Executive Summary Checklist

In order to establish a program to improve hand hygiene and reduce healthcare-associated infections (HAIs), the following implementation plan will require actionable steps. The following checklist was adapted from the WHO Hand Hygiene Self-Assessment Framework.¹

- Commitment from Hospital governance and senior administrative leadership to address this major performance gap in their own organization by taking action.
- Mandate a hand hygiene protocol that is supported by hospital leadership,
- Continually monitor hand hygiene and post results - the goal is 100% compliance.
- System change to ensure that alcohol-based handrub is easily available, there is a continuous supply of clean running water and soap at each sink, and a budget to replenish alcohol-based hand rubs.
- Dedicated hand hygiene team dedicated to the promotion and implementation of optimal hand hygiene practice in the facility. Include patients and visitors in the overall plan.
- Mandatory training for all professional categories at commencement of employment, then ongoing regular training (at least annually)
  - Educational resources easily available to all health-care workers (ex: WHO Guidelines on Hand Hygiene in Health-care: A Summary)
  - System in place for training and validation of hand hygiene compliance observers.
  - Dedicated budget that allows for hand hygiene training
- Evaluation and Feedback
  - Ward infrastructure survey regarding availability of hand hygiene products and facilities performed annually.
  - Indirect monitoring of hand hygiene compliance through consumption of alcohol-based handrub and soap.
  - Direct monitoring of hand hygiene compliance through hand hygiene monitoring technologies.
  - Immediate feedback to healthcare workers at the end of each hand hygiene compliance observation session.
  - Systematic feedback of data related to hand hygiene indicators and trends given monthly, as well as every 6 months.
- Reminders in the workplace such as posters, brochures, leaflets, badges, stickers, etc.

The Performance Gap

Hand hygiene contributes significantly to keeping patients safe. While hand hygiene is not the only measure to counter HAI, compliance with it alone can dramatically enhance patient safety, because there is much scientific evidence showing that microbes causing HAI are most frequently spread between patients on the hands of healthcare workers. Many patients may carry microbes without any obvious signs or symptoms of an infection (colonized or sub clinically-infected). Microbes have an impressive ability to survive on the hands, sometimes for hours, if hands are not cleaned. This clearly reinforces the need for hand hygiene, irrespective of the type of patient being cared for.

Health-care facilities which readily embrace strategies for improving hand hygiene also prove more open to a closer scrutiny of their infection control practices in general. Therefore, the impact of focusing on hand hygiene can lead to an overall improvement in patient safety across an entire organization. The hands of staff can become contaminated even after seemingly ‘clean’ procedures such as taking a pulse, blood pressure, or touching a patient’s hand.²

Leadership Plan

- Hospital governance and senior administrative leadership must commit to becoming aware of this major performance gap in their own organization.
- Hospital governance, senior administrative leadership, and clinical/safety leadership must close their own performance gap by implementing a comprehensive approach.
- Healthcare leadership must reinforce their commitment by taking an active role in championing process improvement, giving their time, attention and focus, removing barriers, and providing necessary resources.
- Leadership must demonstrate their commitment and support by shaping a vision of the future, clearly defining goals, supporting staff as they work through improvement initiatives, measuring results, allocating resources, and communicating progress towards goals. Actions speak louder than words. As role models, leadership must ‘walk the walk’ as well as ‘talk the talk’ when it comes to supporting process improvement across an organization.
- There are many types of leaders within a healthcare organization and in order for process improvement to truly be successful, leadership commitment and action are required at all levels. The Board, the C-Suite, senior leadership, physicians, directors, managers, and unit leaders all have important roles and need to be engaged.

Practice Plan

Change management is a critical element that must be included to sustain any improvements. Recognizing the needs and ideas of the people who are part of the process—and who are charged with implementing and sustaining a new solution—is critical in building the acceptance and accountability for change. A technical solution without acceptance of the proposed changes will not succeed. Building a strategy for acceptance and accountability of a change initiative greatly increase the opportunity for success and sustainability of improvements. “Facilitating Change,” the change management model The Joint Commission developed, contains four key elements to consider when working through a change initiative to address HAIs (Appendix A).

Hand hygiene improvement is not amenable to a “one size fits all” approach. It involves a complex set of interactions that requires an approach focused on measurement and understanding of root causes. The Joint Commission Center for Transforming Healthcare Targeted Solutions Tool (TST) provides health care organizations this type of comprehensive approach and is proven to improve hand hygiene compliance.3

Technology Plan

The recommendations of specific technologies or products herein are those of the Patient Safety Movement Foundation and do not necessarily represent the opinions of the Joint Commission Center for Transforming Healthcare or its affiliates. The Joint Commission Center for Transforming Healthcare was not consulted on, nor did it participate in the decision or choice of any specific product or technology, and as a matter of policy the Joint Commission Center for Transforming Healthcare does not endorse any specific technologies, equipment, or other products.

There is emerging evidence that electronic hand hygiene compliance systems, when combined with appropriate staff feedback and multi modal action plans can lead to reduced infections and avoided costs. Visit http://www.ehcohealth.org/the-evidence/ for a list of scientific studies.

Essential Criteria to Consider

The system must be:

1. Capable of capturing 100% of all hand hygiene events (soap and sanitizer) electronically in real-time.
2. Capable of reporting Hand Hygiene Compliance (HHC) based on the WHO 5 Moments for Hand Hygiene at the Group, Unit, Ward or Department Level.4
3. Validated for accuracy in at least one peer reviewed study.5
4. Supported by scientific evidence of efficacy.
5. Supported with a behavior and culture change tool kit.

Consider an Electronic Monitoring System for Hand Hygiene Compliance to ensure an accurate and reliable data set from which real improvement can be driven, such as:

BioVigil: Biovigil Hand Hygiene Compliance & Surveillance System
DebMed: DebMed GMS (Group Monitoring System)
GOJO Industries: GOJO SMARTLINK Hand Hygiene Solutions
HandGieneCorp: HandGiene HHMS (Hand Hygiene Monitoring System)
Hyginex
Hill Rom
Hygreen
IntelligentM: IntelligentM Smartband System
Proventix: nGage
Stanley Healthcare: Hygiene compliance monitoring system
UltraClenz: Patient Safeguard System (PSS)
Versus: SafeHaven with Versus RTLS and Versus Advantages Hand Hygiene Safety (HHS) software
Metrics

Topic:

**Observed Hand Hygiene Compliance**

Compliance Rate of Hand Hygiene by Observation

**Outcome Measure Formula:**

Based on the “My five moments for hand hygiene” method. 6, 7Moments defined as:

1) before patient contact,
2) before aseptic task,
3) after body fluid exposure,
4) after patient contact and
5) after contacts with patient surroundings.

The formula can be used to calculate hand hygiene compliance during all 5 moments. Moments 1 and 4, before and after patient contact are key calculations.

**Numerator:** Number of hand hygiene actions performed

**Denominator:** Number of hand hygiene actions required (hand hygiene opportunities)

**Metric Recommendations:**

**Direct and Indirect Impact:**

All patients

**Lives Spared Harm:**

\[ \text{Lives} = \text{Compliance Rate(measurement)} - \text{Compliance Rate(baseline)} \times \text{Healthcare-associated Infection HAI Rate (baseline)} \]

**Notes:**

**Data Collection:**

Direct observation of hand hygiene practices in identified clinical settings with one (or two) trained and validated observers. Observers will watch healthcare workers’ hand hygiene practices at the point-of-care. The observer openly conducts observations but the identities of the healthcare workers are confidential. Based on WHO Guidelines on Hand Hygiene in Healthcare (2009) and “Save lives, Clean Your Hands” campaign.8

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Revision History

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<tr>
<td>Version 1</td>
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Appendix A

“Facilitating Change,” the change management model The Joint Commission developed, contains four key elements to consider when working through a change initiative to address HAIs.

Plan the Project:
- Build a strong foundation for change by assessing the culture for change, defining the change, building a strategy, engaging the right people, and painting a vision of the future. This should be done at the outset of the project.

Inspire People:
- Solicit support and active involvement in the plan to reduce HAIs, obtain buy-in and build accountability for the outcomes.
- Identify a leader for the HAI initiative. This is critical to the success of the project.
- Understand where resistance may come from.

Launch the Initiative:
- Align operations and ensure the organization has the capacity to change, not just the ability to change.
- Launch the HAI initiative with a clear champion and a clearly communicated vision by leadership.

Support the Change:
- The capacity to support change is critical; therefore, all leaders within the organization must be a visible part of the HAI initiative.
- Frequent communication regarding all aspects of the HAI initiative will enhance the initiative.
- Celebrate success as it relates to a reduction in HAIs or a positive change in HAI organizational culture.
- Identify resistance to the HAI initiative as soon as it occurs.
Appendix B

The Joint Commission Center for Transforming Healthcare Targeted Solutions Tool (TST)® helps organizations accurately measure their actual performance, identify their barriers to excellent performance, and direct them to proven solutions that are customized to address their particular barriers related to hand hygiene.

The TST includes the following steps:

- Define hand hygiene protocol
  - Who to follow hand hygiene:
    - All personnel and visitors in contact with or in the proximity of patients, including the patient.
  - When to follow hand hygiene:
    - Before patient contact, sterile procedures.
    - After body fluid exposure risk, patient contact, contact with patient surroundings.
  - How to follow hand hygiene:
    - Hand wash with soap and water or hand rub over all hand surfaces with alcohol-based formulation.
    - Hand rub/hand wash for at least 15 seconds.
    - Dry hands completely.
    - Do not touch potentially contaminated surfaces after hand washing procedure.

- Educate all staff on hand hygiene procedure and implications of non-compliance.
- Train observers and just in time (JIT) coaches.
- Measure current “baseline” adherence to hand hygiene protocol with observers who sample and record compliance within the hospital units.
  - Observers should be a role or individual that can maintain anonymity throughout the data collection process, be in a position where they can secretly observe staff while performing their regular job duties, not seem out of place during their time on the unit, and collect data that is representative of the patient population.
  - Twenty to thirty observations should be collected each day over a two to three-week period utilizing a standardized data collection form including observation number, date and time, staff role, entry or exit to patient room, hand hygiene - yes or no, observable contributing factor to non-compliance.

- Identify barriers to hand washing.
  - Qualitative input from secret observers as to observable contributing factors as to why hand hygiene protocol was not followed.
  - Direct interviews with noncompliant caregivers by just-in-time (JIT) coaches within the hospital units to identify non-observable factors as to why hand hygiene protocol was not followed.

- Collect data on barriers to hand washing and calculate the hospital (or unit) baseline compliance, top contributing factors to non-compliance at your hospital (or unit), and the compliance by role(s).

- Analyze the data to identify root causes of why non-compliance is occurring.
  - The top causes (or contributing factors) vary across units and hospitals, roles and shifts. Thus, it is crucial that data is first collected and analyzed to identify the factors which contribute to hand hygiene non-compliance in your area. In order to improve hand hygiene, it is essential that solutions targeting the specific causes are implemented.
  - Not all causes are applicable to your organization and often there are two or three major causes that need to be addressed.

- For instance, if the unit identifies that “improper use of gloves” is the top contributing cause of hand hygiene non-compliance, then the following targeted solutions can be implemented:
  - Detailed training for clinical staff on proper use of gloves.
  - Relocate glove dispensers.
  - Implement standard work process for hand washing between each patient room or patient care area when delivering food trays.
  - Implement standard work process for daily room cleaning and educate all housekeeping personnel.
● Another example of a contributing cause could be “frequent entry or exit.” If the unit finds that this is a top contributing cause through the use of the TST, then the following solutions can be implemented to improve hand hygiene:
  ○ Implement standard work process for hand washing after bringing mobile work machines (such as mobile vital signs devices) into the patient room or care area but before patient contact/interaction (such as taking patient’s vital signs).
  ○ Create a standard “drop spot” for meds and supplies within the patient room that enables nursing to set down meds and supplies and perform hand washing.
  ○ Implement computers and scanners at every bedside to reduce the likelihood of cross-contamination between patients when performing bar code medication administration.
  ○ Implement standard work process for room cleaning and educate all housekeeping staff.
  ○ Create and implement a list of supplies that will be kept within the patient care area.

● Measure progress and effectiveness of change.
  ○ Utilize the same data collection and analysis tools and process utilized to calculate baseline in order to measure progress and effectiveness.
  ○ Identify the changes from baseline performance for each unit, role, and shift, and identify the effectiveness of implemented solution, any barriers to effectiveness, and any additional solutions that need to be implemented.
  ○ Note: The TST includes data collection forms and provides analyses in the form of Pareto (and other) charts that allows your organization to track improvement versus baseline data, to observe HAI data in correlation to hand hygiene compliance rates, and to benchmark against national results.

● Implement a plan to ensure that gains are sustainable.
  ○ The plan should include the following action items:
    ■ Designate someone to “own” the process (for example, the dedicated leader or a unit manager). At least one aspect of their job function should specify that data continue to be collected, monitored and shared with healthcare personnel.
    ■ Replicate the findings to another area within your organization.
    ■ Continue real time data collection to improve data collection.
    ■ Train new hand hygiene observers and JIT coaches, once per year to ensure that observers receive updated training on an annual basis.
    ■ Update the plan whenever changes occur.
  ○ The plan should be completed with the process owner, which signals the transition of responsibility from the project leader.
  ○ The project leader will continue to ensure that data is collected, entered and shared with staff at a frequency determined by the group.