

**1190. Hygiene of the Hands 90/90: A Program of Continuous Improvement for the Compliance of the Hygiene of the Hands**

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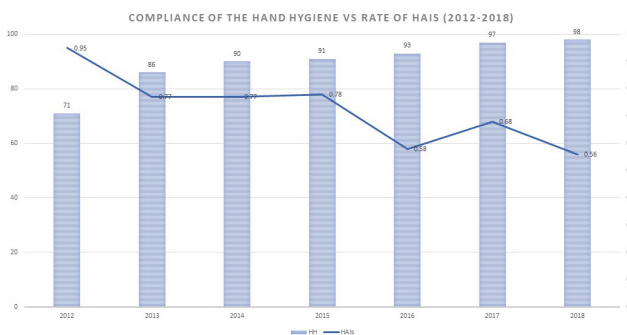
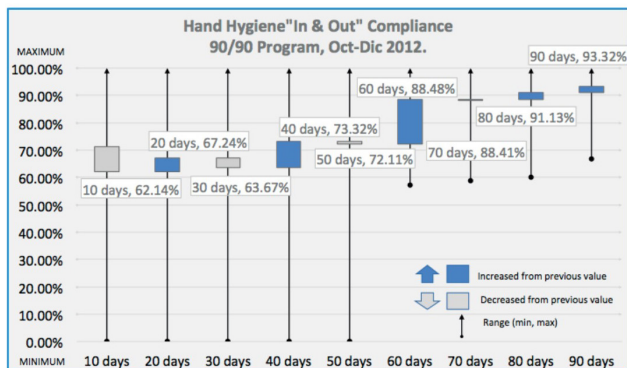
**Session:** 144. HAI: Hand Hygiene and Transmission - Based Precautions  
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**Background.** Healthcare-associated infections (HAIs) are associated with high rates of morbidity and mortality, which translates into an increase in the days of hospitalization and costs of care. The research of hand hygiene in health workers demonstrate that this action decreases the spread of pathogens; however, the compliance of hand hygiene remains low among health workers. Hand hygiene is a cheap method to prevent infections. It has been estimated that the total cost of hand hygiene promotion represents <1% of the costs associated with the HAIs. Our goal is to strengthen the culture of hand hygiene (In and Out) in all health professionals in a period of 90 days, achieving a 90% compliance.

**Methods.** The ABC Medical Center is a high specialty hospital, on average it has 465 beds. The program led by the Epidemiology Unit was formed by a multidisciplinary team with the patriation of leaders of different areas (Epidemiology, Nursing, Physicians, Human resources, Quality and Teaching). We used the "WHO Guidelines on Hand Hygiene in Health Care" consisting of: (1) system change, (2) training for employees, (3) evaluation and feedback, (4) a reminder at the workplace, (5) institutional security climate, (6) monitoring of the compliance to hand hygiene: The monitoring of the evaluation personnel was carried out in two stages, when entering and leaving the patient's room.

**Results.** A total of 9,732 observations were made, of which 55.32% went to the nursing staff, 22.80% to doctors and 21.87% to the hospital staff. The compliance of the hand hygiene at the beginning of the program was 70%, by the end the 91% was reached. Sustainability has been maintained through continuous campaigns of the importance of hand hygiene reaching a 98% adherence to hands hygiene in 2018. The behavior of HAIs is notorious since at the beginning of the program there was a rate of 0.95 and by 2018, with the increase in compliance to hand hygiene, it decreased to 0.56.

**Conclusion.** The 90/90 Hand Hygiene program is a pioneer in its modality for the implementation of the program in a short period of time and excellence in its scope. It is confirmed that leadership is essential and strategic to ensure quality and safety in patient care. Through the incentive to the staff a clear sense of participation and belonging to the institution is achieved



**Disclosures.** All authors: No reported disclosures.

**1191. Hand Hygiene Education: Why Is It so Critical to Tissue Banking?**

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**Background.** In the United States, the most commonly transplanted tissues are bones, tendons, skin, heart valves, vessels and corneas. Over two million tissue grafts are distributed each year. Efforts to advance tissue transplant safety are less defined

compared with organ transplant, and continuously being improved and regulated by national agencies. Environmental contamination, postmortem translocation of microorganisms, cross-contamination, and tissue processing are critical components which can be prevented with hand hygiene education thus preventing the transmission of infectious diseases. Microorganisms from technicians' skin can potentially result in infection and nontransplantable tissue. This is particularly true of regenerative tissue, such as Vivigen, that undergo no sterilization process.

**Methods.** A review was done of all 2018 Vivigen culture with these organisms: *Bacillus*, *Cornebacterium*, *Diphtheroids*, *Propionibacterium*, *Staphylococcus Coagulase negative*, and *Streptococcus viridians* defined as Category 1.

**Results.** In 2018, 384 out of 1418 Vivigen donors were discarded due to positive cultures. Of the 384, 190 were due to the presence of a Cat. 1 microorganism in post-processing cultures, for a discard rate of 17.6%. In these donors, pre-processing cultures were initially negative, thus indicating contamination was due to technician contamination. In the first quarter of 2019, and since implementation of Hand Hygiene education, we have already start to see a decline in acquisition of Cat 1 organism for a total reduction of 6% from Q1 of 2018 compared with 2019.

**Conclusion.** Tissue banking is a complex process of many steps to assure quality and safety of the tissue. Contamination is critical even when the microorganisms are considered low-virulent skin flora (i.e., Cat 1). This is especially important if these Cat 1 organisms are found in Post-processing cultures of grafts not terminally irradiated or sterilized. Implementation of proper hand hygiene education and aseptic techniques among tissue recovery and processing staff can significantly reduce the bioburden. Furthermore, a reduction in bioburden equates to higher likelihood in honoring the gift of donation in this selfless act of the donor and their loved one while also decreasing the financial loss due to culture results.

**Disclosures.** All authors: No reported disclosures.

**1192. A Visual Family Empowerment Tool Is Associated with Increased Healthcare Worker Hand Hygiene in a Pediatric Intensive Care Unit in Vietnam**

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**Background.** Hand hygiene (HH) is the most effective way to prevent healthcare-associated infections. The World Health Organization (WHO) recommends empowering patients and families to remind healthcare workers (HCWs) to perform HH. The effectiveness of patient and family empowerment tools in Southeast Asia is unknown.

**Methods.** We performed a prospective intervention study in an intensive care unit of a pediatric referral hospital in Vietnam. Using family and HCW input, we created a visual tool for families to use to remind HCWs to perform HH. For 2 weeks pre-intervention, we collected baseline data on HH performance, method (hand rub or soap and water), adequacy, HCW type (e.g., physician, nurse), and WHO 5 moments of HH using direct, unobtrusive observation. During a subsequent 3-week intervention period, consenting families were provided the visual tool and educated on its use to prompt HCW HH. Prospective collection of outcome data continued during the intervention period. The primary outcome was change in HCW HH between baseline and intervention periods. Multivariable logistic regression models were used to identify independent predictors of HH.

**Results.** A total of 2,014 pre-intervention and 2,498 intervention period HH opportunities were observed. During the intervention period, 73 families received visual reminder tools and education. Overall HCW HH was 46% pre-intervention, which increased to 73% in the intervention period ( $P < 0.001$ ). Lowest HH adherence in both periods occurred after HCW contact with patient surroundings (WHO Moment 5; 16% pre-intervention and 24% intervention). In multivariable analyses, the odds of HCW HH during the intervention period were significantly higher than pre-intervention (OR 2.94 [95% CI 2.54 - 3.41],  $P < 0.001$ ) after adjusting for observation room, HCW type, time of observation (weekday business hours vs. evening/weekend), and HH moment. Among completed HH opportunities, HH adequacy was >90% in both periods.

**Conclusion.** Introduction of a visual empowerment tool was associated with significant improvement in HH adherence among HCWs in a Vietnamese pediatric intensive care unit. More research is needed to explore acceptability and barriers to the use of such tools in other low- and middle-income settings.

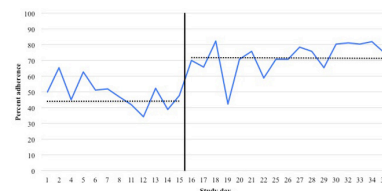


Figure 1. Healthcare worker hand hygiene in baseline and intervention periods. Dashed lines represent mean hand hygiene in pre-intervention and intervention periods (46% vs 73%, respectively, chi-squared  $P < 0.001$ ). The solid line refers to the beginning of the intervention period.

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