Helping to Solve Healthcare’s Most Critical Safety and Quality Problems

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Patients expect and deserve safe, high-quality healthcare that is free from preventable harmful events. In the United States, 247 people die every day as a result of a healthcare-associated infection. This is equivalent to a Boeing 767 aircraft crashing daily. Another staggering statistic is that nearly 100,000 people enter a hospital and die from an infection they acquired while receiving treatment of an unrelated condition. Studies have found that hand hygiene—the most basic, low-cost, and low-technology infection prevention and control strategy—is ignored by half of healthcare workers. It is estimated that at least one-third of healthcare-associated infections could be eradicated simply by following current guidelines and recommendations. So why is washing our hands an issue that still plagues healthcare? Why is this simple practice so hard to do consistently? Moreover, the media is critical of healthcare’s seeming inability to correct what appear to be “commonsense” avoidable patient care errors. The Joint Commission Center for Transforming Healthcare was established to help healthcare organizations overcome preventable harmful events and sustain improvements in patient care.

THE PROBLEM

Although there is considerable agreement among nurses and other healthcare providers on the importance of preventing healthcare-associated infections, as well as other problems such as wrong-site surgery and medication errors, there is a strong and growing demand for specific guidance on how to solve these perennial problems. Many healthcare organizations already devote sizable resources to this end, yet shortfalls in quality and safety persist. To reduce morbidity and mortality as well as meet The Joint Commission’s robust infection prevention and control requirements, healthcare organizations need highly effective, durable solutions that can be implemented in their unique patient care setting.

THE JOINT COMMISSION: LEADER IN HEALTHCARE SAFETY AND QUALITY

Historically, The Joint Commission has led the way nationally and internationally to identify and address the highest priority healthcare quality and safety problems. With
National Patient Safety Goals, core measures, and state-of-the-art accreditation standards, hospitals and other healthcare organizations know where they should be focusing their efforts to gain the greatest improvements in safety and quality. Specifically, The Joint Commission requires effective, robust, and data-driven hand-hygiene and infection-prevention and control programs. These requirements may be found in National Patient Safety Goal 7 and throughout the Infection Prevention and Control, Leadership, and Human Resources standards chapters.

Nurses have often been at the forefront of identifying patient safety challenges and sharing the frustrations that patients and consumers encounter. An era of transparency has begun to emerge, wherein some organizations discuss these serious errors openly, with the objective of improving our collective knowledge on how best to manage the consequences of these adverse events. But we must delve further and find the precise reasons and relevant solutions for how to prevent these events from ever happening. This is the premise behind healthcare becoming a “high-reliability” industry.

Thus, The Joint Commission believes that a new approach is required to achieve the magnitude and breadth of improvement sought by nurses, physicians, other clinicians, patients and their families, and public and private stakeholders such as the federal and state governments. Measurement is integral to formulating a successful approach to solving these healthcare problems.

Launching a new approach

Launched on September 10, 2009, The Joint Commission Center for Transforming Healthcare is a new component of The Joint Commission. The Center aims to help resolve some of the most critical safety and quality problems, such as healthcare-associated infections, hand-off communications, and wrong-site surgery. The Center’s participants—a number of leading hospitals and health systems in the United States—have agreed to work together with The Joint Commission to develop solutions to benefit all healthcare organizations. Lean Thinking, Six Sigma, and change management tools are standardized and used to analyze specific breakdowns in care, determine their underlying causes, develop targeted solutions, and test those solutions in real-life situations. Consistent with The Joint Commission’s objective to help transform healthcare into a high-reliability industry and sustain these key improvements in quality and safety, The Joint Commission will share these proven effective solutions with the more than 17,000 healthcare organizations it accredits and certifies. Hand-off communication is the next project the Center will tackle to improve patient safety and quality. In August 2009, The Joint Commission Center for Transforming Healthcare began work on its second improvement project: improving the quality of hand-off communications. The solutions for this project are targeted for publication in December 2010.

A case in point: Hand hygiene failures and solutions

The Center’s first project examined hand hygiene.8,9 Eight healthcare organizations volunteered to work together. These organizations had significant experience using the Robust Process Improvement™ tools of Lean Thinking, Six Sigma, and change management acceleration. Robust Process Improvement™ is The Joint Commission’s fact-based, systematic, and data-driven methodology, which is being deployed in the Center’s projects. Robust Process Improvement has been used internally throughout The Joint Commission to improve its own business processes and continuously increase the efficiency and effectiveness of its services.

Organizations participating in the hand-hygiene initiative were Cedars-Sinai Health System, Los Angeles, California; Exempla Lutheran Medical Center, Wheat Ridge, Colorado; Froedert Hospital, Milwaukee, Wisconsin; The Johns Hopkins Hospital and Health System, Baltimore, Maryland; Memorial Hermann Healthcare System, Houston, Texas; Trinity Health, Novi, Michigan; Virtua,
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Marlton, New Jersey; and Wake Forest University Baptist Medical Center, Winston-Salem, North Carolina. The leadership of nurses from these organizations played a critical role in the investigation and development of problems and solutions for the challenge of hand-hygiene compliance.

These organizations recognized quickly the enormity of hand-hygiene problems when they began to accurately and reliably measure hand-hygiene compliance. As many of us know, the project's initial work demonstrated that random observation was an unreliable measure of compliance; thus, it is believed that the high compliance rate that many hospitals report is probably not accurate. In aggregate, these 8 hospitals reported that staff clean their hands less than 50% of the time. These results astonished a number of the organizations' leaders.

After establishing this measurement baseline, the hospital-specific underlying causes of hand-hygiene failure were identified and analyzed. Causes of identified failures to clean hands included the following:

- ineffective placement of dispensers or sinks,
- hand-hygiene compliance data are not collected or reported accurately or frequently (lack of information and trending),
- lack of accountability and just-in-time coaching (lack of feedback),
- safety culture does not stress hand hygiene at all levels for all persons,
- ineffective or insufficient education (unclear how to wash and when),
- hands full with no place to put materials,
- wearing gloves interferes with process,
- perception that hand hygiene is not needed if wearing gloves,
- healthcare workers forget and no system of reminders exists, and
- distractions cause delay or forgetting.

The participating organizations rigorously tested solutions that target these specific causes of hand-hygiene failures. In spring of 2010, the Center is examining data to demonstrate whether the solutions can be sustained to achieve a compliance rate of more than 90%. Selected examples of how to link specific causes to their targeted solutions, as developed by the Center's participating hospitals, include the following:

**Cause:** Hand-hygiene compliance data are not collected or are reported inaccurately or infrequently.

**Solutions:**

- Use a sound measurement system to determine the real score in real time.
- Scrutinize and question the data.
- Measure the specific, high-impact causes of hand-hygiene failures in your facility and target solutions to those causes.

**Cause:** Safety culture does not stress hand hygiene at all levels for all persons.

**Solutions:**

- Make cleaning hands a habit—as automatic as looking both ways when crossing the street or fastening a seat belt when getting into your car.
- Commitment of leadership to achieve hand-hygiene compliance of more than 90%.
- Serve as a role model by practicing proper hand hygiene as a leader.
- Hold everyone accountable and responsible: physicians, nurses, food service staff, housekeepers, chaplains, technicians, and therapists.

**Cause:** Hands full with no place to put materials.

**Solution:** Create a place for everything: for example, a healthcare worker with full hands needs a dedicated space where he or she can place items while washing hands.

The Joint Commission has adopted the acronym HANDS (Habit, Active Feedback, No One Excused, Data Driven, Systems) for solutions that address multiple causes of hand-hygiene failures (Table 1).

**Implications for nurses**

The type and amount of contact that nurses have with their patients provides them with multiple opportunities to implement actions to reduce infections throughout their organizations. If these hand-hygiene specific causes...
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<tr>
<th>Habit</th>
<th>Always wash in and wash out upon entering/exiting a patient care area and before and after the patient care. Make washing hands a habit as automatic as looking both ways when crossing the street or fastening a seat belt when getting in your car.</th>
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<td>Active feedback</td>
<td>Coach and intervene to remind staff to wash hands. Clearly state expectations about when to sanitize hands to all staff members. Communicate frequently: provide visible reminders and ongoing coaching to reinforce effective hand hygiene expectations. Engage staff in real-time performance feedback. Tailor education in proper hand hygiene for specific disciplines. Provide just-in-time training. Use technology-based reminders and real-time feedback. Celebrate improved hand hygiene.</td>
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<td>No one excused</td>
<td>Protect the patient and the environment: everyone must wash in and wash out. Make it comfortable to wash hands with soap or use waterless hand sanitizer. Hold everyone accountable and responsible: physicians, nurses, food service staff, housekeepers, chaplains, technicians, and therapists. Apply progressive discipline from the top—managers must hold everyone accountable for proper hand washing. Commitment of leadership to achieve hand-hygiene compliance of more than 90%. Identify proper hand hygiene as an organizational priority. Serve as a role model by practicing proper hand hygiene.</td>
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<td>Data driven</td>
<td>Data provide a framework for a systematic approach for improvement. Use a sound measurement system to determine the real score in real time. Use trained, certified independent observers to monitor appropriateness of hand hygiene. Scrutinize and question the data. Measure the specific, high-impact causes of hand-hygiene failures in your facility and target solutions to those causes.</td>
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<td>Systems</td>
<td>Create a culture of safety so that it becomes uncomfortable to skip key safety steps. Focus on the system, not just on people. Make it easy; examine work flow of healthcare workers to ensure ease of washing hands. Provide easy access of hand hygiene equipment and dispensers. Create a place for everything: for example, a healthcare worker with full hands needs a dedicated space where he or she can place items while washing hands. Limit entries and exits from a patient’s room: make supplies available in room and eliminate false alarms that require staff to leave room to turn alarm off. Identify new technologies to make it easy for staff to remember to wash hands, for example, radio-frequency identification, automatic reminders, “real-time” scoring.</td>
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and associated solutions can be implemented by nurses, there is a tremendous opportunity to prevent healthcare-associated infections.

Of course, nurses are key leaders and stakeholders in all organizational efforts to improve care and must play a role both by being individually accountable and by creating a culture of safety. As change agents, nurse leaders can advocate at the policy level the development of a zero-tolerance policy for healthcare-associated infections, as well as implementation of evidence-based leading practices, to combat this problem. For example, nurses should feel comfortable reminding colleagues about hand hygiene and be confident in stopping procedures if appropriate policies and protocols are being violated.

CONCLUSION

The Joint Commission Center for Transforming Healthcare offers effective, systematic solutions to some of healthcare’s most challenging patient safety problems. The Center offers the unique advantage of combining the employment of process-improvement tools that provide a systematic approach to solving complex problems with the reach of The Joint Commission. Specifically, these tools guide improvement teams to examine why processes fail to achieve their desired results. It is this systematic search for causes of critical quality and safety problems and the assessment of the relative contribution of each cause that makes these improvements effective. Experience with the application of Robust Process Improvement tools in addressing healthcare’s most serious problems is consistent with that of other high-risk industries such as aviation and nuclear power.

The Center’s work to identify and measure causes of healthcare’s most challenging and complex problems will lead to the development and testing of targeted, long-lasting patient-safety solutions. These proven and practical strategies can help transform America’s healthcare into a high-reliability industry that supports patients in receiving safe, high quality care. Hand hygiene is an ongoing challenge to nurses and other healthcare leaders, and improvement of this basic infection-prevention and control activity is critical to reducing healthcare-associated infections, 1 of the 10 leading causes of death. By committing to improved hand hygiene at all levels of the organization, enabled by The Joint Commission’s dissemination of solutions, preventing healthcare-associated infections so that they are increasingly uncommon becomes a reality.

REFERENCES