

Doing Well... Striving for Better!

Headwaters Health Care Centre is a hospital meeting their provincial Emergency Department (ED) wait time targets, but they continue to challenge themselves to improve quality and patient safety through participation in Ontario's ED Process Improvement Program.

CHAPTER 1: The Diagnostic Phase

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ED PIP*



Introduction

Emergency Department (ED) overcrowding has long been a struggle for hospitals across Ontario. The ED acts as a gateway to the healthcare system for many people and as such, improving access to care has been a core part of Ontario's healthcare agenda. Over the last few years, health system planners and advisers have come to understand the root causes of ED overcrowding as a symptom of a larger, system problem. As such, the improvement focus of the hospitals has shifted from ED specific processes to broader clinical process transformations between inpatient care and the ED.

Headwaters Health Care Centre (Headwaters) is a high performing hospital in that it has been able to meet provincial ER wait time targets, where some hospitals have historically been challenged to do so.

As a relatively small hospital, Headwaters is keenly aware that although they are able to meet current demands, their processes may not be scalable, as the demand for hospital services continue to increase.

It is evident that Headwaters is being proactive about identifying areas for improvement. The hospital's strategic plan is focused on increasing quality and safety for patients. Although the hospital had previously worked with Lean consultants, they had been challenged with sustaining improvements and building the internal capabilities to lead future improvement initiatives.

To focus on sustaining improvements in patient flow and access, Headwaters volunteered to participate in Ontario's ED Process Improvement Program (see sidebar). The hospital thought it would be a good investment to ensure they embed a Lean process improvement culture throughout the organization.

About ED PIP

The ED Process Improvement Program (ED PIP) is a component of Ontario's ED ALC Wait Time Strategy. ED PIP is designed to support improvements to patient flow and build capabilities within hospitals for long term sustainable change.

ED PIP began in early 2009 with five hospitals in one [Local Health Integration Network \(LHIN\)](#). Two additional waves have been undertaken (wave 2: Sep 2009 - May 2010; and wave 3: May 2010 - December 2010 which include the participation of over sixty hospitals across Ontario. An additional wave will kick off in early 2011).

ED PIP uses a Lean improvement approach based on learning from health care transformations in Ontario and globally. Improvement teams in hospitals examine end to end patient flow from arrival in the ED through to discharge from the In patient units. Each improvement wave lasts approximately 8 months and includes five phases (Prepare, Diagnostic, Solution Design, Pilot and Roll out & Control). Hospitals participating in ED PIP have support from expert coaches in health care improvement. The coach focuses on building internal capabilities so that hospitals can lead transformative improvements that can spread and be sustained across their organization. In addition, hospital teams have access to practice experts, regional training forums, an online collaborative tool, and a comprehensive toolkit outlining the PIP approach, tools and guidelines.

Case Study Methods

This case study will be conducted in four distinct phases to mirror the core phases of Ontario's Emergency Department Process Improvement Program approach. Following each of the four program phases¹, key stakeholders will be interviewed to provide insights on the experiences, outcomes and lessons learned specific to each phase. During each phase, the case will examine the following topics of interest:

1. Objectives of the phase
2. Engagement
3. Using evidence to build capability and drive improvement efforts
4. Outcomes and achievements
5. Sustainability
6. Lessons learned

In addition, a final overview will be composed that ties together each of the individual components.

¹ The four core phases of ED PIP are Diagnostic, Solution Design, Pilot, & Control and Roll Out

Diagnostic Phase

The objectives of the Diagnostic Phase are:

- 1. To define the current state through quantitative and qualitative fact based analyses; and*
- 2. To identify issues, understand root causes, and generate and prioritize improvement opportunities*

Engagement

Headwaters is a small community hospital. Many people working there also live in the community and generally take pride in their role and the hospital in general. Like many hospitals, there have been historical tensions between the medical staff and hospital administration.

About two years ago, Headwaters initiated some Lean work with the support of external consultants. Their work focused on the introduction of basic Lean tools and techniques; however, the hospital struggled to sustain Lean practices after the consultants left. Several months later, the hospital formed a dedicated team to lead process improvement work through the structured provincial ED process improvement program. As part of the program, support was provided by a Lean coach who was able to help develop the capabilities of the hospital team to lead change initiatives. As a result, the hospital has begun to develop confidence in leading Lean process improvement work.

Engagement across the hospital overall has been strong. With strategies like “feedback for chocolate”, screen savers, observation logs, elevator speeches, gemba walks (observing on the floor) and general presence on the units, people knew what has been happening. Liz Ruegg (VP, patient care services) said “the first step is building relationships with people”. She talked about being visible and being able to answer difficult questions (specifically around being prepared to act).

In addition to appointing dedicated team leads for the ED and inpatient units (in particular the ICU and Medicine), two physician leads were critical members of the team. However, their ability to participate fully varied given competing priorities and summer scheduling.

As nine internists covered the hospital and their community offices, there was little time for additional work. Dr. Joshi (a General Internist) stepped up into a leadership role for the first time and helped to provide insights and act as a sounding board on behalf of his colleagues. In the ED, there was a core, stable group of Emergency Physicians and it was Dr. Donaldson, (Chief of the ED) who took on the leadership role with ED PIP. In some cases, the ED PIP team leads reached out to physicians directly; however, he was the sole buffer between the ED PIP team and the ED physicians. He represented the team in the diagnostic phase. Given summer scheduling, they were unable to engage more broadly. Despite the lack of overall physician engagement, communication was flowing about ED PIP (either through e-mail, overlapping shifts or directly with the team leads).

Using evidence to build capability and drive improvement efforts

As part of the ED PIP experience, hospitals review daily reports for a number of key metrics. The program provided the hospital with access to the Daily Access Reporting Tool (DART) to monitor progress against key metrics daily. This information served as a focal point to engage management and front line staff and brought credibility to the hospital discussions. DART results were also published on the intranet for all to see and sent as e-mail broadcasts when there was relevant data to share.

Early in the diagnostic phase, the team initiated “PIP Rallies” to build awareness about how the hospital was performing (in particular on the pilot units and the ED). The ED PIP team would go out to talk about DART with the front line teams. This became a priority for the managers, executive sponsor and the ED PIP team. If there were negative trends or spikes in the data, the team would keep probing and asking “why?”. This helped to identify the causes for the problems they saw manifested in the DART reports. It was also helpful in getting people at the front line comfortable with looking at data to support problem solving (as opposed to jumping to quick fixes).

The PIP Rallies were one element of an emerging performance management culture at Headwaters. For example, in addition to the PIP Rallies, weekly meetings involving clinical leaders and executives were convened at the “performance wall”. In these meetings everyone was accountable to report results against at least one measure.

Outcomes and Achievements

During the diagnostic phase, the team started with a value stream map (see sidebar) to map the patient’s experience between the ED and inpatient units. They identified seven opportunities (prioritized from a large list of 40-50 opportunities). The team then spent time collecting data and observing. Based on the data collected, they engaged the key stakeholders in discussions to determine the root causes.

Physicians are using data too...

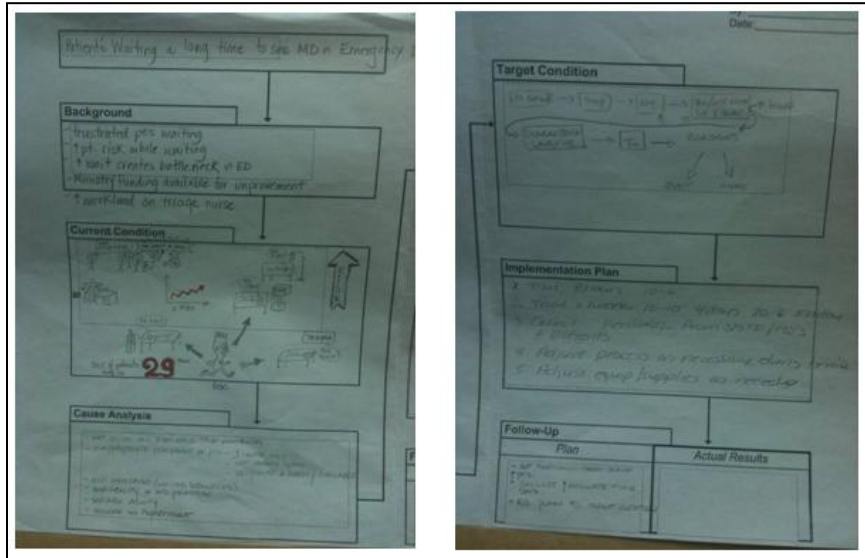
The use of data was of interest beyond the hospital’s administration. The ED physicians have incentives for meeting certain core metrics as part of their Alternate Funding Agreements with the Ministry of Health and Long Term Care. For example, the team monitors Physician Initial Assessment (PIA) time as a physician group. The results are not specific to an individual given that an ED physician could start a shift with a four hour wait time. This practice has provided further engagement and support for improvement initiatives.

What is Value Stream Mapping?

*Value stream mapping presents a pictorial representation of the flow of materials, people and process information from the beginning to the end. Value Stream Mapping is a **team exercise** – it builds the team and ensures that everyone understands the current “as is” process. .*

The team used a number of tools and techniques to determine the root causes (including fishbone diagrams, A3's and the 5 why's). They had most success with techniques like "5 whys" which seemed to be more intuitive and natural for people in the front lines. The A3's were also very useful tools to help put all the information in one place and focus the team on the right issues (root causes).

Exhibit 1: SAMPLE A3: PIA/Bed Assignment



Did you know the A3 Report is a Toyota-pioneered practice of getting the problem, the analysis, the corrective actions, and the action plan down on a single sheet of large (A3) paper, often with the use of graphics. A3 paper is the international term for a large sheet of paper, roughly equivalent to the 11-by-17-inch U.S. sheet. "A3 thinking" helps managers and executives identify, frame, and then act on problems and challenges.

Source: Lean Enterprise Institute

There were two significant findings as a direct result of the due diligence the team undertook around the diagnostic phase. They included:

- Diagnostic turnaround times (from time the test is complete until the results are available in the electronic medical record (EMR). This was considered a bit of a black box and although the hospital committed to addressing the issues, focusing on this opportunity fell outside the scope of ED PIP.
- Bed Utilization in the ED was inefficient. For example, multiple trauma, acute and specialty rooms were being held just in case a patient walked in who required that bed. This finding in particular was seen as an opportunity that the team could prioritize as one of its areas to further investigate possible solutions.

Sustainability

It is challenging to balance the expectations for quick fixes against following the process of ED PIP (especially when spending weeks focused on diagnosing the issues). One of the strategies for gaining support to follow the program was to communicate the need to create sustainable improvements. The team seems to have taken every possible opportunity to communicate, but there never seemed to be

enough. The team took advantage of opportunities to publish in “Heartline” (the hospital’s newsletter), e-mail, presenting at strategic meetings, screen savers, communication boards, staff meetings, etc...

The hospital began to view ED PIP as a journey and not as a project. For example, instead of the ED PIP team leading PIP Rallies focused on reviewing the DART results, the responsibility began to rotate between the charge nurses. In addition, there continued to be increasing responsibility by the clinical and administrative hospital leaders to be accountable for certain metrics at the performance wall and the executive sponsor highlighted plans to spread this further across the hospital.

The senior hospital executives began to develop an accountability framework that can serve to imbed process improvement into the daily roles and responsibilities of the hospital leadership. This practice also ensures that Board reporting includes progress against improvement priority areas.

In addition, the senior management team continues to remain committed to set aside planning time to further define “quality” and be clear about the role that Lean oriented projects like ED PIP play within the organization.

Lessons learned

- **“What we thought might be the cause of a problem was often not...”** Understanding the true root causes is powerful in creating relevant solutions moving forward
- **It is critical to go out to the front lines and talk with them.** This will build awareness and buy in for future improvements. It is the front line engagement during the diagnostic phase that brings everyone along for the ride. They will feel part of the solution as opposed to feeling that solutions were imposed upon them.
- **It is absolutely critical to remain focused on the patient.** This is what the front lines are focused on and if improvement initiatives are perceived superfluous to their mandate, staff will not be on board for changes.
- **Data can be a powerful tool to help illustrate opportunities for improvement** and obtain buy-in.
- **Be mindful of the seasons...** For example, if you know that summer schedules typically present with heavy time off at the front lines (thus causing issues for basic coverage), it may be necessary to develop innovative engagement strategies in order to mitigate for these issues.