The Baptist Health System
Lean Management System

Increasing Collaboration & Improving Outcomes
Objectives

• Gain understanding of the framework for a lean management system
  – Understanding waste and practical application
• Learn key strategies for successful implementation of a lean management system
• Understand how a lean system can improve clinical, operational, service, and financial outcomes
• Provide examples of a lean operating system
Lean Management System

Performance
Lean Tools
(Kaizen Events, Standard Work, 5S, TeamSTEPPS)

Process
Lean Daily Management
(Glass-Wall, Gemba, Huddles, etc.)

People
People Development
(Leadership Development, Onboarding, Mentoring, LDI etc.)

Plans
Strategy Deployment
(Strategic Growth Plans, etc.)

HRO
What Is Waste?

• Anything that adds cost without adding value
• Always from the customer perspective
• For us, first and foremost, value is the overall health of our patients
• There are other values as well:
  – Our patients’ time
  – The comfort of their families
  – The ease of doing business with us for our physicians
## Defining Waste

<table>
<thead>
<tr>
<th><strong>Value Add Steps</strong></th>
<th>Contribute to what the customer values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Procedure</td>
</tr>
<tr>
<td></td>
<td>• Patient Interaction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Value Enabling Steps</strong></th>
<th>Needed to allow value add steps to occur</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Radiology Tests</td>
</tr>
<tr>
<td></td>
<td>• Lab Tests</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Non Value Add but Required Steps</strong></th>
<th>Required by law</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Signing of regulatory forms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Non Value Add Steps</strong></th>
<th>Does not contribute to adding value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Waiting to see provider</td>
</tr>
</tbody>
</table>
Defining Waste

7 Types of Waste

| Transport | Waiting | Overproduction | Defects | Inventory | Motion | Extra Processing |

- Waste is the result of a process failure or a process not optimized.
- While waste can never be fully eliminated we should always strive to eliminate and minimize.

Remember “TWO DIME”
Examples:

- Physically moving patients from one step/area to the next
- Hand-delivering documentation
Waiting

Examples:

• Patients waiting for admissions
• Surgeons waiting for patients to be prepped for surgery
• Discharge orders waiting to be processed
Overproduction

Examples:

- Hospital stays that are longer than necessary
- Prepping patients for surgery faster than the OR can operate
- Making more IV solutions than needed
Defects

Examples:

• Wrong medication
• Wrong surgical site
• Wrong patient
• Wrong procedure
Inventory

Examples:
• Supplies
• Charts building up to have orders taken off
• Patients waiting for beds
• Samples pending testing
Motion

Examples:

• Walking to and from patient rooms
• Supplies traveling to multiple storage locations before use
• Navigating multiple screens to locate information
Extra Processing

Examples:

• Excessive medical testing that is not needed
• Excessive paperwork
Waste Identification

VIDEO – CURRENT STATE
## Defining Waste

### 7 Types of Waste

<table>
<thead>
<tr>
<th>Transport</th>
<th>Observation – Actually visualizing the process allows you to see the waste and identify ways to reduce it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting</td>
<td></td>
</tr>
<tr>
<td>Overproduction</td>
<td></td>
</tr>
<tr>
<td>Defects</td>
<td></td>
</tr>
<tr>
<td>Inventory</td>
<td></td>
</tr>
<tr>
<td>Motion</td>
<td></td>
</tr>
<tr>
<td>Extra Processing</td>
<td></td>
</tr>
</tbody>
</table>
Waste Identification

VIDEO – FUTURE STATE
# Defining Waste

<table>
<thead>
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<th>7 Types of Waste</th>
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<tbody>
<tr>
<td>Transport</td>
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<td>Waiting</td>
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<tr>
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<td>Inventory</td>
</tr>
<tr>
<td>Motion</td>
</tr>
<tr>
<td>Extra Processing</td>
</tr>
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</table>

- A core principle of lean is continuous improvement
- What further waste reductions could be taken?
Lean Management System

Performance
- Lean Tools
  (Kaizen Events, Standard Work, 5S, TeamSTEPPS)

Process
- Lean Daily Management
  (Glass-Wall, Gemba, Huddles, etc.)

People
- People Development
  (Leadership Development, Onboarding, Mentoring, LDI etc.)

Plans
- Strategy Deployment
  (Strategic Growth Plans, etc.)

HRO
People

- Executive, Middle Management, Front-line Staff
  - Buy-in
  - Understanding of Lean System
    - Formal training, coaching sessions, mentoring, huddles.....
    - Have to see it in action
  - Understanding of Roles and Responsibilities in a Lean System
Training on lean tools moved from 4 day model to a modular structure.
Lean Management System

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HRO
Process
Daily Management Structure

Gemba - “The real place”
Where the work happens

Gemba walk - going to where the work happens, rounding with purpose & structure
**Run Chart:**
Measure local performance

**Pareto Charts:**
Identify barriers and focus problem solving efforts on the 20% of causes driving 80% of the problem

**5Whys/Action Plan:**
Problem solving roadmap; keep ourselves accountable.
**Goal:** 90% of orders received by 10am day prior to surgery

As you collect data, the pareto chart helps you understand the problem… where is your biggest opportunity?
Goal: 90% of orders received by 10am day prior to surgery

Area: OR

<table>
<thead>
<tr>
<th>5 WHY's</th>
<th>ACTION ITEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROBLEM DESCRIPTION</strong></td>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>Not having orders for patients is a barrier to their surgical care</td>
<td>10/2</td>
</tr>
<tr>
<td>Which physician offices are not getting orders to us on time?</td>
<td>10/2</td>
</tr>
<tr>
<td>Answer: practice #7</td>
<td></td>
</tr>
</tbody>
</table>

**Countermeasure:**
Physician relationship manager to visit practice #7 to review order submissions for surgery
Defect = Number of orders not received by 10AM day prior to surgery
Goal = 90% of orders received by 10AM day prior to surgery

Did the countermeasure work?
Lean Daily Management

Traditional Management
- Hidden
- Cumbersome
  - Fosters Blame
- Leadership
  - Driven

Lean Daily Management
- Visible
- Easy
- Learns from Failure/Misses
- Staff
  - Driven
Captain Hindsight
<table>
<thead>
<tr>
<th>Executive Role</th>
<th>Director Role</th>
<th>Staff Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage Staff</td>
<td>Manage Metric Mix</td>
<td>Present Gemba Board</td>
</tr>
<tr>
<td>Coach Directors through Problem Solving Process</td>
<td>Manage the Problem Solving Process (Gemba Board)</td>
<td>Participate in Problem Solving</td>
</tr>
<tr>
<td>Facilitate Inter-Departmental Problem Solving</td>
<td>Facilitate Improvements</td>
<td>Generate Ideas for Experimentation</td>
</tr>
</tbody>
</table>
Culture of Change

People Development
Continuous learning

Respect for People
Your problems matter
Standing Safety Huddle

1. Safety Story
2. Engagement Story
3. Service Recovery
4. House Report
5. Anticipated Discharges and Barriers
7. Gemba Follow-Up
8. Around the Room
“...Gemba has helped our nurses to realize the importance of dealing with some issues. From starting our patients on time, to ensuring that every patient has a Dialysis Hand Off report, to ensuring catheter dressings are properly dated, etc., these are all wins for our unit thanks to Gemba. Does this mean that we are 100% proficient? No we are not; but Gemba has helped our nurses to visualize what our needs are.”
LDM Circa 2014

Department Gemba Boards
Gemba 2016

GlassWall

Hospital Scoreboard
What are our Priorities?

Main Business Indicators organized by pillar.
Glass Wall Example

Results:

Foley Device Days

Central Line Device Days

Supporting goals on unit Gemba Boards
GlassWall

Hospital Scoreboard
Are we winning or losing?

Main Business Indicators organized by pillar.
Example Metrics

Q
- 0 CLABSI’s
- CLABSI’s
- Line Days
- Bundle Usage (if problem-solving)

P
- Voluntary T/O < 16%
- Hospital Voluntary T/O
- Departments’ Voluntary T/O

S
- Inpatient PSMS = 76
- Inpatient PSMS
- Call Light Response %
- Call Light Response (if problem-solving)
# Group Boards Example – Daily Huddle with Directors

<table>
<thead>
<tr>
<th>S</th>
<th>Facilities</th>
<th>Radiology</th>
<th>Cath Lab</th>
<th>OR</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patient Rounding</td>
<td>Patient Rounding</td>
<td>Patient Rounding</td>
<td>Patient Rounding</td>
<td>Patient Rounding</td>
</tr>
<tr>
<td>Q</td>
<td>Work Order TAT</td>
<td>Order to Appt. Scheduled</td>
<td>TAT FCOTs</td>
<td>TAT FCOTs</td>
<td>Recollects &amp; Mislabeling</td>
</tr>
<tr>
<td></td>
<td>Productivity Overtime</td>
<td>Productivity Overtime</td>
<td>Productivity Overtime</td>
<td>Productivity Overtime</td>
<td>Productivity Overtime</td>
</tr>
<tr>
<td>G</td>
<td>Total Work Orders</td>
<td>Procedural Volumes</td>
<td>Cases Volume</td>
<td>Case Volume</td>
<td>UA, CBC TAT</td>
</tr>
<tr>
<td></td>
<td>Employee Rounding</td>
<td>Employee Rounding</td>
<td>Employee Rounding</td>
<td>Employee Rounding</td>
<td>Employee Rounding</td>
</tr>
</tbody>
</table>
# LDM Structure

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHO</th>
<th>WHEN</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission, Vision and Strategy Deployment</td>
<td>Senior Leaders and Directors</td>
<td>Annual Review</td>
<td></td>
</tr>
<tr>
<td>Glass Wall and Safety Huddle</td>
<td>Senior Leaders, Directors, &amp; Managers</td>
<td>8:40 AM</td>
<td>20 min</td>
</tr>
<tr>
<td>Executive Level Gemba Walk</td>
<td>Senior Leaders</td>
<td>9:00 AM</td>
<td>60 min</td>
</tr>
<tr>
<td>Coaching Sessions</td>
<td>Directors and Senior Leaders</td>
<td>Monthly or Bi-weekly</td>
<td>30 min</td>
</tr>
</tbody>
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HRO
LDM Strategy Integration

• Tie Strategy into the LDM Structure to ensure alignment of hospital priorities throughout the organization

• Creates improved daily visual structure for directors to operate department as their business

• Creates clear expectations and accountability
LDM Strategy Integration

Strategy Deployment

Glass Wall

Defining goals and objectives

Senior Leaders

Information Flow

Group Boards

Unit Gemba Boards

Unit Gemba Boards

Unit Gemba Boards

Unit Gemba Boards

Unit Gemba Boards

Unit Gemba Boards

Director and Staff

Senior Leaders and Directors
BHS Journey

2010

Performance
People

-Lean Tools
& Training

-Kaizen
Events

2013

Process
People

-Gemba
-Huddles

2014

Process
People

-Glass Wall
-Throughput
Boards

2015

Performance
People

-TeamSTEPPS

2016

Plans
People

-Group
Boards
-Strategy
Deployment
Lessons Learned

- Director Involvement
- People Development is a Constant - Coaching & Mentoring at All Levels
- Continuous Learning of Structure Itself; Structure is Dynamic
Other Examples
**Lean Tool: Spaghetti Mapping**

**Waste Elimination**

**Before**

Walking distance = 1522 feet  
Total Time = 117 minutes  
Walking Over 8 Hours = 1.2 miles

**After**

Walking distance = 554 feet  
Total Time = 76 minutes  
Walking Over 8 Hours = .67 miles

**Waste Reduction: Motion and Transport**
Using root cause analysis, SPD was able to decrease the number of daily calls for items not on the pick ticket from 50+ calls per day to 10 per day.
Waste Elimination

Significantly Reduced Transportation Time
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