

## [OS1-82] Improving Hand Hygiene Compliance in the Perioperative Setting

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**Background:** The importance of hand hygiene and its role in the transmission of infections was first demonstrated by Semmelweis in 1847 when he showed a decrease in postpartum mortality with the use of hand hygiene among healthcare providers(1). Despite this, hand hygiene compliance in general has been poor (2). Studies have shown that increasing awareness and education can increase compliance (3). Our study investigated whether increasing hand hygiene awareness in the perioperative setting, by placing signs promoting hand hygiene, will increase hand hygiene compliance.

**Methods:** After obtaining IRB approval,we observed 250 occurrences of operating room personnel entering and exiting the OR and documented their hand hygiene compliance as defined as the use of alcohol based hand sanitizer or washing hands with soap and water before entering or after exiting the operating room. The personnel was classified into three categories: Physician, Student, Other.

In the second phase signs were placed at OR entrances and exits promoting proper hand hygiene. We again observed 250 occurrences of OR personnel entering and exiting and documented their hand hygiene compliance.

**Results:**The data prior to the intervention demonstrated a compliance rate for the different groups from 0% - 26% with and overall compliance rate of 14% and the MD group being the most compliant and the student group the least compliant. After the intervention the compliance of all groups increased significantly to an overall rate of 40%, ranging from 0% for exiting student group to 55% for the exiting physicians.

**Data-Summary**

**Conclusion:** Our study showed a very poor hand hygiene compliance that improved significantly after our intervention. It demonstrated that a simple intervention like posting a sign can, at least in the short term improve compliance rates. We are planning conduct a follow up study to see if the improvement was only temporary and if hand hygiene compliance can be improved even more with a second intervention. A short coming of our study was the position of the observer in the hallway, which may have left individuals that cleaned their hand in the OR prior to exiting unaccounted. It may have falsely improved hand hygiene rates by raising the awareness of individuals entering and exiting.

Overall, our study demonstrated the continued need for improvement in the area of hand hygiene compliance.

**References:**

1. Semmelweis I. The etiology, concept and prophylaxis of childhood fever.
  2. Boyce and Pittet. Hand hygiene during patient care: pursuing the Semmelweis legacy. *Lancet Infect Dis* 2001; April:9-20
  3. Won et al. Handwashing program for the prevention of nosocomial infections in a neonatal intensive care unit. *Infect Control Hosp Epidemiol* 2004; 25:742-746.
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