



LEAN CASE STUDY:

PROVINCE OF SASKATCHEWAN ADOPT A CULTURE OF LEAN

Looking Through a Lean Lens *The real voyage of discovery consists not of seeing new lands but in seeing with new eyes* ~Marcel Proust

Why Apply Lean in the Ministry of Health? The Saskatchewan Ministry of Health decided to launch lean for a number of reasons.

- Lean is a customer-focused approach that puts the needs of the patient at the forefront. Therefore, it is a philosophy that aligns well with our current primary strategic objective, supported by a provincial Patient First Review, to find ways to create and maintain an unwavering focus on those we serve.
- The Ministry also wants to model the change that we are supporting and encouraging in the broader provincial health sector. Many of the regional health authorities have begun their own lean journeys and recently, there is agreement from senior leaders in the health system that we adopt lean more broadly. This year, the Ministry has provided financial support to all regional health authorities in the province to deploy lean.
- Through the deployment of lean, the Ministry aims to improve our own internal operations with a focus on bringing value to our customers and improving the

work life of our own staff. Our staff are our most valuable resource and lean is about tapping into the potential of every employee and allowing them the freedom to express their ideas and find the solutions to the frustrations they face every day. Lean fosters staff engagement and empowerment – ultimately “restoring joy to work”.

- Our health system is faced with both quality and financial concerns. Health care costs continue to rise, and despite this, quality concerns remain. Lean provides a proven and effective approach to optimizing quality and value, from the perspective of the “customer” while improving efficiency.

Lean is an approach that has been applied across many different sectors with a more than 50-year record of success. In addition, some senior health system officials have had the privilege of visiting other locations to see evidence of the successful application of lean in healthcare in places such as the Virginia Mason Health System in Seattle Washington and the National Health Service in the United Kingdom.

In summary, the Ministry’s focus is on providing value and the elimination of waste to:

- support our primary objective to create and maintain an unwavering focus on the patient;
- improve quality of care and safety of patients and staff;
- increase the effectiveness of our processes;
- increase customer satisfaction with our processes and the experiences of care;

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- raise employee morale;
 - increase productivity;
 - lower costs; and,
 - lead by example and share the journey with the entire provincial health sector.

Approach to Lean The Ministry launched lean in November 2008 with the support of external consultants, Lean Advisors Inc. To date, the consultants have supported us to launch 9 teams and have left us with sufficient capacity to launch teams independently. One team was launched independently in April 2009.

The consultants provided support and “just-in-time” training for teams. Each team has been given consistent introductory training on lean, value stream mapping, and running a kaizen event. Further training is limited to what is required by each team once their value stream mapping and implementation plans are created. This approach has given us value for money by ensuring that the knowledge is applied and transferred to our organization. Our relationship with Lean Advisors is based on a mutual goal to quickly gain self-sufficiency within our organization. Cultural change management training sessions have also contributed to a highly effective deployment of lean.

Additional training has been provided to the lean teams to build their skills in the areas of effective communications, team dynamics, and facilitation skills. This training has been provided by internal human resources department.

While a central planning unit with a limited number of staff with lean expertise has been established in the Ministry to support lean deployment, the Ministry is building capacity throughout the organization to lead lean initiatives. Areas of Focus in the First Year The Ministry's first efforts targeted areas that showed an interest in, and commitment to, be the first to apply lean in the organization. Now that some progress has been achieved in demonstrating success, future efforts will be more closely aligned with achieving the organization's strategic aims. Areas targeted in the first year:

- Provincial Lab - Ordering and supplies management
- Population Health Branch - Vaccine management
- Health Information Solutions Centre - Contract management
- Medical Services Branch - Payment process for out-of-country billing
- Financial Services Branch - Information flow
- Medical Services Branch - Expansion to beneficiary and out-of-province provider claims
- Health Registration Branch - Health Card Application Process
- Drug Plan and Extended Benefits Branch - Income tested programs claims processing
- Policy and Planning Branch, Health Information Solutions Center and Health Quality Council (external customer) – Handling of data requests for research / quality improvement

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- Provincial Lab – Specimen management

Examples of Outcomes Achieved

Before	After
Expired, unnecessary items in inventory (Just in Case)	20% reduction in inventory; consistent ordering matched to demand (Just in Time)
3 storage areas for inventory (two overflow)	1 overflow returned to office space (40 sq m / \$7200 annualized savings in space)
Unsafe supplies in inventory	E.g., Expired and powdered (banned) gloves removed (avoids medical errors and improves staff safety)
Time-consuming, manual inventory counts; cumbersome / untrusted spreadsheets	Visual re-order system
Everyday supplies located 340 steps from technicians; 15 minutes to replenish	5S allowed supplies to be at work stations – 2 minutes to replenish supplies

Population Health - Vaccine Management Vaccines are centrally managed by the Ministry of Health. The team identified costs associated with waste from expired product and exposure to unsafe temperatures totalled almost 7% of the total vaccine

budget in 2008-09. The team has targeted a 50% reduction in this wastage. Already, the team has reduced inventory on hand by 14%.

They also recognized quickly that the value stream did not end at our door, but actually extended into the health region and beyond. They invited a region representative to join their team and have implemented a pilot project to test their improvement initiatives in this region. Through their improvements, inventory counts that took almost 2 days to complete now take 2 hours (involve 2 staff / once per month to meet audit requirements). This team reduced the number of “touch points” for the vaccines as they travel to the clinics where they are administered to patients by removing non-value added steps.

Current State Value Stream: Supplier > Ministry > Government Services > Regional Health Authority > Clinic

Future State Value Stream: Supplier > Ministry > Clinic

The team also applied 5S to freeing up space, improving work flow and creating visual controls. Before and after pictures demonstrate the difference.

Most importantly, the team has experienced a cultural shift, becoming more effective as team and committed to ongoing improvement. This can be seen in the “team shirts”, the effort that went into their final report to all staff, and the inclusion of lean on their ongoing unit meeting agendas.

Health Information Support Centre – Contract Management

Before

Contract Management: 1700 contracts/year;
unstandardized process led to considerable

After

Created standardized contract development process

rework

15% of contracts rejected at signature requiring rework Reduction of rejection rate on contracts to 0%

80% of invoices not paid the first time Improvement in invoice payment to 20%

Minutes to days to never – to find contracts All contracts centrally located and found within 10 minutes

Heavy reliance on outside legal advice Little reliance on outside legal counsel; business and financial analysts' time is released

Medical Services Branch – Out of Country Medical / Hospital Claims Billing

Current State: 13 processes / 67 days to process a claim

Future State: 8 processes and 9 days to process a claim

Kaizens are aimed at working down backlog, cross-training staff and matching demand to capacity to achieve a cumulative time savings of 8 hours per day, a reduction in claim wait time and visual controls on the process to monitor and sustain results achieved Health Registration – Health Card Application Process In the current state, it was identified that time is wasted by batching, sorting, and re-checking. A backlog of 1500 applications is consistently maintained. The actual process time for an assessment of an application is 3-5 minutes. A total of 35 minutes is required per application to cover the currently necessary associated administrative tasks. However, on average, it currently takes staff

4-6 weeks to process an application. Due to backlog, staff manually enter information about the application into a database solely to respond to public inquiries / complaints about the status of their application. The new process envisioned by the team will help them meet customer demand on a first in first out (FIFO) basis with existing resources with a turnaround time of 1-2 days. A quicker turnaround means quicker access to those waiting to access our provincial health services.

To achieve these results, the team plans to:

- Communicate Lean 101, Current /Future State and Implementation Plan to work unit
- Cross-train staff
- Determine solutions to clear the backlog
- Match pace of processing to client demand
- Complete 5S Workplace Organization and Visual Controls
- Introduce First-In-First-Out (FIFO) Lane
- Identify and handle defects immediately at first process step (Mail Sort)
- Determine solutions to reduce the percentage of incomplete / returned applications
- File by date not name
- Put in a Supplies Kanban Supermarket System

Lessons Learned

- Start somewhere – waste is everywhere – just start
- Lean is not a project it is a journey
- Results are quick but efforts must be sustained for the long-term
- Engagement of everyone is critical – lean is top-down and bottom-up
- Lean creates leaders at all levels
- Senior leaders must empower staff to engage in lean and make the improvements
- Time and commitment is required
- Plan resources to support lean implementation
- Change management cannot be underestimated
- Continuous communication at all levels is key
- Ensure cross-functional teams reflect the perspective of the entire value stream
- Don't promoting techniques (e.g., 5S) without Lean context

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- Don't expect training to make Lean happen
 - Don't rely solely on Lean workshops
 - Don't quit after failures