Skills-Building Series

A Tale of Two Kaizens: Making Improvement Happen
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Reminders

• Today’s webinar is being recorded
• The slides and a link to the recording will be posted on the PCPI QI program website
• Please use the chat for the Q&A
  – Please submit questions during the presentation
  – Questions will be grouped and combined as appropriate
NEW Skills-building webinars

PDSA – How to get started in quality improvement
July 12, 2016, 1 pm ET/ 12 pm CT
• MEMBER-ONLY Benefit: Includes 2 hours of coaching calls

Root-cause analysis – Digging deep to improve
September 22, 2016, 1 pm ET/12 pm CT
• MEMBER-ONLY Benefit: Includes 2 hours of coaching calls

Value stream mapping: Finding gaps and opportunities for improvement
November TBD
• MEMBER-ONLY Benefit: Includes 2 hours of coaching calls
Purpose – Step inside a couple kaizens

Assumes some baseline knowledge of process improvement methodology:

- Provide deeper dive on the use of one tool discussed in Introduction to Healthcare Quality Improvement CME workshops
- Orient attendees to what kaizens are (improvement events)
- Provide two real-life, yet very different examples

DISCLAIMER: PCPI does not promote one improvement methodology over another – for example, Lean vs. Six Sigma vs. Model for Improvement – PDSA. PCPI does promote using a methodology.

PLEASE NOTE: Kaizen is a Lean tool.
Agenda

• Preparation
• Identifying projects
• Where to start
• Types of improvements
• Types of kaizens - improvement events
• Keys to success
• Two examples
• Comparison
• Take-a-ways
• Q&A
Preparing for the Kaizen

**Pre-work**

- Define reason for action/problem statement (e.g., increased team member confusion, decreased satisfaction, decreased quality and increased risk of poor and unsafe care)
- Create multi-disciplinary team
- Identify trigger (e.g., patient movement from one care team to another)
- Define scope (what’s in and out – specific units or hospital-wide)
- Define initial state (e.g., # of rapid response team calls - RRTs/month)
- Use A-3 thinking to define, propose and initiate project
Identifying projects

- What is a patient safety problem or risk to solve?
- What are the most pressing complaints from patients?
- What major issues do physicians or other employees bring to your attention?
- What departments have been struggling with employee shortages?
- Who is proposing an expansion or renovation of their space?
- What processes require extraordinary efforts from employees to work?
- Are there systems that routinely require re-work in order to get things right?
- Where are their labor cost savings (reduced overtime)?
- Where can savings in inventory be identified (from reduction or consolidation of inventory and supplies)?
- Where are there revenue growth opportunities (eliminating backlogs, improving utilization, or expanding services)?
What areas are natural starting places?

- Scheduling and registration
- Laboratory
- Pharmacy
- Materials management
- Outpatient clinics
- Outpatient surgery
- Food service
- Medical surgical units

- Telemetry
- Sterile processing
- Emergency departments
- Clinical departments
- Surgery
- Primary care offices
Types of improvements

- Physical layout and structure
- Work processes to improve flow
- Administrative processes
- Error proofing
- Improving the scheduling process
- Standardized work
- Inventory management
- 5S and visual management
- Clinical care (e.g., CLABSI, CAUTI, etc.)
- Patient safety (e.g., error reporting and response)
**Kaizen and kaizen events**

- *Kaizen* means “continuous improvement”
- Formal event for a multidisciplinary team to analyze current process to make improvements, and then **disband**.
  - AKA: Rapid Process Improvement Workshop (RPIW), Process Improvement Event (PIE)

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Adapted from: Lean Hospitals, M. Graban, 2012.
Keys to successful kaizen events

• Senior-level sponsorship and participation
• Proper scope of problem(s) to be solved
• Clear focus
• Team formed specifically for the event and disband afterward
  – Usually cross-functional
  – Led by Kaizen leader trained in process improvement principles to facilitate the process without loyalty to any one department
  – Includes members involved in or affected by the actual day-to-day work
• Mechanism for maintaining improvements
• Teams trained to continually adjust and improve after event
• Ensuring improvement made in one area do not negatively affect others

Adapted from: Lean Hospitals, M. Graban, 2012.
Who should be involved?

Forming the team

- Right people on the team
- Vary in size and composition depending on needs
  - Clinical leaders
  - Technical expertise
  - Day-to-day leadership and workers
  - Project sponsor
Focus on improving the process of patient handoffs between the Emergency Department and hospital floors.
Kaizen - The 5-day Rapid Improvement Event

**Event**
Day 1 – Understand the current state
Day 2 – Develop improvement ideas/countermeasures and brainstorm changes
Day 3 – Develop and execute rapid experiments
Day 4 – Document standard work and run simulation(s)
Day 5 – Report out and celebrate!

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A-3 template

Background – Box 1
Why are we talking about this specific problem? Historical/organizational/business context. “Reason for action”

Current Situation – Box 2
What is our current performance? Initial state? Pre-work trend chart, current state value stream map

Goal – Box 3
What is the target condition or performance improvement you want right now? Measureable, by when (SMART)?

Analysis – Box 4
What are the root causes of the problem? (Fishbone, 5 Whys, Pareto)
What requirements, constraints and alternatives need to be considered?

Recommendations – Box 5
What are your proposed countermeasures, strategies, alternatives? Are they linked to the root causes? (Future state map)

Experiments – Box 6
Create new tools, use PDSA, etc.

Plan – Box 7
Who, What, When? What are the required activities that need to be implemented by whom, when? (WWW grid – Gantt chart)

Follow up – Box 8
How will we know we had the intended impact (metrics)? What remaining issues can be anticipated? When/how will we follow up?

How is it used?
• Problem solving
• Status report
• Proposal

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Why are we doing this?

- Joint Commission is coming
- Need a process that met the National Patient Safety Goal on hand offs
- Specifically, process needs to provide opportunity for receiving RN to ask ED RN questions

Review problem statement

- Process trigger
- In scope
- Out of scope
- Done
Before event, staff examined the number of rapid response teams called to provide a baseline understanding.

**Current:** 2.58/month

**Goal:** 1/month after 90 days
Current value stream map – process as it is

Red diamonds identified gaps – breakdowns, delays or workarounds.
Ideal state

A much streamlined process envisioned.
Gemba – going to where the actual work is done

Examine time for each process step:

- Time bed assigned.
- Time ED RN sees bed assignment.
- Time between when ED RN sees bed assigned and time to call floor
- Time floor sees bed assignment
- Length of verbal report
- Time from when bed assigned to when RN aware of patient
- Etc.

Observed reality and recorded it.

Use to understand the current state, and then plan future state.
Daily report out

Report progress to project leader and champions, administrative and clinical staff.

Seek feedback.
Categorized gaps by types of waste and failures to begin root cause analysis.

Other mnemonics:

DOWNTIME
COMMWIP
Root-cause analysis

ED Gaps
• Transport delay
• Variability in verbal report
• Phones busy
• Waiting to give report

Types of Gaps
• Method
• Measure
• People
• Machine
• Material
• Mother Nature

Inpatient Gaps
• Floor variability
• Floor RN unprepared to receive patient
• Variability in who receives report
• Order issues – who completes, ED or floor
• Bed coordinator role
5 whys - deeper understanding of the gaps

**5 Why's**
- primary RN busy
  - other RNs need to be seen
- b/c placing wrong beds
  - b/c doesn't know pt in restraints
  - clw b/c Know?
  - b/c doc ED MP not always entering specialty (line 5)
  - No hand off
- ph on wrong floor
- Not looking in Epic prior to arrival
  - dependent on verbal or b/c
  - Don't know what b/c is
  - Not documented enough
  - Poor understanding re: staffing
- ED RN not available
  - seeing other pts.
  - doesn't know when ED will call
  - break
- No standard for when ED will call

**5 Why's**
- Change RN didn't notify
  - no time since speaking w/ b/c
  - b/c calling after transport request
  - transporter coming
- RN busy on floor
  - no cue of normal
  - transport didn't notify
  - not signing ticket to ride
- last minute orders
  - pt. change
  - last minute primary
  - ED MD not ordering
  - learning curve
  - ED MD not ordering
  - ED MD not ordering
  - ED MD not ordering

**5 Why's**
- IP RN not available
  - seeing other pts.
  - doesn't know when ED will call
  - break
  - No standard for when ED will call
- Charge hasn't assigned yet
  - ED calling immediately after b/c calls
  - b/c not notifying floor before bed assigned in Epic
  - ED doesn't know how long bed assigned for
- ED not communicating
  - ED not entering
  - ED not entering
Improvement ideas

Based on the root causes

- Identify ways to ameliorate/address root causes through countermeasures
- One approach is to use “7 ways”
  - Require team members to brainstorm 7 ways to address identified gaps
  - Stretches team thinking
  - Some ideas may be redundant
## 7 Ways to Improve

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<th>Improvement Ideas</th>
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<td>1. Transport delay</td>
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<tr>
<td>2. Variability in completeness and length of verbal reports</td>
<td>2.</td>
</tr>
<tr>
<td>3. Phones</td>
<td>3.</td>
</tr>
<tr>
<td>5. Patients sent to wrong room</td>
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<tr>
<td>6. RNs not connecting by phone</td>
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PICK Analysis

• Use PICK analysis to prioritize
  – Possible
  – Implement
  – Challenge
  – Kibosh/Kill

• Place post-its on the flip-chart

Image source: Leanblog.org
Experiment ideas

Tested improvement ideas to see what might work.

ED calls floor to see if RN has any Questions (use ED clinical summary)

Create new handoff tool available to all – combines 3 pages
Experiment 1 & results

More data to make decisions.
Specifications for new handoff tool that will be available to ED and floors so they are literally on the same page.
Completion plan before GO LIVE

Lots of work to make the Improvements up to this point.

Last steps to cross the finish line:

• What?
• Who?
• When?
Immediate (completed in the 5-day event) – in unit education to implement next week

• Create standard work – process/work flow documents and checklists for associates
  – Emergency department primary and charge RNs
  – Bed coordinators
  – Transporters
  – MDs - residents
  – Inpatient RNs; both primary and charge

Short-term – next week

• Identify temporary EMR tool – ED clinical summary; provide everyone access (ED and IP floors)

6 Weeks

• New hospital-wide communication tool in EMR
  – Combined existing ED clinical summary, clinical exchange and SBAR
  – Changes required expedited system-wide approval; similar requests had been made before

• Monitor and sustain improvements
Focus on improving the process for acquiring and using medical equipment for simulation in Post Graduate Courses (PGCs)
Gaps Identified onsite – reason(s) for project

- Procurement of equipment (descriptions, vendor availability, volume, frequency)
- CME regulations – breech prevention
- Management of skill stations (learner flow, faculty instructions, cleanliness, etc.)
- Staffing requirements and pre-course instruction
- Faculty expectation management and preparation
- Facilities and logistics
- Shipping requirements for equipment to and from event
- Resource management (human models or other)
- Vendor and industry partner interface prior to and onsite
- On-demand for these programs (what works and what doesn’t)
• Initial scope was one project - four Post Graduate Courses
• After initial meeting, scope adjusted to four separate, yet related projects
  – Different staff and experience in specific programs
  – Different volunteer review committees and faculty
  – Programs varied in maturity
• Could learn from each other
Outcome statement

• To analyze and create infrastructure and process documentation for educational programs requiring medical/simulation equipment.
Events/meetings

- 4, 3-hour large group meetings
- 6, 1-2 hour small group meetings
- Several scheduled 1:1 or 1:2 meetings
- Facilitator behind the scenes work

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Activities

- WWWWD Analysis (What Went Well, What Did Not)
- SIPOC – Suppliers, Inputs, Processes, Outputs, Customers
- Current State Value Stream Map
  - Identify value-added and non-value-added activities
  - Uncover opportunities for improvement
- Root-cause analysis
- Improvement ideas
- Checklist development
- Future State Value Stream Map
  - Streamline process and increase value-added activities
  - Check lists
<table>
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<th>Inputs</th>
<th>Process</th>
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<td>The group or individual providing the Input to the process.</td>
<td>What the Supplier adds or provides to the process step to take place.</td>
<td>Individual step(s) listed in sequence to complete the process.</td>
<td>The result of the process step being provided to the Customer.</td>
<td>Who receives the Output of the process.</td>
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General Improvements

- Seeing the bigger picture
- More cross-departmental thinking and communication
- Focus on the whole and how tasks come together
- Setting expectations upfront with faculty
- Heightened sensitivity to implications
- Greater sense of empowerment
- Found need to enhance staff volunteer training/presence
- Add simple onsite evaluations for new programs
Specific improvements

• Develop detailed planning checklist and timeline – with phases
  – Checklists for sub-processes
• Set expectations with PGC Co-Chairs and faculty upfront
• Regularly communicate with/among faculty and staff team
• Clarify needs related to equipment EARLY – part of checklist
• Apply standard staffing model criteria
• Use visual management (photo/diagram) for packing equipment
• Develop and implement staff volunteer training and orientation program
What was next after implementation

• Apply and tailor checklist to all PGCs & educational programs
• Monitor and identify new gaps/opportunities for improvement
• Adjust in real time, as necessary
• Assess customer satisfaction meaningfully in the future
• Re-assess after next conference, adjust accordingly
Time Investment Comparison – By Kaizen

ED to floors patient hand off
• 1 facilitator (pre-work, event and post event implementation)
• 1 project lead, 1 project champion
• 8 multidisciplinary team members (ED, floors, clinical documentation)
• 2 members from EMR team
• Others (e.g., BC, Transporters, etc.)
• 1 “Outside set of eyes”
• Outside staff for scheduled reports
  \( \approx 470 \text{ to } 500 \text{ total staff hours} \) over five days plus pre work prior to event

Acquiring medical simulation equipment for education
• 1 facilitator (pre-work, events, post events-action periods, and final wrap up)
• 1 project sponsor, 1 project champion
• 10 multidisciplinary team members (program managers, meetings/education, travel, marketing, customer service)
• Directors (i.e., 3 total: includes sponsor and champion – at kick off and end)
• Report out to senior management team
  \( \approx 160 \text{ to } 180 \text{ total staff hours} \) 12 weeks plus pre work three weeks prior
Take-a-ways

- Kaizens, or process improvement events, are structured ways to move from the current state to an improved future state using a variety of tools.
- Improvement projects require diverse perspectives, knowledge and skill sets.
- Proper scoping is important.
- Improvement is made by people who do the work so it becomes the way work is done.
- Because the improvements are made by peers, broad implementation will have greater support for organization-wide spread and adoption.
Thank you!

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