Integrating LEAN and Baldrige

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Vikram Patel - Director, Operations Improvement

About Advocate Good Samaritan Hospital

Vision: Provide an exceptional patient experience marked by superior health outcomes and service.

2004 G2G 1.0 – Clinical and service excellence
2006 G2G 2.0 – Process-honoring culture (Baldrige)
Milestones Achieved Along the Way


2011 The Reason for Action

UNFUNDED RETIREMENT & HEALTH CARE COSTS

Taking Action on the Data

To provide an exceptional patient experience marked by superior health outcomes, service, and value.

2.1 Strategic Planning

Strategic Objective #5: Expand the QSG culture to reduce waste and add value

Action Plan: Deploy LISN Enterprise
Moving from Good to Great (G2G)
Vision: Provide an exceptional patient experience marked by superior health outcomes, service, and value.

2004 G2G 1.0 – Clinical and service excellence
2006 G2G 2.0 – Process-honoring culture (Baldrige)
2011 G2G 3.0 – Value (LEAN Enterprise)

Integration
“Effective integration goes beyond alignment and is achieved when the individual components of a performance management system operate as a fully interconnected unit” -- Baldrige Glossary

Reacting to Problems
Early Systematic Approaches
Aligned Approaches
Integrated Approaches

What Baldrige and LEAN Have in Common
The Value, Process, People, Continuous Improvement Connection

LEAN
• Minimizing waste
• Improve PROCESSES
• Create VALUE
• Respect for PEOPLE

Baldrige
• Create VALUE (1.1, 6.1, 6.2)
• Engage WORKFORCE in improvement (5.2)
• Improve work PROCESSES (6.1)
• Ensure effective OPERATIONS (6.2)
The Framework for Integration

Level, Trend, Comparison
ADLI
Maturing of Approaches
Systematic Approaches
Self-defined; LEAN; Evidence-based; etc.
Select / De-Select Approaches that Address Criteria
Baldrige Criteria
238+ required approaches

Integrating LEAN and Baldrige:
Addressing Individual Criteria Items

Example 1:
P.2c What are the KEY elements of your performance improvement system...?
Our Performance Improvement System: LEAN Methodology

1. Identify the Problem
2. Set the Aim
3. Select the Change
4. Select the Measure
5. Test the Change

GSAM's Performance Improvement Approach v 1.0

GSAM's Performance Improvement Approach: PI System – A3 v 2.0

-plan
-do
-study
-act

GSAM’s PI System: Deployment

Vision
Provide an exceptional patient experience achieved by superior health outcomes, service & value

2.1 Strategic Planning

Rapid Improvement Events
- Monthly
- Week long
- Participants: frontline
- A3 methodology
- Friday report outs

GSAM’s PI System: Deployment

Transformation & Innovation

Value Stream PI

Future Measure

Rapid Improvement Events

Daily Improvement

Learn, Do, Coach, Mentor
24 month deployment

GSAM’s PI System: Deployment

Learn Leadership Development

Level 1: A3 Thinking

Level 2: Daily Visual Management

Level 3: Lean Management

LEAN Methodology
Identify the Problem
What's the problem? 1
Set the Aim
What are we trying to accomplish? 2
Select the Change
What changes could we make to improve? 3
Select the Measure
How will we know we've improved? 4
Test the change

GSAM’s Performance Improvement Approach v 1.0

GSAM’s Performance Improvement Approach: PI System – A3 v 2.0

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Level 1: A3 Thinking

Level 2: Daily Visual Management

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LEAN Methodology
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-plan
-do
-study
-act

GSAM’s Performance Improvement Approach: PI System – A3 v 2.0

-pla
5.2 How do you develop the workforce to achieve high performance?

How do you engage the workforce in improvement and innovation?

<table>
<thead>
<tr>
<th>PI Approach: Breadth and Depth of Deployment</th>
<th>Prior to 2011</th>
<th>2012</th>
<th>2013 Target Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Trained</td>
<td>100</td>
<td>All 160 leaders and 150 associates</td>
<td>All 160 leaders and 750 associates</td>
</tr>
<tr>
<td>Number Doing</td>
<td>33</td>
<td>160 leaders and 150 associates</td>
<td>160 leaders and 1000 associates</td>
</tr>
<tr>
<td>Number of Improvements</td>
<td>500 per year</td>
<td>&gt;1000</td>
<td>32,000 (2 improvements per associate per month)</td>
</tr>
<tr>
<td>Number of Transformations (Innovation)</td>
<td>Random</td>
<td>One value stream per 18 months</td>
<td>One value stream per 18 months</td>
</tr>
</tbody>
</table>

Integration: PI Approach – A3-PDSA

- Create and modify action plans – 2.2
- Improve organizational performance - 4.1
- Improve health care services – 6.1
- Improve work processes – 6.1
- ADLI

P.2c Performance Improvement System A3-PDSA
Lean Approach = the ‘L’ in ADLI

The Improvement Engine

• **Approach** – Is your approach systematic and repeatable?
• **Deploy** – Is your approach used by everyone and in every place it should be?
• **Integration** – Have there been improvements to the approach?
• **Integration** – Is the approach integrated with other organizational priorities and processes?

230+ Processes Required by the Baldrige Criteria
All must be matured through ADLI

Examples: Using A3-PDSA as PI Approach

• Admissions process in Critical Care Unit
  – 25% inappropriate admissions to 5%
• Reduction in surgery cancellations
  – 8% to 0.5% day of surgery
• Biological testing of surgical implants
  – 20% increase in completion prior to surgical tray enters OR
• Reduction of patient falls
  – Top decile performance
• Surgical tray readiness process
  – 35% missing instruments to <35%
• Charge capture: revenue increases, denials avoidance, accuracy
  – Improved processes yielded additional $1,794,435
• Hiring and retaining RNs – 1st year turnover
  – Reduced by 4% to 9.9%

Example 2:

**6.2a How do you control the overall costs of your operations?**
Good Samaritan: Supply Management

Box 1: Problem Statement
Excess on-hand supply inventories
- Have too much, or not enough
- "Stuff" everywhere
- Expired supplies
- Ordering in silos
- Multiple ordering processes
- "Non-stock" ordering – expensive!

Box 2: Current State
$5000 storage closets
$10,459 on this cart alone

Box 3: Target State
- Reduce inventory & supply costs
- Pull system replenishment
- Eliminate 'non-stock' ordering
- Get RNs out of the stocking business!

Box 5: Solution
If we:
- Convert Omnicells to a 2-BIN system
- Convert non-stocks to stock items
Then:
- Less on hand inventory
- Less trips and counting supplies
- RNs won’t stock! More patient care time
- Leverage supplies across GSAM ($ savings)
- Departments out of the materials business

2-Bin System Implemented
- Critical Care
- Progressive Care Unit
- CV Hart
- Telemetry Units
- PACU
- Med/Surg Units
- Dialysis
- Same day surgery
- Emergency Department

39% Cost Savings
Example 3:

4.1 How do you improve organizational performance by using data and information at all levels and at all parts of your organization?

6.1 How do you design, manage, and improve your health care services to deliver value?

How do you design, manage, and improve your health care services to deliver value?

Example 3:

Good Samaritan: Vent Index

<table>
<thead>
<tr>
<th>Box 1: Problem Statement</th>
</tr>
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<tbody>
<tr>
<td>Too many patients unnecessarily on ventilators causing distress to patients, complications, deaths and avoidable costs</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Box 2: Current State</th>
</tr>
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<tbody>
<tr>
<td>2011 Baseline: 1.44</td>
</tr>
<tr>
<td>2012 Baseline: 1.16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Box 3: Target State</th>
</tr>
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<tbody>
<tr>
<td>2013 Target &amp; Stretch Goals</td>
</tr>
<tr>
<td>1 &gt; 1.16</td>
</tr>
<tr>
<td>2 1.16</td>
</tr>
<tr>
<td>3 1.04</td>
</tr>
<tr>
<td>4 0.98</td>
</tr>
<tr>
<td>5 0.92</td>
</tr>
</tbody>
</table>
**Good Samaritan: Vent Index**

*Why are we not at target state?*

<table>
<thead>
<tr>
<th>Box 4: Root Cause Analysis</th>
<th>Key Root Causes</th>
<th>Key Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Documentation incomplete – not sure when patient is ready to be extubated</td>
<td>RN / MD education</td>
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<td>No standard work for RN and respiratory for trial process</td>
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<tr>
<th>Box 5: Solutions</th>
<th>Key Root Causes</th>
<th>Key Solutions</th>
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**Daily Visual Management:**

*Identifies Process Defects and Allows for Immediate Correction*

<table>
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<tr>
<th>Hospital Goal</th>
<th>Monthly Performance</th>
<th>Daily Performance</th>
<th>Root Causes of Defects</th>
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**Actions to Improve**

**Hospital Goal**

**Health Outcomes**

<table>
<thead>
<tr>
<th>Key Performance Indicators (KPI)</th>
<th>Result</th>
<th>Target</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vent Index (APACHE)</td>
<td>0.88</td>
<td>1.01</td>
<td></td>
</tr>
</tbody>
</table>
Actions to Improve

<table>
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<tr>
<th>PROBLEM</th>
<th>ROOT CAUSE</th>
<th>SOLUTION</th>
<th>WROI / WROER</th>
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Box B: Confirmed State

Advocate Good Samaritan Hospital Vent Day Ratio
4 QTR 2011 - 4 QTR 2013

Visual Management to Sustain
Integrating LEAN into Organizational Processes: How We Lead

Integration of the Lean Management & Tools: Leadership System

- Set Direction
  - Establish Goals
  - Annual Goal Setting Process
- Understand Stakeholder Requirements
- Maximize Values Philosophy
- Develop, Reward & Recognize
  - Observe & Coach
- Organize, Plan & Align
  - Lean Cascading
- Visual Management
  - Standard Work
- Goal Cascading
- Learning, Improve & Innovate
  - A3-PDSA
- Learn, Improve & Innovate

Patient

Integrity, Passion, Caring

Accountability for Results

Perform to Plan

- Develop, Plan & Align

2014 Quest Participants
Baltimore, MD

ATTN: Those Interested in an Innovative Approach in Healthcare
1.1a Vision and values

3.2a Identify service offerings

6.1 Improving health care services & work processes

Caring for the Addiction Patient

2011

1.1a Vision and values

3.2a Identify service offerings

6.1 Improving health care services & work processes

Truly Caring for the Addiction Patient

- Used “A-3 thinking” with staff, physicians, and a patient to uncover root causes of current state
- Dedicated unit and willing staff
- Medical Director to ensure patients’ safety and best protocol
- Consistent approach adopted – focus on the disease process and educated patients and families that addiction is a ‘disease of relapse’
- ‘Stigma’ removed
- Innovative partnership with AA
- Reduced 30-day readmission rate by 30%
- Decreased cost of care for this patient population by $2M between 2011 and 2013

Welcome all to this place of healing

EXCELLENCE
COMPASSION
PARTNERSHIP
EQUALITY
STEWARDSHIP