Learning Objectives

- Describe the importance of process improvement methodologies in improving hand hygiene compliance
- List the steps used in process improvement methodologies.
- Describe strategies to make a difference using process improvement methodologies to improve hand hygiene compliance
“Simple solutions seldom are. It takes a very unusual mind to undertake analysis of the obvious”.  
—Alfred North Whitehead
Sustainable Compliance

Using the Six Sigma Process to Implement the Centers for Disease Control and Prevention Guideline for Hand Hygiene in 4 Intensive Care Units


It’s about putting long-term systems into place.
5-Step Process

<table>
<thead>
<tr>
<th>Step 1: Define</th>
<th>Step 2: Measure</th>
<th>Step 3: Analyze</th>
<th>Step 4: Improve</th>
<th>Step 5: Control</th>
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<td>Identify the process to be improved</td>
<td>Gather baseline data on current processes</td>
<td>Understand and validate the root causes of non-compliance</td>
<td>Implement solutions that address the root causes of non-compliance</td>
<td>Sustain improvements by standardizing the process</td>
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Step 1: Define

Identify the process to be improved

- Identify Hand Hygiene Team members
- Conduct team kick-off meeting
- Review completed survey and identify process to be improved
- Set your facility’s hand hygiene compliance goal
- Confirm support for program development from senior management

Standardize Hand Hygiene Practice

Hand wash:
- Application technique, length of exposure to product, correct concentration of product
- Use of soap and water for at least 15 seconds

Hand rub:
- Application technique, length of exposure to product, correct concentration of product
- Use of alcohol-based antiseptic hand rub when soil is not present on hands
- At least 15 seconds

Surgical hand scrub:
- Application technique, length of exposure to product, correct concentration of product
- Use of either an antimicrobial surgical scrub agent or an alcohol-based antiseptic surgical hand scrub
Step 2: Measure
Gather baseline data on current process

- Establish valid and reliable metrics
- Establish your facility’s current baseline
- Establish an ongoing tracking system for hand hygiene product use

Step 3: Analyze
Understand and validate the root causes of non-compliance

Review and share data on key metrics with team and senior management

<table>
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<tr>
<th>Critical Factor</th>
<th>Cause</th>
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<tbody>
<tr>
<td>Access to product</td>
<td>Hand hygiene products unavailable or not conveniently located.</td>
</tr>
<tr>
<td>Patient impermeable and awareness</td>
<td>Lack of information on hand hygiene requirements; do not encourage patients to wash hands; barriers to practice hygiene; lack of patient education; lack of staff assistance in when to practice hand hygiene; and lack of education on hand hygiene.</td>
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<tr>
<td>Staff awareness</td>
<td>Lack of information on hand hygiene requirements; do not encourage staff to wash hands; barriers to practice hygiene; lack of staff education on hand hygiene.</td>
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<tr>
<td>Facility's culture</td>
<td>Currently no systems of reminders; no response to reminders, problems.</td>
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- Assess relationship of identified factors to hand hygiene compliance in your facility

Step 4: Improve
Implement solutions that address root cause(s) of non-compliance

- Begin pilot program
- Identify and implement interventions that improve hand hygiene compliance
Step 5: Control
Sustain the improvements by standardizing the process.

- Implement the Control Plan
  - Setting up and maintaining the Control Plan is one of the most important steps of process
  - Assign responsibility
  - Establish trigger points
    - When should interventions be implemented
    - How will interventions be evaluated and documented

Project Timeline Example

Summary

- DMAIC is a proven methodology
  - Several hand hygiene compliance projects completed using DMAIC with lasting results
- Multiple projects – 5+ years of sustaining the improvement
  - Same critical factors were present in hand hygiene compliance projects
  - Trust the methodology!
Executive Level Ownership

- Support from senior management team
  - Visible, high-level champion is needed to support program goals
  - Managers performance scorecard
- Resource commitment for a multi-disciplinary team
  - Team members from a variety of departments impacted by hand hygiene improvement process provides valuable and diverse perspectives

Changing behavior and culture

- Identify and recognize hand hygiene champions
- Implement training
  - Focus on root causes of non-compliance
- Empower staff to remind each other
- Empower patients to remind hospital staff