Evidence Based Practices

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Nothing to disclose

Learning Objectives

• Describe two benefits of the gap analysis tool
• Compare and contrast process and outcome measures
• Define CUSP and TRIP
Quality Focused Culture

- Culture is a consensus view of the way we do things
- Leverages the knowledge, skills and expertise of healthcare workers
  - To develop methods and strategies to improve healthcare and patient safety
- Employs multidisciplinary teams
  - Increased creativity for problem solving
  - Increased acceptance of solutions
  - Improved productivity
  - Positive impact on morale
  - Helps align work with organization mission, vision and values
Tools for Performance Improvement

- Gap analysis
- Goal directed checklists
- Fishbone “Ishikawa”
- Resources for a variety of tools
  - [www.asq.org](http://www.asq.org)
    - Seven basic quality tools
    - Project planning tools
    - Go to knowledge center and click on tools tab

Gap Analysis

- Helps to move from current state to desired state
- Identifies gaps that exist between current processes and new standard
- Team takes steps to fill the gaps
Gap Analysis Tool

<table>
<thead>
<tr>
<th>Future State</th>
<th>Current Situation</th>
<th>Next Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foley catheters will be discontinued with in post op day 1 or 2 with day of surgery being day zero</td>
<td>90% of Foley catheters are discontinued after 54 hours post op.</td>
<td></td>
</tr>
</tbody>
</table>

Fishbone Diagram “Ishikawa”

- Helps display cause and effect
- Identifies many possible causes for an effect or problem
- Agree on the problem or effect statement
- Write categories of causes on the branches
- Ask why does this happen and write answer on branch in appropriate category
Fishbone Example

- People
- Process
- Equipment
- Materials
- Environment
- Management

Reason for Foley not documented
No place to hang bag from gurney

CAUTI

Quality Tools Resources

- AHRQ Quality Indicators Toolkit
  - AHRQ Tool Kit for Hospitals
    - Outlines steps for improvement with toolkit roadmap
  - Gap Analysis Tool (Tool D.5)
  - Implementation Plan (Tool D.6)
  - www.ahrq.gov/qual/qitoolkit/qitoolkit.pdf
### Gap Analysis Tool

**Project:**

**Best Practice:**

**Individual Completing This Form:**

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Practice</td>
<td>Best Practice Strategies</td>
<td>How Your Practice Differs From Best Practice</td>
<td>Service to Best Practice Implementation</td>
<td>Will Implement Best Practice (check, only yes/no)</td>
</tr>
</tbody>
</table>

### Implementation Plan

**Project:**

**Individual completing this form:**

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
<th>Column 4</th>
<th>Column 5</th>
<th>Column 6</th>
<th>Column 7</th>
<th>Column 8</th>
<th>Column 9</th>
<th>Column 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed Task Actions Associated With Implementation of Best Practice</td>
<td>Team Members Assigned to Each Task</td>
<td>Target Completion Date</td>
<td>Actual Completion Date</td>
<td>Communication &amp; Training Required?</td>
<td>Communication &amp; Training Explained</td>
<td>Communication Plan Through Dates</td>
<td>Implementation &amp; Training Completed Date</td>
<td>Implementation Completed?</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

**Spreading knowledge Preventing infection.™**
Goal Directed Checklists

- Follows aviation model
- Helps with memory recall
- Makes explicit the steps to complete complex procedures
- Incorporates evidence based quality parameters
- Bundles - VAP, Sepsis, Central line insertion, Bladder

Checklist Resources

- Atul Gawande: Checklist Manifesto: How to get Things Right
- Peter Pronovost: Safe Patients, Smart Hospitals
- AHRQ Central Line Insertion Care Team Checklist at www.ahrq.gov/qual/clinchklist.htm
- Safer ICUs Eliminating CLABSI Collaborative Project Management Task list at www.ncqualitycenter.org
Outcome Measures

• These measures tell you whether changes are actually leading to improvement
• Examples of outcome measures:
  – Adverse Drug Events (ADEs) per 1,000 Doses
  – Number of Cases between Surgical Site Infections.

What are process measures?

• To affect the outcome measure of improving patient safety, you will make changes to improve many core processes
• Measuring the results of these process changes will tell you if the changes are leading to an improved, safer system
• Examples include:
  – Percentage of Staff Reporting a Positive Safety Climate
  – Pharmacy Interventions per 100 Admissions
  – Percent of Surgical Cases with On-Time Prophylactic Antibiotic Administration
  – Compliance with a bundle
We need both measures

- Outcome and process measures need to be balanced
  - to make sure that changes to improve one part of the system aren’t causing new problems in other parts of the system
- Example:
  - Glucose protocol, monitor compliance with new order set (process) and hypo/hyperglycemic events (outcomes)

Measures

- Process Measure
  - Foley catheter d/c within 24 hours of surgery
  - Percent compliance with central line insertion checklist

- Outcome Measure
  - CAUTI rate in surgical patients
  - CLABSI rate
Performance Improvement Methodologies: PDSA or PDCA

- **Plan, Do, Study, Act**
  - **Plan**
    - Identify goals, available resources and actions or steps to take
  - **Do**
    - Implement the activities or steps identified
  - **Study or Check**
    - Analyze data, benchmark, trend data
  - **Act**
    - Based on analysis redefine actions or steps to take to achieve the goal
    - Continuous cycle
Performance Improvement Methodologies: CUSP and TRIP

- **CUSP**
  - Comprehensive Unit based Safety Program

- **TRIP**
  - Translating Research into Practice

- CUSP and TRIP are a two pronged approach to performance improvement

- Both will be discussed in more detail in the following slides

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Performance Improvement Methodologies: CUSP

- Comprehensive unit based safety program
- Aim is changing the culture of safety
- Provides a framework for addressing patient safety issues at a local level
- Leverages local wisdom to identify potential patient harm and create individualized solutions
- Strengthens communication and collaboration at all levels of the organization senior leaders to front line staff

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Resources for Steps of CUSP

- Johns Hopkins Center for Innovation in Quality Patient Care
  - [www.hopkinsmedicine.org/se/util/display_mod.cfm?MODULE=seserver/mod/modules/semod](http://www.hopkinsmedicine.org/se/util/display_mod.cfm?MODULE=seserver/mod/modules/semod) (need rest of it)

CUSP Framework

- Create a culture of safety
  - Train staff in science of safety
  - Engage Staff to identify defects
  - Senior executive partnership
  - Learn from a defect
  - Implement tools for improvement
Pre-CUSP Kick Off

- Assemble interdisciplinary team
  - Everyone has a role in patient safety
- Partner with a senior executive
- Conduct culture assessment
  - Establishes baseline
- Gather unit specific data
  - Safety culture results
  - Infection rates
  - Patient safety events

Using CUSP to Decrease CAUTI

- Assemble the interdisciplinary team
  - Unit nurse, unit manager, nurse champion, nurse educator
  - Infection Preventionist, Patient Safety Officer, QI staff, pharmacy, etc.
  - Don’t forget to include a physician champion
- Partner with a senior executive
  - Who might that be in your facility?
- Conduct the AHRQ culture assessment
  - People support one another in this unit
  - Patient Safety is never sacrificed to get more work done
  - In this unit we discuss ways to prevent errors from happening again…
Conduct literature search and identify best practices

  - Review of the impact of catheter duration. Patients with catheters removed earlier had decreased risk of infection,
  - CAUTI rate pooled mean 1.5 (median percentile 0.8)
  - Foley DUR pooled mean 0.19 (median 0.18, top decile 0.10)

Using CUSP to Decrease CAUTI

- Gather unit specific data for the team
  - Review culture survey results
  - Review CAUTI rate
  - Review Foley utilization ratio
Using Your Data: learn from a defect

- Evaluate your CAUTI rate and compare to the NHSN tables
  - Is your rate above or below the 50th percentile (median) [1.5 per 1000 Foley days]
    - 50th percentile: 50% of the hospitals have rates lower than the median and 50% are higher
  - If you are above the median, are you at or above the 75th percentile?
    - 75% of the hospitals have rates lower than yours

- Evaluate your Foley DUR
  - If your CAUTI rate is high and our DUR is high, your team may want to consider decreasing the duration of catheterization and the unnecessary use of catheters

Implement tools for improvement: ideas

- Develop criteria for Foley catheter indications
- Document alternative methods tried for bladder emptying prior to use of indwelling catheter
- Create a daily patient safety checklist
  - Assess and document why Foley is still in place
    - Each day a Foley is in the risk of CAUTI increases 5%
- Create a nurse driven protocol to d/c Foley without physician order
- Engage the staff, educate the staff, execute the interventions, evaluate results
- Monitor CAUTI rates
- Team review infected patient’s chart and share results of review with staff
CUSP Resources

- CUSP tool kit
  - www.safercare.net/OTCSBSI/Resources.html
- CAUTI CUSP tool kit
  - www.onthecuspstophai.org/stop-cauti/manuals-and-toolkits/
    - Handouts
      - Appendix Q “Remove that Urinary Catheter Poster”
      - Appendix S “Urinary Catheter Project”

TRIP: Translating Research into Practice

- Summarize the evidence
- Identify local barriers to implementation
- Measure performance
- Ensure all patients receive the interventions

Ensure all patients receive the interventions: Implement the 4 Es and target key stakeholders

Engage
Explain why the interventions are important

Educate
Share the evidence supporting the interventions

Execute
Design an intervention tool kit targeted at barriers, standardization, independent checks, reminders and learning from mistakes

Evaluate
Regularly assess for performance measures and unintended consequences

TRIP Lessons Learned

- The strong support of senior management increases the success
- Effective clinical leadership speeds adoption
- Data to support start-up, implementation, and ongoing evaluation must be credible and persuasive to those who influence budget decisions
- The speed of adoption is influenced by the degree to which the innovation requires changes in organizational culture
- The diffusion process is slowed when the effort requires coordination across departments or disciplines
- The perceived ability of an innovation to reduce external threats can influence the speed of its diffusion
Engage, Educate, Execute, Evaluate

- **Resources**
  - APIC’s Elimination Guides
  - www.onthecusstopstophai.org/stop-cauti/manuals-and-toolkits/
  - www.ahrq.gov/qual/qitoolkit/qitoolkit.pdf

Using Data to Evaluate Improvements

- **Quality improvement cycle is never ending**
  - It is a process not an event
- **Data and analysis go on your IPCP Plan and Annual Report**
- **Data will be the foundation of next year’s risk assessment**
Presenting Your Findings

• **Tables**
  - When the display will be used to look up individual values or the quantitative values must be precise
  - Data expressed in words or numbers
  - Data arranged in columns and rows

• **Graphs**
  - When the message you wish to communicate resides in the shape of the data (that is, in patterns, trends, and exceptions
  - Data expressed graphically as a picture
  - Data arranged in relation to one or more axes with scales that assign meaning to the values

Presenting Your Findings continued

• **Before you decide how to present the data, think about what you want to say**
• **If you can communicate your message clearly, efficiently, and with the desired impact in a simple sentence, that’s what you ought to do**
• **If your message requires the precision of a table of numbers and text labels to identify what they are, that’s what you ought to use**
• **Different types of graphs are designed to communicate different types of messages**
• **Too often, data presentations try to impress rather than express—and entertain when they should explain**
• **The purpose of a graph is not to provide a means to interpret the precise value of each bar, line, or data point.**
• **Instead, the purpose is to see the shape of the data, and from that shape discern meaningful patterns, such as trends and exceptions.**

From: Common Mistakes in Data Presentation. Stephen Few. Perceptual Edge
Sustaining

- Organizations trying to improve are under even more critical pressure to close the engagement gap
  - Remember the 4Es, engage is the first
- Report your metrics and measurement data
- Stakeholders must sustain the change
  - Process change also requires a change in heart, soul and behaviors of the people involved
- CHANGE SUCCESS: Depends on Stakeholder Adoption

Pitfalls of Measurement

- Amassing too much data
- Focusing on the short term
- Failing to base decisions on the data
- Dumbing the data
- Measuring too little
- Collecting inconsistent, conflicting and unnecessary data
- Driving wrong performance
- Encouraging competition and discouraging teamwork
- Establishing unrealistic or unreasonable measures
- Failing to link measures
Performance Improvement Methodologies: Why CUSP

- Traditional approaches focused on human error
  - Blaming the clinician
  - Expecting improvements if you try harder
  - Expecting reduction in errors if you are more vigilant
- Safety focused methodologies
  - Build safety into the process design
  - Error proof the process instead of expecting the clinician to function "perfectly"
  - Contributes to a high reliable organization

After CUSP and CAUTI

- Document results in your program plan progress and evaluation section
- Include in your annual report
- Reflect the new reduced risk for CAUTI in your infection risk assessment
- Write an abstract with your results
- Celebrate
- Leverage the team’s success to start the next unit level, unit driven patient safety improvement
Questions?