

# Creating Sustained Improvements in Patient Access and Flow: Experiences from Three Ontario Healthcare Institutions

Hugh MacLeod, Bob Bell, Ken Deane and Carolyn Baker

## Abstract

Ensuring that patients receive timely, high-quality healthcare is the highest priority of Ontario's hospitals, physicians and nurses. Given that the emergency department (ED) is often the "front door" to our healthcare system, developing approaches to improve access and flow in the ED is important – made more challenging by rising patient demand and acuity. Long-standing efforts to improve the ED system have outlined promising approaches and pushed access and flow up the priority list. Recently, in partnership with the Ministry of Health and Long-Term Care (MOHLTC), several Ontario hospitals participated in an intensive and sustained effort to improve access and flow, with promising results. Participants in these efforts described the initiatives as transformational, and the results have been promising and sustained.

This article chronicles the efforts of three hospitals to enable other hospitals, physicians and nurses to learn from these experiences and gain confidence that a similar impact can be achieved in their facilities. Specifically, it discusses the following:



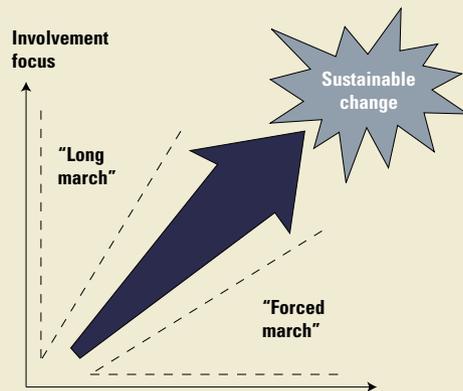
- The three pillars of sustainable transformation
- Hospital case studies
- St. Joseph's Health Centre (SJHC), Toronto
- London Health Sciences Centre (LHSC) – University Hospital
- University Health Network (UHN) – Toronto General and Toronto Western
- Advice for other hospitals

### The Three Pillars of Sustainable Transformation

Many institutions find that identifying changes is relatively easy, but that changing the behaviours across a large and complex health system is a significant challenge. By far the biggest challenge, however, is sustaining their efforts over time. One of the reasons is that they fail to strike a balance between two competing interests: involving their people in the process versus getting results quickly (Figure 1). If they are focused on achieving results too quickly, it likely means their program is driven top down, which can result in a “forced march” that marginalizes the involvement of the staff. By contrast, a “long march,” with large scale and diverse contributions, can lack structure and focus and ultimately peter out when people fail to see results.

**Figure 1. Sustainable change is challenging to achieve**

**Need to focus on results and involvement ...**



ALOS = average length of stay; CI = Continuous Improvement

**... tough to get balance right**

- Pace too slow or too fast: insufficient time for self-discovery after first wave
- Lack of leadership and follow-through of top team: declare victory too early
- Key talent gaps not addressed: run with who we have vs. who is needed
- Central CI group “takes over” from line managers in managing change and marginalizes them
- Focus on moving micrometrics vs. tackling major impact drivers
- Targets ill-defined and/or too low
- Unclear accountability/consequences for results
- Program approach not integrated into ongoing management processes
- Focus on peripheral processes vs. operational core
- Insufficient or disconnected effort focused on behavioural changes/culture
- Focus on one performance element (e.g., employee satisfaction) at the expense of others (e.g., ALOS)
- Deployment of problem solving approaches on small issues vs. solving big issues first

**The most successful** institutions get the balance right by securing the three pillars of sustainable change.

The three hospitals showcased here followed a program that focuses on delivering early results, with heavy engagement from clinical staff in ED and general internal medicine (GIM) areas. The hospitals then gradually engaged all stakeholder groups across the system to develop an institutional capability for wait-time improvements. The path to sustainable change highlights the approach taken by these three case study institutions (Figure 2).

These institutions have started the journey toward substantial and sustainable change. They recognize that the journey is long and will require significant effort and discipline to maintain steadfast focus on continuously improving performance. The most successful institutions get the balance right by securing the three pillars of sustainable change (Figure 3):

1. Efficient and effective *operating system*
2. Supportive *management infrastructure*
3. Deep-rooted *learning organization*

### Operating System

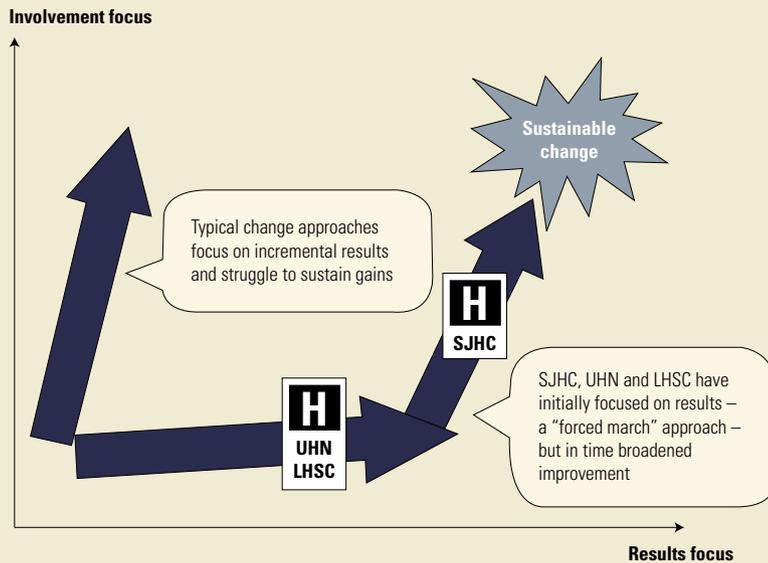
The operating system is the nuts and bolts of the organization’s processes. During a transformational journey, the operating system is commonly improved by applying “lean” techniques. Areas of focus include: reducing variation in processes; eliminating non-value-added activities; ensuring the right people, information and materials are in the right place at the right time; improving equipment availability; reorganizing workplaces and activities; and basing staffing on demand patterns.

### Management Infrastructure

Management infrastructure is composed of the formal mechanisms put in place to support and encourage the desired elements of the transformation. Areas of focus include: putting the right people in the right jobs to drive change; clearly defining roles; frequently measuring and widely sharing operational metrics;

Another challenge faced by hospitals is the difficulty in creating transformational results, as opposed to small incremental change. Hospitals must continue to deliver high-quality care to every patient while simultaneously innovating the way care is delivered. Furthermore, complex organization structure and accountability models can create a culture of “managing by consensus” where even small decisions require discussion and approval from committees. These factors result in a tendency toward small “rapid improvement events” as opposed to broad scale system transformation. As capacity, access and wait time pressures mount, more emphasis is placed on these incremental changes. In other words, any gains made tend to stop short of having step-change impact in key outcomes (e.g., wait times, length of stay, clinical quality) and fail to address the broader system and cultural issues.

**Figure 2. Differences in approach**



LHSC = London Health Sciences Centre; SJHC = St. Joseph’s Health Centre; UHN = University Health Network.

**Learning Organization**

The learning organization forms the cultural fabric of the organization. Areas of focus include: creating mindsets that support superior delivery of patient care; building capabilities to improve the system; engaging the front line in problem solving; clearly defining performance expectations; being willing to improve operations; and sharing knowledge.

**St. Joseph’s Health Centre of Toronto**

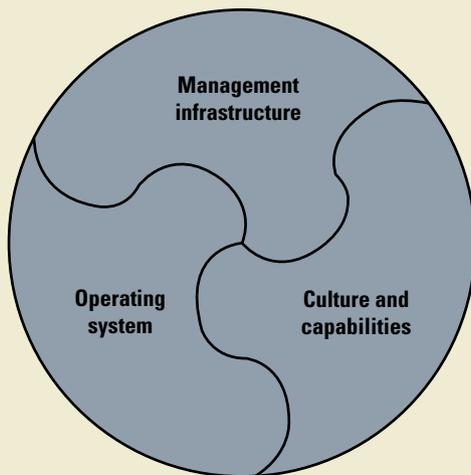
Almost four years ago, SJHC in Toronto committed itself to a threefold strategy: deliver a superior care experience, create a dynamic work environment and exceed the MOHLTC accountability agreements. Recognizing that the current working model could not deliver on these ambitious goals, senior management embarked on a lean operations transformation, focusing on

the “front door” to the community: the emergency department.

After several successes in the ambulatory and fast track areas of the ED to improve capacity to care for emergency patients, build better RN and MD collaboration and achieve superior performance in ambulance offload times in the greater Toronto area (GTA), the team broadened its scope to include patients across the ED-GIM continuum. The key component of

**Figure 3. Three pillars of sustainable transformation**

- Clearly defined roles and performance expectations
- Improved visual management
- Frequently measured and widely shared operational metrics
- Clearly defined Key Performance Indicators (KPIs) and accountability



- Standardized and optimized processes
- Non-value-added activities eliminated
- Improved equipment availability
- Better workspace organization
- Staffing adjusted to demand

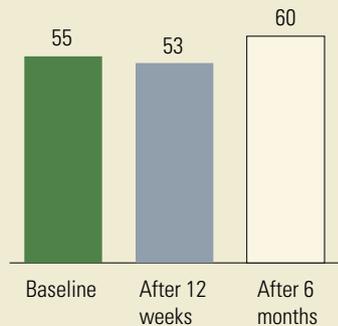
- Engagement of staff and physicians in problem solving
- High willingness to continuously improve operations

clearly defining key metrics and accountability; cascading performance dialogue; and improving visual management.

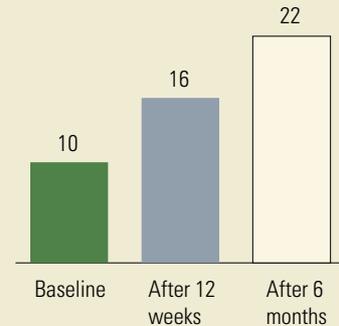
this strategy was acknowledging that improving ED operations alone would not guarantee sustainable performance improve-

**Figure 4. St. Joseph's Health Centre continues to improve its emergency department performance****All CTAS categories****Discharged patients**

Percentage discharged in &lt;4 hours

**Admitted patients**

Percentage admitted in &lt;8 hours



CTAS = Canadian Triage and Acuity Scale; SJHC = St. Joseph's Health Centre

ment in the ER and that without a comprehensive end-to-end strategy performance would decline over time. What the senior leadership needed was to shift the focus to a fix of the entire process, from the patient's presentation in the ED through discharge from the GIM or alternate level of care (ALC) unit. To achieve their goals, they set in action a plan that would address all three components of a sustainable transformation.

**Impact**

The impact at SJHC was rapid cycle changes in systems and processes leading to dramatic improvement in operational metrics and employee satisfaction. A year later, the improvements have been sustained or improved and the system and process changes have been translated to other areas of the hospital (Figure 4).

Results include the following:

- The hospital has created 40% more theoretical capacity on major services by reducing the actual length of stay (ALOS) by 25%. The GIM and surgery services reduced ALOS from 10.4 to 7.8 days, and the ALC patients' total ALOS decreased from 24 to 14 days.
- Smoother and speedier patient flow within the ED – the percentage of patients admitted within eight hours increased from 10 to 22%.
- The GIM and surgery units are coordinating and predicting discharges to make room for the ED patients.
- The percentage of patients discharged by 11:00 a.m.

increased from 20 to 44%, and the percentage of patients discharged by 2:00 p.m. increased from 57 to 87%.

- Informal feedback shows that unity of purpose and commitment to a corporate goal to improve patient safety through improvements in access and flow helps to dismantle the program and unit silos and focus on reducing waste in the system.
- Creating a curriculum to provide staff with common tools and language was instrumental in making transformational and sustainable change in the hospital.
- The feedback from staff who attended any of the seven learning modules was very positive, and the staff are excited about the changes they can see in their workplace and feel in themselves.

**The Three Pillars of Sustainable Change at SJHC Operating System**

Although SJHC's senior leaders made improving patient flow a strategic priority, they felt the early successes in the ED only helped some of the patients coming to the health centre. The leadership team decided to link improving access and flow to the corporate patient safety strategy and to shift from a process improvement approach within a single work unit, where activities were tested against common sense, to a more comprehensive lean methodology, where end-to-end processes were evaluated against the eight sources of waste.

Starting in the fall of 2006, the hospital launched three working teams responsible for emergency processes, admissions and discharge improvements, respectively. To keep the approach firmly focused on point-of-care delivery, the teams consisted of direct care providers, support services, physicians and leadership staff. The teams adopted a *kaikaku* model, a common lean technique of creating significant, step-change impact via constant pressure (as opposed to *kaizen*, which focuses on incremental results within a subset of the process). The knowledgeable front-line staff from the three teams came together to diagnose, design major operating system enhancements, test and rapidly implement and refine improvement initiatives.

These three teams met formally for two hours twice each week and worked around the clock designing, testing and refining improvements with staff at the point of care. The teams implemented over a dozen major initiatives in the first three months, including the following:

- Creating an “ED flow nurse” role to serve as an information and patient flow controller – the ER air traffic controller
- Building enforceable escalation criteria and processes to rapidly move patients up to GIM units when 10 or more patients are awaiting beds
- Creating predictability in GIM and ALC discharges with process transparency for the doctors, nurses and patients’ families
- Improving ALC discharge processes to reduce ALOS.

By the third month, these and other operational changes proliferated across all of the medicine subspecialties and in-patient units. Then senior leadership expanded the scope to the surgical services to improve care for another group of patients and capture

### **The teams adopted a kaikaku model, a common lean technique of creating significant, step-change impact via constant pressure.**

the benefits of whole-hospital operational change. Within one month, the three surgical units implemented these operational improvements and increased patient throughput by 25%.

These improvements occurred without the addition of a new position in the organization, unplanned capital expenditures, or new operating resources. The leadership team, clinical staff and working team members all pulled together to create this new operating model within the existing operating plan.

#### **Learning Organization**

The two sequential and overlapping keys to this transformation effort were consistent support from senior leadership and subsequently teaching new skills to staff at all levels in the organization. From the start, the senior leaders committed to the change and actively guided the teams to make changes.

Most important, the chief executive officer and chief operating officer (COO) created a vision for the staff that set very high aspirations. The largest volume single site ER in the GTA, the centre was already a very high-performing ED on key metrics such as ambulance offloads and treatment times. Patient safety was the key incentive for getting even: “to serve our community safely and effectively, we need to improve access in the ED and across the continuum.” Key patient safety metrics were tied to access performance.

Middle and senior managers aligned on the goal, means and methods to effect clinical operational change from the start, and thus the staff at all levels were able to observe the right role modelling from the very top. For example, the entire organization saw the same daily operational performance metrics, and

the staff and managers were aware that the senior managers were quick to celebrate successes, investigate challenges and pave the way for change.

Based on the results of an extensive workplace cultural assessment, including surveys and focus groups, members of the direct care staff felt they needed to learn new skills to become effective change agents. Therefore, senior leadership created a curriculum of seven modules (lean operations, root-cause analysis, building team trust, conducting effective meetings, influencing skills, feedback and coaching and inter-professional collaborative practice), and teams of four staff members became teachers and coaches for each module. In this curriculum, every employee will receive the lean operations training and, with increasing tenure, will learn additional role-appropriate skills (e.g., conducting effective meetings). Most remarkable at SJHC was that lean terminology has started to permeate the language of the organization and frontline staff led the training program.

Crafting the right message and a comprehensive communication plan is the most effective way to spread the key messages and ensure that everyone aligns on how to approach the challenge. SJHC used overlapping communication methods (e.g., town hall presentation, walk-about discussions, presentations at all key management meetings, intranet articles, e-mails and cafeteria displays) to make sure the message reached everyone. Although the hospital felt the pressure most acutely at an operational level, where ED volumes were growing 9–11% annually, senior leadership chose to create a compelling case for change by emphasizing patient safety. This rallying cry was appropriate for staff deeply committed to the mission at SJHC and appealed to the healthcare providers’ idealism. It also established a framework for discussions on making tradeoffs between operational throughput, patient care and historical working models.

#### **Management Infrastructure**

The final component for making sustainable improvements was leveraging the management infrastructure by combining operational accountability and operational performance management tools with performance discussions that cascaded throughout the organization. After consulting front-line staff and MOHLTC guidelines, the COO developed a list of 12 operational performance metrics that would accurately describe activities across the ED-GIM continuum (e.g., ED discharged patients: patients discharged within four hours [%], patients leaving the GIM unit before 11:00 a.m. [%]). This daily access indicator report delivered two sets of operational information at 7:00 a.m. each day: how each hospital unit operated over the past 24 hours and how many patients are currently awaiting in-patient beds.

Sharing this unit- and program-specific operational performance data made it possible to cascade performance discussions up and down the organization. The patient care managers could discuss yesterday’s performance with their staff, engage in root-

cause problem solving and set that day's tactical improvement plans. The directors could talk about performance with their managers and, in early performance discussions, the senior team could examine how to help the team improve operational performance.

Displaying the number of patients waiting for in-patient beds both unified the ED and the in-patient (IP) unit staff in a common goal of admitting patients to improve patient safety and also added the appropriate degree of urgency to the process. Showing the number of patients activated various programmed activities in the escalation protocol to find beds for them.

**London Health Sciences Centre – University Hospital**

Faced with seemingly intractable and escalating patient access issues (e.g., patients boarding in the ED, same day surgical cancellations) and observing the impact on the organization, staff and patients, senior leadership at the LHSC made improving the overall healthcare experience for patients and staff a corporate priority. Though LHSC continued to perform well relative to its teaching hospital peers, select areas of the hospital were showing signs of strain and the effects were being felt system wide (e.g., an ongoing bed shortage in medicine caused a steady increase in the volume of admitted patients boarding in the ED, which limited the ED's ability to treat patients).

Previous improvement efforts, including a series of kaizen events, were local in nature and often lacked the broader support of physicians, senior administration and other front-line staff necessary to achieve sustainable impact. In addition to feeling stretched in their day-to-day work, the front line had

grown cynical of participating in change efforts. To make the transformation successful, LHSC's senior leadership focused on the following areas:

- Demonstrating the support and engagement of the senior leadership
- Creating an end-to-end approach from the ED, to admissions and onto the medicine floor using a lean approach
- Building the capabilities of staff to allow for scaling of the approach going forward
- Involving management infrastructure and culture and capabilities teams to ensure sustainability of solutions

The newly appointed city-wide COO was familiar with what it would take to deliver lasting impact and knew that to create the continuously improving organization he envisioned, LHSC would need to change how it worked (i.e., operating system), how it behaved (i.e., learning organization) and how it managed itself (i.e., management infrastructure). With the senior leadership team's support in place, LHSC's University Hospital was chosen as the launch site for the first wave of the ED-GIM lean transformation effort.

**Impact**

Improvement in system-wide ED-GIM operational metrics at LHSC's University Hospital began to appear within the 14-week project timeline (Figure 5). More important, operational performance has continued to improve steadily in the weeks after the project – validating senior leadership's focus on creating sustainable change.

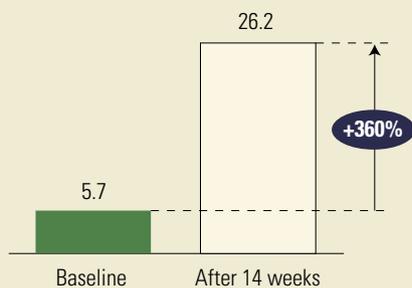
Patients are being seen by clinicians sooner, receiving a disposition (i.e., discharge or admit) faster and, depending on the disposition, either leaving the hospital or arriving in an in-patient bed earlier. This is achieved by “pulling” patients through the ED-GIM continuum (e.g., GIM unit coordinates and predicts discharges to make room for the ED patients). Early results include the following:

- On the GIM unit, the percentage of GIM patients discharged by 11:00 a.m. has increased from 6 to

**Figure 5. Shifting discharge time earlier in the day pulls patients from the emergency department**

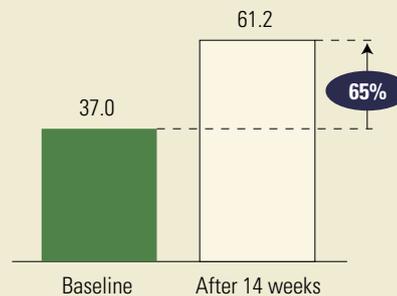
**More discharges before 11 a.m. creates bed capacity for late night and early morning ER patients**

Medicine patients left before 11 a.m.  
Percent



**Discharging almost all patients by 2 p.m. creates space for early afternoon ED surge**

Medicine patients left before 2 p.m.  
Percent



ED = emergency department; ER = emergency room.

36%, and the percentage of GIM patients discharged by 2:00 p.m. has increased from 37 to 64%.

- In the ED, average length of stay (ALOS) has decreased 17% (from 5.4 hours to 4.5 hours) and the percentage of patients that leave without being seen has dropped to 2%. Moreover, the ED has been able to care for more patients during this same period.
- To capitalize on the skill development and performance orientation across the organization, LHSC has started to roll out the program to Victoria Hospital, its second acute care site that operates an adult emergency department with 65,000 visits and a pediatric emergency department with 35,000 visits annually.

In the words of a physician involved in the access and flow initiative, “These recent projects are the best examples of hospital QI (quality improvement), by far, that I have seen in the 15 years or so that I have been involved in similar endeavours. As I have reflected on it, the key elements that have made the access and flow initiative successful are absolutely ‘textbook’ as far as

### Teams credited the structured and fast-paced lean transformation approach with keeping their focus on ideas that could be implemented within six to eight weeks of kickoff.

CQI (continuous quality improvement) is concerned: front-line staff involvement and engagement, interdisciplinary collaboration and learning, rapid cycle measurement and intervention and, perhaps most important ... and most pleasantly surprising to many of us ... visible support and deep understanding at the executive level.”

#### The Three Pillars of Sustainable Change at LHSC

##### Operating System

LHSC senior leadership felt strongly that to be successful, the ED-GIM project would have to deliver tangible benefits and do so quickly. The organization’s determination to achieve a “100% right answer,” and its bias toward consensus decision-making, had impeded past improvement efforts – a new approach was required.

At the kickoff in the summer of 2007, the hospital launched three working teams for ED, admissions and discharge activities. Teams were thoughtfully composed of individuals from across the front line of the ED-GIM care continuum and included clinical, allied health and administrative members. The teams adopted a transformation model, a common lean technique

whereby a group of knowledgeable staff from leadership and the front line come together to diagnose, plan and take action against identified process bottlenecks. In his opening remarks at the project kickoff, the COO emphasized the impact the improvements would have on patient care and encouraged teams to adopt a “just try it” attitude in their approach.

Each team met regularly to diagnose and implement solutions at the front line – often pulling in non-team members and collaborating across traditional silos (e.g., ED and diagnostic imaging) to deliver improvements. Although there were many “big ideas” that if captured would improve patient access and flow, teams credited the structured and fast-paced lean transformation approach with keeping their focus on ideas that could be implemented within six to eight weeks of kickoff. Examples of LHSC improvements included creating a dedicated ED ambulatory care area to rapidly treat low acuity patients, streamlining the admissions process and creating predictability in GIM discharges with process transparency to the doctors, nurses and patients’ families.

Active and visible involvement from senior leaders throughout the 14-week project provided the support and encouragement working teams needed to press forward with improvement ideas. This positive role modelling, coupled with a proactive communications strategy, set a tone across LHSC that improving patient access and flow was a top priority. While physicians were initially skeptical, this changed to enthusiasm once they realized the initiatives they designed would actually be executed. In particular, this effort enabled physicians and nurses to contribute many long-held ideas and take ownership for improving patient care and operational processes.

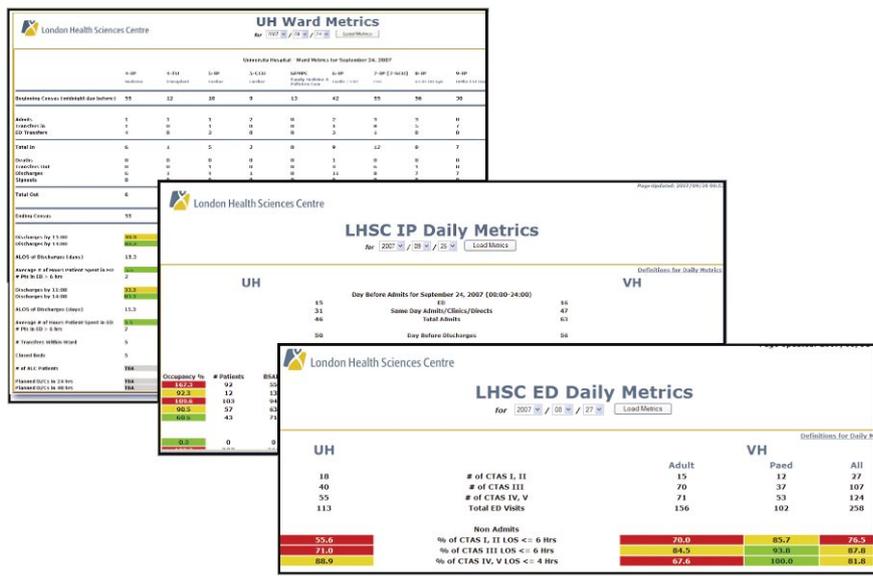
By including front-line staff on the working teams and leveraging existing leadership and support resources, LHSC was able to accomplish these improvements without additional full-time employees or capital expenditures.

##### Learning Organization

While focused on delivering impact within the 14-week timeline of the lean transformation, LHSC’s senior leaders recognized that to create sustainable improvements and foster a culture of continuous improvement they would need to build new capabilities in staff and understand the organization’s cultural strengths and barriers.

To build new capabilities and embed lean thinking in the organization, 40 members of the lean transformation teams participated in weekly training sessions (e.g., lean methods, problem-solving skills) and over 200 front-line staff were exposed to, trained on and involved in the improvement methodology. New skills were role modelled and reinforced by LHSC’s senior leaders during scheduled steering committee meetings and informal updates.

Figure 6. Example of the London Health Science Centre daily management tool



forward-looking improvements. Sharing this unit-specific operational performance data made it possible to cascade performance discussions throughout the organization. The nursing managers could discuss yesterday's performance with their nurses, engage in root-cause problem solving and set that day's tactical improvement plans. Many units in LHSC now hold a series of daily "heartbeat discussions" to review performance and make plans to drive metric improvements.

To support the COO's goal of "making metrics the currency of our conversations," LHSC's senior leadership team committed the organization to linking metrics to owners and developing formal target,

support and accountability mechanisms.

### University Health Network

Two years ago, the senior leadership of UHN reaffirmed that strengthening ED and GIM services was essential to their strategic plan to become a medical centre with global impact. They committed themselves to restoring these services to their core status after many years of lower prominence within the organization. To achieve this, they determined to maintain their focus on delivering the best care for patients with complex medical conditions and introduce a new component – lean operations.

One and a half years ago, UHN teamed up with the process management experts at Shared Information Management Services (SIMS) and launched an effort to bring lean operations to the bedside to improve the timeliness of patient care. The SIMS and clinical staff teams adopted a program of kaizens or rapid improvement events. Kaizens are a common lean technique that brings together a group of knowledgeable staff from leadership and the front line to diagnose, plan and take action against identified process bottlenecks.

Approximately every six weeks the kaizen team reformed and spent a week unlogging targeted bottlenecks in the ER, OR and GIM units. Between meetings, the SIMS team audited performance to measure improvements. Key ED-GIM kaizen targets included revamping ED triage and registration activities, refocusing care rounds and improving bed turnaround times.

The strong acceptance of lean operations and the good

To understand LHSC's workplace culture, 3,100 organizational performance surveys (representing over 30% of the workforce), 10 focus groups and 40 in-depth interviews were completed. During an intensive workshop, senior leaders used the insights provided by the workplace culture diagnostic to develop a strategy and set of interventions to create the continuously improving workplace they envisioned. For example, results of the workplace cultural surveys and focus groups indicated that members of the front-line staff felt they would be more effective if there were formal mechanisms in place to provide clear objectives and expectations, as well as a view of current performance.

### Management Infrastructure

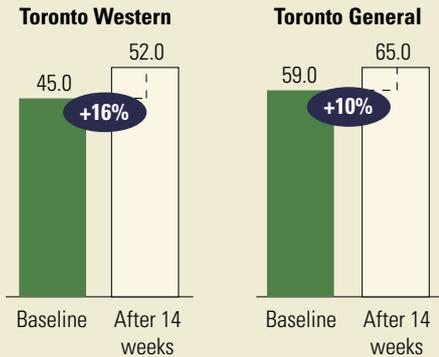
To support the operating process changes, LHSC developed a transparent, web-based daily report accessible to all staff. After consulting front-line staff and MOHLTC guidelines, a list of 20 operational performance metrics that accurately describe performance across the ED-GIM continuum (e.g., ED discharged patients: patients discharged within four hours [%], patients leaving the GIM unit before 11:00 a.m. [%]) was developed. In advance of the project launch, LHSC's performance and quality management team created an online tool that automatically posted the hospital's results along each metric for the previous day (Figure 6).

Over the 14-week project, the daily metric tool provided ED-GIM leaders and front-line supervisors with a common set of facts and language to discuss past performance and plan

**Figure 7. Shifting discharge time earlier in the day pulls patients from the emergency department**

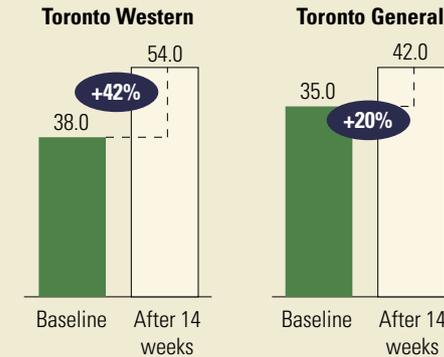
**Increased percentage of discharged ED patients moving from triage to discharge within 4 hours**

ED discharges in less than 4 hours  
Percent



**Discharges before 2 p.m. on GIM services increased, creating capacity earlier in the day for ER admits**

Medicine patients left before 2 p.m.  
Percent



ED = emergency department; ER = emergency room; GIM = general internal medicine.

met for two hours twice each week and then worked in small groups with non-team members to diagnose and implement improvements at the front line.

Starting in the summer of 2007, both Toronto General Hospital and Toronto Western Hospital launched two working teams responsible for ED and GIM process improvements. These teams were grounded in front-line activities, consisted of clinical, allied health and administrative staff and were led by nurse managers. Examples of UHN’s ED-GIM improve-

working relationship between SIMS and front-line clinical staff were the most important outcomes of this year of work.

**Impact**

The impact for UHN has been an immediate improvement in both operational metrics and employee satisfaction (Figure 7):

- Smoother and speedier patient flow in the ED – the percentage of discharged patients leaving the ED within four hours increased at Toronto Western Hospital (TWH) from 45 to 52% and at Toronto General Hospital (TGH) from 59 to 65%.
- The GIM and surgery units are coordinating and predicting discharges to make room for the ED patients.
- The percentage of patients discharged by 2:00 p.m. increased at TWH from 38 to 54% and at TGH from 35 to 42%.
- Informal surveys of employees reveal that they enjoy the new work and like taking charge of their workplace so they can improve the care of their patients.

**The Three Pillars of Sustainable Change at UHN Operating System**

With this foundation of lean operations laid, the SIMS staff then shifted to a more intensive working model called *kaikaku*, another common lean technique of constant pressure that blurs the boundaries between work and problem solving so that every day becomes a working problem-solving session. These teams

include the following:

- Creating an ED flow role to control information and patient flow
- Incorporating visual management tools to reduce the turnaround times for patients receiving medical imaging
- Refocusing the 9:00 a.m. care rounds on bringing together all care givers to discuss discharge needs and assign a discharge date
- Displaying anticipated discharge dates on board to align staff and choreograph discharge activities
- Reserving two peripherally inserted central catheter line appointments per week at interventional radiology to speed along GIM discharges
- Reserving one gastrointestinal endoscopy appointment per day for ED patients to accelerate diagnostic time

After three months, these and other efforts took hold in both hospitals’ EDs and all five GIM units. The results were a dramatic improvement in patient throughput in the ED and discharges by 2:00 p.m.

The SIMS staff continue to work with the clinical teams and meet on a weekly basis to continue the innovations and incorporate more lean operations in the nursing units.

**Learning Organization**

The SIMS staff learned two key lessons from their first year of

**Figure 8. Sustainability self-assessment: operating system**

	Strongly disagree		Strongly agree		
	1	2	3	4	5
1. We know what success looks like in 6, 12, 18 months	<input type="checkbox"/>				
2. The critical front line and clinical staff feel engaged in all process improvement activities	<input type="checkbox"/>				
3. We have a proven methodology to deal with both "long-push" initiatives as well as "quick hits"	<input type="checkbox"/>				
4. Each unit/area is clear on its strengths and main areas of weakness	<input type="checkbox"/>				
5. Each unit/area is clear on their largest process bottlenecks	<input type="checkbox"/>				
6. Our front line and clinical staff have taken ownership and proactively raise as well as tackle process bottlenecks	<input type="checkbox"/>				
7. We know which units/areas have the greatest/least capacity for sustainable change	<input type="checkbox"/>				
8. We know how far/fast it is realistic to move in each unit	<input type="checkbox"/>				
9. Our front line and clinical staff both highlight and address problem areas as well as look for ways to propagate best practices	<input type="checkbox"/>				

the lean operations effort: the importance of implementing more lean techniques and mastering the soft skills to influence the clinical staff.

At the start of the second year, all of the process management SIMS staff attended five workshops and some received additional one-on-one coaching. These workshops incorporated didactic sessions, role plays and exercises to teach both concrete and soft skills. The concrete skills learned were lean operations, root-cause problem solving, oral communications, storyboarding and written communications. The soft skills learned were influencing with integrity, meeting facilitation and changing mindsets.

The next step in this process is for these SIMS leaders to teach these skills to the broader SIMS and clinical organizations. Crafting the right communication plan is the most effective way to spread the key messages and ensure everyone aligns on how to approach the challenge. UHN

used overlapping communication methods (e.g., speeches, intranet articles and e-mails) to ensure that all stakeholders received the message. It is very important to rely on the judgment and skill of the corporate communications expert in developing messages that will address the concerns of the entire workforce.

**Management Infrastructure**

The final component for making sustainable improvements was building a management infrastructure by combining an operational performance management tool with performance discussions that cascaded throughout the organization. The clinical executive directors created a list of 10 operational performance metrics that would accurately describe activities across the ED-GIM continuum (e.g., ED discharged patients: patients discharged within four hours [%], patients leaving the GIM unit

**Figure 9. Sustainability self-assessment: management infrastructure, page 1**

	Strongly disagree		Strongly agree		
	1	2	3	4	5
1. Pivotal management positions are filled by change leaders, down to middle and lower management levels	<input type="checkbox"/>				
2. We have enough change leaders to go after the major areas of value	<input type="checkbox"/>				
3. There is sufficient real-time, on-the-job coaching to drive change at the front line	<input type="checkbox"/>				
4. I am confident in my ability to implement the required rate of change in our organization with the people currently in place	<input type="checkbox"/>				
5. We hire for fit with a continuous improvement culture in addition to clinical and/or administrative abilities	<input type="checkbox"/>				
6. We have the right organizational structure to drive change and performance	<input type="checkbox"/>				
7. The highest performers move between areas	<input type="checkbox"/>				
8. We attract leaders from outside our healthcare centre, where possible	<input type="checkbox"/>				
9. We effectively develop tomorrow's leaders and retain our high performers	<input type="checkbox"/>				
10. We are driving change fast enough <ul style="list-style-type: none"> <li>• At the top management level</li> <li>• At the middle management level</li> </ul>	<input type="checkbox"/>				

**Figure 10. Sustainability self-assessment: management infrastructure, page 2**

	Strongly disagree			Strongly agree	
	1	2	3	4	5
1. Employees feel real ownership in setting targets as well as executing them (vs. the target-setting process being primarily a top-down, nonparticipative process)	<input type="checkbox"/>				
2. Measures exist for organizational "health" or sustainability as well as performance	<input type="checkbox"/>				
3. Front-line and clinical staff in all functions know exactly where and how much they contribute individually to improve the performance of the corporation	<input type="checkbox"/>				
4. We are aggressive enough in target setting against technical or theoretical limits (not best practices)	<input type="checkbox"/>				
5. When targets are missed, there is more focus placed on taking corrective measures to achieve targets than on justifying why we missed them	<input type="checkbox"/>				
6. We really execute	<input type="checkbox"/>				
7. Achieving targets is linked to individual employee performance evaluations with meaningful personal consequences for success and failure	<input type="checkbox"/>				
8. There is an ongoing process for mobilizing the workforce in generating improvement ideas on priority issues (e.g., brainstorming after each shift)	<input type="checkbox"/>				
9. We track the most critical metrics that drive impact and follow up with accountable parties (e.g., ALOS)	<input type="checkbox"/>				

ALOS = average length of stay.

**It is very important to rely on the judgment and skill of the corporate communications expert in developing messages that will address the concerns of the entire workforce.**

before 11:00 a.m. [%]). This daily access indicator report delivered two sets of operational information at 7:00 a.m. each day: how each hospital unit operated over the past 24 hours and how many patients are currently awaiting in-patient beds.

Sharing this unit-specific operational performance data made it possible to cascade performance discussions up and down the organization. The nursing managers could discuss yesterday's performance with their nurses, engage in root-cause problem solving and set that day's tactical improvement plans. The directors could talk about performance with their nurse managers and, in early performance discussions, the senior team can consider how to help the front line improve operational performance.

**Advice for Other Hospitals**

Focusing systematically on the three pillars – operating system,

management infrastructure and learning organization – can create substantial change. These cases illustrate the importance of thinking about change beyond operations. In previous efforts, hospitals struggled to create and sustain improvement efforts because they did not pay sufficient attention to creating a learning organization and improving their management infrastructure.

As an institution thinks about its starting point, it is critical to properly tailor the transformation program. Figures 8–11 highlight a sustainability self-assessment that identifies the biggest gaps and helps focus the program on building strengths in those areas.

Finally, looking back at these three transformation efforts, there are six common success factors.

**1. Demonstrate involvement of senior leadership.** The senior hospital team must be aligned on

- the scope and objectives of the project, and a senior leader must play an active leadership role throughout the project.
- 2. **Involve the physicians and clinical and front-line staff.** It is extremely important to get the physicians on-board early and establish cross-functional working teams; full-time project leaders are also required.
- 3. **Lead with quality and safety.** This is about improving patient quality and safety, not about reducing cost.
- 4. **Focus on sustainability measures from the beginning.** Incorporate performance management, skill building and cultural change elements into the work plan from the start.
- 5. **Communicate, communicate, communicate.** Ensure everyone knows what is going on before and during the project and stick with it even when times get tough or change fatigue sets in.
- 6. **Recognize the need to incorporate the teaching mission (as appropriate).** It is crucial to incorporate the teaching mission and staff's role in the change effort.

The case for improving access to emergency medicine in Ontario is apparent. New clinical technologies are enabling us to take better care of patients. At the same time, we are enhancing the way we deliver care in our hospitals through approaches that improve the operating system and management infrastructure

**Figure 11. Sustainability self-assessment: learning organization**

	Strongly disagree			Strongly agree	
	1	2	3	4	5
1. An explicit knowledge transfer system exists where the best and worst experiences are shared systematically across the hospital	<input type="checkbox"/>				
2. Management fosters a culture that promotes idea copying	<input type="checkbox"/>				
3. We promote the best people, i.e., those who have learned from their failures (vs. the most immaculate records)	<input type="checkbox"/>				
4. There are sufficient competent resources dedicated to continuous improvement	<input type="checkbox"/>				
5. There are standardized on-the-ground practices and problem solving tools to help employees solve problems in the same way across the hospital	<input type="checkbox"/>				
6. The organization is doing enough to tap nontraditional sources for learning (e.g., companies in unrelated industries)	<input type="checkbox"/>				
7. Each level of management lives by the values and mindsets of CI	<input type="checkbox"/>				
8. We are very innovative (relative to peers) in each part of our operations	<input type="checkbox"/>				
9. We know what our limiting mindsets are and systematically eliminate them	<input type="checkbox"/>				
10. Our initiative on mindsets and behavioural change is clearly linked to specific and measurable performance imperatives	<input type="checkbox"/>				
11. Front-line and clinical staff are actively involved in problem solving	<input type="checkbox"/>				
12. Our senior leaders take an active and visible role in affecting change	<input type="checkbox"/>				
13. Front-line and clinical staff feel direct ownership for CI (vs. specialized group)	<input type="checkbox"/>				

CI = Continuous Improvement

and create learning organizations. UHN, SJHC and LHSC are excellent examples of the power and potential of this approach, and we hope they will soon be joined by many more successful Ontario hospitals. **HQ**

**About the Authors**

**Hugh MacLeod, MA**, is the former Assistant Deputy Minister, Health System Accountability and Performance Division, Ontario Ministry of Health and Long Term Care.

**Robert S. Bell, MDCM, MSc, FACS, FRCSC**, is President and Chief Executive Officer of Toronto's University Health Network.

**Ken Deane** is Chief Operating Officer, London Health Sciences Centre and St. Joseph's Health Centre.

**Carolyn Baker, RN, MScN, CHE, EXTRA Fellowship**, President and Chief Executive Officer St. Joseph's Health Centre, Toronto.



**Get it first. Get it fast.**

Sign up to have the table of contents e-mailed to your inbox each time a new issue comes online.

The table of contents allows you to:

- Scan the contents of each Longwoods journal
- Prioritize your reading instantly
- Link directly to articles that are of interest to you

**[www.longwoods.com](http://www.longwoods.com)**