

# Improving Healthcare Using Lean Processes

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## Abstract

**For more than a decade, healthcare organizations across Canada have been using Lean management tools to improve care processes, reduce preventable adverse events, increase patient satisfaction and create better work environments. The largest system-wide effort in Canada, and perhaps anywhere, is currently under way in Saskatchewan. The jury is still out on whether Lean efforts in that province, or elsewhere in Canada, are robust enough to transform current delivery systems and sustain new levels of performance. This issue of Healthcare Quarterly features several articles that provide a perspective on Lean methods in healthcare.**

For more than a decade, healthcare organizations across Canada have been using Lean management tools to improve care processes, reduce preventable adverse events, increase patient satisfaction and create better work environments. Lean principles and methods focus on engaging staff, providing them with the tools to diagnose and improve care and the patient/client experience, with a focus on reducing waste and creating better value.

Many leaders are drawn to Lean methods because they seem like a practical solution to pressing and seemingly intractable problems. For example, beginning in 2009, the Ontario Ministry of Health and Long-Term Care created an Emergency Department Process Improvement Program (ED PIP) to support hospitals in improving ED patient flow and reducing wait times. Eighty-one hospitals in Ontario participated in ED PIP, with many implementing changes that reduced wait times. Results varied, but for many hospitals it was an introduction to a

new way to improve care. Hospitals in other provinces have also employed Lean methods; one example is St. Boniface Hospital in Winnipeg, Manitoba, which used this approach to reorganize its surgical programs, improving patient flow and reducing unnecessary patient hand-offs and transport (Tétreault 2013).

In many organizations, Lean management has been focused on projects. But Lean methods appear to have their most profound impact when they are broadly applied across an organization or system. The Lean healthcare pioneers that exemplify such a broad approach, including the Virginia Mason Medical Center (Seattle, Washington) and ThedaCare (Appleton, Wisconsin), have demonstrated substantial performance improvements (Kaplan 2012; Plsek 2013; Toussaint 2013). These derive from wide deployment of training, numerous rapid process improvement events and, just as critically, changes in traditional leadership and management roles, supporting clinical and non-clinical staff to work differently. Such large-scale changes are valuable in stand-alone organizations such as hospitals. They are potentially much more powerful as system-wide initiatives, reaching across the care continuum and the healthcare economy.

The largest system-wide effort in Canada, and perhaps anywhere, is currently under way in Saskatchewan. Beginning in 2012 and supported by the Health Quality Council and Saskatchewan Ministry of Health, healthcare regions in Saskatchewan began system-wide Lean training and implementation that includes basic training in Lean concepts and tools for all 40,000 staff in the province, and an in-depth Lean Leader Training for nearly 900 leaders and managers, who are required to learn and apply Lean methods in healthcare environments.

These efforts are beginning to pay off, with reports of major improvements resulting in reduced waiting times and positive patient experiences in a number of facilities, and substantial savings in the planning for new facilities that are being designed to incorporate more efficient patient flow.

This broad-scale transformation has focused leadership and staff on Lean initiatives and altered the work of the Health Quality Council, which now houses the Provincial Kaizen Promotion Office (PKPO) supporting the Lean rollout across the province. The efforts have also roiled the Saskatchewan legislature, where the leader of the NDP opposition, Cam Broten, has repeatedly attacked the government for spending \$40 million to hire John Black (who transformed Virginia Mason) and his US-based Lean consultants and Lean experts from Japan. Saskatchewan is also paying physicians for time spent away from practice to learn Lean methods, and supporting Saskatchewan tours of leading organizations in Seattle and elsewhere. In turn, the government has defended its decisions, pointing to savings already achieved in redesigning blood services, and the planning of the new Children's Hospital in Saskatoon and a new hospital in Moose Jaw. The Saskatchewan Union of Nurses, while initially supportive of the Lean rollout, has now raised objections, claiming that Lean is focused on efficiency rather than patient safety and that managers have intimidated nurses who speak out on these issues.

Saskatchewan's efforts to implement Lean across the entire healthcare system represent an ambitious effort to transform their healthcare system, and will require both major investments and, if successful, significant changes in how the system is managed. Although the final results are unclear, I think the effort is worth the investment and may offer important lessons for other provinces (Baker 2014, April 11). Canadian healthcare faces huge quality and economic challenges that require bold and sustained efforts. Moreover, the Saskatchewan initiative incorporates a provincial priority-setting process that has involved a broad range of leadership and created agreement on critical system goals. In both its strategic focus and broad-scale transformation strategy, the Saskatchewan plan incorporates many of the key components evident in high-performing healthcare systems in the United States, England and Sweden (Baker and Denis 2011).

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But the ongoing debate over the Lean transformation in Saskatchewan is not surprising. The jury is still out on whether Lean efforts in that province, or elsewhere in Canada, are robust enough to transform current delivery systems and sustain

new levels of performance. Given government oversight and accountability of our healthcare systems, there are also political challenges in staying the course for sufficient time to reap the benefit of such investments.

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In this issue of *Healthcare Quarterly*, we feature several articles that provide a perspective on Lean methods in healthcare. David Wood examines the experience of three Ontario hospitals that participated in that province's ED PIP effort to use Lean methods to improve ED performance. The success of Lean methods in these sites rested not just on the methods employed but also on the capability of these hospitals to focus on the patient, engage staff and address their work cultures. Lucille Perreault and her colleagues at Monfort Hospital also address this theme, providing a detailed account of how their facility used team tools, performance reports, quality huddles and other methods to create, review and improve standard work processes in clinical teams. Finally, Leigh Kinsman and colleagues outline the evaluation program that has been designed to assess the impact of the Saskatchewan initiative. This program will offer a detailed longitudinal assessment of the Lean implementation in that province, allowing us to understand the outcomes and processes that have been changed – or were unaffected – in the efforts to improve care. **HQ**

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