Hand Hygiene Project: Best Practices from Hospitals Participating in the Joint Commission Center for Transforming Healthcare Project

November 2010
Why focus on hand hygiene?

• Health care-associated infections (HAIs) account for approximately 1.7 million infections in U.S. hospitals, with more than 98,000 deaths annually (CDC, 2002).

• Hand hygiene is the primary means to reduce HAIs.

• Hand hygiene is the number one patient safety challenge identified by hospitals in the Joint Commission Robust Process Improvement Project.
Hand Hygiene Project

- Sponsored by the Joint Commission Center for Transforming Healthcare
  - Established in 2009 to address health care’s most critical quality and safety problems
- Eight hospitals selected to participate
  - Baseline data results, using non-biased hand hygiene observers or secret shoppers, showed hand hygiene compliance much less than previously thought
  - Most hospitals thought their compliance rate was about 70 percent to 90 percent, when it was actually less than 50 percent.
  - All had Robust Process Improvement (RPI) infrastructures, used Lean Six Sigma methodologies, and agreed to follow the same methodology.
- April 2008 – August 2010: hospitals defined and measured hand hygiene, analyzed data, and improved processes and workflow using Lean Six Sigma.
Summary of Results

• Hospitals identified 15 root causes of failure to clean hands and developed targeted solutions for each root cause
• As of August 2010, all eight hospitals reported hand hygiene compliance rates at about 82 percent
• Many of the hospitals reported a decline in HAIs as their hand hygiene compliance rate increased
• Solutions developed by the hospitals are part of the Targeted Solutions Tool (TST), a web-based tool provided free to Joint Commission-accredited organizations
Defining and measuring hand hygiene

• First step was defining hand hygiene - “washing (or cleaning) hands with an alcohol-based foam or gel or soap upon entry and exit of a patient care area or environment”
• Determining how data was collected was critical to the project
• Hospitals used secret observers to collect baseline data and just-in-time coaches to identify barriers to hand washing
  • Just-in-time data was kept separately from baseline observational data to avoid skewing the data
Analyzing Data

• Data analysis identified root causes and pinpointed particular groups that struggled with the problem more than others

• Many root causes were surprising
  • Dietary workers having their hands full while delivering trays of food and thinking that they do not need to wash their hands since not touching patients
  • After culturing everything in the patient environment, the surveillance team discovered that the privacy curtains were colonized with multi-drug resistant organisms in some rooms
• Hospitals used Six Sigma to examine processes and workflow and target solutions
• Main objective was to incorporate hand washing into staff routines while minimizing number of hand washings
• For some, streamlining meant putting hand hygiene items in one place
• Four of eight hospitals used technology to monitor hand hygiene compliance (e.g., Wearing infrared (IR) badge with IR signal to measure performance)
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<thead>
<tr>
<th>Main Causes</th>
<th>Examples of Solutions</th>
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<tbody>
<tr>
<td>Ineffective placement of dispensers or sinks</td>
<td>Standardize dispensers, increase visibility &amp; place dispensers in workflow</td>
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<td>Hand hygiene compliance data not collected/reported accurately or frequently</td>
<td>Use of quality coaches for data collection</td>
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<td>Lack of accountability &amp; just-in-time coaching</td>
<td>Goal of 100% compliance is part of evaluations; leaders model behavior &amp; just-in-time coaching</td>
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<td>Safety culture does not stress hand hygiene at all levels</td>
<td>Clear policy stipulating number of incidents &amp; action to be taken</td>
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<td>Ineffective or insufficient education</td>
<td>Ongoing education, culture staff hands to show how long organisms survive</td>
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<td>Hands full</td>
<td>Shelves added to hold items, bundle of supplies in place for admissions</td>
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<td>Wearing gloves interferes with process</td>
<td>Changed order of process to “wash hands, gown and then put on gloves”</td>
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<td>Perception that hand hygiene is not needed if wearing gloves</td>
<td>Using Six Sigma, minimized number of times food and nutrition staff had to clean hands</td>
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<td>Health care workers forget</td>
<td>Visual reminders, changing signage frequently, red lines at threshold of rooms, involving patients/families</td>
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<td>Distractions</td>
<td>Visual cues, reminders on badges, positive feedback</td>
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Targeted Solutions Tool - Steps

1. Get started – Determine who will be on the team and understand stakeholders in the process
2. Train observers – Give them the tool to collect data and document contributing factors
3. Measure compliance – Collect and enter data
4. Determine factors - Get compliance, analysis, and means charts
5. Implement solutions by analyzing data to identify top 3 contributing factors – For each factor, TST provides implementation guidelines
6. Sustain gains – Rethink the data collection plan and continue to monitor the process