



# Hospital Quality Institute Vanguard Award 2016

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**Title of Application:**

Building a Reliability Infrastructure Through a Hand Hygiene Compliance Program

**Topical Area of Focus:** Quality

**Brief statement by an executive leader in support of the application:**

“Becoming a highly reliable organization (HRO) requires: leadership commitment, substantial engagement of staff, physicians, and patients; excellent teamwork skills; continuous process improvement; meaningful measurement; and cultural transformation. Sharp HealthCare’s hand hygiene initiative encompasses all of these HRO elements. As a result, we have achieved not only excellent hand hygiene compliance rates but also have created new measurement systems, teamwork tools and patient engagement resources that can be translated to other performance improvement initiatives and shared with other healthcare systems. We are big believers in adopting external best practices so that we don’t waste resources recreating the wheel. The Joint Commission Targeted Solutions Tool for Hand Hygiene provided an excellent starting package and Sharp leaders then customized the program to integrate into our culture and motivate staff and physicians. Although the improvement work will never end, this initiative is helping us to provide The Sharp Experience and achieve our vision to be the best place to work, practice medicine, and receive care.

*Dan Gross, DNSc, RN, Executive Vice President, Sharp HealthCare*

## **I. Executive Summary**

Sharp HealthCare is the largest healthcare system in San Diego with over 2,087 licensed beds, approximately 83,000 discharges annually, 17,000 employees and 2,600 physicians. Sharp HealthCare's Hand Hygiene Compliance initiative started in 2014 with compliance rates in the 60 to 70 percent range and now we are achieving rates consistently above 90% for staff and above 82% for physicians. Our hospital-acquired infections are beginning to show the impact of this robust hand hygiene program.

The Joint Commission Targeted Solutions Tool (TST) was used as the performance improvement framework. The TST involves trained Secret Observers, Just-in-Time Coaches, online educational training for robust measurement, and action plan monitoring. Timely data enables managers to benchmark and evaluate their improvement efforts. Changes were made to the environment to best support the hand hygiene workflow. Sharp leaders went beyond the TST tools and created a patient engagement video called, 'It's OK to ask'. Physicians created their own videos at each Sharp entity. Visual or verbal cues were embedded into the culture. Each Sharp entity put their creative spin on the initiative and at Sharp Grossmont Hospital, for example, Hand Hygiene Superheroes were featured. Finally, patient stories are used to compel staff and physicians to have a reliability mindset towards infection prevention.

## **II. Background and relevance of the problem being addressed and effort undertaken**

In the 1840s, Semmelweis demonstrated the efficacy of hand hygiene in dramatically reducing maternal deaths in hospitals from puerperal fever.<sup>1</sup> Preventing hospital acquired infections requires a multi-pronged approach and hand hygiene compliance programs are foundational to these efforts yet messages about hand hygiene become stale and compliance declines without active management of the process and continuous feedback and motivation of staff and physicians. According to Chassin, et al., "hospitals have different sets of key causes of hand hygiene failure and a targeted approach may be more effective and more efficient than a one-size-fits-all improvement strategy"<sup>2</sup>. Key causes of hand hygiene compliance failure include: rushing, distractions, lack of accountability systems, poor environmental design that doesn't support the workflow, and finally, a lack of clear expectations when hand hygiene is warranted especially in regards to donning and doffing of gloves. Sharp CEOs committed to a renewed focus on hand hygiene in 2013 and a variety of tactics were considered including the use of technology to measure compliance. Although hand hygiene compliance technology is promising, Sharp executives understood the need to build the reliability infrastructure of the Just-in-Time coaches and the visual management tools for cross-monitoring. Therefore, the decision to use the TST was made. In the future, the technology solution may be the best plan but only after the foundational elements are established. Once the decision was made to go with the TST, then entity-based workgroups formed to discuss logistics. A Leader Implementation Tool Kit was made and all managers were required to participate.

## **III. Describe the effort, including the scope, process, strategies and tactics utilized, challenges encountered and how they were addressed.**


### **Project Scope**

- Every inpatient, outpatient and ambulatory department within Sharp HealthCare
- Every discipline and department that encounters patients

## Process, Strategies and Tactics Utilized

Using The Joint Commission (TJC) Center for Transforming Healthcare’s Targeted Solutions Tool (TST) for Hand Hygiene Program, teams were formed at each entity to develop and execute an implementation plan. Resources were provided centrally by Sharp’s Clinical Effectiveness Division and each entity was given the freedom to customize the program to fit their local culture. The following improvements were hardwired to address the various barriers to hand hygiene:

Barrier	Improvement
<p><b>Patients and families are reluctant to speak up</b></p>	<p>A Sharp HealthCare system-wide team received a grant from Carefusion to create a video that addresses the difficulty that patients and families have in speaking up to healthcare workers when they don’t see them clean their hands. Actual patients were interviewed and answered two questions: “Is it difficult to ask your care providers to clean their hands?” and “Would it be helpful if your care providers invited you to speak up by conveying to you that it’s okay to ask us to clean our hands. The following link is Sharp HealthCare’s ‘It’s OK to Ask’ video that was rated #3 on the Becker’s Hospital Review of the Ten Most Popular Hand Hygiene Stories of 2015. This video is shown during new employee orientation to all staff and physicians to set expectations that patient’s should be informed that ‘It’s OK to Ask’ if someone hasn’t cleaned their hands.</p> <p><a href="https://vimeo.com/127183717">https://vimeo.com/127183717</a>  <a href="http://www.beckershospitalreview.com/quality/10-most-popular-hand-hygiene-stories-of-2015.html">http://www.beckershospitalreview.com/quality/10-most-popular-hand-hygiene-stories-of-2015.html</a></p>
<p><b>Hand hygiene measurement creates the Hawthorne effect.</b></p>	<p>Traditional hand hygiene compliance measurement was performed by poorly trained individuals, had high variability and was considered a task to complete rather than an opportunity to engage and improve. Further, there was a lack of data aggregation. With TJC TST Hand Hygiene Program, there are two types of measurement roles: a) Secret Observers who simply track compliance of ‘wash in and wash out’ of patient rooms or areas and b) Just-in-Time Coaches who observe hand hygiene compliance and initiate a conversation in the spirit of humble curiosity to elicit information about barriers and solutions when a lack of compliance is observed.</p> <p>Sharp executives considered using technology to automate hand hygiene compliance measurement; however, creating the infrastructure for learning through observation and coaching was considered primary.</p>
<p><b>Safety culture doesn’t stress hand hygiene at all levels</b></p>	<p>Simply reminding people to clean their hands becomes a stale message so our hand hygiene compliance program included a variety of methods to resonate with a variety of individuals and includes data, stories, and fun campaigns.</p> <p>Monthly data is presented to leaders and action plans are required for less than 90% compliance.</p> <p>One of the most effective ways to alter the beliefs of our people is to tell stories. Patient stories such as the one below are shared at conferences or at the beginning of meetings. <i>“A physician had previously been a bit annoyed about our handwashing data and was starting to resent that people were watching his hand hygiene compliance. Then one day he went into a patient’s room and saw an elderly patient wedged between the toilet and the wall. The patient’s daughter and nurse were in the process of cleaning up a giant mess of diarrhea. He saw the look of suffering in everyone’s eyes, and all he could think</i></p>

	<p>was, 'We did this to him.' It was clearly hospital-onset <i>Clostridium difficile</i>. "Now when he washes his hands, he doesn't care if anyone is watching. What goes through his mind is, 'I don't want to hurt anyone.' These kinds of stories are how we can connect hearts, minds and habits of our staff and physicians.</p> <p>Lastly, fun campaigns are developed and implemented. For example, at Sharp Grossmont Hospital a comical Hand Hygiene Super Hero campaign, which features its nurses in Marvel-esque style posters using hand hygiene to battle germs. See the following link to 'Health System Management' article featuring Sharp: <a href="http://advanceweb.com/sharedResources/EBook/2016/July/HSM072216/index.html#/34/">http://advanceweb.com/sharedResources/EBook/2016/July/HSM072216/index.html#/34/</a></p> <p>Creative campaigns keep the message fun and fresh. When our own staff is featured in posters or videos, the message is more likely to be perceived as a personal passion of our own leaders and less like it's imposed by an outside agency.</p>
<p><b>Physician Engagement</b></p>	<p>Sharp HealthCare Chief Medical Officers (CMOs) were identified as physician hand hygiene champions. The CMOs knew that simply reminding physicians to clean their hands was not going to be sufficient so they enlisted the support of the Medical Executive Committees (MEC) and applied some creativity. Each hospital CMO created a short video using their own physician leaders as actors and spoke-persons to message the importance of hand hygiene. Additionally, the physician hand hygiene compliance rates are routinely provided at MEC meetings where specific improvement tactics are discussed. After seeing the monthly compliance data, physicians in many departments expressed the desire to be reminded in the moment.</p>
<p><b>Lack of just-in-time cross-monitoring</b></p>	<p>Healthcare is complex and workers are often rushed and distracted by multiple competing demands. In-the-moment feedback is challenging even for the most skilled communicators. Therefore, one department created a green badge card with shapes of hands imprinted on them. These badge cards are a form of visual management and provide nonverbal feedback to workers when they forget to clean their hands. This cross-monitoring teamwork tool was spread throughout Sharp.</p> 
<p><b>Sink and hand gel dispenser placement</b></p>	<p>A part of leader commitment to hand hygiene includes 'gemba walks' where leaders make rounds in their department and observe barriers to hand hygiene. As a result of these gemba rounds, leaders often discover that hand gel is not within the workflow of staff and physicians. So additional dispensers are added and in some departments were mounted to bedside tables and in other departments hand gel holsters are provided for staff to wear.</p>
<p><b>Hands are full when entering patient rooms</b></p>	<p>Another observation during gemba rounds was that staff often had their hands full of supplies, medications or linens and there was no place to set them down to perform hand hygiene. So in some units, we are redesigning the workspace to create a place to put down supplies near the door so hand hygiene can be completed with ease.</p>
<p><b>Gloves</b></p>	<p>One of the most common defects is the failure to perform hand hygiene before and after</p>

	glove application. Initially, the root cause of this defect was simple education but once the expectation is clear to staff and physicians, leaders had to make it easy to perform so in many units the location of hand gel was placed next to glove dispensers.
<b>Lack of education about the expectations of hand hygiene</b>	In order to set the expectations to all staff who come into contact with patients, a mandatory learning module was created and made available on Sharp's learning management system. This learning module reviews all 'Five Moments' of hand hygiene to reinforce the full expectation and clarifies that our measure of success is 'wash in and wash out'.

### Challenges Encountered and How They Were Addressed

Several challenges were encountered during the Hand Hygiene Initiative and are outlined below.

**Challenge #1:** Commitment of leaders at all levels

**How we addressed:** The Sharp HealthCare Accountability Team selected hand hygiene compliance as a key performance metric which includes leader financial incentives.

**Challenge #2:** Fear of speaking up to physicians when hand hygiene is not performed.

**How we addressed:** This remains one of the greatest challenges and very important in creating a reliability mindset. We continue to address this challenge in three approaches. First, we spread the message to physicians (and all staff) that when they are reminded to perform hand hygiene, the best response is to say "thank you". Second, we created scripting for staff that contained key words to use when approaching physicians about hand hygiene compliance. Lastly, the nonverbal cue using the hand hygiene badge card makes providing feedback in a non-threatening way.

**Challenge #3:** Clear expectations and measurement of contracted employees

**How we addressed:** Housekeepers and food service workers have frequent entry and exits to patient rooms that make 'wash in, wash out' hand hygiene compliance difficult. Setting clear expectations was critical and ensuring that all Secret Observers were clear was important. Additionally, the number of observations for contracted employees was often low making the data less meaningful. Therefore, the contracted leaders were trained and they added some of their staff to the pool of Secret Observers to ensure the expectations were clear and the number of observations were substantial.

**Challenge #4:** Secret observer inter-rater reliability

**How we addressed:** All Secret Observers are required to complete a two-hour online learning module with video vignettes and pass a post-test. Measurement accuracy and reliability is essential to the credibility of the data. One common concern is that health care workers were being marked as noncompliant incorrectly with the 'wash in' metric when sinks were located inside the patient's room. A clear message was sent to all secret observers that if there was any doubt about compliance then the observation was discarded.

**Challenge #5:** The Measurement burden of approximately 7000 observations per month.

**How we addressed:** We have over 500 Secret Observers trained throughout Sharp. This high number of observers helps to disperse the burden of measurement.

**Challenge #6:** Ensuring the Five Moments (before and after touching a patient, before a clean/aseptic procedure, after body fluid exposure risk and after touching patient surroundings) are still adhered to when the measure of success is 'wash in, wash out' of patients room/area.

**How we addressed:** Mandatory learning module education emphasizes all five moments and expectations are set to cross-monitor peers during any clean or sterile activities such catheter insertion, central line care, dressing changes, etc.

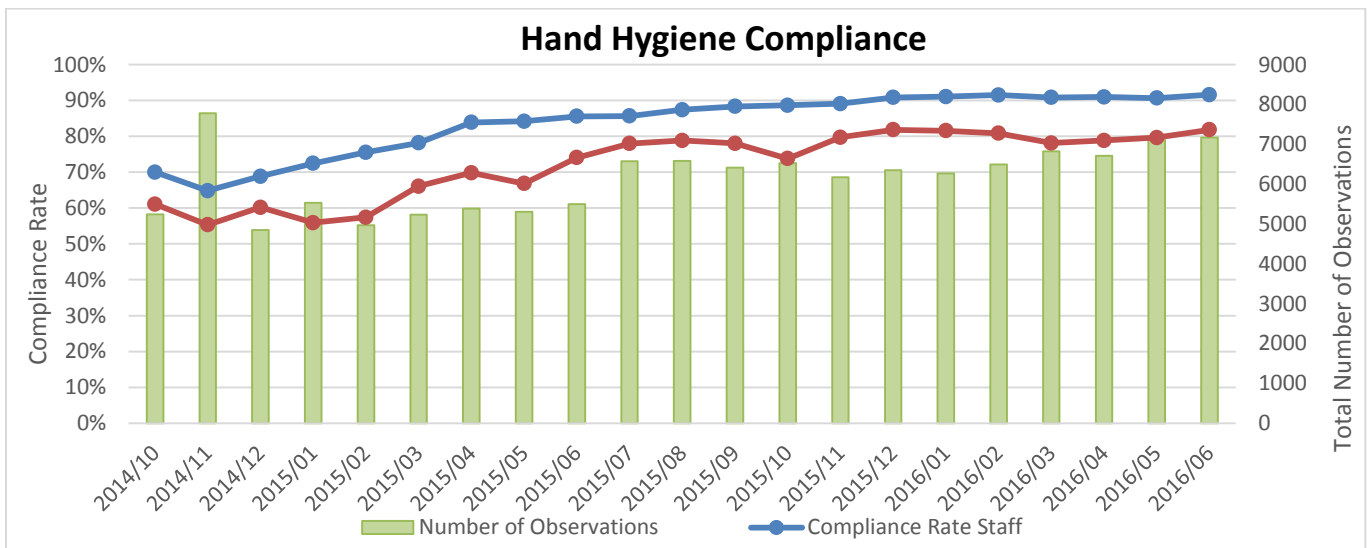
**Challenge #7:** Departments that do not have patient rooms made the ‘wash in, wash out’ challenging.

**How we addressed:** In areas that have curtains between patients, crossing the line of the curtain was considered the ‘threshold’ to the patient area. For patients who are moving about in an area such as behavioral health or rehabilitation unit, the immediate three-to-five foot circumference around the patient is considered the ‘threshold’ to the area. For these areas, using hand hygiene holsters are often convenient way to have ready access to hand gel.

**IV. Describe the results of the efforts.**

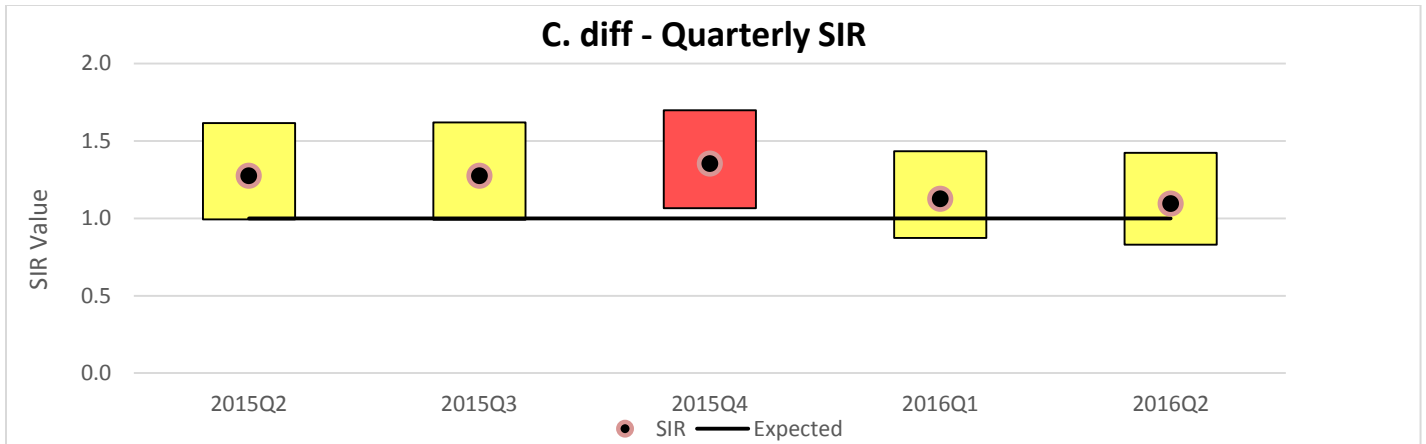
- Measure 1: Staff hand hygiene compliance**
- Measure 2: Physician hand hygiene compliance**
- Measure 3: Total observations**

The graph below shows the three key metrics from October, 2014 through June, 2016. The old adage, “we manage what we measure” rings true as the compliance increases as the number of observations increased.



**V. Discuss the significance of the results. How do the results demonstrate outstanding achievement?**

Although multiple factors contribute to the spread of infection, hand hygiene is fundamental to prevention and the ultimate measure of success is hospital acquired infections (HAI). Below are the results of Sharp HealthCare’s C-difficile SIR values:



Other benefits of this project have:

- Creation of Just-in-time Coaches and a cross-monitoring culture
- Culture of accountability
- Physician engagement in an important quality initiative

## VI. Describe sustainability and scaling of the achievements

The keys to sustained reliability include: a) is to keep the hand hygiene compliance metric as a key performance indicator with leader financial incentives attached to it, b) providing timely relevant data, c) removing barriers to lower the burden of compliance, and d) using patient stories to compel.

Now that we have broken the barrier of creating wide-spread Just-in-Time Coaches, the peer checking and coaching infrastructure can be spread to other reliability initiatives such as the use of team skills, rounding, mindfulness and general critical thinking activities.

## VII. Describe key lessons learned and any advice to colleagues who might try to undertake a similar effort.

### Lesson Learned #1:

Executive sponsorship at the highest level is critical to the success of engaging physicians and all staff in changing practice habits.

### Lesson Learned #2

The best way to understand and remove barriers is for leaders to “go to the gemba” and ask why in a respectful way.

### Lesson Learned #3

Compliance is directly related to two factors: 1) the burden of complying and 2) the belief that the effort of complying is value-added. Leaders must make it easy to comply rather than simply reminding and re-educating.

### Lesson Learned #4

Striking a balance between program standardization and customization is important not only to adoption but also on addressing unique failures present in each department. The key components that must be standardized include the compliance expectation education, measurement, and data presentation.

Components that allow customization are teamwork tools, campaign themes and local solutions. By allowing the customization of certain program elements, the local adoption improved.

**References:**

1. Pittet D, Boyce JM. Hand hygiene and patient care: Pursuing the Semmelweis legacy. *Lancet Infect Dis.* 2001;1(0):9–20
2. Chassin, M.R., Mayer, C., Nether K. Improving Hand Hygiene at Eight Hospitals in the United States by Targeting Specific Causes of Noncompliance. *The Joint Commission Journal on Quality and Patient Safety.* Jan. 2015; 41(1); pp. 4-12.