Lean: Instituting Lean Process Improvement Training to Build a Community of Learners

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Silver Cross Hospital

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Stroke Coordinator
Silver Cross Hospital
Agenda

• Build a Lean Culture

• Understand Lean Learners Program Logistics

• Share Stories from the Sharp Edge

• Improve Stroke Care Through Lean

• Develop a Community of Problem Solvers
Silver Cross Hospital continues to build a community of problem-solvers who are devoted to identifying, planning, and executing improvement projects.

Background

- Project-based approach in limited areas
- Limited inclusion of the “sharp edge”
- Shift to building relationships and creating a cultural movement
Background (Cont.)

Engaging employees and turning them into a community of problem-solvers

• The two dimensions of employee’s jobs are work skills and improvement skills.

• Lean Learners aims to continuously develop these skills and transform employees into problem-solvers.
Lean Learners Program Logistics

The Program

• **6 Sessions in 10 Weeks**
  – 3 six-hour sessions, 2 four-hour sessions and one presentation session
  – 30 participants / wave
  – 12–14 teams / wave
  – 1 focused problem / team
  – Linked to ACE Strategy

• **Continuous Process Improvement Consultant Coaching**
  – Team time for project work built into class
  – Meeting with groups outside of class time

• **Teams Present to Leadership**
  – Commencement
  – 90-day follow-up
  – 180-day follow-up

Lean is a systematic *thinking approach* to producing *more value* with *higher quality* by engaging the hands and minds of the *people doing the work*, in a *disciplined* and understood *problem-solving culture*. 
Lean Learners Program Logistics (Cont.)

The Selection Process

**Submission Form**
- Available to all employees on the intranet
- Requires the submitter to identify how it aligns with ACE strategy
- Prompts the submitter for:
  - Background and Problem Statement
  - Target Condition

**Review with Operations Executive Team**
- Ranking system to determine timing and fit
- Projects that fall outside are reevaluated for next wave

**Workforce Development**
- Alignment with our People Strategy

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**Improvement Effort Submission**

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
<td>This information helps the team build an A3!</td>
</tr>
<tr>
<td>Process Map</td>
<td>Has the high-level process been mapped?</td>
</tr>
<tr>
<td>Current State</td>
<td>Scale of the problem (provide data if available)</td>
</tr>
<tr>
<td>Target Condition</td>
<td>What is your target level of performance? Desired outcome?</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>Who is involved in the process? Who provides inputs to the process? Who is impacted by the process?</td>
</tr>
<tr>
<td>Level of Support</td>
<td>What level of support do you need from Process Improvement?</td>
</tr>
</tbody>
</table>

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Lean Learners Program Logistics (Cont.)

The Curriculum

- Introduction to Lean Concepts
- Mapping the Current State
  - Bring on the Post-Its
- Gemba: Go, See, Ask, & Listen
  - Gemba Walk to an area outside of their regular work environment
- Developing Your Personal Kanban
  - Visualizing the work
- Lean Daily Management
Lean Learners Program Logistics (Cont.)

The Curriculum

- Leading Successful Change
- Measure What Matters
- Discovering the Root Cause – 5 Whys
- Designing the Future State
- Lean Simulation Exercise
- Sustainability at Silver Cross
Lean Learners Program Logistics (Cont.)

Model Cells
- A testing center where people can experiment with ideas
- Areas that embrace change and put new concepts into action
- Practice PDSA
- The work runs an inch wide and a mile deep

Procedural Care Unit
- Introduction to Lean concepts, measurement systems, & project management
- Development of course content
- Primarily leadership attendees with a focus on building process improvement skills

Emergency Department
- Waves 1 & 2
  - 2015
- Waves 3
  - Spring 2016
- Waves 4
  - Fall 2016
- Waves 5
  - Winter 2017
Lean Learners Program Logistics *(Cont.)*

<table>
<thead>
<tr>
<th>If WE</th>
<th>Then Silver Cross Can</th>
</tr>
</thead>
<tbody>
<tr>
<td>Define and Implement Standard Work for Cardiac Monitor Results</td>
<td></td>
</tr>
<tr>
<td>Implement Future Orders for Rehabilitation Institute of Chicago</td>
<td></td>
</tr>
<tr>
<td>Optimize Patient Readiness for Surgery</td>
<td></td>
</tr>
<tr>
<td>Reduce Abandonment Rate for Scheduling</td>
<td></td>
</tr>
<tr>
<td>Improve Emergency Department Urinalysis Turnaround Times</td>
<td></td>
</tr>
<tr>
<td>Develop a Team Structure for an Emergency Department Pod</td>
<td></td>
</tr>
<tr>
<td>Standardize Surgery Case Cart Return</td>
<td></td>
</tr>
<tr>
<td>Improve the Observation Unit Discharge</td>
<td></td>
</tr>
<tr>
<td>Streamline the Process for Rapid Care in the ED</td>
<td></td>
</tr>
<tr>
<td>Improve the Inpatient Discharge</td>
<td></td>
</tr>
<tr>
<td>Develop Standard Work for Clinical Pharmacology</td>
<td></td>
</tr>
<tr>
<td>Chase Zero Lost Specimens</td>
<td></td>
</tr>
<tr>
<td>Develop Standard Work in the ED Registration</td>
<td></td>
</tr>
</tbody>
</table>

**E.6.f.** – Increase operational performance including efficiency and elimination of waste.

Stories from the Sharp Edge

Pain medication for possible long bone fracture in the ED setting

Problem Statement

• The current time to get pain medication after arriving in the Silver Cross Emergency Department with a long bone fracture is exceeding the standard.
  – FY 2016: 58 minutes
  – October 2016: 62 minutes

Goal

• Decrease the wait time for a patient to be medicated for the pain associated with a long bone fracture ≤ 45 minutes.
  – Minimum: 52 minutes
  – Target: 45 minutes
Pain medication for possible long bone fracture in the ED setting

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of knowledge of core measure and data abstraction process in relation to the process of doing the work</td>
<td>• Meet with Data Abstractor to learn about core measure abstraction process to understand measure</td>
</tr>
</tbody>
</table>
| Staff awareness of LBFP core measure and goal                             | • Staff education at staff meeting  
  • Poster presentation in break room  
  • Posting of results monthly to staff |
| No reassessment for pain in the waiting room                              | • Implement standing set of orders to follow when a patient with a possible long bone fracture presents to the ED at triage  
  • Utilize reassessment flag in triage to reassess patient pain |
| Absence of protocol for long bone fracture pain management to be initiated by the nurse | • Work with IT to design and implement changes to First Net |
| Limited queues in First Net to address long bone fracture pain             |                                                                                |
Awareness of the goal and involvement in the plan to reach the target is a key step in managing change!

Stories from the Sharp Edge (Cont.)

Staff education completed
Stories from the Sharp Edge (Cont.)

Direct admit transport and hand-off

• Focus on hand-offs and transitions

• Problem: experienced a “near miss”

• Goal: zero safety events related to direct admit patient transports

• Adopted best practice from previous Lean effort
  – Ticket to Ride

• Direct admission patients are sent to the hospital directly by their physician or primary care provider when their health condition requires it
  – 10% of SCH admissions
## Stories from the Sharp Edge *(Cont.)*

### Direct admit transport and hand-off

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Countermeasures</th>
</tr>
</thead>
<tbody>
<tr>
<td>No standard work for direct admit patients; no documentation to confirm safe transport of patients</td>
<td>Implement Ticket to Ride for direct admit patients; volunteers would be required to have RN caregiver sign when transport is complete</td>
</tr>
<tr>
<td>No identifier in Cerner indicating if patient was a direct admit (challenge to measure)</td>
<td>Add Direct Admit identifier in Cerner to be able to better capture Direct Admit volume and trends</td>
</tr>
<tr>
<td>There is not a designated person to transport direct admit patients; volunteers frequently transport when CNA is not available</td>
<td>Re-evaluate utilizing volunteers for transportation of direct admit patients from GSL to the nursing unit; evaluate feasibility of using current transporters to transport direct admits from GSL to appropriate unit</td>
</tr>
</tbody>
</table>
Stories from the Sharp Edge *(Cont.*)

Direct admit transport and patient hand-off

**Zero** Safety Events related to transport of direct admit patients

That’s “0”!

“We have implemented an organization best practice (Ticket to Ride) to serve as a hand-off communication tool from staff to volunteer and from volunteer to the accepting floor.”

“Our GSL staff and the receiving units are all on board!”

“Volunteers are happy too!”
Stories from the Sharp Edge (Cont.)

Case cart standardization

**Problem Statement**

- Surgical case cart standardization was identified in Lean Learners Wave 3 as a potential way to contribute to improved turnover times between surgical procedures and overall efficiency gains for the PCU and SPD Teams, while improving OR staff and physician satisfaction

**Goal**

- Develop and implement standard work for SPD staff picking and OR staff checking case cart

- Increase staff and physician satisfaction
Stories from the Sharp Edge *(Cont.)*

Case cart standardization

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Countermeasure</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPD staff retraces steps several times while picking trays and disposable items for cases; based on pick list layout, SPD team members pick all trays and then go back to the same row and pick all disposable tray items</td>
<td>Move SPD picking section to the top of the pick list; arrange tray items and disposable items on the pick list together (upon redesign of space); redesign space in the future</td>
</tr>
<tr>
<td>Hold items are opened for a case unnecessarily; trays need to be reprocessed, supplies are wasted</td>
<td>SPD will separate hold and open items when picking each case by placing the hold items in the yellow bin on top of the case cart; items that will not fit in bin may be placed on top of case cart next to the bin</td>
</tr>
<tr>
<td>Variation in review of 1st wave of cases for accuracy and pulling of supplies only available in OR due to lack of space in SPD for all cases</td>
<td>Implement handoff from Night Shift to Day Shift to enhance communication, teamwork, and accountability among shifts</td>
</tr>
</tbody>
</table>
We achieved an all-time high of **30 days** since our last wrapper tear!
Applying Lean to Stroke Care

Improving Code Stroke lab turnaround times

2012
Achieved Primary Stroke Center Certification

2013
Received Get With The Guidelines Silver Plus Award
85% compliance in each of seven measures for 12 months

2015
Received Silver Plus Award and Target Stroke Honor Roll
Achieve ≥85% compliance with all Get With The Guidelines Stroke Achievement Measures
>75% on at least 5 quality measures + administer TPA within 60 minutes greater than 50% of the time.
Applying Lean to Stroke Care (Cont.)

Improving Code Stroke lab turnaround times

Problem Statement

• We were not meeting target performance for the standard of care set forth by The Joint Commission and American Stroke Association for Code Stroke lab turnaround times

Goal

• 80% of labs completed for Code Stroke patients within 45 minutes (Arrival to Resulted)
  – CBC (Complete Blood Count)
  – BMP (Basic Metabolic Panel)
  – PT/INR (Prothrombin time)
Applying Lean to Stroke Care (Cont.)

Identifying the different types of waste that may occur

- **Process Map**
  - Process mapping
  - Identifying waste

- **Gemba Walk**
  - Where the work happens
  - Asking questions to understand

- **Identify the Opportunities**
  - Bridge between current and future-state maps
  - Realization of what needs to happen to improve
Applying Lean to Stroke Care (Cont.)

Process Improvements

- RN to be staffed at front desk in triage

- Initiation of Code Stroke by RN upon arrival at main entrance
  – Previously initiated by Shift Coordinator

- Implemented overhead Code Stroke paging (October 2016)

- Collaboration in department relationship

- Tracking form promoting accountability of all stakeholders

% Arrival to Labs Resulted ≤ 45 minutes

Avg = 74
Avg = 83

<table>
<thead>
<tr>
<th>Month</th>
<th>%</th>
<th>Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td>75</td>
<td></td>
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<tr>
<td>Apr</td>
<td>79</td>
<td></td>
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<tr>
<td>May</td>
<td>79</td>
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<tr>
<td>Jun</td>
<td>67</td>
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<td>Jul</td>
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<td>Aug</td>
<td>66</td>
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<td>Sep</td>
<td>71</td>
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<td>Oct</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td>77</td>
<td></td>
</tr>
</tbody>
</table>
Applying Lean to Stroke Care (Cont.)

Future process improvement work in stroke care at Silver Cross Hospital

• Continue to monitor and trend (sustainability)
  – Arrival to activation
  – Arrival to labs resulted

• Continue to apply Lean Learnings
  – Code Stroke activation in the field

• Reach for the Gold
  – Get With The Guidelines Gold
  – Target: Stroke Honor Roll
Creating a Community of Problem Solvers

By 2019, Silver Cross Hospital hopes to have 300 Lean graduates

• Corporate Goal FY 2017
  – Addition of 100+ Lean Learners
  – Addition of 2 model cells
Creating a Community of Problem Solvers (Cont.)

How do we …

- Engage the medical staff?
- Align with our journey as a high reliability organization?
- Continue to create collaborative environments among the Lean Learners?
- Enhance teamwork in units?
- Maintain spread and sustainability?
Creating a Community of Problem Solvers (Cont.)

<table>
<thead>
<tr>
<th>Project</th>
<th>Project lead</th>
<th>Executive sponsor</th>
<th>Leadership sponsor</th>
<th>Goal</th>
<th>Project status</th>
<th>Performance Breakthrough, Quotas, Milestones</th>
<th>Bridging recommendations</th>
<th>30-Day Results</th>
<th>Who Needs to Know?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining Order Triage for Direct Adults</td>
<td>Dr. Joyce Kimball, MD</td>
<td>Frank Doshi</td>
<td>Scott Walker</td>
<td>To educate online provider in patient education on 30-minute visits.</td>
<td>N/A</td>
<td>- Develop communication guidelines to align patient and physician goals.</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>Improving Homesick Ultrasound Patient Satisfaction</td>
<td>Dr. Sarah Morley, MD, PhD</td>
<td>Frank Doshi</td>
<td>Scott Walker</td>
<td>Improve patient satisfaction for the 30-minute visit.</td>
<td>N/A</td>
<td>- Communicate the importance of the 30-minute visit.</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>REI Improvement - Transitional Care Management</td>
<td>Michael Vidal, MD</td>
<td>Scott Walker</td>
<td>Jennifer Scott</td>
<td>To improve patient satisfaction for the 30-minute visit.</td>
<td>N/A</td>
<td>- Increase patient satisfaction rates.</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>HIT Process Help Requisition to Patient Access for RNs</td>
<td>David Goodwin</td>
<td>Michael Vidal</td>
<td>Jennifer Scott</td>
<td>To increase process efficiency.</td>
<td>N/A</td>
<td>- Implement an electronic system.</td>
<td>- Process efficiency increases from 30% to 80%</td>
<td>- Process efficiency increases from 30% to 80%</td>
<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>Strengthening Stewardship and a Measurement Culture for RNs</td>
<td>Mary Evans</td>
<td>Michael Vidal</td>
<td>Jennifer Scott</td>
<td>To improve patient satisfaction.</td>
<td>N/A</td>
<td>- Implement a new system.</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
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</tr>
<tr>
<td>CNA Care Team Integration</td>
<td>Mark Davis</td>
<td>Michael Vidal</td>
<td>Jennifer Scott</td>
<td>To improve patient satisfaction.</td>
<td>N/A</td>
<td>- Implement a new system.</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>- Patient satisfaction rates increase from 30% to 80%</td>
<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>Direct Admission Orthopedics and Pediatrics</td>
<td>Mark Davis</td>
<td>Michael Vidal</td>
<td>Jennifer Scott</td>
<td>To improve patient satisfaction.</td>
<td>N/A</td>
<td>- Implement a new system.</td>
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<td>Hailey McFadyen, MD, MPH, FACP</td>
</tr>
<tr>
<td>Patient Readmission (ESPR) to OIL</td>
<td>Mark Davis</td>
<td>Michael Vidal</td>
<td>Jennifer Scott</td>
<td>To improve patient satisfaction.</td>
<td>N/A</td>
<td>- Implement a new system.</td>
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Creating a Community of Problem Solvers (Cont.)

Developing Trust

With Leadership
- And Sharp Edge
- And PI

Among Teams
- Inter & Intra Departmental
- Lean Learner Cohort

Process Improvement
- With Sharp Edge
- With Executives

= Measurable & Continuous Improvements
Lessons Learned

Spreading Lean Thinking

Engaging and developing the sharp edge

Increasing organizational learning
  • Learning
  • Application

Achieving and sustaining results

Empowering future continuous improvements
  • What’s next?

Together, WE are creating a community of problem solvers
Lessons Learned (Cont.)

• Engage both upper-level administrators and frontline staff members with a project-oriented course.

• Eliminate identified barriers to achieving targeted measures through executive support and staff collaboration.

• Identify opportunities to improve the safety and quality of care patients.
Conclusion by The Academy

• The Academy extends thanks to our presenter as well as our attendees – and welcomes any questions, comments, or feedback regarding this presentation

  – At this time, we would like to begin our Q&A session
Appendix

NOTE TO ATTENDEES
While Cost & Quality Academy has attempted to ensure the accuracy of the research and the information provided within this presentation, the information has been obtained from numerous sources, and The Academy cannot guarantee its accuracy.

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