

IMPROVING PATIENT FLOW IN THE ED



Editor’s Summary: In *Improving Patient Flow in the ED*, Providence Healthcare in British Columbia discusses how a variety of strategies such as clustering like patients, using standardized referral and assessment tools; streamlining processes and protocols; and developing electronic systems to support best practices, resulted in an overall improvement to the Emergency Department length of stay from 2.8 hours to 2.3 hours. The initiative also enabled a reduction in the time needed to receive an ECG from 16 minutes to 10 minutes; a decrease in time in Urinalysis tests from close to 90 minutes to close to 45 minutes; and a decrease in CT from order to dictation from an average of 30 hours to under 5 hours.

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Purpose:	High quality care for patients is the result of both clinical and operational excellence. Optimizing patient flow through the Emergency Department (ED) by reducing process variation and waste is key to timely, efficient, safe and effective care. The Ed Operations and Clinical Improvement Project at St. Paul’s Hospital was initiated to comprehensively transform its core operations. Utilizing operations management science tools such as Lean methodology has helped the team to better understand the complex dynamics of the system, effectively eliminate and reduce waste while increasing the focus on patient care.
Context:	ED overcrowding is a significant problem facing most hospitals today resulting in delays to care and poor patient outcomes. Improving flow through the ED has shown to improve access to care, better patient outcomes, reduce costs and improve staff morale. Improving patient flow requires optimizing internal processes and interfaces with other departments (i.e. CT scan, X-ray department, Lab, etc)
Resources:	Operating \$: ____ FTEs: ____
Source of resource:	<input type="checkbox"/> <i>In kind</i> contributions from the organization <input type="checkbox"/> Dedicated internal funding <input checked="" type="checkbox"/> External funding (example grant, Ministry etc.)

Population group:	The population group for this initiative is Emergency Patients
Patient flow entry and end points:	The emergency patient flow is considered from the moment of arrival to the ED to discharge home or decision has been made to admit the patient to the hospital.
Description/ approach:	<p>The primary aim of this comprehensive quality improvement initiative was to improve patient flow through the ED by re-engineering and optimizing key operational processes. This was accomplished by studying the variability, demand and current workflow for delays and inefficiencies. At the same time identify waste and create innovative ways to eliminate it or reduce it as much as possible. The following statements list some of the changes the ED has implemented:</p> <ol style="list-style-type: none"> 1.Segmentation of population:Not all the patients follow the same pathway, some of them might need more interventions than others. Identifying segments of patient population with similar needs and designing specific processes help to streamline patient flow and use resources more efficiently. A Rapid Assessment Zone (RAZ) was created to more efficiently assess and treat middle acuity emergency patients. 2.Demand/Capacity matching for human resources: Responsive scheduling to level out the workload and to match capacity/demand. 3.Standardization of processes using checklists (i.e.SBAR) and best practice algorithms (Triage) 4.Streamlining registration processes by eliminating redundant and unnecessary steps. 5.Optimize flow and space utilization. Improving the layout for better patient flow. 6.Organize Kaizen events - having the team involved in continuous improvement and problem solving events. 7.Dedicated carts to bring equipment and supplies closer together 8.Develop Electronic systems to support standardization and best practices. 9.Working together with Ancillary services by creating service agreements, monthly performance measures and improving processes.
Tools and tactics:	Using Lean Methodology
Measurement approach:	ED length of stay, Lab times from Order to Completion, ECG times from Order to Completion and Radiology times (CT) from ordered to dictation.

Impact/ evaluation:	The implementation of the changes has helped the ED to reduce Length of Stay (A decrease in Fast Track average EDLOS from 2.8hrs to 2.3hrs). At the same time working with ancillary services the team has been able to reduce core sub-cycle times: i.e. A decrease in time to ECG from an average of 16 min to 10 min; A decrease in time in Urinalysis tests performed from 1.43hrs to 45 min; and an increase from 48% to 63% of K-potassium tests performed in less than 45 min. An decrease in CT from Order to Dictated from an average of 30hrs to an average of 5 hrs.
Observation/ Discussion:	Change is difficult and time consuming. It takes serious senior leadership consistency and support, and a consistent and resilient approach. It is important to include the team in problem solving. Standardization is the foundation for continuous improvement
Critical success factors/ lessons:	Dedicated MD and RN champion, Strong support from the Senior Leadership Team, Strong support from other departments as: Quality Improvement, Decision Support and Change initiatives. Indicators - Daily/weekly/monthly reports back to staff
Limiting factors:	Communication barriers - funding to purchase and implement a wireless, preferably handsless system for ED communication - communication is the barrier that if we could resolve it, would take us to the next level of improvement