Shaping the Future of Health Care: Using QI Frameworks and Methodologies for Process Improvement

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Learning Objectives

• Identify a plan and process to establish a QI Scholarship Program for health care practitioners.

• Evaluate QI methods and tools that facilitate understanding of an underlying health problem as well as improving health care processes and outcomes.

• Demonstrate how a QI Scholarship Program can increase the requisite knowledge and skills to effectively participate in QI.
Challenges in Healthcare

- Rising costs of supplies, labor, and equipment
- Difficulty in balancing the need to improve with our daily demands
- Increasing regulatory requirements
- Meeting patient satisfaction goals
- Competition to draw our patients away
- Reimbursements and Healthcare Reform

How Do We Meet these Challenges?
Taking a Different Approach

“I’ve got too much work to do to stop and listen to you”

“The Tools Are Available”
QI is about producing **reliable** and **sustainable** change.
What is Quality Improvement?

• Systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups

• Principles of QI:
  • QI work as systems and processes
  • Focus on patients
  • Focus on being part of the team
  • Focus on use of the data

• Quality is Everyone’s Responsibility
  • Engage all nurses, not just nursing leadership
QI Scholarship Program

- Call for Applications
- Training Schedule
- Project Timeline
- Scholarship Stipend
Process

• LEAN methodology and A3 Tool
• Problem Statement
• Current State and Best Practices/Literature Search
• Goal of the project
• Root Cause Analysis
• Solutions
• Check
• Act
Step 1:
Establish QI/Lean Framework
Lean Definition

A *management system* and *culture* designed as a way we work by adding value for our patients and eliminating waste, where every employee is empowered to continuously improve their processes.
Lean is Based on a Few Important Concepts...

- **Value**
  - What patients are willing to pay for
    - Patients: clinician time

- **Waste**
  - Waste hides in complex systems
    - Patients: Waiting for appointments

- **Scientific Method**
  - PDSA and A3s can be leveraged to solve problems

- **Empowered Staff**
  - Involve and engaged staff: will “own” changes; experts in their area

- **Alignment**
  - Limited siloed improvement => few critical strategies to focus and advance goal
Value-Added & Non-Value Added

Waste = anything that does not add value for the customer

Three types of activity
1. Non-value added = waste
2. Incidental = waste but necessary
3. Value added
   a. Adds value from the customer’s perspective
   b. Customer is willing to pay for it

Objective
The objective is to minimize waste and incidental activity
Waste Categories

**Overproduction**
Producing too much, or producing too soon

**Overproduction**
Producing too much, or producing too soon

**Extra-Processing**
Over-processing, unnecessary steps, signatures, reviews

**Defects**
Correcting errors or reworking processes

**Motion**
Any motion that does not add value; searching for supplies or equipment

**Transport**
Any non-essential transport

**Inventory**
Any more stock than the minimum to get the job done

**Waiting**
Waiting for an appointment, for signatures, for a printer that has a long queue

**Not Utilizing**
Talent & Knowledge
Not utilizing the time, talents and knowledge of people
5S: Method to Eliminate Waste

Purpose & Definition
A strategy to develop and maintain a working environment that is clean, organized, and in the correct place

Benefits
- Reduces searching
- Highlights problems
- Improves morale
- Improves safety
- Gain flow
5S: Method to Eliminate Waste

SORT
Remove unneeded items

STRAIGHTEN
Organize based on location and frequency of use

SHINE
Keep the workplace clean, daily

STANDARDIZE
Develop a consistently organized workplace

SUSTAIN
Establish a system for ongoing support for the first 4 Ss
5S: Method to Eliminate Waste

Before 5S:

After 5S:
PDCA: Continuous Improvement

• The method by which we should be practicing continuous improvement in our daily work

• A tool to solve problems encountered while performing our daily work
6) Check:
(Summary of the solutions' results, overall goal success, and any supporting metrics)

1) Problem Statement:
(description & quantification of the problem and effect)

Project Lead:

Project Champion(s):

Date Updated:

Project Team:

2) Current State:
(depiction of the current state, its processes, and problem(s)

Best Practices/Literature Search:

3) Goal:
(how will we know the project is successful; standard/basis for comparison)

4) Root Cause Analysis:
(investigation depicting the problems' root causes)

A3* Project Title

5) Solutions:
(action plan and findings of tested solutions)

7) Act:
(Action taken as a result of the Check, and the plan to sustain results)

Goal & Metrics Baseline Target Current

Goal
Supporting Metric
Supporting Metric

Root Cause
Tested Solution
Responsible
Due
Finding

*A3 is a UCLA Operating System 11x17 template used to document and communicate complex problem-solving using the Plan Do Check Act (PDCA) method: Steps 1-4 (Plan), Step 5 (Do), Step 6 (Check), Step 7 (Act)
# What is a Problem-Solving A3?

**A3-Problem Solving**

**Use for:**
- Complex problems
- Gaining consensus
- Communicating
- Managing the project

**Use if:**
- Root Causes to problems are unknown
- Solutions aren’t obvious

<table>
<thead>
<tr>
<th>A3* Project Title</th>
<th>Project Lead:</th>
<th>Project Champion(s):</th>
<th>Date Updated:</th>
<th>Project Team:</th>
</tr>
</thead>
</table>

1) **Problem Statement:** (description & quantification of the problem and effect)

2) **Current State:** (depiction of the current state, its processes, and problem(s))

3) **Goal:** (how will we know the project is successful; standard/basis for comparison)

4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)

5) **Solutions:** (actions, plans, and findings of tested solutions)

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Tested Solution</th>
<th>Responsible</th>
<th>Due</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

6) **Check:** (summary of the solutions’ results, overall goal success, and any supporting metrics)

<table>
<thead>
<tr>
<th>Goal &amp; Metrics</th>
<th>Baseline</th>
<th>Target</th>
<th>Current</th>
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</thead>
<tbody>
<tr>
<td>Goal</td>
<td></td>
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<tr>
<td>Supporting Metric</td>
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<td></td>
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<tr>
<td>Supporting Metric</td>
<td></td>
<td></td>
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</tbody>
</table>

7) **Act:** (actions taken as a result of the Check, and the plan to sustain results)
**Prevention of Catheter Associated UTI (CAUTI)**

**Project Lead:** Lee Galuska, Charlene Earnhardt  
**Project Team:** CAUTI Task Force  
**Project Champion(s):** Zachary Rubin

**Date Updated:** Aug 28, 2016

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**1) Problem Statement:** CAUTI is a major cause of morbidity and mortality in the hospitalized patient. CAUTI increases length of stay, antibiotic exposure, mortality and overall cost of care. It is also an important quality metric that is publicly reported by both the California Department of Public Health and CMS. CAUTIs also factor into value based purchasing and into Magnet status.

**2) Current State:** (depiction of the current state, its processes, and problem(s))

![Hospital Total - All Units (excluding NICU) Graph]

**3) Goal:** Consistently decreasing CAUTI rate, keeping standardized infection ratio <1 after CDC performs re-baseline in 2015.

**4) Root Cause Analysis:** See fishbone diagram from CAUTI charter

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**5) Solutions:** (action plan and findings of tested solutions)

<table>
<thead>
<tr>
<th>Root Cause</th>
<th>Tested Solution</th>
<th>Responsible</th>
<th>Due</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>No CAUTI surveillance on acute care units.</td>
<td>CAUTI surveillance institution wide.</td>
<td>Zachary Rubin Dana Russell</td>
<td>Completed 4/2014</td>
<td></td>
</tr>
<tr>
<td>UCLA does not have standardized removal orders for urinary catheters</td>
<td>Develop RN driven protocol Serial straight cath instead of Foley</td>
<td>Charlene Earnhardt Zachary Rubin</td>
<td>Completed 12/2014</td>
<td>Poor compliance</td>
</tr>
<tr>
<td>RN have difficulty assessing bladder volume</td>
<td>Purchase bladder scanners for each unit</td>
<td>Zachary Rubin Lee Galuska</td>
<td>Completed 12/2014</td>
<td>Delayed initially</td>
</tr>
<tr>
<td>25% CAUTIs do not have UA or normal UA</td>
<td>Develop urinalysis with reflex culture</td>
<td>Romney Humphries Zachary Rubin</td>
<td>Completed 12/2014</td>
<td>Poor compliance</td>
</tr>
<tr>
<td>No standardized response to CAUTI</td>
<td>Develop mini-causal analysis form for each event</td>
<td>Charlene Earnhardt</td>
<td>Completed 2/2015</td>
<td>Working well</td>
</tr>
<tr>
<td>No easy clinical assessment for removal of unnecessary urinary catheters</td>
<td>Develop CareConnect report to help identify unnecessary urinary catheters.</td>
<td>Elyse Fritschel Zachary Rubin</td>
<td>1/2016</td>
<td>In progress</td>
</tr>
<tr>
<td>Perceived poor RN education</td>
<td>NRE office targeting units with high CAUTI rates for additional competencies</td>
<td>Lee Galuska</td>
<td>ongoing</td>
<td></td>
</tr>
<tr>
<td>Perceived poor MD education</td>
<td>Education sessions with residents and attending MDs</td>
<td>Elise Martin Zachary Rubin</td>
<td>ongoing</td>
<td>Started 12/2014</td>
</tr>
<tr>
<td>Urinary caths used unnecessarily in OR</td>
<td>Surgeons not to place for short operations</td>
<td>Hallie Chung</td>
<td>ongoing</td>
<td></td>
</tr>
</tbody>
</table>

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**6) Check:** The main interventions have been built within care connect and extensive education has been done for MDs and RNs.

**Goal & Metrics**

<table>
<thead>
<tr>
<th>Goal &amp; Metrics</th>
<th>Baseline (2013)</th>
<th>Target</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAUTI rate</td>
<td>RR: 3.6 inf/1000 cath days SM: 2.14</td>
<td>All units SIR &lt;1.0 (CDC to reset baseline after 2015)</td>
<td>RR: 1.92 SM: 1.27</td>
</tr>
<tr>
<td>Compliance of RN-driven protocol</td>
<td>0</td>
<td>75%</td>
<td>Unknown</td>
</tr>
<tr>
<td>Removal of unnecessary urinary catheters</td>
<td>Unknown</td>
<td>75%</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

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**7) Act:** While most of the important infrastructure has been rolled-out, compliance with these measures is still low. Plans for 2015-2016 include:

1. Continue increasing awareness of nurse driven protocol (NDP) among RNs and MDs.
2. Increase compliance with NDP through education—Dr. Sanjay Saint visiting on Sept 17, 18 to lecture.
3. Increase utilization of serial straight cath—Dr. Sanjay Saint visiting on Sept 17, 18 to lecture.
4. Developing CC report on unnecessary urinary catheters.
Step 2: Understanding the Problem
# Comparison of Mapping Techniques

<table>
<thead>
<tr>
<th>Process Map</th>
<th>Value Stream Map (VSM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Graphical representation of a defined process</td>
<td>• Focuses on improving the whole, not optimizing pieces of the process</td>
</tr>
<tr>
<td>• Improvements are usually very small – but easy to implement</td>
<td>• Identifies non-value added activities “within” &amp; “between” the process</td>
</tr>
<tr>
<td>• Enables short term tactical planning</td>
<td>• Enables a long term strategy</td>
</tr>
</tbody>
</table>

*Note: The text within and between the process refers to non-value added activities.*
How to Draw a Process Map

1. Define Boundaries (Where the process starts and stops)
2. List Functions
3. List Process Steps According to the Functions that Performs It
4. List Key Milestones or Running Time Across the Top
5. Identify Opportunities

Timeline

- Pt Enters Clinic
- Check-in Patient
- Room Patient
- Take Vitals
- Exam Patient
- Draw Blood
- Collect Co-pay
- Pt Exits Clinic

Opportunity: 20% of co-pays are not collected
How to Create a VSM

1. Define customer and supplier
2. Identify high level processes
3. Gather and document process data and information
4. Determine flow of information and materials
5. Calculate total value added and non-value added time
6. Analyze data and information to identify opportunities

7 Patients

<table>
<thead>
<tr>
<th>Process</th>
<th>Time (min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check-in</td>
<td>3</td>
</tr>
<tr>
<td>Physician Evaluation</td>
<td>15</td>
</tr>
<tr>
<td>Check-out</td>
<td>2</td>
</tr>
<tr>
<td>NVA = 50 min.</td>
<td></td>
</tr>
<tr>
<td>VA = 20 min.</td>
<td></td>
</tr>
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1) Problem Statement: (description & quantification of the problem and effect)

2) Current State: (depiction of the current state, its processes, and problem(s))

3) Goal: (how will we know the project is successful; standard/basis for comparison)

4) Root Cause Analysis: (investigation depicting the problems’ root causes)

DO
- Describe the problem
- Quantify the gap between the problem and the ideal
- Describe the effect/impact of the problem

DON’T
- Don’t include the solution
1) **Problem Statement:** (description & quantification of the problem and effect)

OR turnaround time currently averages 53 minutes, (should be 40). This leads to delays in surgery start times throughout the day and impacts patient care.

2) **Current State:** (depiction of the current state, its processes, and problem(s))

Best Practices/Literature Search:

3) **Goal:** (how will we know the project is successful; standard/basis for comparison)

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4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)

- Observe, document, & study the current state
- Observe it with your own eyes
- Document it so it can be analyzed
  - Value Stream Map
  - Process Map
  - Spaghetti Diagram
  - Interview experts (pain points)

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2) **Current State:** (depiction of the current state, its processes, and problem(s))

- 15 surgeries a day
- No signal when a room is clean
- Waiting for supplies = 20 mins

3) **Goal:** (how will we know the project is successful; standard/basis for comparison)

4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)

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Define the Goal
• Ask: what is the ideal outcome?

Goal Elements

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3) **Goal:** (how will we know the project is successful; standard/basis for comparison)
   Improve OR turnaround time from 53 minutes to 40 minutes (25%) by October 1, 2017.

4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)
Step 3: Identifying Areas for Improvement
1) **Problem Statement:** (description & quantification of the problem and effect)

OR turnaround time currently averages 53 minutes, (should be 40). This leads to delays in surgery start times throughout the day and impacts patient care.

2) **Current State:** (depiction of the current state, its processes, and problem(s))

- 15 surgeries a day
- No signal when a room is clean
- Waiting for supplies = 20 mins

The Current State tells the “facts”.

3) **Goal:** (how will we know the project is successful; standard/basis for comparison)

Improve OR turnaround time from 53 minutes to 40 minutes (25%) by October 1, 2017.

4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)

Root Cause Analysis:

- Examines underlying, not “surface” causes
- By asking “Why” as much as necessary to get closer to the solution
- To eliminate the problem permanently: If we do not fix the root cause, the problem will usually resurface

Tools:

- 5 Whys
- Fishbone

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Jefferson Memorial Dilemma

- Problem: The granite of the Jefferson Memorial is crumbling at an increased rate
  - Why?
- Washed more frequently
  - Why?
- Because it needs to be cleaned more often
  - Why?
- A large bird population leads to increased waste
  - Why?
- Large number of spiders for birds to eat
  - Why?
- Large number of midges to eat
  - Why?
- Because midges are attracted to the lights, which are turned on before dusk
The Problem

The Cause

Equipment → Process → People

The Effect

Materials → Environment → Management

primary cause

secondary cause
1) **Problem Statement:** (description & quantification of the problem and effect)

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Improve OR turnaround time from 53 minutes to 40 minutes (25%) by October 1, 2017.

4) **Root Cause Analysis:** (investigation depicting the problems’ root causes)

- OR Turnaround Time is higher than target
- Why? Hospital Assistant starts late
- Why? Does not have surgery room assignments on time
- Why? OR room schedules not distributed before shift starts
- Why? OR secretary not informed to distribute schedules before shift

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Step 4: Devising a Measurement Strategy
Uh... where to go for data?
Devising a Measurement Strategy

Collecting data is challenging, but allows you to ensure the problem you are fixing will result in improved outcomes!

But what to measure?
Deciding What to Measure

Outcomes
(patient level results)

Process:
(actions)

Structure
(equipment)
Data Collection Process

Where the Data Comes From:

- Prevalence Day
- NRC Picker (inpatient) and Press Ganey (outpatient) Patient Surveys
- Event Reports
- Ad Hoc Audits
- Finance
- Infection Control

Data Concerns:

- Validity and reliability of data
- Measureable and observable
- Sustainability
## Nursing Dashboard

### All Inpatient Nursing Units - Performance Dashboard

<table>
<thead>
<tr>
<th>RR UCLA Medical Center Performance Dashboard</th>
<th>FY 2012</th>
</tr>
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<tbody>
<tr>
<td>All Inpatient Nursing Units</td>
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</table>

#### Quality

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</thead>
<tbody>
<tr>
<td>C. Difficile Rate per 10,000 Patient Days - Med/Surg</td>
<td>10.5</td>
<td>&lt;10.5: green; 10.5 - 14.0: yellow; 14+: red</td>
<td>13.57</td>
<td>12.60</td>
<td></td>
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</tr>
<tr>
<td>C. Difficile Rate per 10,000 Patient Days - ICUs</td>
<td>12.2</td>
<td>&lt;12.2: green; 12.2 - 14.0: yellow; 14+: red</td>
<td>8.25</td>
<td>7.51</td>
<td></td>
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<tr>
<td>VRE Rate per 1,000 Patient Days - Med/Surg</td>
<td>0.41</td>
<td>0-0.41: green; 0.41-1: yellow; 1+: red</td>
<td>0.85</td>
<td>0.71</td>
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<tr>
<td>VRE Rate per 1,000 Patient Days - ICUs</td>
<td>1.05</td>
<td>0-1.05: green; 1.05-2: yellow; 2+: red</td>
<td>1.05</td>
<td>1.05</td>
<td></td>
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<tr>
<td>MRSA Rate per 1,000 Patient Days - Med/Surg</td>
<td>0.22</td>
<td>0-0.22: green; 0.22-1: yellow; 1+: red</td>
<td>0.27</td>
<td>0.12</td>
<td></td>
<td></td>
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<tr>
<td>MRSA Rate per 1,000 Patient Days - ICUs</td>
<td>0.17</td>
<td>0-0.17: green; 0.17-1: yellow; 1+: red</td>
<td>0.07</td>
<td>0.38</td>
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</tr>
<tr>
<td>VAP Rate per 1,000 ventilator days - ICUs Only</td>
<td>0.38</td>
<td>0-0.38: green; 0.38-1: yellow; 1+: red</td>
<td>0.20</td>
<td>0.00</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>BSIs per 1000 Central Line Days - Med/Surg</td>
<td>1.00</td>
<td>0-1.0: green; 1.0-2: yellow; 2+: red</td>
<td>1.50</td>
<td>2.90</td>
<td></td>
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</tr>
<tr>
<td>BSIs per 1000 Central Line Days - ICU</td>
<td>0.75</td>
<td>0-0.75: green; 0.75-1.2: yellow; 1.2+: red</td>
<td>1.20</td>
<td>1.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVC Compliance Bundle Checklist (ICUs only)</td>
<td>100%</td>
<td>&gt;95: green; 90-95%; yellow; &lt;90%: red</td>
<td>93%</td>
<td>96%</td>
<td>86%</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Hand Washing Between Patient Contact (MAPS) RNs/CPs</td>
<td>100%</td>
<td>&gt;95: green; 90-95%; yellow; &lt;90%: red</td>
<td>83.0%</td>
<td>89.0%</td>
<td>94.0%</td>
<td>97%</td>
<td>97%</td>
<td>96%</td>
<td>97%</td>
<td>96%</td>
<td></td>
</tr>
</tbody>
</table>

#### Pressure Ulcers

<table>
<thead>
<tr>
<th># Pts with Hospital Acquired Pressure Ulcers</th>
<th>0</th>
<th>7</th>
<th>3</th>
<th>4</th>
<th>2</th>
<th>4</th>
<th>3</th>
<th>1</th>
<th>3</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Patients with Hospital Acquired Pressure Ulcers</td>
<td>3.80%</td>
<td>1.49%</td>
<td>0.60%</td>
<td>0.80%</td>
<td>0.40%</td>
<td>0.86%</td>
<td>0.60%</td>
<td>0.20%</td>
<td>0.60%</td>
<td>1.30%</td>
</tr>
</tbody>
</table>

#### Medication Errors

| Medication - Wrong Patient | 0 | 0: green; 1: yellow; 1+: red | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 1 |
| Medication - Wrong Dosage | 0 | 0: green; 1-4: yellow; 4+: red | 13 | 11 | 6 | 4 | 15 | 11 | 5 | 12 |
| Medication - Nurses Checked ID Prior to Med Admin (NRC) | 92.5% (90th percentile) | >90%: green; 89-90%: yellow; <90%: red | 90.9% | 90.6% | 87.2% |

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**Note:** The dashboard includes metrics such as infection rates, pressure ulcers, and medication errors. Each metric is color-coded to indicate performance levels, with green indicating performance within target thresholds, yellow for near misses, and red for non-compliance.

**Source:** RR UCLA Medical Center Performance Dashboard for All Inpatient Nursing Units.
Step 5: Implementing Small Tests of Change
1) Problem Statement: (description & quantification of the problem and effect)
OR turnaround time currently averages 53 minutes, (should be 40). This leads to delays in surgery start times throughout the day and impacts patient care.

2) Current State: (depiction of the current state, its processes, and problem(s))
- 15 surgeries a day
- No signal when a room is clean
- Waiting for supplies = 20 mins

3) Goal: (how will we know the project is successful; standard/basis for comparison)
Improve OR turnaround time from 53 minutes to 40 minutes (25%) by October 1, 2017.

4) Root Cause Analysis: (investigation depicting the problems’ root causes)
OR Turnaround Time is higher than target
   Why? Hospital Assistant starts late
   Why? Does not have surgery room assignments on time
   Why? OR room schedules not distributed before shift starts
   Why? OR secretary not informed to distribute schedules before shift

5) Solutions: (action plan and findings of tested solutions)

6) Check: (Summary of the solutions’ results, overall goal success, and any supporting metrics)

7) Act: (Action taken as a result of the Check, and the plan to sustain results)
DO

- Target solutions based on the identified root causes
- Test & Track solutions & Findings
- Prioritize the solutions so that the action plan can be achieved

5) Solutions: (action plan and findings of tested solutions)

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<thead>
<tr>
<th>Root Cause</th>
<th>Tested Solution</th>
<th>Responsible</th>
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Let’s Prioritize an Improvement Opportunity

Impact (Patient, System)

<table>
<thead>
<tr>
<th>Frequency of Occurrence</th>
<th>Impact</th>
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<tbody>
<tr>
<td>Low</td>
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</tr>
<tr>
<td>High</td>
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Start planning now

Work on this now!

Review only if other areas have been addressed

No regrets

UCLA Health
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A3* Project Title

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“Check” the results of the “Solutions” and the “Goal”

• Did the tested solutions eliminate the root causes?

• Did implementation of the solutions improve the goal time?

• Are their supporting metrics that need to be tracked?

• What worked? What didn’t?

5) Solutions: (action plan and findings of tested solutions)

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6) Check: (Summary of the solutions’ results, overall goal success, and any supporting metrics)

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Step 6:
Measuring Change
Statistical Process Control Charts

Statistical calculation illustrating the probability that a particular point represents random as oppose to assignable variation

- Plot 20-30 points over time
- Calculate mean or average
- Calculate upper and lower control limits (+/- three standard deviations)
Statistical Process Control Chart Example
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- Implementation of solutions significantly reduced OR Turn Around time.
- Not all solutions have been implemented yet

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<td>OR Turnaround Time (Aug-Sep 2016)</td>
<td>53 min</td>
<td>40 min</td>
<td>46 min</td>
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<td># of On Time OR Starts (Sep 2016)</td>
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7) **Act:** (Action taken as a result of the Check, and the plan to sustain results)
- OR Director to walk new room turnaround process with hospital assistants
- Project Lead to follow up on pending solutions by deadlines
- Review progress with at staff meeting, huddles ➔ what else can be improved to eliminate 6 more minutes?

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Step 7: Sustaining Change
Sustaining the Process

- Create readily accessible visible data to display progress over time
- Put process ownership into a group (not on to you!) that includes nursing, physicians, staff and patients
- Design the process to fit into daily work flow
- Celebrate Success
"World peace'? — No, but we brought you a very advanced dishwashing detergent!"
References


Thank You

Connect with me through e-mail or social media!

Anna Dermenchyan
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Twitter: @ADermenchyan