Improving Patient Flow in an Acute Inpatient Medicine Program

Editor's Summary: *In Improving Patient Flow in an Acute Inpatient Medicine Program*, London Health Sciences Centre combines the use of information such as the 'daily metrics' (please see submission entitled *The Use of Daily Patient Access Metrics to Improve System Performance for* more information on the daily metrics project) in combination with visual cues such as a green/yellow/red colouring scheme to alert providers to status issues, the presence of a nurse manager, unique communication protocols and lean strategies to facilitate efficient practices and better communication. An example of a result of these strategies was the ability to reduce the average length of stay for patients in the medicine program by 2.5 days.

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Purpose:	This project was designed to coordinate the patient journey through the care process more efficiently and safely with reductions in wasted time and effort in the process. It was also intended to address a problem with communication between interdisciplinary healthcare providers as well as the patient and family by beginning discharge planning soon after admission to improve patient outcomes as well as access and flow of all patients within inpatient medicine. Problems had been identified through observations and practices of ensuring patients were physically on the mend prior to initiating discharge planning. There were also corporate access concerns with boarded admitted patients in the Emergency Department (ED) as well as surgery cancellations.
Context:	London Health Sciences Centre is a multisided acute care academic health sciences centre with the widest array of clinical programs of any single hospital in Ontario. In 2007/8, it embarked on a corporate wide initiative to improve patient access and flow supported by Ministry of Health Funds and hospital operating funds. Growing demands in LHSC's emergency, medicine and surgery programs were threatening quality of care and the academic mission of the organization.

Population group:	The population group and scope of this project was adult inpatient internal medicine patients from the time they arrived in the medicine unit bed until the time they were discharged. The project began at one site and then moved to the other acute care site. The scope later grew in later projects to include all inpatient beds both adult and pediatric, including mental health through a diffusion strategy.
Patient flow entry and end points:	From the time the patient arrived in the bed until he/she was discharged and left the hospital.
Description/approach:	An external consulting firm was hired and facilitated the project work. A unique approach was utilized in this project as it focused on the patient flow from the intake source, the ED, through the admission processes to the inpatient unit and disposition. This was one of the first times that work spanned across programs / departments to address the issues that were interdependent. Each project team consisted of a manager as team lead who would then become the process owner, other interdisciplinary team members including nurses, allied health professionals, support staff, physicians and other clinical leaders. The approach consisted of a 12 week process utilizing lean techniques including a diagnostic phase, solution design phase, pilot phase and hand-off phase. A core principle was creating capacity within LHSC staff and leaders. As mentioned above, the project began in the inpatient general medicine unit at one hospital. The tools developed then evolved during the second wave and were implemented throughout the hospital including both adult and pediatric as well as mental health programs during subsequent waves.
Tools and tactics:	The tools that were developed and implemented include the use of a red/yellow/green discharge staging tool that was visually displayed on each unit as well as within LHSC's electronic patient record. Written procedures and guidelines were also developed. Ongoing education of new staff and physicians continues to occur. An existing role was remodeled and additional resources were added to enable continuity throughout the patient visit. This role is called the Nurse Case Manager/Patient Care Facilitator and is only functioning within the acute medicine inpatient program. Roles and responsibilities were developed.
Measurement approach:	Number of discharges before 11 am and 2 pm and reasons for delay in discharge. ALOS and admitted patient numbers are also used to monitor and evaluate the impact.
Impact/evaluation:	For the medicine program at Victoria Hospital, the ALOS reduced by 2.5 days. This has consistently been demonstrated since April 2008. The number of discharges before 11 were hoped to be 50% and the number of discharges before 2 were hoped to be 75%. These numbers have not been achieved due to continued bed pressures forcing discharging of patients before the team feels they are fully ready. Therefore, more discharges are unexpected and occurring after 2 pm.
Observations/discussions:	One cannot underestimate the resources required for this type of project. Communication is key to success.

Critical success factors/lessons:	The need to free up and involve the process owners (those who work in the area) is essential. These are the people who do the work so should be involved in the solutions. This also adds to sustainability of the initiatives. The development of a stakeholder analysis and change and communication plan was very useful. Communication was frequent and informative allowing buy in from those impacted.
Limiting factors:	The high number of ALC patients sitting in medicine beds has been a limiting factor as many acute patients are being cared for in off service beds. The continued bed pressures have also been a deterrent in enabling these initiatives to meet their full impact.