

Expanding capacity without adding resources

By Morteza Zohrabi

Hospitals are constantly tasked with the challenge of increasing internal capacity without compromising existing budgets or patient experience. To that end, many have turned to Lean and Six Sigma training as a collaborative means to seek out bottlenecks and streamline processes for the greater good.

In June 2014, Integrated Health Solutions, a division of Medtronic embarked on a project with William Osler Health System's (Osler) Diabetes Education Centre at Brampton Civic Hospital, focused on freeing up capacity to meet growing patient demand. Osler's Diabetes Education Centre provides essential educational and nursing services to help individuals and their families understand, control and manage diabetes. It offers various categories of services: nursing and dietitian support for Type 2 diabetes patients; counselling and insulin management for Type 1 diabetes patients; gestational diabetes management for pregnant women; and paediatric diabetes support.

One interesting anomaly of note is that Peel Region has one of the highest prevalence rates of diabetes in Canada, 10 per cent versus the national average of just over five percent placing significant demand on the Diabetes Education Centre. Among other issues, the Diabetes Education Centre was experiencing a 45 per cent no-show and cancellation rate, taking time away from other patient visits and leading to longer wait times.

Integrated Health Solutions worked with the Osler Diabetes
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Education Centre to tailor a solution that would increase the number of new patient visits and capacity for classes, as well as decrease the number of no-shows. The first step was to conduct a five-day formal Six Sigma training workshop for project teams comprised of dietitians, nurses and administrative staff.

Over that time, the teams worked together to review processes, find bottlenecks within the system, and develop solutions.

A key element involved mapping the value stream of the process from the patient's perspective, assessing what worked/what did not, how long each step took, and its inherent value. This mapping exercise is considered to be one of the strongest tools in Lean training.

Following the five-day engagement, Integrated Health Solutions then worked with the team to develop an action plan outlining tasks and requirements. The program's clinical services manager followed up on every action item to ensure the deadlines were met. This was facilitated through daily performance huddles for dieti-

tians, nurses and administrative staff.

Key action items included streamlining the medical reporting systems by merging three databases into one. This initiative alone saved over 2,300 working hours and allowed staff members to focus less on administration and more on interacting with patients. Another significant outcome was

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reducing redundancy by eliminating a 25 per cent overlap in what dietitians and nurses were covering during patient sessions. This move alone reduced session times by 25 per cent

with no negative impact on training or the perceived patient experience.

Overall, the outcomes have been exceptional. New patient visits per full-time employee have increased by 3 per cent; gestational diabetes management capacity has increased by 20 per cent; and impaired glucose tolerance class capacity has seen a 45 per cent improvement.

In addition, the no-show rate has been reduced from 45 to less than five per cent, allowing for more patient interactions with no additional time investment. Lastly, streamlining paperwork has saved 2,600 hours of team time annually; while data redundancy has been reduced by 60 per cent.

To ensure a sustainable process, the entire project team earned their Lean Six Sigma Yellow Belts. This has provided the Diabetes Education Centre with the internal capacity to continue managing similar projects and enabled it to be much more effective in improving internal capacity on an ongoing basis.

Perhaps the most important takeaway from this is that all of these outcomes were achieved while maintaining patient satisfaction rates and service delivery. Medtronic Integrated Health Systems was pleased to be a key community partner to Osler and looks forward to partnering with other health care providers to help address the needs of their communities. 

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