

Finding a Balance between “Value Added” and Feeling Valued: Revising Models of Care

The human factor of implementing a quality improvement initiative using Lean methodology within the healthcare sector

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Abstract

Growing demand from clients waiting to access vital services in a healthcare sector under economic constraint, coupled with the pressure for ongoing improvement within a multi-faceted organization, can have a significant impact on the front-line staff, who are essential to the successful implementation of any quality improvement initiative. The Lean methodology is a management system for continuous improvement based on the Toyota Production System; it focuses on two main themes: respect for people and the elimination of waste or non-value-added activities. Within the Lean process, *value-added* is used to describe any activity that contributes directly to satisfying the needs of the client, and *non-value-added* refers to any activity that takes time, space or resources but does not contribute directly to satisfying client needs.

Through the revision of existing models of service delivery, the authors' organization has made an impact on increasing access to care and has supported successful engagement of staff in the process, while ensuring that the focus remains on the central needs of clients and families accessing services. While the performance metrics continue to exhibit respectable results for this strategic priority, further gains are expected over the next 18–24 months.

In a world that is changing both in terms of the global nature of work and the diversity of the workforce, engaged employees are key to leading successful change management initiatives. The following article provides a summary

of how, through the use of Lean principles, Holland Bloorview Kids Rehabilitation Hospital enhanced the provision of quality services, increased access to care in pediatric outpatient clinics and successfully engaged staff in creating new capacity for change management within the organization.

Holland Bloorview Kids Rehabilitation Hospital (formerly Bloorview Kids Rehab) is Canada's largest children's rehabilitation hospital. Holland Bloorview is a world-class teaching hospital fully affiliated with the University of Toronto. The Bloorview Research Institute is located on-site, allowing us to integrate cutting-edge research and teaching with front-line care to improve children's quality of life. Holland Bloorview serves about 7,000 children each year, with about 600 in-patient admissions and 58,000 outpatient visits (Holland Bloorview Kids Rehabilitation Hospital 2011b).

Lean methodology is a management system for continuous quality improvement. It is based on the Toyota Production System that has as its focus two main themes: respect for all people and the elimination of waste or non-value-added activities. Within the Lean process, *value added* is used to describe any activity that contributes directly to satisfying the needs of the client, and *non-value-added* refers to any activity that takes time, space, or resources but does not contribute directly to satisfying client needs (Grabau 2009). Lean ensures that clients and families receive the highest-quality care and that front-line staff are able to achieve their very best through the removal of obstacles and barriers that prevent pride in workmanship (Institute for Healthcare Improvement 2005).

In the pilot phase of Lean implementation, the primary intent was to deliver on the organization’s strategic priority to improve access to care for clients and families and to meet corporate wait time targets (Holland Bloorview Kids Rehabilitation Hospital 2011b). The following were specific objectives for this initiative:

- To train the organization’s leadership and a front-line clinical team on the principles of Lean
- To optimize processes and support continuous quality improvement in the Neuromotor Developmental Pediatric Outpatient Clinics
- To reach the access-to-care target of *80% of clients seen within 192 days* from the time of the initial referral to first appointment

Method

Introduction of Lean

In August 2009, Holland Bloorview sought external consultant expertise to guide the first phase of education and to provide support at key stages of implementation. A team of individuals most likely to demonstrate success and champion the change were also identified to participate in the pilot. The team selected depicted strong management and physician leadership, and the front-line clinicians had exposure to the science of quality improvement; there was a sincere desire to improve the outcomes for the clients and families, and wait time metrics were being reported on a quarterly basis through the organization’s decision support framework.

By November 2009, all levels of senior administration from across the organization had participated in a leadership forum that introduced Lean concepts. This was important not only for the immediate staff who would be executing the changes but also to build awareness among those who were peripheral, but essential, to the improvement process, such as human resources, information systems and building services.

Lean Learning and Team Building

The next level of key influencers were identified to participate in targeted learning events such as Value Stream Analysis to map out the current state, and to identify value-added and non-value-added activities and a leaner future state for specific outpatient clinical areas (Institute for Healthcare Improvement 2005). By December 2009, an extended team of clinicians and administrators had been identified to actively participate in rapid improvement events called *Kaizen* that would initiate immediate quality improvement and targeted changes specific to the Neuromotor Developmental Pediatric Outpatient Clinics. These clinics provide essential developmental assessment services and act as a gateway to accessing specialty clinics and therapy for children with existing neuromotor concerns and their families, both internal and external to the organization.

Activating Lean Improvements

The active improvement phase of the Lean pilot relied on improving not only access to care for new clients on the wait list but also the services offered to existing clients being seen in follow-up outpatient clinics. The quality improvement work concentrated on the follow-up clinics and developing standard work, with workload levelling between physicians and nurses, and a new teaching-in-the-room model with the physician, medical trainee and the client and family. The intent was to reduce the length of time for a follow-up visit and thereby increase capacity in the schedule to see additional new clients. Specific outcome measures were established, and new processes and practices were monitored and reported on throughout each stage of the pilot.

Ensuring a Client- and Family-Centred Focus

Holland Bloorview has a long-standing commitment to client- and family-centred care. The commitment comes with an understanding that best practices in this area are always evolving, and a desire to stay at the forefront of advancing the practice (Holland Bloorview Kids Rehabilitation Hospital 2011a). The organization recognizes that quality improvements cannot happen without the strong voice of our clients and families. It is for this reason, that the partnerships between clients, families and staff at every level were vital to the success of the Lean initiative. As such, each stage of Lean learning involved clients and families with their perspectives, opinions and advice for creating a future state that would meet their service needs. These client and family perspectives were essential to the groundwork of the project and to remind the team why we were embarking on this journey.

Discussion

The primary purpose of the Lean quality improvement initiative was to better the access to care for clients and families seeking services through the Neuromotor Developmental Pediatric Outpatient Clinics. In order to effectively deliver on this corporate agenda, staff engagement was critical. The following discussion provides specific examples of engagement strategies that were employed to optimize clinical processes and build a front-line culture of continuous quality improvement.

“There were a lot of things I wanted to get involved in and change when Lean was first introduced. However, I learned early on, that the changes needed to involve the whole team and that we couldn’t jump to conclusions. Each team member was at a different stage of readiness, and so was I. Once we were all on the same page, the opportunities were endless.” (Michelle Hart, manager, client appointment services)

Over the course of the first year, during the active improvement stage, the team met on a daily basis for 15-minute “team huddles” in which outcome measures and performance targets

were reviewed. This provided an open forum for discussion and ongoing identification of quality improvement projects. A primary lead to facilitate the daily huddles was essential to support timely decision-making, the removal of barriers and the setting of priorities to keep the quality improvement work in scope. The team huddles were necessary to create collaborative opportunities for the group that consisted of quick wins and additional short- and long-term projects to monitor over time.

Role clarity is important at the early stages of Lean implementation. When individuals were treated with dignity and respect and valued for their contributions, and not simply as the occupant of a role, they were more likely to obtain a sense of meaningfulness from their interactions (Locke and Taylor 1990). For example, after several clinic observations and audits, it was evident that there was a significant amount of duplication of information gathered during the client assessment. The team initiated a workload-levelling approach to balance the roles and responsibilities shared between the nurse and physician attached to each clinic. This strategy created new opportunities for nursing to better use their skills and expand their professional scope of practice to include more opportunities for health promotion (i.e., the delivery of osteopenia guidelines, teaching sleep hygiene). Supporting these efforts increased the value-added content for clients and decreased the duplication of information gathered at each clinic visit.

The benefit of the team's work was realized not just within the clinics themselves; other program areas gained from strategies such as a 5S campaign (sort, set in order, shine, standardize and sustain) that standardized the working environment to provide better access to tools and materials regularly used in clinic (Graban 2009). The staff involved in the 5S campaign reported a significant improvement in their work environment, both personally and professionally.

"I found the 5S campaign extremely helpful to me and the work of the team. It allowed us to focus on what we actually needed and what was most important. Before the campaign, we used to go searching for things all the time. After "5S"-ing the clinic space, we were able to get rid of extraneous stuff that was no longer needed and prioritize the items we used every day." (Whillette Warren, clinic coordinator)

One of the most significant Lean initiatives as identified by staff was the introduction of the teaching-in-the-room strategy, which supported trainees debriefing with the physician in the room with the client and family during their appointment. This strategy decreased the total duration of individual clinic appointments by an average of 30 minutes. It received positive feedback not just from clients and families but also trainees and has since influenced the organizational model for teaching and learning in other outpatient clinics.

Almost two years later, the team is at the early stages of launching new follow-up models that have taken into consideration a year of improvement and increased knowledge of the true client demand. The new models propose a transformational change in practice that includes the following:

- A continuity-of-care model for specified client needs
- The introduction of a consultative model for clients who only require short-term developmental pediatric involvement prior to connecting with other external community supports
- The introduction of a monitoring model

The monitoring model will support an increased scope of practice for occupational therapy and physiotherapy in partnership with physician leads to monitor clients at specific stages of development. The model will allow for early identification of therapeutic needs while monitoring any medical complexities that may require physician or nursing attention.

Over a six-week trial with more than 100 clients, 89% of clients met the new follow-up model criteria. This is a positive indication of the potential impact to the demand within the physician-led follow-up clinics. The decreased demand for follow-up appointments creates an increased availability for new appointments to be made in a standardized schedule that meets the diverse needs of both new and existing clients.

Impact on Access to Care

At the end of March 2009, prior to the introduction of Lean, the wait time for 80% of clients and families to be seen in Neuromotor Developmental Pediatric Outpatient Clinics was more than 238 days. After the first year of Lean implementation, the wait time for a neuromotor outpatient appointment was reduced to 192 days for 80% of clients seen. These short-term results indicate success in meeting the identified target for the project. However, as previously mentioned, the success of the initiative relies on the sustainability of the work and the commitment of team members.

One area that has demonstrated sustainability in the improvement made to date involves the new clinic appointments in the Neuromotor Developmental Pediatric Outpatient Clinics. Prior to Lean implementation, between seven and 20 new clients attended the clinics in any given month. Since the introduction of Lean, the clinics have seen 20 new clients consistently every month, indicating a significant level of sustainability. The organization is able to meet the demand for this service with new clients; however, strategies to deal with the backlog are currently under way, and these include the launch of new follow-up models. While the performance metrics continue to exhibit respectable results for this strategic priority, further gains are expected over the next 18–24 months.

Conclusion

To realize the true accomplishments that can be demonstrated through the implementation of Lean principles in a healthcare setting, one must look beyond the bottom line. The ability to reach an identified target and deliver on objectives relies on the successful engagement and empowerment of front-line staff, clients and families.

Lean has the potential to impact on meeting the objectives of a quality improvement initiative and also on motivating staff to get involved in leading change and adopting a new understanding of change management. In a healthcare setting where every action toward the care of a client comes from a place of best intention, one of the most significant hurdles to overcome is adopting Lean language. Specifically, understanding that an activity may be “valuable” but not necessarily “value-added” to a client can help one realize an opportunity for improvement.

To effect change, the commitment to Lean must start at the top of the organization and involve staff at all levels as well as clients and families. Targeted educational activities that are specific to individual, team-based and organizational needs must be applied and reinforced throughout the organizational structure. Pitfalls can occur when there are communication breakdowns or there is a perceived lack of shared vision or commitment by team members. To avoid this, encouragement and involvement of higher levels of leadership in response to time-sensitive requests is essential.

The importance of recognition for team efforts and role clarity should not go unnoticed. Motivated key influencers in a quality improvement initiative assist in relieving tensions between the organizational needs and the personal/professional goals of each individual (Toussaint et al. 2010). Measurable outcomes that are monitored and re-evaluated by the team on a regular basis are important to ensuring the organization is on track and has not lost focus. In the end, the organization will have built a team that will guide the next stage of quality improvement feeling valued while continuously looking for ways to increase value-added and decrease non-value-added activities for clients and families in their everyday practice. By fostering new growth and expertise in change management that is organization-wide, true big dot measures can be realized.

“Being a part of the discussion and, more importantly, the decision-making was what I found most rewarding about Lean. I now know that when I have an improvement idea, someone is there to listen and together as a team we can make the changes happen for the benefit of clients and families in our care.” (Katrine Pilested, registered nurse, Neuromotor Developmental Pediatric Outpatient Clinics)

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