

relationship with pathogen transmission, specifically critical site contamination. Of all the 5 moments, this moment is most directly related to HAIs. Further research should investigate why moment 2 performance is so low.

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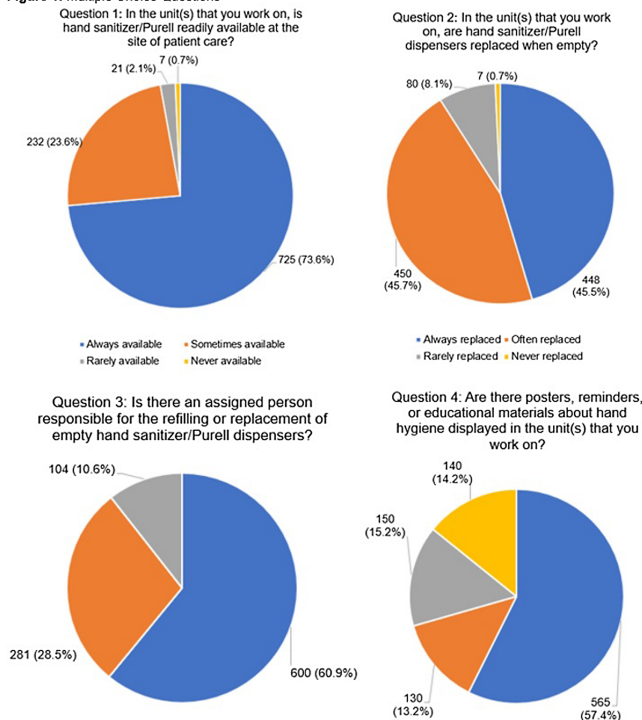
**Subject Category:** Hand Hygiene

**Staff Perspectives on Barriers & Facilitators to Meeting Hand Hygiene Goals in a Multicenter Academic Hospital System**

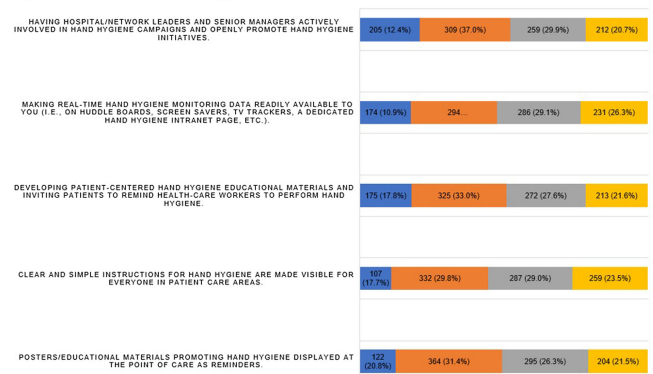
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**Background:** Proper hand hygiene is the most important practice to reduce the transmission of infections in healthcare settings. Despite this, healthcare institutions continue to struggle to achieve and maintain high rates of hand hygiene compliance among healthcare workers with some studies estimating national healthcare worker hand hygiene compliance to be approximately 50%. **Methods:** We conducted an anonymous one-time survey of our Lifespan Hospital System employees to evaluate barriers and facilitators to performing hand hygiene as well as interventions to improve hand hygiene compliance. The survey was designed with guidance from the Consolidated Framework for Implementation Research and input from Lifespan infection prevention staff. **Result:** Over four weeks 985 (6%) Lifespan employees completed the survey. Figure 1 shows the aggregate results of the first 4 survey questions which focused on hand hygiene infrastructure at Lifespan, including availability of sanitizer, staff to manage hand hygiene supplies, and educational materials/reminders. One significant finding was >70% of respondents reported that they either did not know if their unit/department has a person assigned to replace/monitor hand hygiene supplies, or if so, who that person is. We also asked

**Figure 1: Multiple Choice Questions**



**Figure 2: Perceived Effectiveness of Hand Hygiene Interventions**



employees to rate how effective different interventions would be at improving hand hygiene compliance. Figure 2 shows of five proposed interventions, three were rated as either “moderately effective” or “very effective” by >50% of respondents. These included displaying hand hygiene instructions, making hand hygiene data available to employees, and displaying materials/reminders promoting hand hygiene. There were also 977 free-text responses regarding “barriers or facilitators to proper hand hygiene”. Major barriers identified were a lack of staff to monitor and refill supplies, slow replacement of hand hygiene products, lack of sanitizer dispensers and sinks, inconsistency of sink location and dispenser placement, lack of hand hygiene reminders/educational materials, time constraints, skin irritation from sanitizer, and an inability to have dispensers in behavioral health units. Survey responses led us to enhance the following: educational materials and reminders in work areas; staff education; leadership involvement in hand hygiene initiatives; routine auditing and feedback; conveniently placed sanitizer dispensers and sinks at the point of care; and making hand hygiene compliance data readily available to staff. **Conclusion:** This survey identifies important barriers and facilitators to achieving high rates of hand hygiene compliance among healthcare workers and provides the basis for interventions aimed at improving hand hygiene compliance in a large multicenter academic hospital system.

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**Subject Category:** Hand Hygiene

**Improving Data Quality from a Hematology Unit Hand Hygiene Observation Program**

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**Background:** For United States healthcare programs to be fully compliant with Joint Commission National Patient Safety Goal (NPSG) #7, organizations must implement and maintain a hand hygiene (HH) program that follows either the current Centers for Disease Control and Prevention (CDC) or the current World Health Organization (WHO) HH guidelines. Joint Commission standard IC.03.01.01 requires these organizations to provide metrics that evaluate the effectiveness of their program and program goals. Our center utilizes the direct observation method with the use of over 550 Hand Hygiene Observers (HHO) to collect our HH compliance. HHO are trained with a computer-based course that requires passing a post-education test. During fiscal year 2023 (FY23), Infection Control

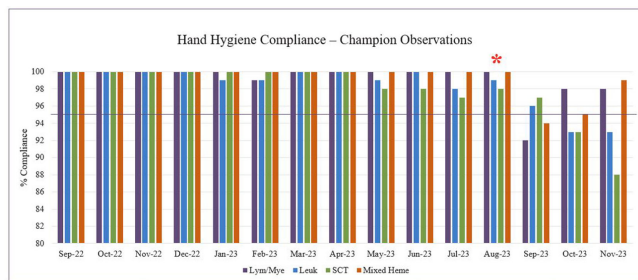


Figure 1. A comparison of hematologic malignancy unit Hand Hygiene Champion compliance observations before and after Infection Preventionist re-education.

surveillance noted an increase in hospital-acquired infections (HAI) Clostridioides difficile infections (CDI), catheter-associated urinary tract infections (CAUTI), and multidrug-resistant organisms (MDRO) on our hematologic malignancy units (HM), which initiated an Infection Control (IC) investigation into possible causes. Increased rounding by our Infection Preventionist (IP) observed that HH compliance was much lower than unit HHO reported rates. Inquiries into this data discrepancy revealed barriers to accurate reporting, including HHO having low confidence in identifying and reporting non-compliant behavior. To that end, we conducted mandatory re-training of all HM HHO with the primary goal of improving the quality of our HH compliance data and addressing barriers with non-compliance reporting. Our secondary goal was to identify areas of improvement in institutional HH rates. **Methods:** In August 2023, 252 HM staff and HHO received detailed, in-person retraining by the HM IP. Training included reviewing the discrepancy in HHO and IP observations, potential causes of discrepancy, most commonly missed HH opportunities, examples of correct and incorrect HH practices, and addressing staff questions. **Results:** Following mandatory re-training of HM HHO, HH compliance for our HM units from September 2023 – December 2023 ranged from 89% to 98%, with increased reporting of non-compliance (Figure 1). A detailed dashboard was created that focused on HM HH compliance, containing the HHO observations and non-compliant reports. **Conclusion:** A one-time in-person retraining of HM HHO by our IP has led to an improvement in data quality, which is imperative for future quality improvement initiatives. Improving our HH data quality allowed IC to identify and provide actionable feedback to HM leaders, create targeted interventions to improve HAI rates, and improve patient safety. Future goals include retaining of all HHO and a HH campaign to ensure patient safety across our institution.

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**Subject Category:** Hand Hygiene

**Assessing the quality of Hand Hygiene data produced by Alberta Health Services using a time-in-motion study**

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**Background:** Alberta Health Services (AHS) measures hand hygiene compliance through direct observations performed by trained site-based reviewers (SBRs) and facilitated by the Infection Prevention and Control (IPC) program. Within AHS there are >100 acute care facilities, ranging in bed size from four beds to more than 1,000, with catchment populations ranging from one million. A time-in-motion study using trained AHS IPC staff was proposed to validate the completeness and accuracy of data being collected by the SBRs. **Methods:** The AHS IPC staff

performed direct observations at pre-selected facilities across all five zones and four different unit types (emergency, medical, surgical, and intensive care) for four 30-minute periods during weekdays between June and September 2023. An iPad app was used to capture results from all four moments of hand hygiene. The reviewer indicated the day and time of the review and captured as many representative hand hygiene moments and healthcare providers as possible. The distributions of the four moments of hand hygiene, healthcare provider group and overall compliance were compared at the unit type and facility level (tertiary, large urban, regional, pediatric, and small sites) between this time-in-motion study and SBR data collected June-September 2023. **Results:** The study collected 175 reviews and 4,683 observations from 14 facilities and 48 units. Between June and September 2023, SBRs collected 2,625 reviews and 61,506 observations from these same facility and unit types. Across all facility and unit types, the distribution of the four moments was similar between the study and SBRs. Similar proportions of healthcare providers were also observed. However, the overall hand hygiene compliance collected in the study was approximately 10% lower across all unit types as compared to that collected by the SBRs (study: 63%-84%; SBRs: 75%-92%). **Conclusions:** In public health surveillance, completeness and accuracy are two characteristics of high-quality data. A time-in-motion study identified that the hand hygiene observations collected by SBRs were complete, as the range of healthcare providers observed, and the distribution of their moments, mirrored that collected in the study. However, the SBRs reported higher compliance than the study participants and the true hand hygiene compliance is likely lower than what is currently being reported. Since this difference was seen consistently across all unit and facility types, trending data over time should still identify areas in need of improvement and may help to suggest causes of the over-reporting.

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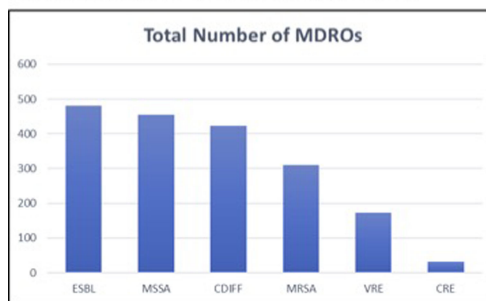
**Subject Category:** Hand Hygiene

**Relationship between Hand Hygiene and MDRO Acquisition after Implementation of an Electronic Hand Hygiene Monitoring System**

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**Background:** Hand hygiene (HH) is fundamental to preventing the transmission of pathogens between patients. Unfortunately, adherence to HH is suboptimal and monitoring adherence is challenging. Electronic HH monitoring systems (EHHMS) are emerging potential solutions to increase the number of HH observations and eliminate the potential for observation

Figure 1. Total number of MDROs, January 2021 – September 2022



Abbreviations: ESBL, extended-spectrum beta-lactamase producing Enterobacterales; MSSA, methicillin-susceptible *Staphylococcus aureus*; CDIFF, *Clostridioides difficile*; MRSA, methicillin-resistant *Staphylococcus aureus*; VRE, vancomycin-resistant enterococci; CRE, carbapenem-resistant Enterobacterales