FEWER CLASSROOMS, MORE WALKING; BUILDING AN IMPROVEMENT CULTURE AT MAINEHEALTH

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Abstract

Like many healthcare systems, the members of the MaineHealth system attempted to roll out Lean, Six Sigma, and Microsystems through trainings and "Kaizen Events." Like many healthcare systems this approach led to pockets of improvement, but not a systematic culture of improvement. Then new leadership came to one member organization, Pen Bay Healthcare, and began a Lean Daily Management system which both empowers and engages. This management system has now been expanded to three other members of the MaineHealth system under the title of Operational Excellence. The three key elements of Operational Excellence are: 1. Daily huddle, 2. Daily Gemba walks, 3. Improvement events and education.

Introduction

Many healthcare systems have begun implementing improvement methods. Some of them do this by hiring individual improvement advisors. Some health systems offer trainings for staff to improve their own work. Some create internal consulting groups with staff whose skill set range from improvement methods to advanced systems engineering. In some cases these efforts are ad-hoc and in some cases they are part of a systematic program with names such as: Process Excellence, Performance Improvement, Performance Excellence, Operational Excellence, etc.

Despite some very well-known successes in applying improvement methodologies in healthcare, many healthcare systems are still struggling to succeed in these programs [1,2]. MaineHealth is one such system; however some of the members of MaineHealth have recently created Operational Excellence programs that use Daily Management Systems and are showing early successes. This paper seeks to describe these programs.

About MaineHealth

MaineHealth is a not-for-profit integrated healthcare delivery network. MaineHealth has 15 member organizations which are distributed along south east and south central Maine as well as parts of eastern New Hampshire. The headquarters are in Portland, Maine. The largest member of the MaineHealth network is Maine Medical Center an academic teaching hospital and level 1 trauma center in Portland, Maine.

A history of improvement at MaineHealth

Like many healthcare organizations, for many years MaineHealth members were using improvement methods in a non-systematic way. Many members hired consultants who performed successful, high-profile projects at specific facilities. Some members created systematic education programs in improvement methods. However none of these practices led to cultures of continuous improvement.

In recent years, two nationally recognized, centralized approaches were taken by MaineHealth to drive improvement cultures at its members. One method was the principles of clinical microsystems as developed at Dartmouth College [3]. This led to some improvement at the unit level but no structure was put in place to maintain a culture around Microsystems. Another popular method that has gained momentum among MaineHealth practices is the Patient Centered Medical Home. This has continued to grow and yielded some positive results in practices [4].

Moving to a Daily Management System

In 2013 one MaineHealth member organization, Pen Bay Healthcare (Pen Bay), hired a new Chief Operating Officer, who brought with him a "Lean Daily Management System." His former employer, a for-profit health system which has locations throughout the United States had made the effort to coordinate improvement initiatives into a single system which would be used at all sites. This system has been further edited when brought to Pen Bay under the name, Operational Excellence.

Viewing early successes at Pen Bay, the MaineHealth Value Improvement program was tasked with packaging this system and bringing it to member organizations as requested. At this time four of the 15 MaineHealth members have begun to implement Operational Excellence, including Pen Bay and the second biggest member of the MaineHealth network, Southern Maine Healthcare. The rest of this paper describes this Operational Excellence and the daily management system in more detail.

Operational Excellence at MaineHealth

Operational Excellence as it has been implemented at MaineHealth members is not an improvement methodology. Operational Excellence is a structured approach to fundamental culture change which encourages staff engagement and the use of improvement methodologies. The key element of Operational Excellence is a change in management system such as the one described at ThedaCare [5]. In this way it does not compete with common methods such as Lean, Six Sigma, and Clinical Microsystems. Improvement methods offer tools for empowering employees to improve their work. Operational Excellence does integrate improvement methods to empower, but it is primarily designed as a method for bringing leaders and staff together to engage in work together. Over time, the dual emphasis on engagement and empowerment leads to a culture of continuous improvement and accountability. Figure 1 below depicts Operational Excellence at MaineHealth.

As can be seen, Operational Excellence at MaineHealth is comprised of two complimentary systems. The first is the Daily Management System. This system encompasses the daily standard work for frontline staff and leadership, which engage and encourage one another. Once the daily management system is working smoothly then the Improvement Support System can be activated to build upon and reinforce the work being done on a daily basis.

The Daily Management System

The Daily Management system is a set of expectations for leaders, managers and staff for duties that will be performed every day. These expectations are accompanied by sets of standard work which allow all participants to be aware of their role in the system and to make it obvious when tasks are incomplete. This leads to a level of mutual accountability between leaders and staff, designed to create a reinforcing loop between leadership support and front line participation. MaineHealth Daily Management includes two key elements:

1. Daily huddle: Daily management offers a change in culture and thinking from periodic meetings (weekly/monthly/annually) to daily check-ins. In the meeting structure, found at many hospitals, data is collected on a monthly (or longer) basis and aggregated using summary measures. Daily management is based on the realization that the long term performance of the system is based on effective management of daily operations. At the end of a month, a summary of operational or quality issues comes in a report which is difficult to dissect. When shared on a daily basis, issues can be addressed when the details are still known and action can still be taken. On the leadership side, this daily management begins at the daily huddle. This huddle is performed at a board which contains the key data elements for managing the system. Each healthcare system is different and the elements chosen for one board may be different than those chosen elsewhere. These elements may also evolve based on strategic objectives and short term initiatives. For example, one system used the board to track how many staff members received their flu vaccines. However they often include patient volumes, staffing levels, usage levels of limited resources, and daily patient flow targets, any safety events, daily physical facilities and daily information technology issues.
2. Gemba Walks: While leaders collect and review data in a daily huddle, units are collecting daily data on issues that they wish to improve. These issues are summarized as key performance indicators (KPI) which can be easily measured and tracked each day. KPIs are given a category of Safety, Quality or Experience (patient or staff). KPIs are meant to be internally focused, allowing units to take an introspective look at how they can improve their own work. In cases where improvement requires the cooperation of another department, data collection enables department managers to coordinate using facts and a common understanding. A participating system is broken into many routes of units. On a daily basis, a team (lead by one AVP, VP, or Sr. VP and attended by at least one support person/scribe) walks each route, enabling leaders to collectively visit every department in the system. The walks keep leaders aware of the issues that are important to their staff. The walks also create an opportunity for staff to request assistance from leadership in removing any barriers that are beyond their control. The interaction between staff and leaders is guided by standard work that enables effective and efficient communication. Figure 2 is a depiction of a unit KPI board. Table 1 is a list of example KPIs from units. Unit KPI boards are rolled out through a three day “train the trainer” workshop where a unit that is joining the system will send two staffers to learn how to use the boards and pick KPI while taking time to return to their workplace and educate/engage their co-workers. These trainings contain limited amounts of improvement methods education and focus more on how to find waste, define problems and collect/use data.

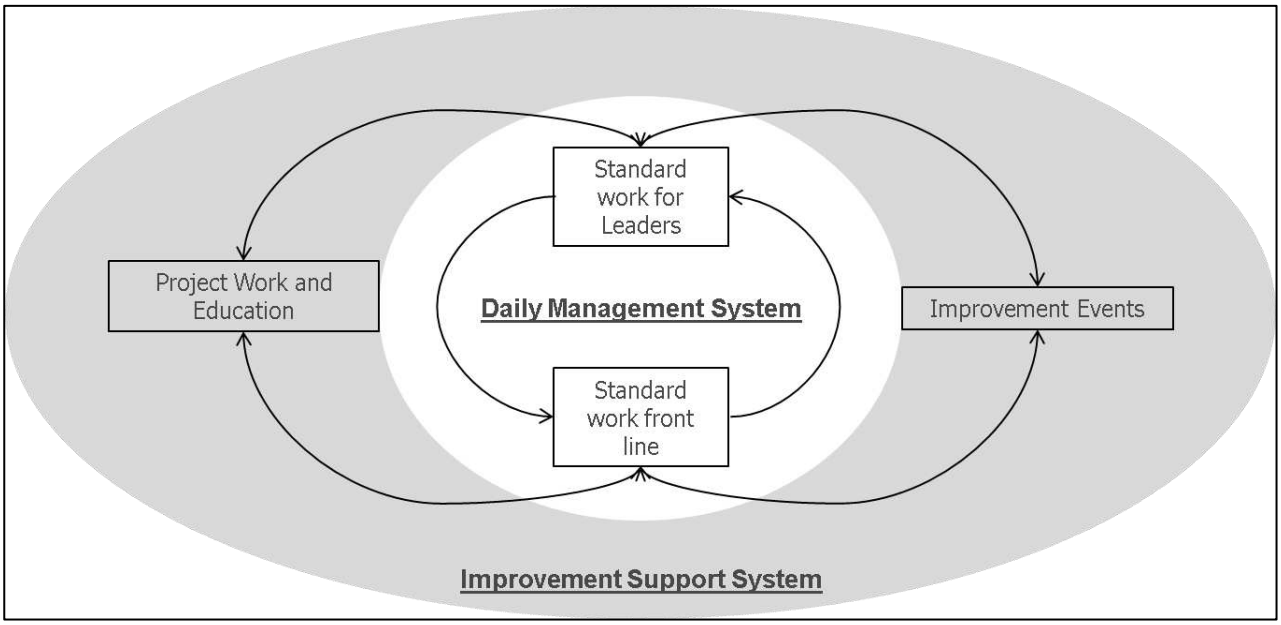

Figure 1 The MaineHealth Operational Excellence Model

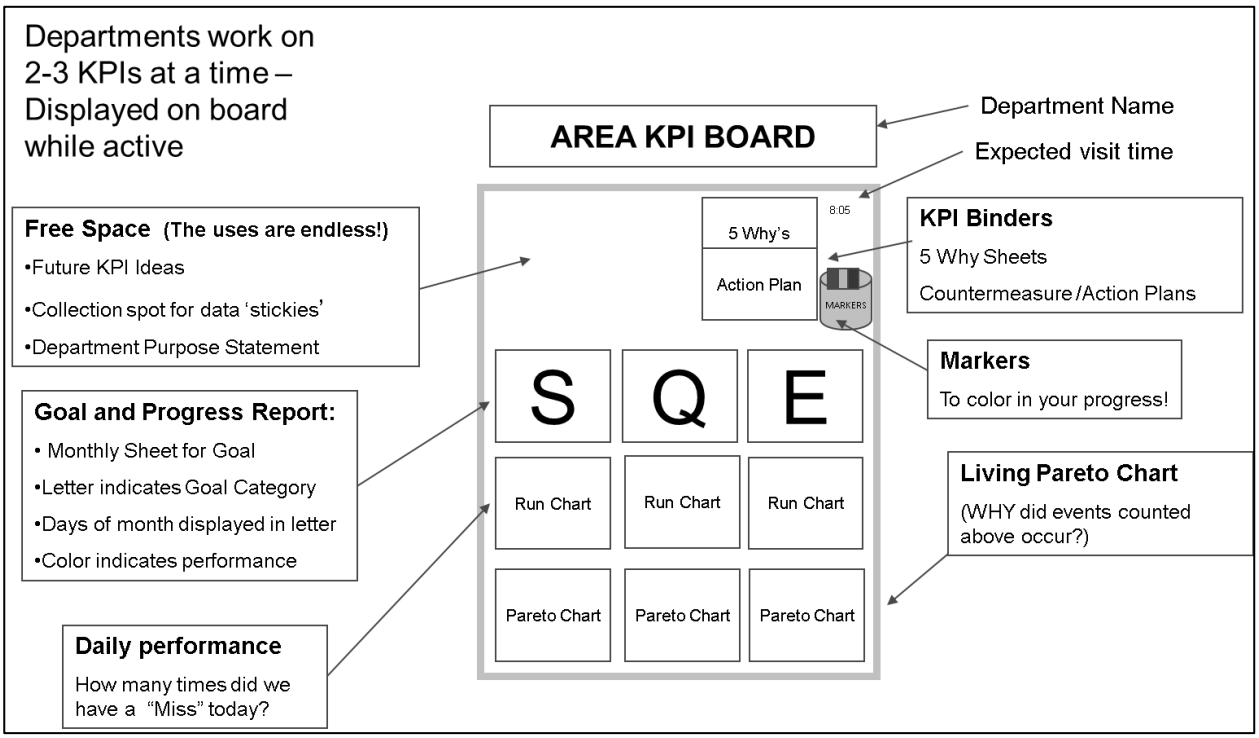

Figure 2 Design of Unit Key Performance Indicator Board

The Improvement Support System

Once the Daily Management system has been working for long enough to become organizational habit, it is then possible to activate the improvement support system. The existence of KPIs create a demand for improvement skills among staff and provide opportunities for applying new skills immediately after learning them.

Often when seeking to roll out improvement methods, a healthcare system begins with the improvement support system. This will lead to some success, with a few people working on improvement, but lacks the structure for encouraging hundreds of staff focused on improvement and the mutual reinforcement that comes with the Daily

Management System. The improvement support system is comprised of many other staples of a functional improvement system:

1. Project work and education: Projects and education are one-time events that empower staff and lead to small improvements or a set of educated staff. These events allow for some further growth of the system and provide staff with methods that they can integrate into their daily management efforts but it does not provide a basis for creating an ongoing culture of improvement. Often a staff member returns to their normal work place and does not apply their new education further unless they are engaged through a system like Daily Management.

2. Rapid Improvement or "Kaizen" Events: Rapid Improvement events are a key way to avoid sub-optimization. Daily management engages staff in improving their own localized work, but this improvement is not always optimal for the entire health system. Often local improvements rely on improvements elsewhere. In these cases a multi-day committed team participating in a Rapid Improvement Event is valuable for bringing together staff from across the system.

Table 1 Example Key Performance Indicators

Unit	Category	KPI
Pharmacy	S	100% of scan codes recognized in electronic systems.
	S	100% of patient profiles complete with height, weight, and allergies.
	Q	100% of medications are where they need to be when they need to be there.
M/S Ortho	S	Standard equipment in room at patient admission 80% of the time.
	Q	Bedside nursing report complete 80% of the time.
Case Management	S	100 % of discharge phone calls are made.
	Q	100% 'Midas' documentation complete at discharge
Emergency Dept	S	100% Proper equipment will be in exam rooms 100% of the time.
	E	70% of Staff will take lunch breaks every day.
	E	50% of patients to the floor within 30 minutes of giving report.
Housekeeping	S	Proper layout in the supply room 75%of the time,
	E	100% of patient receive cleaned room tent card.
	Q	Staff will have appropriate par level of microfiber mops 50% of the time.
Security	S	Less than 8 Door panic alarms per day.
	S	0 visitor injuries
	Q	Shift hand-over reports occur within 12 minutes.
Surgery	Q	Filter needles available 100% of the time.
	Q	Masks worn in core center 100% of the time.
OB	S	100% of stat labs resulted within 1 hour
	Q	Every Mom and baby will have one hour of skin to skin contact
	E	Every guest will rate the comfort of the sleep surface at a 7 or higher

Early Successes

Many organizations that have developed cultures of improvement have learned that it is difficult to unequivocally prove the value of this culture. Often value is shown through correlation between increasing numbers of improvements and increased performance on key hospital metrics [5,6]. For those that fundamentally believe in cultures of improvement, these correlations are enough, but this may not be the case for all.

Another way that cultures of improvement can be quantified is through the evaluation of each individual improvement and summing the benefits collectively [6].

However this can be difficult, for example, if an improvement saves a nurse one mile of walking each day, which bottom line metric will it affect? It may lead to increased time at the bedside, or increased ability to take a lunch, or simply less nurse fatigue. This one improvement won't directly hit the bottom line of an organization and is difficult to quantify in hospital wide metrics, however a combination of hundreds of equally small improvements have a very real effect.

In the end, a daily management system is meant to be a change in how leaders manage, moving away from meetings and towards engaging their staff in improvement efforts. If we were to seek to prove the value of a culture of meetings (as opposed to a culture of improvement) we would not seek to look at institutional measures, we would need to look at the value of each individual meeting. The authors believe that doing this would lead to a very real case for eliminating meetings and this is likely not a controversial opinion. Yet we do not threaten to cancel all meetings and end the system when measures are not being met, because this is how we do things. A daily management system approach to improvement should be viewed the same way and evaluated as our way of working rather than as one big project.

Based on the reasoning above, the early success at MaineHealth of daily management is judged based on softer measures. Many system leaders are expressing increased connectedness with staff. Many staff members are expressing increased engagement (at the time of this writing the updated staff engagement scores have not been collected, but we believe they will improve). In about a year of implementation across the participating organizations hundreds of KPIs have been resolved; many of these issues would likely have not been addressed by the old member cultures. In the end, the greatest measure of early success is that despite the amount of effort this requires from leadership at the participating members, they continue to enjoy it and express real appreciation for the system. This has led to increased interest from the other members of the MaineHealth system.

Areas for Growth

Just as Kim Barnas describes in her book "Beyond Heroes" the implementations of a new management system has been accompanied by the exposure of many fundamental issues that must be addressed to support this system in the long term. Foremost among these is the evolving role of managers and leaders. While our system engages staff in choosing KPIs and discourages managers from imposing these measures, managers must evolve from being an administrator and super staffer/hero to being a true leader who can influence without force and engage their staffers in the improvement work. They must also learn to be more comfortable with exposing when their unit is not performing at a desired level with the understanding that they will not be punished for seeking to improve. These new duties are time consuming for managers and will require a reduction in other duties such as standing committee meetings.

Bringing managers to this point will also require an evolution of system leadership from an administrative role to a true leadership role. The current leaders have emerged in an old system and now must learn their new role while supporting managers in a new role that the leaders themselves may have never experienced. In this way our system will continue to seek guidance from the standard work and systems that have been recently published [5].

Acknowledgements

The authors would like to acknowledge the many improvement professionals who freely share their methods, training materials and learnings with others. This kind of collaborative culture is necessary for ensuring that all systems can stay appraised of the most recent evolutions in improvement science, which will lead to the best care possible for our patients.

Many thanks are also given to the senior leaders of our participating organizations for their extreme commitment to employees and patients as shown by their willingness to completely re-think their management systems.

Finally thanks to the improvement professionals at our members who have shown willingness to re-think how they do their own improvement work to fit into this new system as well as manage the day to day work required by this system.

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Biographical Sketch

Jordan Peck is the Value Improvement Program Manager at MaineHealth. Jordan received his PhD in Engineering Systems at MIT focusing on Healthcare Systems Engineering and cultures of improvement.

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