An ER Transformation:
From Modest Beginnings (2009), to Radical Redesign (2011), to Daily Continuous Improvement (2012)

By Joseph Swartz
December 6, 2012
Learning Network II:

Step 1: Rapid Intake:
- Rapid triage.
- Short registration.

Step 2: Comprehensive Triage:
- Step-by-step engineered comprehensive triage.
- Confirm ESI level.
- Charge nurse backup.
- Immediate bedding if room available.
- Full bedside or booth registration.
LNII Results:

- Reduced LOS, during a 3.3% increase in volume.

### Average Length of Stay (ALOS)

- **Before UM**: Jul '08 to Feb '09.
- **After UM**: Jul '09 to Feb '10.

**Overall ALOS**:
- A 6% Decrease.
- \( p = 0.032 \)
- Statistically Significant.

**ALOS Triage Level 3-5**:
- A 8.5% Decrease.
- \( p = 0.020 \)
- Statistically Significant.
LNII Results (Continued)

- Reduced Arrival to Bed Time.
- Reduced Left Before Triage (LBT).
- Reduced LWBS: 3.87% in 2008 to 2.62% in 2009.
- Improved communication and relationships between staff hospital-wide.

Arrival to Treatment Time

- A 10% decrease

<table>
<thead>
<tr>
<th>Minutes</th>
<th>Before UM</th>
<th>Post UM</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>40</td>
<td>35.5</td>
</tr>
<tr>
<td>44</td>
<td>39.5</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>38</td>
<td></td>
</tr>
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<td>40</td>
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<td>34</td>
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<tr>
<td>32</td>
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<td></td>
</tr>
<tr>
<td>30</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

p = 0.115

Proportion Leaving Before Triage (pLBT)

- A 50% decrease

<table>
<thead>
<tr>
<th>pLBT</th>
<th>Before UM</th>
<th>Post UM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.016</td>
<td>0.0110</td>
<td></td>
</tr>
<tr>
<td>0.014</td>
<td>0.0109</td>
<td></td>
</tr>
<tr>
<td>0.012</td>
<td>0.0098</td>
<td></td>
</tr>
<tr>
<td>0.010</td>
<td>0.0087</td>
<td></td>
</tr>
<tr>
<td>0.008</td>
<td>0.0076</td>
<td></td>
</tr>
<tr>
<td>0.006</td>
<td>0.0064</td>
<td></td>
</tr>
<tr>
<td>0.004</td>
<td>0.0042</td>
<td></td>
</tr>
<tr>
<td>0.002</td>
<td>0.0025</td>
<td></td>
</tr>
</tbody>
</table>

p = 0.003
The St. Francis Emergency Room Staff invites you to a celebration of achievement in

Urgent Matters

Thursday, March 4
Emergency Room
St. Francis Hospital — Mooresville

6 to 8 a.m.
2:30 to 4:30 p.m.

We will celebrate this special achievement during two shifts. Please choose a time that is most convenient for you to attend.

Join us for celebratory snacks and beverages as we recognize the steps the St. Francis Emergency Room and Admitting/Registration staffs have taken to improve patient flow and patient satisfaction.

Rush to the Celebration!
The ESI 3 Conundrum
By: Adhi Sharma, MD, FACMT, FACEP

- Good Samaritan Hospital, Long Island, NY
- ER: 100,000 annual visits
- Solution: Mid-Track

<table>
<thead>
<tr>
<th>Chief Complaint</th>
<th>LWBS Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain</td>
<td>4.6%</td>
</tr>
<tr>
<td>Flank pain</td>
<td>3.5%</td>
</tr>
<tr>
<td>Headache</td>
<td>5.5%</td>
</tr>
<tr>
<td>Pregnancy complication</td>
<td>5.3%</td>
</tr>
<tr>
<td>Vaginal Bleeding</td>
<td>6.1%</td>
</tr>
<tr>
<td>Vomiting</td>
<td>2.5%</td>
</tr>
</tbody>
</table>
St. Francis Hospital and the Aligning Forces for Quality (AF4Q) Hospital Quality Network (HQN)
AHRQ/HRET Web Conference:
Implementing the Door-to-Doc Model for Safer Care in the Emergency Department

April 16th, 2010
Site Visits

• Ochsner’s “qTrack” Process, New Orleans
  • 3 MDs, 1 PA, 1 NP, 1 Manager, me

• Banner Health’s “Split Flow” Process, Phoenix
  – 3 MDs, 1 Director, 2 staff RNs, me
  – 29 minute D2D, 192 minute D/C LOS

• Wishard Health Services, Indianapolis
  – 2 MDs, 1 NP, 1 Director, 1 Manager, 1 RN, 1 CNS, me
  – D2D: 90 → 31 minutes; D/C LOS: 240 → 150 minutes
Emergency Care Is An Urgent Matter
Leadership

- **Administrative Champions:**
  - Keith Jewell (COO), Susan McRoberts (CNO), and Christopher Doerring (CMO).
- **Physician Leaders:**
  - **Michael Russell (VP EPI),** Randall Todd (Medical Director)
- **Nursing Leaders:**
  - **India Owens (Director),** Kelley Hill (Clinical Manager), Vince Corbin (Operations Manager), and all our PCCs.
- **Staff Nurses:**
  - Sarah Rockwell, and Monica Sufan.
- **Others:**
  - Lab, Imaging, and Registration leaders.
- **Process Improvement:**
  - Joseph Swartz, and Thomas Pearson
## Overall Results

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Door to Provider (Median)</td>
<td>28 minutes</td>
<td>14 minutes</td>
</tr>
<tr>
<td>Door to Discharge (Median)</td>
<td>180 minutes</td>
<td>130 minutes</td>
</tr>
<tr>
<td>Left Without Treatment</td>
<td>2.8%</td>
<td>&lt; 0.5%</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>13th percentile</td>
<td>48th percentile</td>
</tr>
</tbody>
</table>
Kaizen Continuous Improvement in the ER
Kaizen

Kai = Change

Zen = Good

Source: Healthcare Kaizen by Mark Graban and Joseph Swartz
3 Levels of Kaizen

- Management-oriented Kaizen
  - COG Group
  - Now ER

- Group-oriented Kaizen
  - Six Sigma Projects

- Individual-oriented Kaizen

Bubble size is meant to roughly represent relative size of effort

Complexity
Ideas vs. Suggestions

“Suggestions are things I think you should do.”

“Ideas are things that I can do.”

- Norman Bodek
Steps of Kaizen

1. See & Find:
   – Find improvement ideas.
2. Discuss:
   – Discuss with supervisor and those affected.
3. Implement:
   – You do it (with help).
4. Document:
   – Write it down.
5. Share:
   – Post it and talk about it.
## Thermometers at the Point of Use

<table>
<thead>
<tr>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses spent too much time searching for thermometers</td>
<td>Have one thermometer in each room at the point of use.</td>
</tr>
</tbody>
</table>

### Effect

Saves nursing time searching for thermometers.

<table>
<thead>
<tr>
<th>Name</th>
<th>ID #</th>
<th>Dept #</th>
<th>Supervisor</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Thompson</td>
<td>6301</td>
<td></td>
<td>Nancy Mosier</td>
<td>2008</td>
</tr>
</tbody>
</table>
Our little patients under 5 years old are often screaming and won’t be still or lay down during Ultrasound procedures. The parents are frustrated and many times cannot find a way to calm the infant down.

We now have tiny bottles of “wedding” bubbles and we ask the parents to gently blow them over the top of the child to calm and entertain them.

Happy babies make for happy parents, which make for happy staff, resulting in Joyful Service, and peace of mind.

<table>
<thead>
<tr>
<th>Name</th>
<th>Supervisor</th>
<th>Date</th>
<th>Estimated Cost Savings (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hope Woodard</td>
<td>Gina Bonner</td>
<td>5-9-07</td>
<td>Priceless!</td>
</tr>
</tbody>
</table>
3 Ways to Submit:

1. Paper
2. Email
3. Web Based Database
5. Share
Start Small

• Make your job easier, safer and more enjoyable.
• Improve patient care, the patient’s experience or patient safety.

Source: Healthcare Kaizen by Mark Graban and Joseph Swartz, p. 55.
Peter’s First Kaizen
Daily Operational & Quality Huddles (DOQH)

• 15 minutes.
• Focuses on nursing improvements.
• Answers questions:
  – How did what we tried yesterday work?
  – Should we keep it, modify it, or throw it out?
  – What can we try different today?
• Met daily for a few months after Now ER go-live, but now less frequently.
• Drives Kaizen.
Design Team Meetings

• 2 hours.
• Every 2 weeks.
• Big DOQH proposed changes and changes that could affect providers go to the Now ER Design Team for review and approval.
# of Recorded Kaizens

Source: Healthcare Kaizen
Franciscan Savings Impact

Source: Healthcare Kaizen
Real Culture Change:

• “Real culture change occurs when Kaizen is practiced daily by everyone in an organization.”
  – Masaaki Imai

A Cultural Change:

- High % of employee engagement
- Control over workplace has improved
- The workplace is clean and orderly
- Work and patient care flow more like clockwork
- Staff relentlessly searching for opportunities to improve
- Everyone works together better
- Everything gets questioned
- Staff and physicians happier
- Patients and families happier
- Less stress and tension
- The whole atmosphere is better
Q&A / Contact Info:

• Joseph Swartz
  – joeswartz14@gmail.com

• www.HCkaizen.com
  – Download Chapter 1:
    • www.Hckaizen.com/kaizenpreview
CME/CEU Disclosure Statement

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Disclosure:
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Acknowledgements
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