvement, health IT, digital innovation and transformation, market development, tax planning, mergers and acquisitions, commercialization and organizational development — we believe this helps make KPMG professionals among the best equipped and most experienced advisory healthcare providers.

KPMG's Global Health Practice helps member firms bring the best and freshest international perspectives to clients by uniting KPMG professionals across six broad proposition networks.

Board Grip

Leveraging KPMG member firm's audit platforms to drive good governance, regulatory compliance, risk management, and information quality assurance

Operational Excellence

A toolbox of strategies and approaches to support healthcare providers improve their performance from a clinical, operational, and financial sustainability perspective

Care System Redesign

Supporting the development of target operating models and system transformation for the 'ecosystem' of providers within a whole health economy

Strategy, Transactions, and Financing

Representing KPMG Deal Advisory offerings, this includes support in the development of deals, transactions, partnerships, restructuring, and post-merger integration

Health Information Technology (HIT) and Data & Analytics
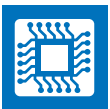
Enterprise-wide IT, data & analytics, CIO advisory, and technology-enabled solutions across the healthcare value chain

Value Based Care

Supporting the design and alignment of incentive structures of providers with the interests of patients outcomes, and system/other stakeholder objectives

These six propositions and the global community of practice are supported by KPMG's Global Healthcare Team, comprised of globally recognized leaders who support practice development, shape market perspectives, and support the frontiers of system transformation.

If you would like more information about how KPMG member firms can help your organization or system please contact the KPMG Head of Healthcare in your local region (see back cover), or email healthcare@kpmg.com

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Notes

Notes

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Gordon was the key lead on Ontario's Emergency Department Performance Improvement Program (ED PIP), which included training of 1,000+ staff and physicians and supporting patient-flow improvements across 90 hospitals over three years.

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His areas of expertise include performance improvement, Lean management, cost reduction, strategy, reconfiguration, mergers and acquisitions, board development and senior stakeholder management.

Jason has led over 80 major performance improvement projects with heath organizations, working with Trusts that are either financially challenged or seeking to be best-in-class. He has led the firm's work on efficiency and implementation of the Patient First System at Western Sussex Foundation Trust for the past four years.

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