Value-Stream Improvement for the Office and Services

a free webinar presented by the

Lean Enterprise Institute
Today’s Speakers

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David Verble

*Lean Enterprise Institute Faculty*
The Challenge of Lean

- **Purpose** – Provide value to customers cost-effectively and consistently in order to prosper.
- **Process** – Through the primary value-creating work flows for design, make, and ship, and the streams that support them.
- **People** – By engaging employees who do the value-creating work (including those in the support streams) in sustaining and improving the processes.

- Defining purpose & establishing process while/by aligning people in an integrated business system is the central task of management in Lean.
This is a Value Stream
10-hour ER wait angers parents

Waiting room jam-packed

By Roberta Pennington

When Cassie Burry rushed her three-year-old daughter to the emergency room at the Metropolitan campus of Windsor Regional Hospital at 1:30 a.m. Tuesday, she expected to wait, but not for 10 hours.

Yet that was the estimated wait time flashing across the hospital’s scrolling emergency room screen overnight Tuesday. And the number of people packed into the waiting room left no doubt as to the digital sign’s accuracy.

“I’ve never seen it that busy,” Burry said of the ER waiting room. “It was ridiculous.”

Slept on mats

Burry described a room filled with about 20 to 25 people, including an elderly couple covered in blankets sleeping in chairs while pediatric patients slept on mats in the children’s play area.

“I went right to the triage because it looked like a crazy wait, so I just said, ‘How long is this going to be? My daughter has coughing, and the triage nurse said, ‘Well, a realistic number is 10 hours.’” Burry said from her Leamington home. “Six tonight, if you’re lucky.”

When Burry suggested taking her daughter Emma to Hotel-Dieu Grace Hospital, she didn’t get much encouragement from the nurse.

“She said, ‘You can try it.’

An ambulance driver walks past a row of waiting ambulances at Hotel-Dieu Grace Hospital on Monday. A full emergency room left ambulances lined up outside as they were forced to wait for space at the hospital.

Busy ERs stall ambulances

Continued from A1

“Let’s just play it hour by hour,” Kim Browning came to Hotel-Dieu Grace Hospital with her daughter Shyann to have a chest injury checked out.

But with every seat in the waiting room full she decided against staying at the standing-room-only waiting room and went to the Metropolitan Campus of Windsor Regional Hospital instead.

“I’m not going and waiting in there,” said Browning.

“We’ll be here til five in the morning. It’s ridiculous.”

A number of people in the waiting room were coughing and displaying flu-like symptoms, she said.

Browning said it’s ridiculous that the provincial government found $400 million to spend on...
Applying the Value-Stream Mapping Tool to a VSI Project

**Preparation**
Agreeing on what process to study (product family), how to map it, who will participate, and logistics.

**Current State**
Agreeing on a well understood map of the current situation.

**Future State**
Agreeing on a shared vision of a lean future state.

**Planning**
Agreeing on how to implement the future-state plan.

Implementation
Driving Successful Implementation ... The PDCA Cycle

1. Current-State Map
2. Future-State Map & Implementation Plan
3. Implementation
4. Review & Evaluation
5. Decision/Adjustments
6. New Plan

Grasp the Situation

Act
Plan
Check
Do

Value-Stream Improvement for the Office and Services
Lean Enterprise Institute
3 Factors for a Successful VSI Project Established during Preparation

• Clear business case for the project linked to a strategic purpose
• Clear project roles, responsibilities, scope and deliverables
• Senior leadership endorsement and the executive who will champion the project
# Lean Transition Role by Level

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
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<tbody>
<tr>
<td>Directors</td>
<td>Business Strategy for Using Lean Strategy &amp; Goal Deployment Enterprise Perspective</td>
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<tr>
<td>Executives</td>
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<td>Drivers</td>
<td>Lean Improvement Initiatives</td>
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<td>Middle</td>
<td>Plans &amp; Projects</td>
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<td>Managers</td>
<td>Value-Stream Performance</td>
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<td>Doers</td>
<td>Action Plans &amp; Kaizen Projects</td>
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<tr>
<td>Process Owners</td>
<td>Implementation &amp; Problem Solving Activities</td>
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<td>Project Leaders</td>
<td>Operational &amp; Process Performance</td>
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<td>Subject Matter Experts</td>
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<td>Staff</td>
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Value Proposition: Text Format

1. Process, Problem Statement
2. Project Objective
3. Process Owner, Project Scope — In Scope/Out of Scope
4. Suppliers, Inputs, Process Steps, Outputs, Customers
5. Issues, Impacts, Benefits
6. Stakeholders, Workshop Participants, Decision Panel
7. Project Schedule, Preparation Confirmation, 3-day Workshop
# Value Proposition

**Process:** Automotive Component Qualification Process  
**Objective:** Reduce supplier quality defects by 20% in 90 days  
**Process Owner:** Karl M.

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Input</th>
<th>Start</th>
<th>Process</th>
<th>Stop</th>
<th>Outputs</th>
<th>Customers</th>
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</thead>
<tbody>
<tr>
<td>External Customer</td>
<td>Order</td>
<td>QA-0</td>
<td>Kick Off</td>
<td>QA-3</td>
<td>Samples</td>
<td>External Customers</td>
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<tr>
<td>OEM</td>
<td>Requirements</td>
<td></td>
<td>Planning Steps</td>
<td></td>
<td>Documents</td>
<td>Plants</td>
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<tr>
<td>Tier 2 Supplier</td>
<td>Due Dates</td>
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<td>Supplier Audits linking</td>
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<td></td>
<td>Commercial</td>
<td></td>
<td>Supplier &amp; divisional plans</td>
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<td></td>
<td>Agreements</td>
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<td>Verify Supplier build</td>
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<td>Purchasing</td>
<td>Qualified Supplier List</td>
<td>Release</td>
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</tbody>
</table>

## Issues
- 80% of quality problems are due to supplier  
- External customers disrupted  
- Samples are out late, out of spec  
- Cost of quality  
- No process (model) for reuse (learning)  
- Always cleaning up after the parade  
- No true owner of supplier quality (disconnect between purchasing plants, engineering): based on procedure, purchasing is the owner, but because of disconnect by the time we learn about supplier problems, it's too late  
- Procedures and method sometimes disconnect  
- We do not explain to customer what we're best able to build and our limitations about what we can design and build

## Impacts & Benefits
- 80% of customer quality defects are due to our suppliers

## In Scope

## Out of Scope
- Purchasing process to quality suppliers  
- Quoting  
- Strategy: what do we build, and how do we select low cost supplier(s)  
- Follow-up with suppliers after QA-3

Value Stream Improvement for the Office and Services  
Lean Enterprise Institute
This is engaging employees who do the value-creating work ... in sustaining and improving the processes.
Current State Value Stream Map for Emergency Department – with problems marked with yellow Post-Its
OLD WAY: Emergency Room Flow

Entrance → Triage → Acute Patients → Treatment → Release

Waiting Room

NEW WAY: Emergency Room Flow

Entrance → Triage → Acute Patients → Treatment → Release

Not Acute Patients → Treat → Release
A Project Tracking Center

Master Schedule

Actions Plans with Problem./Countermeasure Sections

Reviews & Metrics

Communication about Activities

Value-Stream Improvement for the Office and Services
Reviewing & Checking by Level

- **Executive**: Formal **reviews** by steering team of reports from project and team leaders at mid- and endpoints of the project master schedule.

- **Middle Management**: Formal **monthly reviews** by the project champion of updates on master schedule progress and problems coming from team leaders; weekly reviews of action plans for team leaders led by the project leader at tracking center.

- **Team**: Regular “go-see” **checks** of action plans for teams by team leaders at tracking center.

- **ALL**: Unscheduled **checks** by executives, project champion, project and team leaders at implementation sites.
## ER Lea(r)n Project 30 Day Plan

### 3 Focus Areas
- **11 Action Items**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Task</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Communication/ Learning</strong></td>
<td>1. Post StoryBoard for project</td>
<td>Thom, John L., Jeannie</td>
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<td></td>
<td>2. Draft information re: discharge and circulate to staff</td>
<td>Sheri, Carrie</td>
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<td></td>
<td>3. Create schedule for Information Sessions for ED staff - overall vision of project, explain lean, current state map, future state map, connection to implementation plan -</td>
<td>Gord, Carrie, MaryLou, Dawna, Nikki, Sarah</td>
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<tr>
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<td>4. Plan for publication of frequently asked questions from the information sessions</td>
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<tr>
<td><strong>2. Standard Work</strong></td>
<td>1. Redraft consultants letter and discharge letter</td>
<td>Sheri, Sophia</td>
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<tr>
<td></td>
<td>2. Plan for sort and discharge process- discuss at Triage focus group meeting, create one page working draft</td>
<td>Jeannie, Jen</td>
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<td></td>
<td>3. Explore discharge instructions for chart and translation into multiple languages</td>
<td>Kim</td>
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<tr>
<td><strong>3. Workplace Organization</strong></td>
<td>1. Obtain agreement on separation of the department- create one pager and diagram, explain advantages</td>
<td>Thom</td>
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<td></td>
<td>2. Reorganize Pyxis to fit workplace plan</td>
<td>Nikki</td>
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<td></td>
<td>3. Explore alternatives to stocking supplies at each bedside</td>
<td>Dean, Jen, Nikki</td>
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<tr>
<td></td>
<td>4. Standardize assembly of chart and review of completed x-rays</td>
<td>Carrie, Dean, Jen</td>
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</tbody>
</table>
### E.R. Lea(r)n Project
**90 Day Plan Update**

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Target: 28-Mar</th>
<th>6-Apr</th>
<th>13-Apr</th>
<th>20-Apr</th>
<th>25-Apr</th>
<th>4-May</th>
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</thead>
<tbody>
<tr>
<td><strong>Improve Staff Engagement</strong></td>
<td>Complete</td>
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<td>Action Taken: Presentation, video</td>
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<tr>
<td>Additional action required: Participants to encourage staff members to become more involved</td>
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<tr>
<td>Person Responsible: All</td>
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<tr>
<td><strong>Improve Project Status Communication</strong></td>
<td>Complete</td>
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<tr>
<td>Action Taken: Story Board, posting changes on Pcrl board and Treat and Release board</td>
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<tr>
<td>Additional action required: 1. Continue to use Suck It up Wednesday board for experiments.</td>
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<td>2. Implement method to communicate changes that are continuing</td>
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<td>3. Develop Standard Form for task leaders to post on story board weekly with their plan and status to date.</td>
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<td>4. Post # of patients seen in ER vs. T&amp;R</td>
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<tr>
<td>Person Responsible: Nicki</td>
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<td><strong>Integrate Clinic Education with LEARN</strong></td>
<td>Complete</td>
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<td>Action required: Meeting to determine plan to how to integrate and develop Plan.</td>
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<tr>
<td>Person Responsible: Nicki and Marg</td>
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<tr>
<td><strong>Create Standard Work for Fax Referrals</strong></td>
<td>Complete</td>
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<tr>
<td>Action taken: Letter sent to all specialists, several agreed to have non_emergent referrals made by Fax.</td>
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<td>Additional action required: 1. Develop standard method to identify what physicians will accept faxed referrals 2.Develop standard Fax Sheet.</td>
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<td>Person responsible: Carol</td>
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<tr>
<td>Support: David, Nicki, Janine</td>
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<td><strong>Revise One page Discharge Instructions to include copy for the Chart</strong></td>
<td>Complete</td>
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<td>Action taken: One page instructions trialled and revised</td>
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<td>Additional action required: Explore carbon copy for chart</td>
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<tr>
<td>Person responsible: Sandy</td>
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<td>Support: Kim Weiler, Carol</td>
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</tbody>
</table>
## E.R. Lea(r)n Project
Review, Reflect, Sustain Action Items

### ER LEA(R)N PLAN July 20, 2006

<table>
<thead>
<tr>
<th>Action Required</th>
<th>Jul. 27</th>
<th>Aug. 4</th>
<th>Aug. 11</th>
<th>Aug. 18</th>
<th>Aug. 25</th>
<th>Sept. 1</th>
<th>Sept. 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allocates separate area for Corplex D</strong></td>
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<td>Action: Metting before August 4 to develop plan and to involve new people</td>
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<td>Responsible: Linda Q.</td>
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<td>Support: Sanda A., Nikki, Carrie, New people to be determined.</td>
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<td><strong>Develop Data Collection Work Group</strong></td>
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<tr>
<td>Action: Meet before Aug. 11 to develop plan</td>
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<td>Responsible: Nicki, Marg</td>
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<td>Support: John Coughlin, Sand A., Kim, ? Sheila Arpan</td>
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<td><strong>Develop Plan for Changes required to Physical Layout and Sort Process</strong></td>
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<td>Action Required: Meet to review prior plan and develop new plan</td>
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<td>Continue to look at Sort process output:</td>
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<td>Person responsible: Jean M</td>
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<tr>
<td>Support: Anthony, Nicki, Sophia, Kim, David, Beanor, David</td>
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<td><strong>Create Workplace Organizational and Visual Communication Group focus on past changes and Sustaining</strong></td>
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<td>Action required: Each person involved in improvement is to audit their change and look at any improvements required and if has been sustained</td>
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<tr>
<td>Additional action required: Formal 5s workshop to be arranged by Nicki</td>
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<tr>
<td>Responsible: CSR Sherry, Stock Angela, Respiratory Jean, Visual Communication Sandy A., Equipment: Carrie</td>
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<tr>
<td><strong>Create Communication Group</strong></td>
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<tr>
<td>Action required: Meet to develop a group of core people on each shift rotation to communicate changes within the department or communicate problems to group.</td>
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<tr>
<td>Person responsible: Nicki</td>
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<td>Support: Carol B., Allison S., PCRL,s</td>
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What does it take to actually* make an improvement?

**PERSISTENCE**

• You generally have to solve a lot of problems to actually* make an improvement.

• Maybe that’s why it’s called “Continuous” improvement”

  * Actually meaning you see what you did made a difference (moved the needle) in the way you intended.
John F. Coughlin
V.P. Corporate Services
Hôtel-Dieu Grace Hospital Hospital
Windsor, Ontario, Canada
Strategic Importance of VSI Project Approach

• Previously – management solved problems by devising and mandating solutions

• VSI Project Approach
  • allows people who do the work to see their work differently and to redesign their work to add value to the customer
  • promotes a cultural change from problem identification to problem solving
VSI From A Strategic Perspective

• We have proceeded on a unit by unit basis
• Senior Team is now looking at using the VSI approach to improve over-all hospital performance
• Senior team is setting goals around occupancy, length of stay and cost per case
• It has been recognized that all of these relate to flow and waste and will have to be addressed in the performance of the primary and secondary value streams
Role of an Organizational Leader

• To ensure that the project objective is aligned with the organizational direction
• To introduce the workshop and set the ground rules
• To demonstrate ongoing organizational support
• To remove obstacles to implementation
• To promote reflection on accomplishments and/or failures
Nicki Schmidt
Lea(r)n Process Improvement Facilitator
Hôtel-Dieu Grace Hospital
Windsor, Ontario, Canada
Importance of ER Project

- Low morale, high staff turnover
- Long waits, poor patient satisfaction, increased risk
- Increased violence
- Poor press
How is VSI Different From other Improvement Attempts

- Provided a venue for everyone who touched the work to paint an accurate picture of what was really happening and design the new process based on truths.

- Past improvements were based on what management thought was happening or what one or two people said.

- Improvements were made by committees of people who often didn’t touch the work and it was pushed down.
Value stream management process provided:
- Clear goal, structure and tools to manage a project
- Emphasis on understanding the problem
- Continual PDCA

**Results:** Decreased staff turnover, Increased patient satisfaction, Decreased patient walk outs, Decreased time to see physician and average time to decision.

**Learnings:**
- Experimentation provides better learnings
- Sustaining most difficult, needs clear plan and attention
- Role clarity very important
Hospital, staff lauded for more efficient system

BY DOUG WILLIAMSON
STAR HEALTH/SCIENCES REPORTER

The hard-working nurses and doctors at Hotel-Dieu Grace Hospital’s emergency room aren’t used to being thanked for their efforts, but that’s exactly what has been happening since the facility adopted lean operational techniques based on automotive industry experience.

“That’s what freaked us out ... we’re still a business and we had to improve it,” said Dr. Gord Vail, medical director of the ER.

One year ago, the hospital decided to embark on an ambitious program to make every aspect of the department more efficient, with the goal of improving staff morale, shortening waiting room times, improving patient care and saving money.

Innovation award

This week the hospital is being recognized for its pioneering work by the Ontario Hospital Association, which is presenting Hotel-Dieu Grace with the Clinical Innovation Team Award during the OHA’s annual convention in Toronto.

A SYSTEM THAT WORKS: Registered nurse Jacintha Primus speaks with patient Cameron Pastorius in the emergency room of Hotel-Dieu Grace Hospital Monday. The ER has won a major award for its LEAN program which cut wait times and improved patient care.
Sarah Sasso
Coordinator Organizational Development
Hôtel-Dieu Grace Hospital
Windsor, Ontario, Canada
Other VSI Projects at HDGH

- **Diagnostic Imaging** - reduce lead time
- **Clinical Teaching Unit** - increase % CTU patients on unit
- **Orthopedics** - reduce length of stay
- **Mental Health** - stabilize processes, then reduce length of stay
- **Central Sterilizing and Reprocessing** - reduce rework in case cart preparation
How are the projects related?

• Focus on improving patient flows in order to increase access, reduce occupancy rates and reduce wait times

• Focus on the work of the direct & indirect patient care providers

• Focus on reducing the non-value added process steps, many add-ons to the processes over the years
Effects on Management

Project Areas:

- More time spent on “planning” in the learning cycle
- Daily involvement in the “messy details”
- Visual display of metrics and improvements
- Coaching through questioning
- Senior management visibility and support
- Physician participation

Overall:

- System and process focus
- Ownership of problems
- Strengthened relationships
- Leading by example
- Connection to strategy
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