

**EMERGENCY DEPARTMENT
PROCESS IMPROVEMENT
PROJECT (ED PIP) AND THE
PATIENT JOURNEY**

WAVE 2

SANDY SHEAHAN

ASSISTED BY TOM BIGDA-PEYTON



**INSTITUTE OF PUBLIC
ADMINISTRATION OF CANADA**

<http://www.ipac.ca>



This publication has been prepared through the Health Transformation Learning Partnership (HTLP) project.

The HTLP project is an innovation project in the healthcare sector involving the transformation of three health care organization using organizational transformation techniques through the development of balanced scorecards, strategy maps, accountability agreements and process improvements using LEAN methodologies. The results of these processes will be tracked, documented and the learnings harnessed and shared through publications and workshops. This project is supported by the Ontario government.

The views expressed in this report are the views of IPAC and the authors and do not necessarily reflect those of the Ontario government.

The IPAC Team

Project Lead and Writer: Sandy Sheahan (MHA) – Sandy has been a transformation consultant in healthcare in the province of Ontario for the last 7 years. Working on Community Health Centre (CHC) and Family Health Team (FHT) development from 2004 – 2007, her recent work has been with the Health Transformation Learning Partnership (HTLP) as an executive coach and writer. She has assisted organizations at all levels to apply transformation techniques including balanced score-carding (strategy development and execution), capacity-building, storytelling and dynamic evaluation. Sandy has taught Health Promotion at Queen’s University as an adjunct professor the last 5 years and has recently completed a project for the Department of Military Family Support (DMFS) developing a support tool “*RESILIENCE*” for military dependents.

Project Story Telling Expert: Tom Bigda-Peyton (Ed.D) - Tom is a world-leading expert on the art and science of storytelling/ dynamic evaluation and qualitative analysis. Tom’s graduate advisors at Harvard & MIT were Chris Argyris and Don Schön – two important thought-leaders on learning organizations, collective intelligence and measuring the progress being made in complex adaptive systems in the mid-80’s. Over the last 2 years, Tom has used story-telling and dynamic evaluation methodologies to enhance organizational learning at SE CCAC, YCH and NYGH. Through story-telling he draws out lessons and patterns to build capacity and nurture cultural transformation in healthcare as well as other sector organizations.

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Introduction: ED PIP and the Patient Journey

A study released in early June by the Institute of Public Administration of Canada (IPAC) highlights the stories of five acute care hospitals in the Waterloo-Wellington region and their respective experiences with ED PIP - the Ontario Ministry of Health and Long-Term Care's *Emergency Department Process Improvement Program* (found at: <http://www.ipac.ca/HealthCareLeadersForum> and <http://www.patientflowtoolkit.ca/introduction.aspx>).

An eight month initiative which began in March 2009 engaged front-line staff in the diagnosing, designing, piloting and implementation of process improvement changes in Ontario hospitals. With Wave 2 just recently completed (October 2009 – May 2010) and an additional 15 sites added to the roll-out, PIP may be one of the most significant transformational efforts to take place at Ontario hospitals in decades. Early day results have clearly demonstrated that improved process design has enhanced access, flow and quality of patient care at participating Wave 1 and 2 sites.

This second study considers the impact of PIP improvements at five additional Wave 2 sites profiling some key design changes to the patient journey through the Emergency Department (Kingston General Hospital), from the Emergency Department to the Inpatient Units (Joseph Brant Memorial Hospital and Thunder Bay Regional Health Science Centre) and on the Inpatient Units through to discharge (Toronto East General Hospital and Orillia Soldiers' Memorial Hospital). These accounts also underscore the value of organizational culture in fostering capabilities and mindsets in staff to influence and drive change.

At the first of three IPAC Conferences to be held on '*Sustainable Transformation*' over this next year, 75 people from across various sectors (healthcare, environment, finance, aviation, industrial safety and others) gathered in early June to dialogue on the conference theme of '*Building a Resilient Organization.*' Reflecting on the fast pace of change in Ontario over the last 18 months, Saäd Rafi, Deputy Minister of Health, spoke on the need for '*resilience*' in today's world referencing the recent downturn in Ontario's economy, major changes in the manufacturing and auto industries and the growth of public debt. "*Add to that healthcare spending, if left unchecked in Ontario could easily rise to 70 cents on the dollar in the next 10 to 12 years. The auto sector will never go back to where it was. They need to refurbish themselves. Healthcare needs to do the same*" he stressed. More specifically in the healthcare sector, he proposed that change initiatives already in the works and those currently being contemplated need to be better aligned with quality and patient health outcomes and more adept at keeping pace with technical improvements, fiscal challenges and an ever increasingly sophisticated patient population. '*Resilient organizations*' will be those that can adapt to change and not only survive it but also thrive in the midst of it. '*Resilient organizations*' he believes:

- have a clear vision for the future and can define and articulate goals to work towards that vision
- have staff who are committed to the goals and vision and can see their role in fulfilling both
- embrace innovation and adapt to change as dictated by their services
- take calculated risks
- engage with partners and stake-holders who strengthen their ability to provide service excellence
- can live within their means and can leverage their resources as they continue to evolve

Speaking at the same conference with a "*never go back*" mindset forged in his thoughts for a long time to come, Bruce Miyashita, Vice-President, Six Sigma at Maple Leaf Foods described the effects of compromised safety and quality in the deaths of 23 Canadians following a listeriosis outbreak at their Toronto food processing plant in August 2008. "*We were suddenly the emperor with no clothes on. This*

was our moment of clarity. We had been through many food safety audits. We thought we were in a good place. Clearly we weren't." Quick to publicly accept blame for this tragic event, Maple Leaf Foods then embarked on a journey of operational and organizational transformation. Every day now, Miyashita explains *"we begin with an early morning conference call to review findings of the last 24 hours at each of our food production facilities."* Staff have been required to take additional food safety training courses and have learned to interpret new statistical and biological data. Work has been done to improve communication and engagement across all levels of the organization. New processes have been designed and implemented to ensure product safety and quality and recently the position of 'Food Safety Officer' was established. In May of this year, company President Michael McCain issued an organizational pledge committing to becoming a global leader in food safety. *"Some may argue that we shouldn't be doing that with our past"* says Miyashita *"but by making this pledge we are holding ourselves publicly accountable to consumers and setting the course for a desired future that we are now moving towards."*

On June 3rd of this year, the Ontario government passed The 'Excellent Care for All' Act. This Act puts the patient at the center of the healthcare agenda by improving the quality of patient care through the use of evidence-based practice. Although the legislation begins with hospitals, Deputy Minister Rafi points out that *"this is meant to be about the entire system and developing the strategies to drive a culture that from the boardroom to the front-line is focused on quality improvements. This will help to build a stronger, more resilient sustainable system."* According to the Ministry of Health and Long-term Care, this legislation will strengthen accountabilities for improved patient care through:

- annual quality improvement plans which each healthcare organization will be required to develop and make public
- Quality Committees which will report to healthcare organizations on quality-related issues
- Executive compensation linked to achieving improvement targets set out in annual quality improvement plans
- staff satisfaction surveys to address employee experiences and views on the quality of care provided by the organizations that they work for
- patient / client / caregiver surveys to assess satisfaction with services
- patient relation processes to address patient experience issues

Focused on 'quality' improvements through process redesign, ED PIP is one such strategy that is changing the system by building capacity in hospital staff to enhance patient access, care and flow. *"We know that quality doesn't come from throwing more dollars at a problem"* emphasizes the Deputy Minister. *"On the contrary, waste, inefficiency, rework and poor design have been very costly to Ontario's healthcare system."* Learning from initiatives like PIP through the sharing of stories and lessons learned like those of the five Wave 2 sites profiled here can challenge us to consider what is possible in our own organizations as we continue the journey of healthcare reform in Ontario.

ED PIP Wave 2 Case Study Sites

Kingston General Hospital (KGH)



The Environment

Affiliated with Queen's University, KGH is a 422-bed teaching hospital that serves more than 500,000 people in Southeastern Ontario. With 43 ALC patients on the day of our visit, Eleanor Rivoire, Vice President, Clinical Administration, Professional Practice and Chief Nursing Executive points out that this would have been in the 70 – 90 range just a year ago . KGH provides an array of complex and specialized acute clinical services and is home to the Cancer Centre of Southeastern Ontario. A robust education and research program also provides hands-on skills training for approximately 1900 healthcare students annually.

In July 2008, a Supervisor was designated to address long-standing governance, management and financial issues at KGH. What followed was the hiring of a new CEO in February 2009 and the stage was set for the beginning of a new era. Charting a course for eliminating the hospital's operating deficit by 2012 while ensuring minimal impact on patient care, Leslee Thompson, newly appointed CEO has been busy working with her people to restore financial well-being to the organization while addressing other underlying issues that she believes *"... don't require dollars per se but will ultimately lead to better patient care. It almost sounds too simple but the key to unlocking our future is about putting the patient first and then everything else will flow from that."*

For years front-line staff in hospitals across Ontario have been trapped in a vicious cycle of performing inefficient work-a-rounds in order to get their jobs done. Staff satisfaction and morale have been on the downward slide due to poor system design at the macro-level, lack of clarity and standardization of work processes at the micro-level and valuable energy and talent being poured into wasteful activity. In many organizations, these circumstances have fostered a culture of blame where an emotionally draining work environment can easily shift the focus away from patient-centered care.

Recent PIP work has yielded some substantial results throughout KGH both in the ED and on the Medicine Units. In speaking to a room of 40 staff at the PIP Wrap-up Day in May of this year, Dr. Paul Dungey, Director of Emergency Medicine and ED Physician Lead for PIP tells those present *"We have had a culture shift in the ED. I didn't think we could do it but we did! We took all of the old rules and threw them out. We realized that the nurses were becoming so efficient at what they did that we needed to change our perspective as physicians to keep pace. We consider it unacceptable now for someone to be sitting in the waiting room and we have become comfortable with people sitting in chairs inside the ED."* Although they are now onto their third round of changes in the ED, Dr. Dungey reminds those present that *"this doesn't stop with the third round. Every day is a new round as our team collaborates together to ensure that each patient is seen and treated appropriately for their illness regardless of their triage designation or how busy the department is."* He adds that he has also seen significant changes on the medicine side of the hospital and muses that *"the fact that ED and Medicine are currently sitting in the same room together with no blood on the floor is testament to the changes that have taken place here."*

Joseph Brant Memorial Hospital (JBMH)



The Environment

Founded in the late 1950s by a group of citizens eager for a community hospital, JBMH first opened its doors in 1961. Today this organization serves a catchment area of over 250,000 in Burlington and the surrounding communities of Halton and Hamilton providing a wide range of inpatient, outpatient and outreach services through a staff of 175 physicians, 1400 full-time and part-time professional care staff and more than 500 volunteers. Operating 228 acute care beds, JBMH has approximately 12,100 admissions and 1450 births annually and handles about 46,000 ED visits a year.

One of the biggest challenges facing JBMH and many of their Ontario hospital counterparts at the onset of PIP was the lengthy transfer time to move admitted patients from the ED to the Inpatient Units. Quality design changes implemented through PIP have dramatically reduced this transfer time. The use of visual management and other lean tools on the medical floors has increased accuracy in predicting patient discharges. Significant uptake of the Daily Access Reporting Tool (DART) has also proved to be a valuable resource for providing timely and relevant feedback to staff around daily quality improvements and performance management. These are just a few changes successfully launched at JBMH.

Liliana Canadic, Team Lead for the Emergency side of PIP reflects ... *“As I stood at our final Steering Committee presentation and listened to our team present, answer questions, converse with hospital leadership and talk about the culture shift and transformation they were experiencing and witnessing...I knew (even though sometimes it still seems unbelievable)...that the success of our journey was undeniable and it could not be taken away from those who created it and they continue to run with it!”*

Now one year into his mandate as CEO and President at JBMH, Eric Vandewall, in referring to the work of the PIP team believes that *“The extent to which we see what has been modeled by this team hard-wired into all of our people will be the measure of our success at achieving the culture change that we want to see throughout our entire organization.”* He affirms his intention to nurture a culture that empowers those closest to the patient to be involved in the planning and designing of quality improvements to the patient journey.

As Supervisor of the Department of Environmental Services (DES), Branka Pavic-Muir found PIP to be a wake-up call for the entire organization. Historically she recounts that everyone had been doing their jobs in isolation without realizing that *“we are all responsible for the patient journey and not just our piece of it.”* Today she has seen how the engagement and empowerment of the least heard people in the organization has created a very different dynamic where patients see us all working together as a team.

Mary MacLeod, Vice President of Patient Care Services and Chief Nursing Executive makes the point that *“Our patients want a team caring for them that is adaptable.... flexible, a team that can be their partners and help them smoothly navigate through the system. We set out to smooth the bumps (variability) and work as a hospital-wide team with the outcome being great patient care!”*

Thunder Bay Regional Health Science Center (TBRHSC)



The Environment

Meeting the healthcare needs of people in Thunder Bay and Northwestern Ontario, TBRHSC is a 375 acute care bed hospital housing a Regional Cancer Care Center with a large inpatient oncology unit. TBRHSC is also a regional trauma centre with one of the busiest Emergency Departments in the country reporting over 100,000 annual visits last year. The Center also features a large renal program that reaches out to assist patients in Sioux Lookout and Fort Frances. Isolated from other metropolitan centers by hundreds of kilometers, this recently built award winning design facility rests on 70 acres of beautiful northern landscape and could easily be mistaken for a holiday resort at first glance. Also becoming known as a centre for research and education, this organization is now host to students from Canada's newest medical school – the Northern Ontario School of Medicine (NOSM) established in 2005.

“One of the great strengths of the PIP project” states Rhonda Crocker-Ellacott, Vice President ER, Critical Care, Trauma, Surgery, Chief Nursing Executive and PIP Executive Sponsor “...is that when you look at the ED and the Inpatient Units historically, there have been challenges with regard to work processes and team, however PIP has created an opportunity to bring everyone together to create a better process of care for the patient. Ultimately we aren’t talking about what’s best for me or for you here. We are talking about what’s best for the patient. This team has done a phenomenal job of highlighting the patient journey and designing changes to improve that journey rather than looking at their individual needs.” She asserts that there are still organizational challenges around managing transitions in patient care and *“we still often manage in silos here”* but the work accomplished by this team in educating and bringing awareness to staff around the patient transfer process from the ED to the Inpatient Units has been *“monumental.”* *“This is a process that we hope to replicate in many other areas of the hospital in the days to come.”*

ED Manager and PIP Team Lead, Rita Grenier Buchan believes for some in the organization there is now an understanding of *“process”* whereas before, it was lacking. She describes how people were doing things because that’s just the way they had always done it but now many have become acutely aware of how that process impacts the patient. *“When we brought everyone together to map out the journey of the patient from the ED to the floor we had a big ‘aha’ moment because we came to the realization that there are things that you know, there are things that you know you don’t know and there are things that you don’t even know you don’t know.”* The greatest learning for this team came from the latter.

Lorraine Campbell, Manager for Medicine and PIP Inpatient Team Lead recalls that when the ED and Inpatient Units came together to map the patient transfer process, *“one thing we began to understand was how hard everyone worked within their own departments. Unfortunately, when we looked at the transition points for the patient between departments, things didn’t flow at all.”* This was where the process left opportunity for things to fall through the cracks most evident in bed empty times on medical floors of up to 4 hours or more happening on a regular basis. Clearly, a hospital with 300 ED visits a day couldn’t afford to have beds empty anywhere for any length of time.

Orillia Soldiers' Memorial Hospital (OSMH)



The Environment

Located in the heart of Ontario's lake country, OSMH is a 230-bed community hospital providing regional programs, as well as surgical and medical services to the residents of Simcoe County and Muskoka. In its recent past, this organization has experienced major upheaval with leadership from four different CEO's and extensive senior team and governance turnover. Today, OSMH is well on their way towards a corporate vision of becoming a centre of excellence in patient care for the region.

CEO, Elisabeth Riley emphasizes that *"PIP isn't just another thing to do but we saw the reasoning and opportunity to embed this in our organization. We have been on a journey of financial betterment the last two years and looking at our performance indicators it was clear that we certainly had room to improve."* Identifying 'patient length of stay' and 'alternate level of care' as significant organizational challenges combined with tough budget constraints, she describes how creating an 'efficiency mind-set' has been part of her mandate since her arrival in April 2008. *"PIP has been a powerful motivator to move us to an even more efficient state."*

OSMH is a busy place averaging around 52,000 ED visits a year. Some 300 physicians, 1200 staff and more than 400 volunteers partner to provide services to this community.

Recently returned from a CCAC *"Home First"* training session, Bernie DeMunnik, ED Manager and PIP Team Lead expresses the importance of *"Home First"* thinking in tackling *length of stay* and *alternate level of care* issues in the organization. *"We have four long-term care homes in this area, three of which have 130 – 160 beds all currently occupied with an 18 – 24 month waiting list. The fourth home has a wait list of six months. There are interim beds in some places north of us but ideally people really want to be at home. Some require just a little bit more support to be able to do this."* With 52 ALC patients on the day of our visit and limited long-term care resources in the community, OSMH has had to become very strategic in partnering with CCAC, patients, care-givers and family members in patient care and discharge planning.

Michelle Soares, PIP team member began her days at OSMH twenty years ago as a Candy Striper and has just starting her seventh year as a registered nurse in the ED. Michelle explains how PIP has helped her to understand that the efficient running of a hospital is about more than just the ED or any one department in particular. By having the opportunity to come out of the ED during PIP and observe how other departments operate, Michelle feels like she has been able to see the world. *"This has been a gift for me and should be something that everyone has a chance to do. By seeing what happens on other units, I have been able to gain a greater perspective and appreciate that although the ED is a important part of the patient experience, it is still just the beginning for many. All staff need to be mindful, knowledgeable and respectful of every part of the patient journey every day."*

Toronto East General Hospital (TEGH)



The Environment

TEGH is a 500 bed, urban full-service community hospital serving south-east Toronto since 1929. Staff provide care to a diverse population of some 400,000 individuals representing over 45 cultural and linguistic groups offering a broad range of programs and services. This past spring, TEGH became the first hospital ever to make the 'Best Workplaces in Canada' list according to the Great Place to Work Institute, as revealed in the Globe and Mail on April 13, 2010. In addition to being one of the top 75 organizations recognized in Canada this year, they are one of few unionized organizations to make this list.

Recently, TEGH have been successful in reducing patient transfer times from the ED to Inpatient Units. They have also worked diligently to achieve a significant decrease in average patient length of stay (ALOS) primarily related to a more intentional focus on predictive discharge practices including strengthening their partnership with CCAC “*Home First*” Program. What’s noteworthy about these accomplishments says Marla Fryers, Vice President of Programs and Chief Nursing Officer is that *“there has always been a sense that this was a capacity issue and that we didn’t have enough beds in the organization. Every morning we would be in shock all over again with roughly 15 – 20 people waiting in the ED to be admitted and nowhere for them to go. This went on for years...each day we would look at each other and say – it’s happened again – we don’t have enough beds. For the past month, we have had the equivalent of almost an entire unit of empty beds (25 beds) on a regular basis. Today, we can confidently say that this wasn’t about a shortage of beds.”*

Director of Medicine Health Services, Irene Andress remembers that when they first started to look at their patient transfer process a couple of years ago, *“we started to make a concerted effort to get the patients up from the ED within 24 hours of their being admitted to an Inpatient Unit.”* Then they were able to reduce that to 12 hours and then again to 8 hours. Today, through the PIP process, Irene is emphatic that *“We have now come to the place where we don’t want our patients sitting down there at all. If they are admitted, we want to get them up as soon as possible!”*

Ruth Freitas, Supervisor of Interprofessional Practice and PIP team member acknowledges that in the past, staff had a tendency to think only about the patient directly in front of them and not the one coming next or the one just ahead. *“As we started to look at the DART data on a daily basis, we began to see some patterns emerging. We generally saw about 160 people each day in the ED and regularly admitted about 20 of those. Seventy five percent of all of our patients will eventually go home with no support required. When you can see the patterns, you can do a better job at planning patient care.”*

She explains how there has been a change in thinking at TEGH with staff trying more and more to look at things through the patient’s eyes. *“It’s the notion of putting a camera on the patient’s head and trying to visualize how they see their journey through our institution and how we can make that better.”*

Mapping the Patient Journey

PIP uses an improvement approach grounded in 'lean methodology' based on learning from healthcare transformations in Ontario and globally. Improvement teams at each site looked at patient flow from registration in the ED to discharge from the Inpatient (IP) Units. PIP team members at each site (see Appendix A) are trained in quality and process improvement tools and techniques, and lead their organizations through a structured 8-month program, diagnosing issues, designing solutions, piloting improvements and rolling out successful initiatives to other units beyond the ED and medicine units. PIP efforts are directed at removing waste from the system. Waste in the system can present itself in a number of ways including but not limited to the following examples:



Wasted Motion – a pharmacy technologist spends 20 minutes looking in multiple places for a particular medication



Rework – an X-ray technician has to re-enter 10 – 20% of requests because of wrong side Indication (eg. left arm versus right arm)



Over-production – 7 of 16 pages in an Admissions Package are no longer used



Excess Inventory – medicines or other supplies are held beyond their shelf-life because of excess ordering



Wasted Transportation – 25% of patients transferred to a unit are re-transferred to another unit offering a similar level of care within 24 hours of admission



Excess Processing – a nurse documents rate of respirations in 4 different places each time she measures it



Lag Time – an OR team waits 20 minutes for a case to start with no other tasks to perform



Wasted Intelligence – sadly this is where numerous ideas are lost, some never to be discovered and some only to be rediscovered at a later date

The three root causes of waste in most systems are:

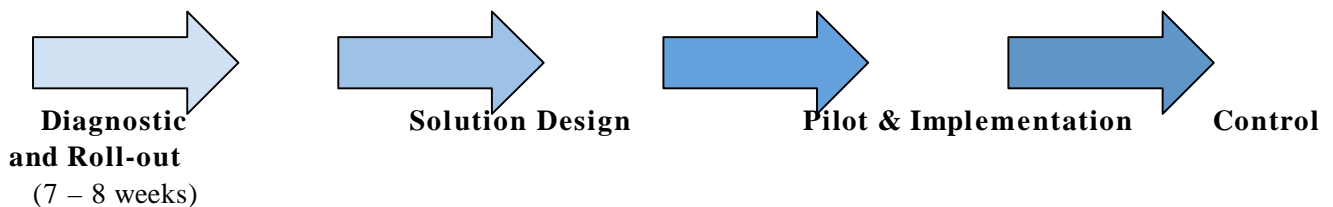
- variability in practice which can be “*inherent variability*” created by external factors or “*controllable*”

variability” created by anyone working in the system (doctors, nurses, clerks, housekeeping, lab etc.)

- redundancy and
- inflexibility

Front and center of every PIP journey is an early diagnostic tool – the Value Stream Mapping (VSM) exercise where staff are invited to consider the flow of materials, patients and information through the system in order to identify where the waste and bottlenecks happen. People from every part of the organization collaborate on how to better use lag times to do concurrent activity, reduce waste, enhance communication and improve care. As Paul Lacey, Clinical Educator for the ED at Cambridge Memorial Hospital, a Wave 1 site put it, *“This exercise helped us to see why Maria (fictitious patient) gets to sit in 6 different chairs in the ED before she gets to go and sit back in the waiting room again for a really long time!”*

Generally speaking, anywhere from 20 – 60 people attend a VSM event. Whether senior team members or front-line staff, everyone seems to leave with a greater understanding of the overall process of patient flow and the roles of others in providing important aspects of patient care. Participants are encouraged to ask questions like *“why are we doing things this way?”* and to offer ideas on what can be done better. A day is usually set aside to do this exercise which becomes an important launch point for a comprehensive diagnostic phase that tends to last a further 6 - 8 weeks.



“What were we thinking?”

Mary MacLeod, Vice President, Patient Care Services and Chief Nursing Executive at JBMH, put it so eloquently when talking about the Value Stream Mapping exercise - *“You stand back and look at it when it’s done and you thinkgosh! We really do all that to provide patient care! What were we thinking?”* Bringing 40 people together for the first time historically at JBMH to map the patient journey, the staff identified 79 steps that their patients go through from entering the ED to discharge from the IP Unit. Taking a closer look, they targeted 6 key process improvement opportunities that would require further diagnosis before proceeding to the solution design phase.

In the days that followed, Eric Vandewall (CEO) would rally the JBMH Board, the Quality Committee of the Board and anyone else that needed to view the Value Stream Map to enhance their understanding of the patient journey at JBMH and why process improvement work was so important. He then proceeded to elicit support from everyone for PIP team work in the days to come.

Journey into the Abyss

Meanwhile up in Thunder Bay, the ED and Medicine staff were on their own little journey of discovery. About 20 people attended the VSM day with Medicine sitting on one side of the room and ED staff on the other. *“There was a fair amount of finger pointing happening”* remembers Lorraine Campbell, Manager Medicine and IP Lead for PIP, but when everyone started to get down to the work, what happened next was really quite extraordinary. As both sides occupied themselves with *their* wall on *their* side of the room to map what happens to the patient in *their* department, what began to emerge (or not emerge depending on how you look at it) was the blank wall at the back of the room that joined the ED and IP Units. Whoever was responsible for bridging the gap between the ED and IP Units wasn't in the room and what was worse - no one in the room really knew who that was. *“We called it the Wall of Vague,”* laughs Robbie Dunbar, PIP team member and Registered Nurse in the ED. *“It wasn't difficult now to understand why we could have bed empty times on the medicine units of 4 hours or more. We spent the next few days figuring out who was involved in the patient transfer process and inviting their participation to fill in the gap.”* The VSM Day was a learning experience for ED and Medicine staff as they came to realize *“what they didn't know they didn't know”* and its impact on the patient journey.

The Wall of Vague



Bridging the Gap



The Beginnings of a Patient-centered Language and Culture

“VSM has been a starting point for us,” says Sean Bisschop (OSMH), “... to develop a common language and a corporate culture in our organization.” Previously, in the organization, Sean comments that what evolved was a very “*silo-focused language and culture*” within each department. When staff started to understand that “*the patient’s journey didn’t just stop or end with each of their departments, what began to emerge was a new language and culture centered on the patient and the patient journey through our system.*”

As OSMH mapped their patient journey, they selected 10 areas (see Appendix B for OSMH VSM) for improvement design work within their organization. All Wave 1 and 2 PIP sites were required to target 6 areas for major improvements although some also chose less labour intensive improvements or “*quick wins*” in addition to their original main areas of focus (see Appendix C). Each hospital directed their efforts at improving the quality and efficiency of the patient flow experience through the ED, from the ED to the IP Units and from the IP Units through to discharge from the hospital. Team work and collaboration with those (front-line staff) closest to the patient experience, to diagnose, design, pilot and roll-out changes has not only resulted in better outcomes for patients at Wave 1 and Wave 2 sites but has also resulted in new ways of thinking about patient care and improved quality of life in the workplace for staff.

In an article entitled *Creating Sustained Improvements in Patient Access and Flow: Experiences from 3 Ontario Healthcare Institutions*, MacLeod, Deane, Bell and Baker (2008) identify three important pillars for sustaining transformational change in organizations:

- A “***learning***” culture where leadership engages the front-line in problem-solving and nurtures capabilities and mindsets in their people that foster the design and delivery of high quality care. This type of environment builds and strengthens employee ***resilience*** increasing their ability to adapt to change and making them more effective at influencing and driving change.
- ***Effective, efficient operating systems*** that decrease variation in practice, do away with non-value activities, position the right people, information and materials in the right place at the right time, improve equipment availability and allow for the reorganizing of workplaces, activities and staffing schedules based on demand patterns. Process improvement designs enhance system effectiveness and efficiencies and improve overall ***reliability*** of care delivery.
- A ***management infrastructure*** that encourages and supports the desired ***results*** of the transformation. Desired results are best obtained through frequent measuring and extensive sharing of operational metrics, defining relevant quantitative and qualitative data and accountabilities, and clearly defining roles and ensuring the right people are in the right jobs to drive the change required to achieve the best possible patient outcomes.

This next section outlines key process improvements implemented at each of the five Wave 2 sites as identified through their VSM exercises; the impact of these changes on the patient journey and the development of capabilities and mindsets in staff that continue to influence and drive change.

The Patient Journey through the ED: Kingston General Hospital

“I didn’t save your life, the Flow Nurse did!”

This past March (2010), Kingston General Hospital (KGH) put an additional ambulatory pathway into action in the ED with dedicated space and staffing to reduce ED patient length of stay and door to doctor wait time. The greatest driver of ED wait-times in Ontario tends to be the volume of less acute patients (CTAS 4 and 5’s) which at most of our hospitals can account for close to half of all daily visits. For this reason, some hospitals have designed a separate pathway with staff dedicated to addressing the needs of these individuals. This pathway allows for less critical ambulatory patients (4’s, 5’s and sometimes 3’s) to move through the ED more rapidly and not coincidentally with greater satisfaction, making room for more urgent cases (the 1’s and 2’s) to receive the attention and care that they require.

Mike McDonald, ED Manager and PIP Team Lead established a new position of ‘Flow Nurse’ as an important early first step to decreasing ED wait-times at KGH. *“This individual travels throughout the ED during a 12-hour shift each day from 10 a.m. to 10 p.m. assisting the prioritization, placement and flow of patients.”* Flow Nurse tasks can include the movement of less acute patients into the faster track of care or the clustering of patients with similar CTAS classifications together in specific sections of the ED where they can be more readily seen by a physician. The Flow Nurse can also oversee the off-loading of ambulances and the ordering of certain tests based on specific medical directives allowing nurses to initiate sanctioned standardized procedures. Coordinating the cleaning of stretchers and chairs as they are vacated and the movement of patients from hallways into appropriate sections of the ED as space is freed up are all part of Flow Nurse tasks that make this new staffing position critical to improving patient flow.

In her new role as Flow Nurse, Kathy Mussel, vividly remembers the events of a cold, blustery evening this past winter. A man in his 40’s came in via ambulance with severe pain in his lower pelvic region, pale in appearance with very low blood pressure. *“One of the benefits of our new ambulatory pathway,”* explains Kathy *“is that we rarely have to wait to off-load ambulances anymore.”* Patients are flowing more efficiently through the ED so we are able to get our ambulance arrivals in quicker. In addition to this, Kathy describes how in her role as Flow Nurse, she is able to get people she considers to be in distress into the physician faster if her assessment tells her that this is warranted. Even though the ED was busy that night, Kathy’s speedy and thorough triage of this patient directly upon his arrival indicated immediate physician attention while she concurrently initiated preparations for what she suspected was the next phase of his journey.

As Flow Nurse, Kathy tells how she was able to remain with the patient until he received the care he needed. Within minutes, she had sought out the attending physician and within 90 minutes the patient was in the operating room having surgery for a life-threatening condition. *“The Flow Nurse needs to be a very experienced ED nurse,”* emphasizes Kathy. With nearly 30 years of experience in the KGH ED and nine of those as Charge Nurse, Kathy certainly fits the bill for this new and much needed position at KGH. *“I was recognized by Mike as a senior nurse who could do this role based on my experience. Every day I come home feeling respected by my colleagues and empowered in this work. I operate as a facilitator of patients and together our staff are working better as a team focused on providing patient-centered care.”* Reflecting back to a year ago at this time, Kathy can see how much things have changed. There were lengthy ambulance off-loading times, ED grid-lock and challenges around prioritizing patient volume. A year ago Kathy speculates that this patient’s journey and outcome could have been quite different.

She regrets that she hasn't had the opportunity to see this patient again since that snowy evening in February but has heard that he is now back to work. Recently, the operating surgeon that night visited Kathy to tell her that after the surgery, the patient had thanked him for saving his life. *"I told him, I didn't save your life, the Flow Nurse did!"* Kathy says *"This is a PIP success story!"*

"Our patients don't see any value in waiting...."

When the PIP Team first began to explore opportunities for improving patient flow in the ED at KGH back in October 2009, it was clear that decreasing wait times for less acute patients was a major priority. After the diagnostic phase of PIP, improvements were made to better align medical coverage with patient arrival patterns as ED data revealed higher patient volume earlier in the day. By matching physician coverage to this volume, the department was able to have a direct impact on the traditional late afternoon back-log of patients. In addition to this process improvement, 21 medical directives were also developed and implemented and are now being used by 90% of KGH ED staff. Much needed changes were also initiated to improve turn-around times of lab and diagnostic results.

Wendy Schleger, an ED registered nurse, speaking at the PIP Wrap-up day in May affirmed that designating and staffing a new area in the ED to treat ambulatory 3's, 4's and 5's has enhanced the capacity of staff to address a large number of patients in a more timely fashion freeing up both time and space for more critically ill patients.

Dr. Paul Dungey, Emergency Program Medical Director and Deputy Chief at KGH knows this only too well depicting the events of a Sunday evening shift in early May. *"I came into Section A where we place our more critical patients. There were four patients that needed attention. Then we went on to have three motor-cycle traumas in a row – two of which were seriously injured and eventually went to the operating room. I know that this sounds like a really rough night but there were things that were really great about it from both the clinical and the patient perspective"* says Dr. Paul. He illustrates that because they had space in the ED to look after these patients and also to accommodate the trauma team to care for the motorcycle injuries, everything went along in an organized *"step-line fashion"* with nothing happening in the hallway and no one having to play shuffle the deck chairs to find vacant resuscitation rooms. *"When you improve the flow of the patients through the ED, it opens up space and as physicians we can focus on the work that we are suppose to be doing without wasting mental energy moving people around or trying to make order out of chaos."*

He admits that it can be difficult to keep up with the less acute patients from time to time when more acute patients are demanding their attention *"... but our nurses are doing a great job of implementing the new processes here and in the end, we are doing things smarter and it feels better."*

"Our coaches really opened our eyes to seeing what the patient sees" comments Wendy. *"Patients don't see any value in triage; they don't see any value in waiting in the waiting room. They just want to see a doctor so our #1 goal has to be getting them into see the doctor sooner."* Previously CTAS 4's and 5's would have to wait 2 or more hours in the waiting room before being seen. Today with early PIP improvements in place, the majority of these patients go door to doctor in about 30 minutes.

Another significant impact of PIP changes has been for CTAS 3 patients at KGH who make-up about 50% of all ED visits at KGH. Total ED length of stay for these individuals has been reduced from more than 6 hours on average to about 3 hours and 48 minutes which is well below the Ministry of Health guideline of 6

hours or less. *“By getting these patients in quicker, we are providing safer care because we don’t like to see this group sitting undiagnosed in the waiting room”* adds Wendy.

To conclude her presentation at the PIP Wrap-up day, Wendy flashes 2 pictures up on the screen and concludes, *“This is a picture taken on November 23rd. We had 53 patients total in the department at this time, 16 were admissions waiting for a bed, 7 people in the hallway, 15 in the waiting room, 5 transfers from other hospitals on their way in and the rest occupying our ED beds. This was not a good day as you can see from the unhappy, unwell faces of the people waiting in this picture. This is our waiting room today after implementing our ‘access to care’ initiatives.”* She shows a picture of an empty waiting room, a more common occurrence at KGH these days.

“We have had a culture shift in the ED. I didn’t think we could do it but we did! says Dr. Paul. Staff no longer consider it acceptable to have patients waiting in the waiting room. “We throw a lot of ideas against the wall every day now thinking about how we can make the patient journey better. Some things stick and some don’t and that’s ok,” says Dr. Paul. “What we do know is that so far these improvements have us working better together and our patients are benefitting as a result.”

Some Members of the KGH PIP Team standing in the ED Waiting Room



The Patient Journey from the ED to the Inpatient Floor: Joseph Brant Memorial Hospital and Thunder Bay Regional Health Science Centre

What in the world was everyone waiting for?

Most Wave 1 and Wave 2 PIP sites elected to redesign the patient transfer process from the ED to the Inpatient (IP) Unit as a priority for improvement coming out their VSM exercises. When Joseph Brant Memorial Hospital (JBMH) in Burlington and Thunder Bay Regional Health Sciences Centre (TBRHSC) began this work, neither site could have predicted the learning ahead or the impact that this redesign would have on the patient journey and the cultures of both of their organizations.

In October 2009 as PIP roll-out began at each site, the average length of stay for admitted patients in both ED's was well above the provincial target of 8 hours or less. In fact early diagnostic review of available data at the outset of PIP revealed that the average admitted patient spent 13 – 30 hours in JBMH ED depending on acuity level. Interestingly enough, evidence suggests that the length of time a patient spends in the ED is positively correlated with their length of stay on the IP Unit.

The patient transfer experience is an important part of the patient journey. The amount of time it takes to prepare and transfer a patient to an assigned IP bed, once the decision has been made to admit contributes to the overall length of stay of that patient in the ED. If for example, a patient has spent 10 hours in the ED before a decision is made to admit them and then spends another 4 hours in the ED before they arrive on the IP Unit, then their total length of stay in the ED is 14 hours. At the outset of PIP, the time from *decision to admit* to actual arrival in a designated IP bed was taking an average of 3 1/2 hours at JBMH and 4 hours at TBRHSC. One could ask the question ... *what in the world was everyone waiting for?* Contrary to popular belief it wasn't always for someone to free up a bed. In fact both organizations confess that on occasion, a bed could sit empty without anyone knowing it or for quite some time while on other occasions a bed may be empty waiting for a decision to happen.

In Ontario hospitals today, once the decision is made to admit a patient from the ED to an IP Unit, the timely transfer of this patient is highly dependent on clear communication between many stakeholders. These stakeholders may include ED and IP nursing staff, bed allocators, bed managers, clerical staff, housekeeping, porter services and others. The patient transfer process is a complex one, comprised of a series of interdependent steps (often occurring in sequence rather than simultaneously) and reliant on a number of clinical and non-clinical staff contributing to a positive patient experience.

Pull versus Push

Commonly referred to as a '*push*' system where the ED regularly calls up to the IP Unit to inquire about the status of a bed and the overall readiness of the unit to receive a patient, the communication between the ED and IP Units has often been ineffective at best. A common scenario of the past depicts a staff member (admitting clerk, bed allocator, nurse, bed manager or other) trying to decant the ED by attempting to '*push*' admitted patients up to the floors while the person on the floor is thinking, '*there's that person calling me again to take a patient and we aren't ready or don't have the space.*'

A '*pull*' system on the other hand has its roots in 'lean thinking' methodology and is far more effective than a '*push*' system. In this case, a '*pull*' system would have the inpatient floor trigger the movement of the patient from the ED by informing them that the unit is ready to receive a patient. This can happen via electronic data entry, a faxed report or phone-call followed up with a mutually agreed-upon transfer time. The availability of a bed to trigger the '*pull*' process would of course be dependent on a number of

planning and predictive discharge steps taking place prior to the inpatient floor initiating the ‘pull.’ In the past the patient transfer process in many Ontario hospitals has involved a myriad of phone calls (sometimes 10 – 20 per patient transfer), faxes, e-mails, duplication, workarounds, excess leg work and patients transported to an IP Unit only to be moved again shortly after their arrival.

Mary MacLeod, Vice President of Patient Care Services and Chief Nursing Executive at JBMH asserts that *“Most of the time we design a streamlined process to start – then something happens and to keep providing care we create a workaround for a temporary issue and in this fast-paced healthcare system we forget to go back and take it out when the issue is resolved. These workarounds then become part of the process and the process becomes more and more complex. What we always need to remember is that there is a patient in the middle of all of this and that they need streamlined, consistent, collaborative care.”*

During our visit to JBMH in March, staff recounted how there was a time in the organization when a patient would arrive on a floor only to be turned around and sent back down to the ED again because the bed wasn’t ready. *“This would leave the patient feeling totally abandoned”* relates Carol Ann Vaile, Admitting Clerk and PIP team member.

In speaking with staff at TBRHSC we learned that they also had become experts at rework and wasting energy. Rita Grenier Buchan, ED Manager and PIP Lead tells the story of how the IP Unit would receive a call from Admitting asking for a male bed. Because the IP Unit only had a female bed left, they would spend the next hour running around moving beds trying to accommodate the incoming male patient. *“Then about 90 minutes later, we would get another call saying forget the male bed, can you take a female patient instead.”* Rita explains that for Admitting this was just a matter of scratching out a male name on a piece of paper and filling in a female name. *“They simply had no idea what these changes entailed for the IP staff.”*

Crossing the great divide...

When staff at both sites gathered to map out the journey of the patient through their respective organizations, getting the right people involved was the first challenge. Kelly Ingram PIP Lead for the Inpatient team (JBMH) remembers that *“When we started inviting people to focus groups there was this question that kept coming up which was ... soooooo, who is going to be there?”* A sense of leanness, cynicism and distrust around ‘change initiative’ agendas had been percolating in the organization for some time. Front-line staff had long since become skeptical that voicing their opinion could have any impact on changes that needed to happen.

What neither hospital expected was that as staff came together to talk about the ‘patient journey,’ something they all had in common; walls between different departments began to crumble and new relationships started to form. *“I’ll never forget”* commented Robbie Dunbar, ED registered nurse at TBRHSC, *“when we visited other hospitals and saw ED and IP staff sitting and talking with each other at lunch. It was like they really knew each other. This was pretty shocking for us.”*

Through the mapping process, staff at both sites began to develop a greater awareness of each other’s roles in providing important aspects of patient care. Looking back on those start-up days, Julie McMurray (JBMH PIP team member), a registered nurse on the Acute Medicine floor admits that *“as we learned about everyone’s part in the patient journey we came to realize that we had been complaining in ignorance. People would always say they were busy. Now we really knew what they were talking about and vice versa.”*

ED and IP staff would also come to appreciate and better understand the role of non-clinical services when exploring the patient journey from the ED to the IP floor. Looking at an almost blank wall during the VSM exercise (see pg. 10), an enigma that would become known as the ‘Wall of Vague,’ staff at TBRHSC spent days searching out the staff needed to fill the great divide between the ED and IP Units. Patricia Jordon, Patient Safety Coordinator confesses *“This was a big learning for all of us ... that those things that happen behind the scenes in the non-clinical environment also have a huge impact on the patient journey and how the patient gets to the floor.”*

A very real challenge for both sites in mapping the movement of the patient from the ED to the IP Units was knowing when the patient transfer process started. Did it begin with Admitting or the ED requesting an available bed from the IP Unit? Perhaps it was housekeeping notifying someone that the bed had been cleaned? Could it be as simple as an electronic entry somewhere by a ward clerk, a nurse, a nurse manager or the Admitting Department indicating that a bed is ready? When did the transfer process begin? What were the trigger points?

JBMH PIP Team Members rolling up the VSM during their PIP Wrap-up Day



Identifying and standardizing transfer trigger points would be a valuable start for both sites in clarifying this process and a necessary requirement for establishing realistic performance targets for monitoring patient transfer times in the days to come.

As PIP team members and staff analyzed improvement opportunities and worked together to map out and redesign the transfer process, much of the ‘detail work’ that followed would involve formalizing processes and redefining tasks that in many cases had never been written down or previously defined before.

TBRHSC staff collaborated to create a one page flow-chart describing the transfer process, its trigger points, who was responsible for what, how long each phase should last and what to do when staff hit roadblocks to patient flow. JBMH went onto develop an implementation plan with guidelines for patient transfer practices, standardized porter and bed cleaning services, a transfer of accountability report and a refined bed assignment and admitting process. Both organizations committed to giving greater ownership to IP Units for initiating *'the pull'* of patients from the ED up to the floors through designing more intentional and predictive discharge practices.

Reflecting on PIP learnings of the past year, staff at JBMH and TBRHSC both agree that front-line engagement in patient-centered problem solving undergirded by supportive senior team leadership has yielded significant gains for staff and patients alike.

A very solid trend.....

No doubt the most obvious gain from the patient perspective in terms of moving from the ED to the IP floors is the dramatic drop in transfer times that have occurred at both hospitals. JBMH has reduced this time on a consistent basis from 210 to 60 minutes and TBRHSC had decreased their patient transfer time from roughly 240 to 75 minutes. *"When this works, it's really beautiful," smiles Rita Grenier Buchan (ED Manager and PIP Lead) but we still have a ways to go in making this part of our culture at TBRHSC.*" When commenting on how things have improved, Rita points out that *"It isn't like our patients are thanking us for not moving them 6 times but we are making fewer moves and getting the right person in the right bed the first time. We don't get as many complaints as we did before and fewer visitors have to ask us if we know where their loved one or friend is because they were in this room yesterday and now they are gone."*

AT JBMH staff believe that changes to the patient transfer process have led to improved patient safety and satisfaction, improved staff satisfaction and decreased workload. ED and IP staff are committed to streamlining the patient transfer process and patients are no longer being told they are getting a bed and then having it taken away. *"Now,"* says Liliana Canadic (ED PIP Lead), *"they are being told that they are getting a bed and they will arrive in that bed within the hour."*

"This really all starts with relationship, team building and instilling a collaborative spirit in the organization," espouses Rhonda Crocker-Ellacott, TBRHSC Vice President and Chief Nursing Executive. She is convinced that you can't see sustainable movement in the metrics until you have that. *"Patients are very aware when there is a collaborative spirit between staff and they definitely know when there is not."* She emphasizes how the impact of the recent PIP work is reflected in the last 2 quarters of their patient satisfaction data. *"There is a very solid trend here where you can see that previously we were dismal in providing patient-centered care according to our patients but now we have shifted on all 8 categories. The provincial averages haven't shifted much but we have shifted significantly."* She credits the PIP team and front-line staff for these changes and emphasizes that staff have *always* cared for their patients but now have better tools to create better processes to support them.

A significant cultural gain has been the new found relationships developing between clinical and non-clinical staff that have surfaced at both sites as a result of recognizing and respecting that housekeeping and porter services also have a vested interest in the patient journey. *"After all,"* says Mary Beth Carter, ED Clinical Care Leader (JBMH), *"these people often see the patients more than we do as clinical staff. In the past, our support staff would do their work in isolation of the rest of us. Now they come and talk with us because we have engaged them in this process. They feel more a part of the team and this motivates them to want to work with us to improve the patient experience in our organization."*

“As a nurse in the ED at TBRHSC,” Robbie describes another notable shift in culture. “I hear my colleagues introducing themselves to the patients all the time now. We use this acronym called the ‘NOD’ where every staff member introduces themselves with their name, occupation and what they are going to do.” Robby references an occasion the week before where a lab technician came into the ED and introduced himself to the patient with the ‘NOD.’ “I found myself listening intently from a distance” laughs Robbie “because I’d been watching this guy come into our department for a long time and I didn’t have a clue who he was or what he did. I actually wanted to know who he was. Things are changing. I am changing. The culture here is definitely changing!”

TBRHSC PIP Team Members



The Patient Journey on the Inpatient Unit through to Discharge: Orillia Soldiers' Memorial Hospital and Toronto East General Hospital

“We were always playing ‘catch-up’ constantly in ‘react mode’....”

Without a doubt, one of the greatest challenges heard in the stories of Wave 1 and 2 PIP sites over the last 6 months has been the obstacles encountered by some organizations in effecting the timely discharge of inpatients. Despite everyone's best attempts to move admitted patients from the ED and up to the floors in a more efficient manner, unfortunately what often happens is that patients who were ready to be discharged yesterday or even the day before can still be found lingering in hospital because of various barriers to discharge. In the end, all of this redesign work to improve patient flow at the front end of the journey becomes fairly meaningless if the back end of the journey is broken. This past year, Orillia Soldiers' Memorial Hospital (OSMH) and Toronto East General Hospital (TEGH) have been working hard at redesigning processes to improve the safety and quality of inpatient care with an intentional daily focus on predictive discharge planning to reduce discharge delays.

“We ask ourselves three questions here every day about our inpatients” says Irene Andress, Director of Medicine Health Services at TEGH and IP PIP team member. *“Where is this patient from? Can they be discharged back there? If not - why not?”* Ruth Freitas, Supervisor of Interprofessional Practice and PIP team member on the IP side emphasizes that *“although people may think that this is all about the ‘alternate level of care (ALC)’ or ‘difficult to place’ patients slowing down discharges, data actually shows that the majority of TEGH patients go home with no additional support required and we are still having difficulty getting these people out the door.”* Formerly, TEGH described themselves as an organization always playing “catch-up” constantly in “react mode” as opposed to a “proactive planning mode” with 20 patients a day in the ED and no place for them to go. *“There was no sense of the big picture”* says Paula Istead, IP PIP Team Lead, *“... an absolute disconnect between the role of timely discharge in delivering quality care and its impact not just on the patients ready to leave but also on the patients coming up behind them. You can see 100, 200 or 300 patients a day in your ED and be the most efficient ED in the world but if you can't get your patients discharged in a timely fashion, it's all for nothing.”*

With 52 ALC patients on the day of our visit in a 230 bed community hospital, Elisabeth Riley, CEO recognizes that OSMH has *“inpatient length of stay and ALC issues of some magnitude”* and cites PIP as a welcome driver of performance improvement in the areas of patient safety, quality and overall efficiency. Impressed with how PIP has contributed to the development of her staff as *“one of the gems of this project,”* she continues to be amazed at how many staff members have worked in the organization for years and have never had a reason to go beyond their own unit. *“PIP helped us to understand the important work of others and the more we can understand about other areas of the hospital, the more we will understand about the patient journey.”*

Sean Bisschop, Quality and Patient Safety Coordinator at OSMH and IP Lead for PIP adds *“before PIP, there was no corporate structure here that encouraged anyone to look at anything besides their own department. We have begun asking our staff to break things down and look at processes from the viewpoint of the patient journey. So we ask ourselves all the time now – how does this help the patient journey? Today, Value Stream Mapping is the key starting point in everything that we do.”*

“Value Stream Mapping brought 40 of our people out of their silos to consider the patient journey together” says Sean (OSMH). After mapping the patient journey, both sites went on their own fact finding missions to validate that they did indeed have a problem with discharge delays.

With the VSM exercise complete, staff at OSMH and TEGH took a few more days to synthesize the information that they had gathered so as to further define their actual opportunities. From there they validated their priorities with relevant data which in some cases came from existing sources in the organization and in other cases, required visits to various units engaging the services of front-line staff in finding the information that they needed. At TEGH, as PIP team members dug into the numbers, they discovered to their amazement that 75% of inpatients went home from hospital without any needed support. *“Our staff didn’t believe that this could be possible. They said – no – that can’t be true! We always thought discharge took so long because the majority of our patients were waiting to get services in place before they left”* explained Ruth. She recalls assuring staff that the information they had uncovered was indeed true.

As OSMH analyzed the data they had collected *“sometimes we wanted to make assumptions or jump to solutions”* says Bernie DeMunnik (ED Lead for PIP) *“so we had to keep distinguishing between the symptoms and root cause of problems.”*

Both organizations shared with us that at times they found the diagnostic phase of PIP (7 weeks) to be *“painfully slow”* but realized in retrospect how important this phase was in getting to the heart of their discharge delay problems.

TEGH PIP Team Members



With further diagnosis, both TEGH and OSMH found numerous barriers hampering the discharge process leading to longer than necessary ‘patient length of stay.’ These included but were not limited to:

- patients waiting on assessments, tests or therapies to be completed by various disciplines
- patients waiting on prescriptions or other orders to be written
- patients waiting for a family or care-giver meeting to take place

- ALC patients waiting on transfer to long-term care, palliative, rehab or complex continuing care (CCC)
- patients unaware they were going to be discharged and therefore not prepared to leave
- staff unaware that a patient was ready for discharge and therefore not prepared for them to leave
- siloed documentation in the patient chart not conducive to collaboration around patient care and discharge

A broken communication process....

At the root cause of all this ‘*patient waiting*’ was a care team with challenges in effectively communicating discharge information with each other, with the patient and with others close to the process (family members, care-givers, CCAC, CCC etc). That being recognized, both organizations set out to reduce discharge delays by developing improved communication processes, forums and tools for staff, staff and patients and other key partners in patient care and discharge planning.

Bullet or Minute Rounds

Bullet or Minute Rounds as it is called at TEGH, is a daily forum attended by members of the care team which can include nurses, doctors, physician assistants, CCAC care coordinators and allied healthcare professionals who share pertinent patient information with the ultimate goal of reducing unnecessary days of patient stay. In the past, patient discharges have often been delayed due to poor interdisciplinary communication regarding patient discharge. Front and center of these daily forums is an estimated discharge date for each patient and whatever action items are necessary to expedite that discharge. Typical actions may involve the writing of orders, scheduling of family / care-giver meetings, patient assessments, and tests or therapies to be completed before the patient can leave.

In general terms, bullet or minute rounds entails a system of red, yellow and green magnets on a white board next to each patient’s name signaling the expected date of discharge. Red indicates a discharge date of 3 or more days away, yellow indicates 2 or more days and green indicates departure to be within 24 hours. Individual magnets labeled by discipline denote specific meetings, tests or therapies required before discharge eg. SW for social work, PT for physiotherapy, OT for occupational therapy, DT for dietary and a myriad of other possibilities. Each morning, the staff person leading the rounds updates patient information with the input of those present and revisions to the whiteboard continue to be made by the care team as the patient’s situation changes throughout the day. Bullet rounds last 10 – 15 minutes highlighting the status of each patient on the floor in succinct bullet-like fashion. These daily interactions between staff keep them close to the patient situation. The improved communication between disciplines has been “*remarkable*” according to everyone we spoke with. Team members are becoming more accustomed to actioning items during rounds to expedite discharge. Doing so often facilitates earlier discharges freeing up capacity to pull more patients up from the ED earlier in the day.

At TEGH, the Hospitalist Medical Group who actively participated in the VSM process have recreated themselves to facilitate more collaborative care between general internal medicine and other specialties. Their work in partnership with ‘physician assistants’ is supporting more patient-centered care and improved discharge planning processes. Physician Assistants or PA’s represent physicians at rounds as TEGH doctors often have numerous patients spread out throughout the hospital making it difficult to attend bullet rounds on each unit. Working with specific medical directives, PA’s at TEGH are able to order certain tests and diagnostics and recently have been given the latitude to write discharge orders and prescriptions. They provide the physician perspective at rounds and relay patient outcomes back to the physician including questions, concerns or verification of discharge plans and recommendations. This increases patient flow considerably at TEGH. At OSMH, staff find hospitalist participation at bullet

rounds to be invaluable in decreasing patient length of stay. Linda Minielly, CCAC Case Manager responsible for patient intake and placement at OSMH believes that bullet rounds have opened up communication between staff through a deliberate, discharge-focused daily forum and this enhanced communication is leading to results.

Bed Meetings and Huddles

According to staff at TEGH, bed meetings once consisted of “*victims and oppressors*” where no one ever mentioned the patient. Today, a very different type of meeting takes place at 8:45 each morning at the end of the hallway on the 3rd floor. Here, IP managers, supervisors and executive team members attend the daily ‘huddle’ focused on flow, quality and safety issues related to the patient journey. Unusual occurrences, falls, medication errors and anything pertaining to the patient that warrants further dialogue or attention is discussed or marked as an item for follow-up. Staff review key metrics around patient discharge, celebrate patient successes and problem solve together. This meeting allows for those who attend to see the bigger picture of how all the units have done the day before. In the huddle, those present look at the Daily Access Reporting Tool (DART) specifically discharges by 11:00 a.m. and 2:00 p.m. from the day before. Referring to 3 discharges that happened after 4:00 p.m. the previous day, Irene Andress, Director of Medicine Health Services points out to the group that “*we can’t be discharging patients this late in the day. We need to get to the root cause of this problem and get these patients out sooner.*” At this ‘end of the hallway’ gathering, the team reviews incidents, complaints, staffing, overtime and agency issues. Each floor represented gives an update on actual and expected discharges and transfers to and from their floors that day.

At OSMH, a similar type of meeting takes place each day led by Sean Bisschop on the day of our visit. As Quality and Patient Safety Coordinator, Sean can see how the daily bed meeting continues to challenge staff to look beyond their own department and think about the corporate system. Last week he recalls that “*... even our Chief Financial Officer seemed to know the right questions to ask over a bed problem we were trying to solve together. Now that’s progress!*” adds Sean. By bringing charge nurses, managers and directors together from across the organization each morning at 11:00 a.m. to review the hospital census and look at actual and predicted discharges for the day, this type of meeting helps everyone to develop a global awareness of the patient journey that they have never really had before. Recognizing that patient access and flow is a system problem that needs to be tackled *together* is an important philosophical leap for most Ontario hospitals. Michelle Soares, ED RN (OSMH) explains that “*this daily meeting still feels a little like a meeting of the United Nations from time to time where everyone is there to represent their own country but its getting better now as we turn the focus away from our ‘departments’ to the ‘patient.’*”

Improving Discharge Communication with Patients, Family Members and Care-givers

Communicating the patient plan of care and pending discharge on a daily basis with the patient, family members and care-givers helps everyone to be involved in good patient outcomes and reducing patient length of stay. Discharge posters in the hallways, discharge planning brochures on the bedside table and small whiteboards near each hospital bed serve to communicate to patients, family members and care-givers that a treatment plan is in place moving the patient towards a safe and imminent discharge.

OSMH PIP Team Members



The patient whiteboard is becoming a valuable communication tool for enhancing the patient journey. Staff at OSMH have found that posting key information in a prominent place on these boards helps patients, families and staff to stay better informed about the daily plan. Information like ‘your nurse today’ and physician name, number of days until discharge, date and time of upcoming tests, special equipment needs and a place where patients and families can write notes to staff and vice-versa all contribute to everyone’s greater understanding of the daily plan.

At some Ontario hospitals, patient whiteboards have been such a success that they have had to be replaced with larger boards to provide a bigger space for information sharing between staff, patients and significant others. *“These boards help the patient to plan too”* explains Linda Minielly, CCAC Case Manager (OSMH). *“When our patients see that they are going home in 2 days, they know they need to arrange their ride and plan for their upcoming appointments which are also written on the board. By involving patients in the planning of their care and through our partnering with those closest to them, everyone feels more valued and better prepared for what is coming next including discharge.”*

ALC and Home First

The ALC issue continues to be an ongoing challenge for most PIP hospitals as evidenced by the high number of ALC beds at OSMH at the beginning of May; however with improved predictive discharge practices and positive early results of the CCAC 'Home First' program, this is one mountain that is slowly starting to show some movement. New initiatives like 'Home First,' a program funded by CCAC encouraging ALC patients to go home prior to making a long-term care decision or applying to a long-term care institution is beginning to ease the ALC burden in many parts of Ontario.

Bernie DeMunnik, ED PIP Lead (OSMH) finds that *"CCAC 'Home First' really links with what we are trying to do here as a hospital to improve the ALC discharge piece and support our patients and their families to make this important decision from the home setting."* A recent study by the Centre for Healthcare Quality Improvement (CHQI) revealed that when patients have their say and their choice on where they want to be, the majority indicate that it is 'Home First.' With improved discharge planning for OSMH and TEGH patients, some of these individuals who would have waited in hospital for a long-term care bed a year ago are now going home, going home sooner, choosing to stay home and often requiring only basic temporary services. Since November 2009, the number of ALC patients being transferred from hospital to long-term care has decreased in the Toronto Central LHIN region from 170 to 98 clients. It really does seem that more people are going home and staying home.

"The PIP Team operated like the patient advocate throughout this entire process..."

With dedication and commitment to improving the patient journey exemplified in statements like Toronto East General Hospital - *"Above All, We Care"* and Orillia Soldiers' Memorial Hospital - *"Inspiring Excellence Everyday: Mission Possible!"* it is not surprising that both of these hospitals, like many other PIP sites we visited throughout Ontario are witnessing the improvements that they are. Through engaging the front-lines in process improvement work with strong senior team support, both sites have seen significant drops in their ALC and 'patient length of stay' numbers. Tracking these metrics daily through the DART and more intentional discharge planning and improved communication processes has been key to early results.

"When we began providing people with data each day on the floors and in the huddles, staff began to find their piece in the metrics and turned their attention to how they could improve their piece the next day" says Ruth (TEGH). *"We also came to appreciate patterns in the numbers and what we needed to do to maintain or shift those patterns."* One dramatic pattern shift worthy of note at TEGH is the move from a hospital in need of 15 – 20 medicine beds a day just a year ago to a trend of 'surplus' medicine beds on a daily basis.

"We all felt like we were participating in a team sport here at TEGH" report staff, reflecting on PIP work of the past year. Dr. Alfio Meschino, Chief of Staff at TEGH describes how *"the PIP team operated like the patient advocate throughout this entire process utilizing their exceptional relational and professional skills at all times."*

Up in Orillia at Soldiers' Memorial, what appeared to be a fairly gloomy start to the month of May with 52 ALC patients on the day of our visit, has had a bit of a turnaround with a considerable drop to 31 ALC patients at the start of July. *"This drop"* explains Sean *"is related to increased attention to the issues at hand, redirecting some resources and collaborating with CCAC about new ways to care for patients at home."*

In addition to decreased ALC numbers at OSMH, end-June DART numbers reveal 69% of inpatients are now being discharged by 2:00 p.m. on Soldiers' 1 (medicine floor) compared to the most recent baseline of 50% slowly inching up towards their projected target of 75%. Average patient length of stay on this unit has also decreased from a baseline of 6.3 days to 5.6 days coming in just under the projected target of 6 days.

As PIP improvements continue to spread to other floors, a new corporate mind-set is beginning to take hold at OSMH where staff are thinking about the 'patient journey' across departments and not the 'departments' themselves. *"For the first time in 25 years, I really feel great about the prospect of where PIP is taking us"* observes Liz Murray, a PIP secondment from the pathology department. *"PIP has really changed how we look at and care for the patient at OSMH and the quality of our lives in the workplace!"*

Going Forward: ED PIP and the Patient Journey

“Our patients’ needs are always changing and we need to be changing with them.”

As an external coach for ED PIP, Michael Brown explains to the audience at a PIP Wrap-up Day that the word ‘sustainability’ *“sometimes implies that we have made a number of improvements and we now have to try as hard as we can to not let things slip back to the way they were before. If we think we are trying to preserve something ‘perfect’ we might as well stop now because no improvement is perfect since people are always changing. Our patients’ needs are always changing and we need to be changing with them.”* He adds that the journey of continuous quality improvement requires us to:

- build in mechanisms that help us to identify ‘when’ and ‘why’ things are breaking down so that we can remedy the problem as quickly as possible eg. value stream mapping and daily use of the DART
- encourage problem-solving and process improvement at the front-lines through the development of lean thinking mind-sets and capabilities. When processes are breaking down, the gold standard for every organization should be that each person is critically aware of their role in problem solving and quality improvement. This isn’t just the job of the manager or director or senior team member
- finally, organizations need to establish a management infrastructure and a quality improvement framework that encourages and supports the desired results of the transformation

Taking it up a few notches to a more system-wide perspective, Paul Huras, SE LHIN CEO believes that *“if we really want to sustain a strong acute care system, then we need the programs and appropriate resources to ensure that those who don’t need acute care services, have what they do need in the community.”*

SMILE (Seniors Managing Independent Living Easily), an initiative of the SE LHIN, is an example of a community support program offered through the Victorian Order of Nurses (VON) in Southeastern Ontario. *SMILE* supports seniors who are frail and elderly, and most at risk of premature institutionalization, to receive help with activities that are essential to daily living. *“This program is an amazing collaborative initiative that focuses on empowering seniors by giving them new options to remain in their homes for as long as possible,”* says Dr. Judith Shamian, President / CEO of VON Canada.

The elderly want to feel that they can function well and remain independent even if it is with a little bit of help. They want others to see that they are able to do that to. *“Being able to stay home longer is very important our patients and their families”* emphasizes Mr. Huras. In the Southeast, *SMILE* is actually decreasing the number of frail elderly visits to the ED, reducing admissions to acute care beds, providing for earlier discharge from ALC beds and decreasing placements to long-term care homes. With the oldest population of all 14 LHIN regions, the SE LHIN has found that *SMILE* provides for the frail elderly and their families, caregivers and loved ones to customize support services to keep seniors safe and comfortable at home longer.

Similarly, establishing a ‘Home First’ philosophy when an inpatient is identified as no longer requiring acute care can actually decrease the ALC creation rate and return the patient to his / her home or an appropriate community placement. Mr. Huras indicates that both initiatives have proven to decrease ED wait times, ALC levels and long-term care placements in the Southeast.

Achievements to date are unsustainable without the contribution of the primary healthcare sector!

Filling out the ‘continuum of care’ picture a little more, Huras adds that although all our efforts and initiatives to reduce ED wait times and inappropriate acute care bed placements or alternate level of care (ALC) days are noble and showing improvements towards targets, he is concerned that the achievements to date are “*unsustainable*” without the contribution of the primary healthcare sector! “*We also need primary healthcare providers to align with these goals and provide more open access with longer / later hours that match patient demand patterns, and we need better coordination with community support services.*”

Commenting on the recently passed ‘*Excellent Care for All*’ Act, Huras asserts that “*Ontario’s healthcare is becoming more coordinated around an integrated system of accountabilities which ensures providers are aligned with LHIN priorities and LHINs are aligned with provincial priorities. This system of accountabilities ensures all providers are working in concert toward maximizing the value of resources available to our healthcare professionals in providing quality services to our people as they travel along the continuum of care. We have further to go in this bold new world of performance and process improvement*” he proposes, “*but the results to date are impressive.*” In most areas of the province patients are waiting as much as seven months ‘less’ for a hip or knee replacement, more people self-report access to a primary care physician and emergency wait times (the proverbial canary in the healthcare coal mine) are on the decline.

For the first time in recent memory, Huras concludes that “*an already very good Ontario healthcare system is showing measureable improvements in access and quality. PIP is one example of how we are doing this well. Through initiatives like PIP we are measuring outcomes; we are using these measures to design quality improvements; we are holding those entrusted to receive, allocate and spend healthcare dollars to be accountable for performance; and we are seeing proof that targets are being met.*”

ED PIP is assuredly one of the greatest change initiatives that the Ontario hospital system has seen in some time. Many of the over 1,000 hospital staff that have participated to date are believers; some understandably are still figuring it out. With the recent completion of Wave 2 and an additional 17 Wave 3 sites currently embarking on this journey, we are seeing the pursuit of “*quality*” as a system property beginning to take hold with the recognition of quality and safety as a core competency of everyone’s job. With a strategic focus on patient needs and the patient journey, these accounts show by example how high quality, sustainable care can be delivered every day – not just by chance but rather by design. Committed to a spirit of persistent crafting and sustaining of robust strategies and improvements in care, these ‘stories’ and ‘lessons learned’ influence, inspire and dare us to consider what is possible as we continue the journey of healthcare reform in the province of Ontario.

APPENDIX A: ED PIP Team Members

Kingston General Hospital

Executive Sponsors	ED Team	IP Team
Leslee Thompson, CEO	Mike McDonald , Manager ED and ED Team Lead	Jackie Donaldson, Manager Staffing & Scheduling and IP Team Lead
Eleanor Rivoire, VP Patient Administration and Chief Nursing Executive	Dr. Paul Dungey – Emergency Program Medical Director	Dr. Christopher Smith
	Pam Devine - Program Operational Director Emergency Medicine	Richard Jewitt , Program Operational Director Medicine
	Dr Ken Edwards - ERP	Andrea Keller , Administrative Coordinator
	Wendy Schleger RN	Laurel Haynes, RN
	Tracy Fitzgerald RN	Donna Delahaye - Unit Clerk
	Sharon Gourdier - Unit Clerk ER	Rod Albrough - Data Support

Joseph Brant Memorial Hospital

Executive Sponsors	ED Team	IP Team
Eric Vandewall, CEO	Liliana Canadic, Manager Palliative Care/Oncology and Ambulatory Care and ED Team Lead	Kelly Ingram, Manager Patient Flow, Social Work & Pastoral Care and IP Team Lead
Mary MacLeod, VP Patient Care Services and Chief Nursing Ex.	Dr. Sam Aziz, Physician, Emergency Medicine	Dr. Keith Greenway, Hospitalist
Anne Marie MacDonald, Director Surgery and Patient Care Systems	Josie Fichtner, Charge Technologist	Gerry Kew, Social Work
	Tracy Gallina, Pharmacist	Julie McMurray, RN, Acute Med.
	Laura Kentie, RN, ED	Carolyn Sharma RN, Acute Med.
	Dr. Daniel Kollek, Physician, Emergency Medicine	Lorie Ann Tirone, Occupational Therapy
	Branka Pavic-Muir, Supervisor, DES	Sarah Toms, Physiotherapy
	Jill Schitka, Interim Manager Emergency Department	Dara Klisowsky, Decision Support Consultant

Thunder Bay Regional Health Science Center

Executive Sponsors	ED Team	IP Team
Ron Saddington, President and CEO	Rita Grenier Buchan, Manager Emergency and ED Team Lead	Lorraine Campbell, Manager Medicine (2B) and IP Team Lead
Rhonda Crocker Ellacott, VP, ER, Critical Care, Trauma and Surgery, and Chief Nursing Ex.	Dr. Brad Jacobson, Emergency Physician	Dr. Arnold Kim, Lead Hospitalist
	Dr. Paul Dupuis, Medical Director, Emergency and Trauma Services	Arlene Thomson, Director Medical / Cardiovascular Services
	John Ross, RN	Val Walser, Occupational Therapist
	Robbie Dunbar, RN	Rachelle Brink, RN
	Dena Rooney, RN	David Vester, RN
	Patricia Jordan, Patient Safety Coordinator	Anne Cryderman, RN
	Earl McIvor, Business Coordinator, ER Services	Jennifer Bean, Process Improvement Facilitator
		Donna Otto, Administrative Support

Orillia Soldier's Memorial Hospital

Executive Sponsors	ED Team	IP Team
Elisabeth Riley, CEO	Bernie DeMunnik, ER Manager and ED Team Lead	Sean Bisschop, Quality and Patient Safety Specialist and IP Team Lead
Cheryl Harrison, VP Patient Services and Chief Nursing Officer	Liz Murray, Pathology Clerk	Sue Falkenham, RN
	Michelle Soares, RN	Linda Minielly, CCAC Placement Coordinator
		Mary Keele, Supervisor Admitting / Registration
		Sherry Manson, Housekeeping

Toronto East General Hospital

Executive Sponsors	ED Team	IP Team
Rob Devitt, President and CEO	Michelle Samm, ED Team Lead	Paula Istead, IP Team Lead
Marla Fryers, VP Programs and Chief Nursing Executive	Carmine Stumpo Director, Emergency & Pharmacy	Irene Andress Director Medicine Health Services
	Dr. Paul Hannam Chief of Emergency Services	Dr. Ian Fraser Chief of Medicine
	Kevin Edmonson	Maxine Castello
	Rose DiLeo	Ruth Freitas
	Brenda Page	

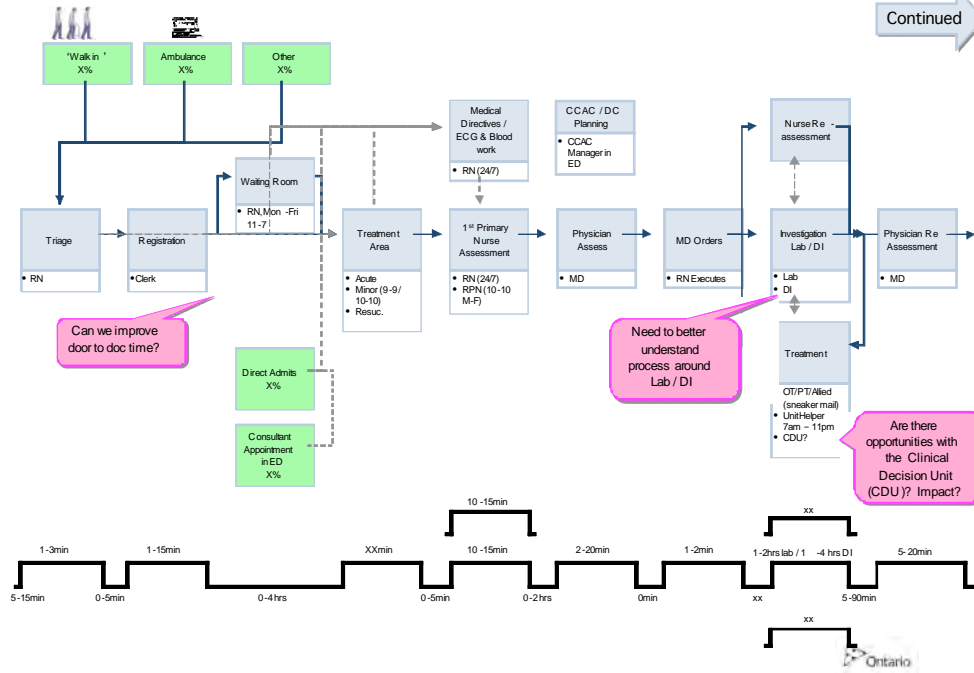
APPENDIX B: OSMH Value Stream Map from ED to Discharge

This Value Stream Map outlines the journey of the admitted patient through OSMH with green indicating where patients enter the system, blue showing what is happening to them in the system, white representing which hospital staff they are interacting with and yellow marking where they leave the system. Pink identifies potential improvement areas where staff agree that the patient journey could be better designed.

OSMH Value Stream Map – Emergency Department (1/2)

DRAFT

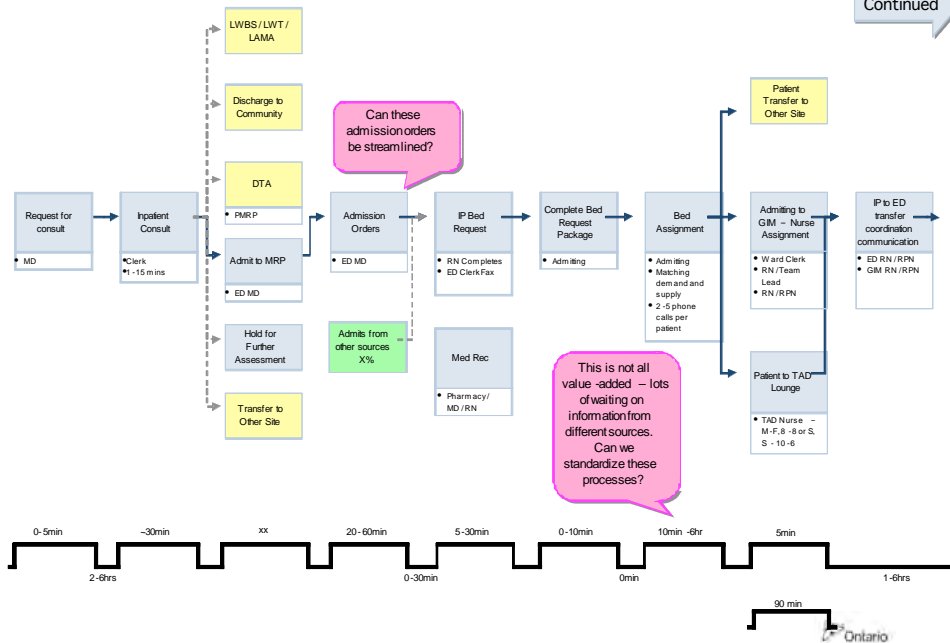
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OSMH Value Stream Map – Emergency Department (2/2)

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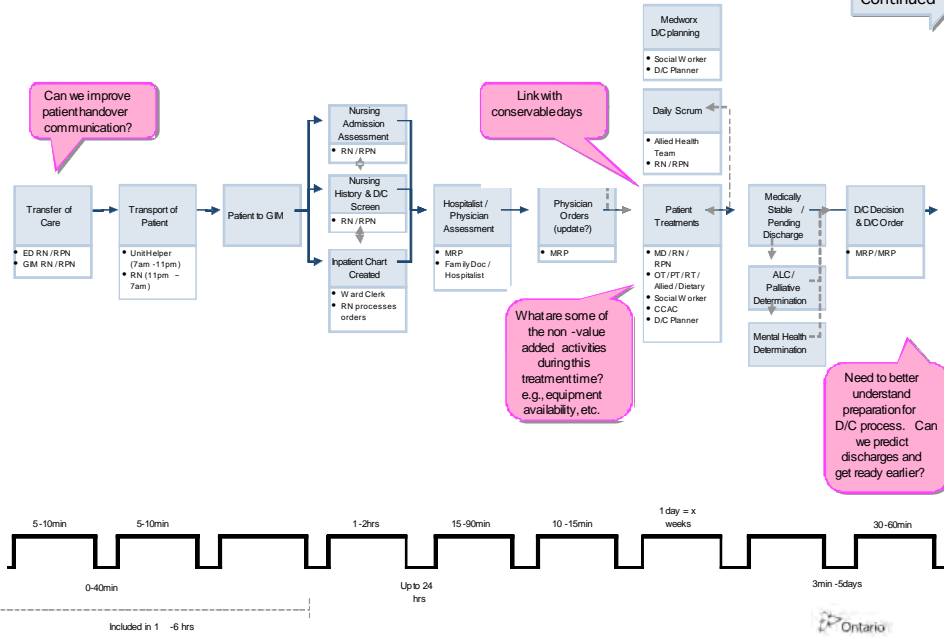
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OSMH Value Stream Map – IP Department (1/2)

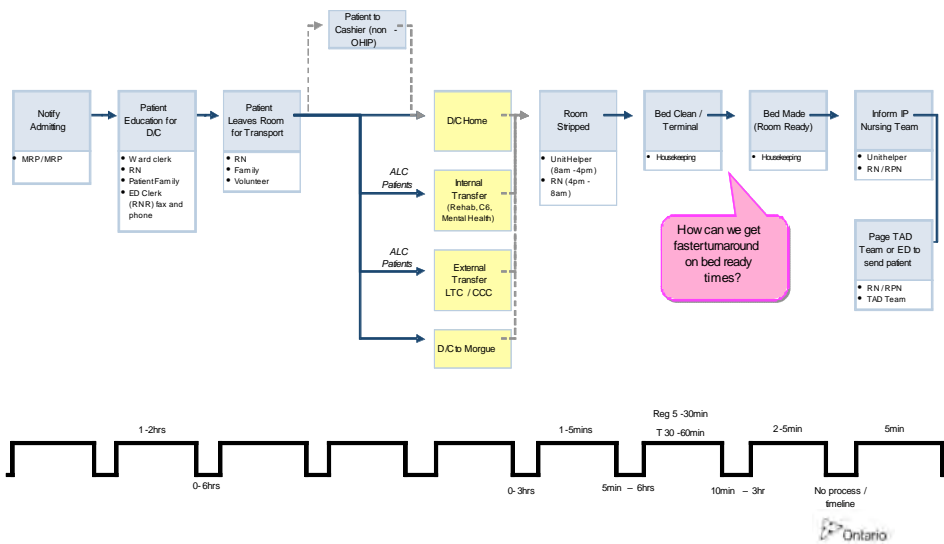
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OSMH Value Stream Map – IP Department (2/2)

DRAFT



APPENDIX C: Process Improvements Implemented at Wave 2 Case Study Sites

Orillia Soldiers' Memorial Hospital

Summary of Process Improvements Implemented through ED PIP

Emergency Department		Admissions / Inpatient	
Description	Status	Description	Status
Reduce door -to-doctor time • Matching supply & demand via MD schedule • See & Treat	Piloting	Predictive Discharge • Unit whiteboard • Daily bullet rounds • Discharge planning brochure • Patient room whiteboards • Discharge posters	Spreading
Reduce diagnostic imaging turnaround times • ER notification • Inpatients – Ticket to Ride	Spreading	Reduce bed empty time • Vocera communication triggers • Unified two roles into one	Spreading
Improve patient handover • From ER to inpatient unit • Between inpatient units	Spreading	Bed Management & Flow • Bed meeting structure and decision -making • Bed assignment algorithm	Piloting (whole hospital)
		5S • Redesigned supply carts and supply rooms • Nursing station renovations	Ongoing



Toronto East General Hospital

Summary of Process Improvements Implemented through ED PIP

Emergency Department		Admissions / Inpatient	
Description	Status	Description	Status
See & Assess Model	Implemented	Reduce Discharge Delays Discharge • Whiteboard • Bullet Rounds • D/c plan of care	Implemented (A3, B3, F3 Medicine)
Waiting Area in Rapid	Implemented	Reduce Bed Empty Time • "Cut the band..." • Bed Empty/Bed Ready trigger • Elimination of phone from ED	Implemented (all Medicine)
Visual management – coloured lines directing patients to appropriate treatment areas & signage	Implemented	Reduce Delays in ALC Transfers • Redesign process	Implemented (CCC, Medicine)
Huddles	Piloting	Surge Policy • Patients "sorted" on IP units • ED patients transferred to units prior to existing IP discharge	Piloting (Medicine)
		Huddles	Implemented (Medicine)



Kingston General Hospital

Summary of Process Improvements Implemented through ED PIP

Emergency Department		Admissions / Inpatient	
Description	Status	Description	Status
Ambulatory Assessment Track • Dedicated ER space and Nurse • Objective reduce ER length of stay and door to doctor time.	Implemented March 1, 2010	Predictive Discharge • Unit Whiteboard • Bullet Rounds • Patient Flow Traffic Lights	Implemented (On all four medical units)
Medical Directives 21 directives developed and in use by 90% of the staff.	Approved and Implemented January 2010	Patient Communication • Patient whiteboards	Piloting on one medical unit, Plan to implement to remaining medical units then hospital wide.
Lab/DI processes • Decrease lab and diagnostic result turn around time.	Implemented February 2010	Change in Bed Meeting • Medicine Bed Huddle with Critical care and Emergency representation	Implemented
....	...	Faxed Report/Transfer of Care	Implemented on Medical units with plan to implement on surgical
		Conditional Discharge Orders	Planning

Kingston General Hospital



Joseph Brant Memorial Hospital

Summary of Process Improvements Implemented through ED PIP

Emergency Department		Inpatient	
Description	Status	Description	Status
Decrease Door to MD Time • standardize ED RN roles to improve access to care, patient flow and teamwork	Implemented	Predictive Discharge • Whiteboard • Rapid Rounds	Implemented (Medicine) Roll-out to other inpatient units planned
Decrease ED to IP Patient Transfer Time • change bed assignment process to achieve 60 min target time	Implemented (ED/Medicine)	Patient Communication (to move discharges to earlier in the day) • Discharge pamphlet • Discharge posters	Implemented (Medicine) Roll-out to other inpatient units planned
Resource to Demand • increase physicians resources to match volume of patients	Piloting (ED Chief)	Just Do Its • Located O2 filling station on Medicine • Chart Management System • Flagging for discharge orders • Whiteboard for location of patients when off unit • 5S of Medicine units and supply rooms	Completed/ Rolling out to other inpatient units
Just Do Its • floor taping • patient information pamphlet • meal tray delivery system • pre-printed physicians orders	Completed		



Thunder Bay Regional Health Sciences Centre

Summary of Process Improvements Implemented through ED PIP

Emergency Department		Admissions / Inpatient	
Description	Status	Description	Status
Transfer process * <ul style="list-style-type: none"> Clean bed trigger Roles of IP unit and ED staff Rocket rounds and Bed rounds Transfer sheet Education on process Bed flow process algorithm New Bed management system 	Piloting / Rollout	Consultation process <ul style="list-style-type: none"> Review of policy Auditing tool Algorithm for consult response implemented 	Solution design / planning
Admission process <ul style="list-style-type: none"> Holding orders in collaboration with stakeholders Effective and safe transfer of care 	Planning	Discharge Planning – Education to floors on process <ul style="list-style-type: none"> In-patient floor white boards Patient room whiteboards 	Implemented
Patient Location in Meditech <ul style="list-style-type: none"> Created interim location in Meditech 	Planning / Implemented	Nursing History / Documentation <ul style="list-style-type: none"> Review of location Education provided to stakeholders 	Implemented
Nursing Documentation Form <ul style="list-style-type: none"> Nursing documentation Piloting for 6,000 patients Functionality and ease of utilization Safety reports related to documentation 	Piloting / Rollout	Applying LEAN * <ul style="list-style-type: none"> 5S techniques of LEAN Effectiveness of room and carts to be done weekly by MRP and group of staff 	Piloting

* Applied to inpatient units and ED





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Editor: Prof. Andrew Graham,
Queen's University

ISBN# 155061-101-1