

Introduction to Lean/Six Sigma



Shared Health works collaboratively with our provincial service delivery partners to develop and deliver lean training to staff across Manitoba

Statement of Acknowledgement of Indigenous Ancestral and Territorial Lands

Health services across Manitoba are provided in facilities located on the original lands of First Nations, Inuit, and on the homeland of the Métis Nation. Manitoba's health authorities respect that First Nations treaties were made on these territories, acknowledge harms and mistakes, and we dedicate ourselves to collaborate in partnership with First Nations, Inuit, and Métis peoples in the spirit of reconciliation.

[Land Acknowledgement - Shared Health \(sharedhealthmb.ca\)](https://www.sharedhealthmb.ca/land-acknowledgement)

Objectives

- Describe the general principles and concepts of Lean and Six Sigma
- Identify opportunities to apply the principles of Lean and Six Sigma within the participants' work environment
- Support a common language of process improvement across the province
- Explain how our work is a series of processes and how-to identify areas of opportunity

What is Lean?



Lean thinking is that there is a simpler, better way to do our everyday work



It is achieved through continuous improvement. Continually identifying and eliminating inefficiencies and errors.



Lean improves safety, quality, costs, efficiency and service delivery.



Lean helps create time for patients and for quality/ process improvement to be part of routine activity.

What is Six Sigma?



Sigma or Six Sigma is a scientific, data-driven approach to problem solving.



Focus is on reducing variation and errors in a process



It is measured in terms of Defects Per Million Opportunities or DPMO.



Six Sigma represents a level of excellence in the process and/or system.

Lean/Six Sigma



Lean focuses on improving efficiency and process flow

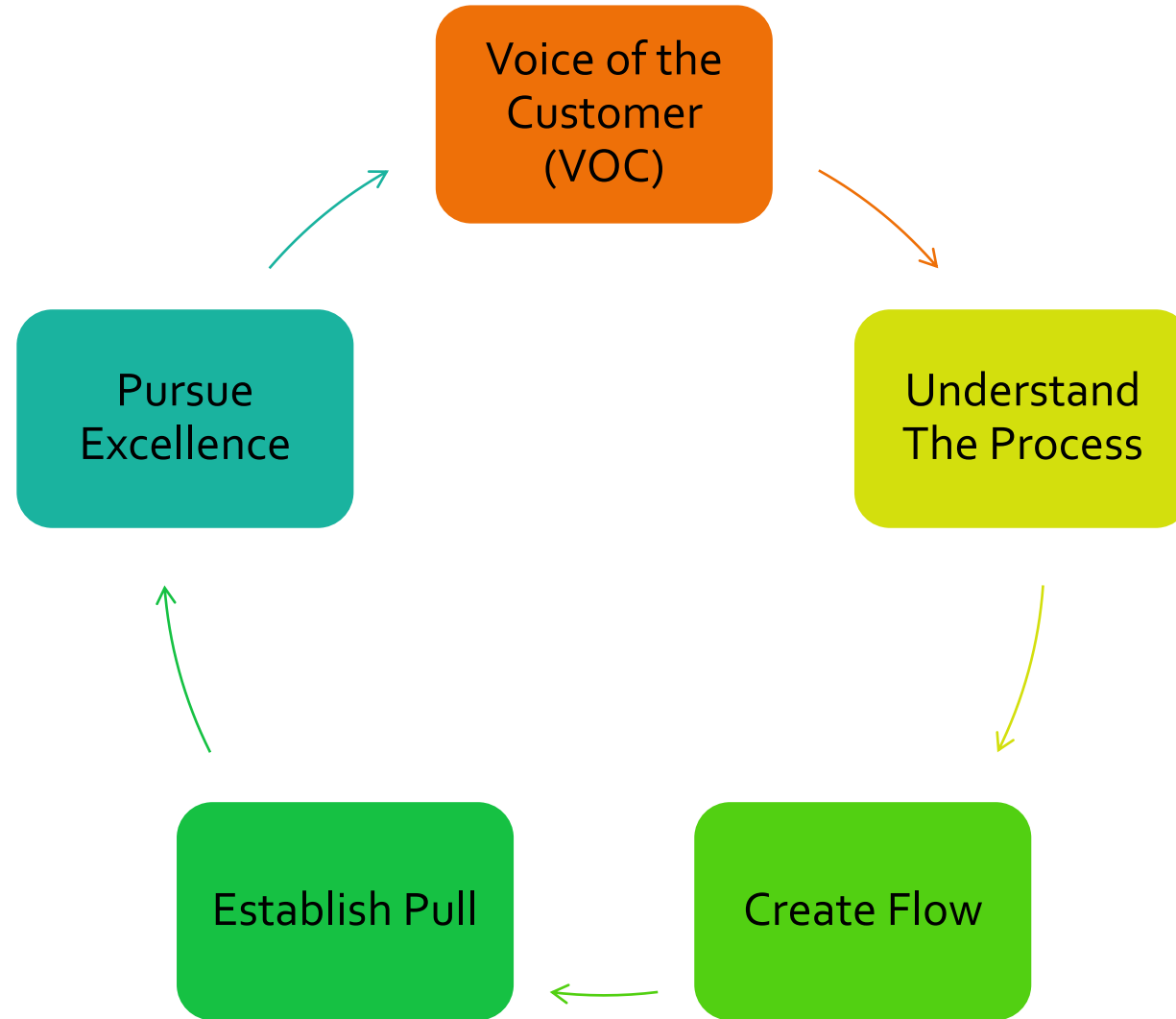


Six Sigma focuses on reducing process variation and errors



Six Sigma and Lean are complimentary processes and work best with they are combined together

The 5 Principles of Lean



Lean - The 8 Wastes

D

• Defects

O

• Overproduction

W

• Waiting

N

• Non-Utilized Talent

T

• Transportation

I

• Inventory

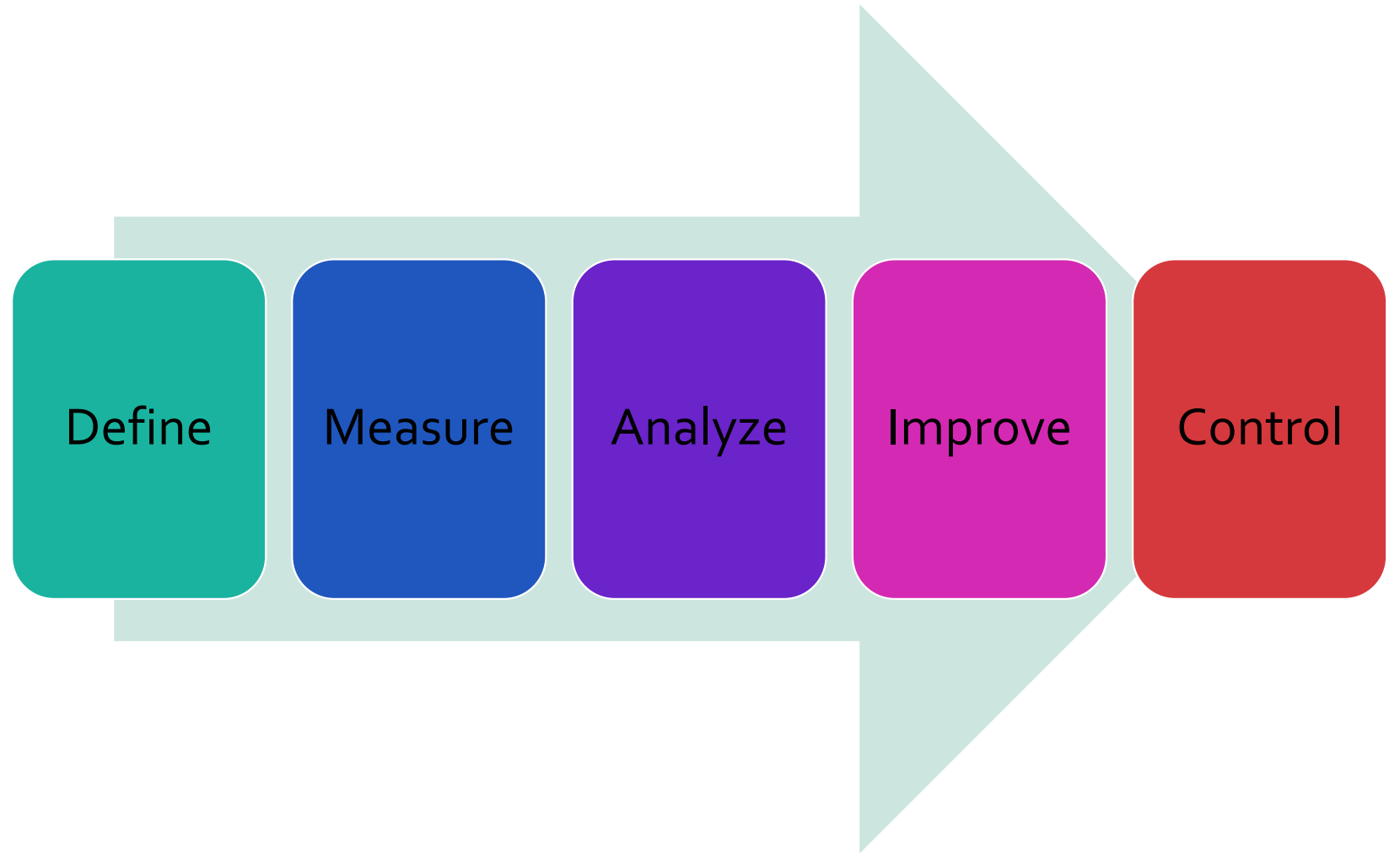
M

• Motion

E

• Excess Processing

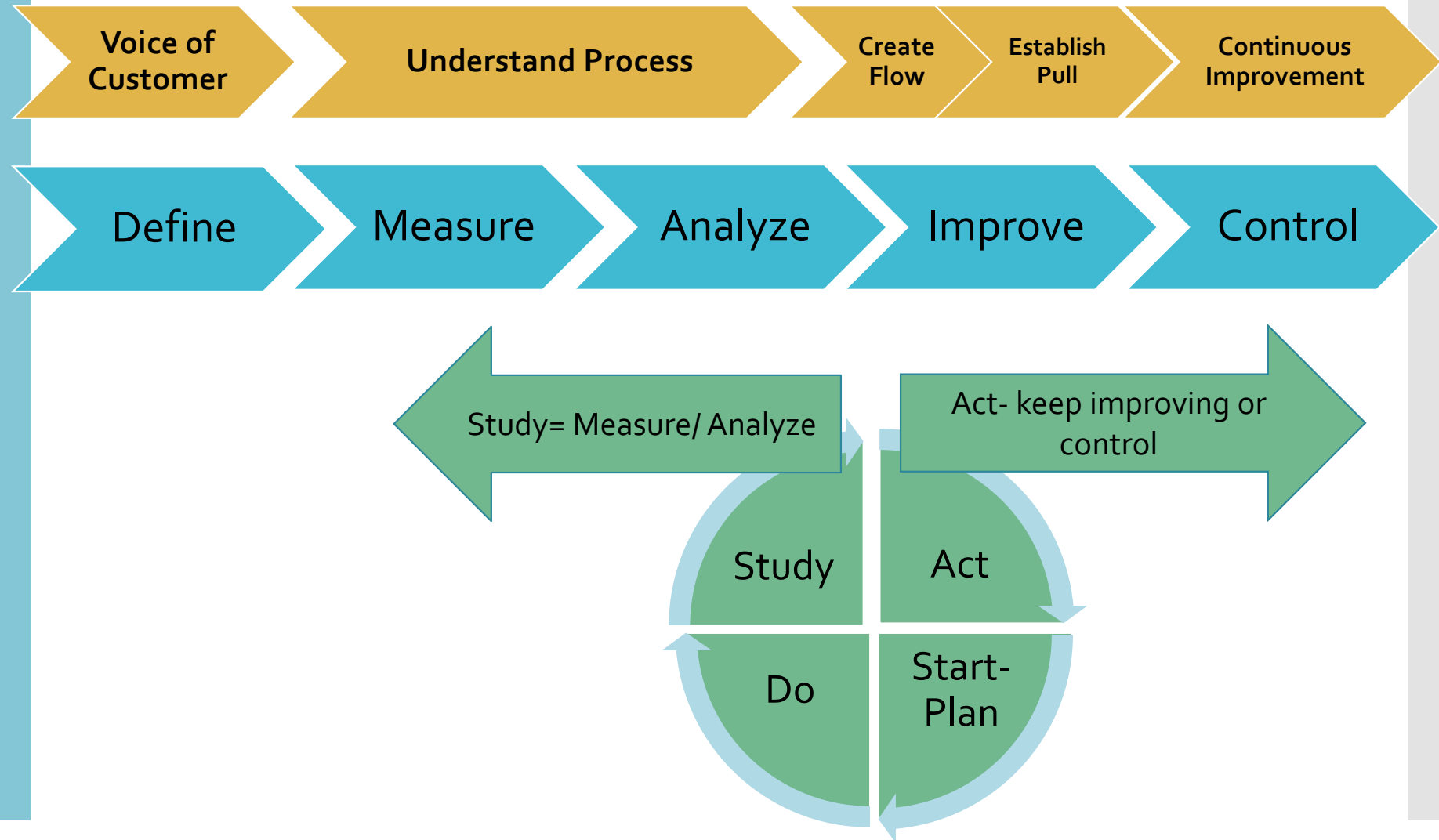
6 Sigma- The DMAIC Cycle



PDSA Cycles



How do the Lean 5 Principles, the DMAIC Cycle and the PDSA Cycle relate to one another?



Hierarchy of Controls



Number of Completed LSS
Projects this period:

63

Improvements Achieved

Cost Savings

- \$925,038

Patient Safety

(VGH)Reduced expired supplies to almost nil
(Thompson and Selkirk) Reduced urinalysis accessioning errors to nil SMHC-
Implemented routine inspections on recurring malfunctioning equipment
SMHC- Developed standardized process for reporting broken equipment
SMHC- Improved equipment backup availability
SMHC- Developed a preventative maintenance program and plan for SMHC
SMHC- Total safety occurrences reduced by 53 occurrences.
SMHC- "Do Not Disturb" plan while loading desserts
PMH- 33% reduction in unintentional discrepancy rate on A3
PMH- 17% reduction in falls - Carberry HC
PMH- 100% reduction in critical incidents related to ceiling lifts
PMH- 4% reduction in delirium rate in ICU patients
PMH- 17% reduction in falls (9 sites)
PMH- 6,912 expired med/surgical items removed from 9 Primary Care sites
(\$5,850.74) that can no longer be used on patients
SH-SS- Through the trigger process for reassessments there was an increase
in completed 6 month reassessments in the community from 6 % to 62%.

Cycle Time

2,386 Processing days saved
5,026 Processing hours saved

2016-2017 Provincial Project Summary

2016-2017 Provincial Project Summary continued...

| | |
|-------------|--|
| Client Flow | <ul style="list-style-type: none"> • 69,691 patient wait days reduced (not incl. line below) • PMH- 1340 more appts annually – (42,099 patient wait days reduced) Diabetes Heart Health Program • PMH- 105 additional hours of time added to perform clinic functions – Western Medical Clinic • PMH- 94% reduction in no-shows at Roblin NP Clinic • SH-SS- Through the trigger process for reassessments there was an increase in completed 6 month reassessments in the community from 6 % to 62%. |
| Other..... | <ul style="list-style-type: none"> • DSM Thompson Lab- 33% motion reduction in accessioning area • DSM Westman Lab- 5.5 hours MLA time per week • DSM- 100% reduction in out of stock items in Steinbach and Portage laboratories • DSM- (Steinbach, Portage Lab and Portage DI) 50% reduction in staff time to order supplies across 3 sites/ disciplines • DSM- Standard work to complete pre-accreditation requirements across all 75+ sites • SMHC- Created up to date medical equipment inventory database (with over 500 items and 30 types of equipment) with work orders for each piece of equipment • SMHC- Strengthened equipment ordering and forecasting process • SMHC- Standardized new equipment arrival process • SMHC- Implemented warranty tracking process and warranty claiming process • SMHC- Restricted FOB access to Kitchen by other non-essential staff during tray loading • MHSAL- 30% reduction in total GBs of email storage • PMH- 32% increase in ICT system accuracy • PMH- 96% reduction in Regional Orientation no-shows • PMH- 5S and Inventory Management implemented in 27 PMH sites through a Regional 5S Initiative • PMH- 50% reduction in HR time spend reviewing HEB claims • PMH- Development of a single, standard process and policy within the EMS program covering all aspects of Medications including; ordering, transportation, storage, wastage, documentation, administration, return, and financing • SH-SS- Consistent communication/messaging with client/family resulting in overall client/family satisfaction with PCH placement. Client clearly aware of contact person anticipated results- client satisfaction. Potential staff time saved from calls/extra questions from clients when things are unclear. • SH-SS- Program changed notification to electronic. This resulted in supply savings...paper cost, mail cost, time for printing etc. Admin staff time cut in half for processing electronic vs. paper. Processing time decreased; client info scanned and emailed saving 1-3 business days (or more) for interoffice mail to be delivered. • SH-SS- Standardize education modules and training provided at regional clinical orientation. • SH-SS- Standardized processes for booking chronic disease education. The project demonstrated that assumptions in the problem statement were not supported. However it provided a baseline of data to support future planning provisions. • SH-SS- Home care supplies are being recirculated instead of re-ordering. Further evaluation is occurring to determine whether there would be financial benefit in having incontinent products delivered directly by Quality Life rather than by a Materials Distribution Agency. Home Care nursing supervisors are working on which items may be removed from supply top up lists with a goal of reducing costs there as well. • SH-SS- Some office and home care spaces areas have been 5S'ed |

| | | | |
|---|-----------|---|-----------|
| Number of Completed LSS Projects this period: | 43 | Number of In Progress LSS Projects this period: | 49 |
|---|-----------|---|-----------|

Improvements Achieved

| | |
|-----------------------|--|
| Cost Savings | <ul style="list-style-type: none"> • \$650,942 • Cost savings related to single dose packaging, reduction in medication waste through PYXIS implementation. Saving will be applied to offset equipment-leasing costs. |
| Patient Safety | <ul style="list-style-type: none"> • 6,912 expired items removed from Primary Care program stock rooms (8 North sites) • 11% increase in use of surgical checklists regionally • Total Average Days Urgent clients Waiting to be Seen reduced from 15 days to 14.3 days (despite loss in PT availability) in Physio Dauphin • Aim to reduce medication incidents through PXYIS implementation. Pharmacy will be doing pre and post implementation measures on med errors |
| Cycle Time | <ul style="list-style-type: none"> • 81,700 days cycle time saved. • 59,208 hours cycle time saved |
| Client Flow | <ul style="list-style-type: none"> • 15,937 wait days reduced for annual overtime • 58,106 wait days reduced for appointments • 98% reduction in time to book a PICC appointment |
| Other..... | <ul style="list-style-type: none"> • Decreased the deployment time of DEPP resources by identifying areas reporting high frequency of outages and relocating equipment in closer proximity and implementation of up-to-date intranet tracking • 50% reduction in time spend analyzing claims due to a 65% reduction in claim errors for HEB • 500lbs of paperwork removed from a space to create new offices and a family room for community program through a 5S day • Increase the use of the HPCD SharePoint pages by Health Promotion staff by decreasing the number of clicks it takes to obtain a desired document by 56%. • Reduced 13 New Employee Checklists by 3 pages each. Format now consistent for all program areas. • Reduced Health & Safety Checklist by 2 pages • Allied Health (Social Work, Occupational Therapists, Physiotherapists) created a checklist and handbook for new staff, FAQ sheet has been developed • Reduced staff time to order and stock supplies and inventory by 50%. • 157 hours per year searching for and stocking supplies in Diagnostic Imaging. Items no longer out of stock. |

2017-2018 Provincial Project Summary

Reflections & Resources

- Where do you see opportunities in your work environment?
- Link to one pagers



Thank You!