Improving Hand Hygiene Practice through Utilization of Automated Hand Hygiene Monitoring and Feedback Technology

Candie B. Northey, RN, BSN, CIC, Patient Safety Officer, National Division, LifePoint Hospitals
Andalusia Regional Hospital, Andalusia, Alabama

Background:

Healthcare regulatory agencies identify effective hand hygiene as the single most important way to reduce infection risk, yet high levels of sustained hand hygiene compliance remain elusive in healthcare facilities. A 2010 Infection Control and Hospital Epidemiology study systematically reviewed 96 empirical studies on hand hygiene adherence and found the median for hand hygiene compliance was found to be only 40%, with 72% of the studies reporting compliance rates of 50% or less[1]. This study describes the use of an automated hand hygiene monitoring to improve hand hygiene performance and positively affect patient perception of caregiver behavior.

Methods:

Researchers conducted a prospective case study of the effects of electronic surveillance technology on hand hygiene activity using soap and sanitizer dispenser counts and patient satisfaction survey results. The hand hygiene monitoring technology consisted of a wireless network, active communication display units adjacent to dispensers, radio frequency identification (RFID) tags, and existing sanitizer and soap dispensers. Personal RFID tags worn by healthcare workers were used to measure the number of times caregivers engaged in hand hygiene activities. The system recognized the healthcare worker in the patient room, the time spent in the room, hand hygiene solution dispenses and whether soap or sanitizer was used. Patient perception of hand hygiene activity associated with use of this system was measured by the frequency of the patient response of "always" on the patient satisfaction survey tool question, "How often did the patient care staff wash their hands or use an alcohol hand rub before providing patient care?"

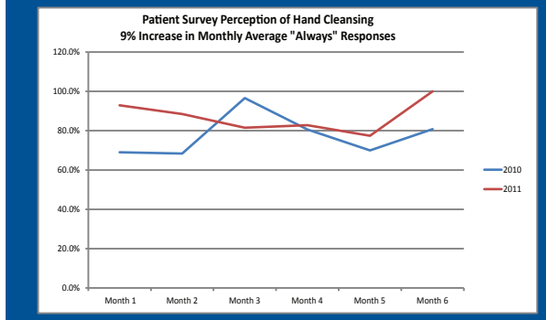
Results:

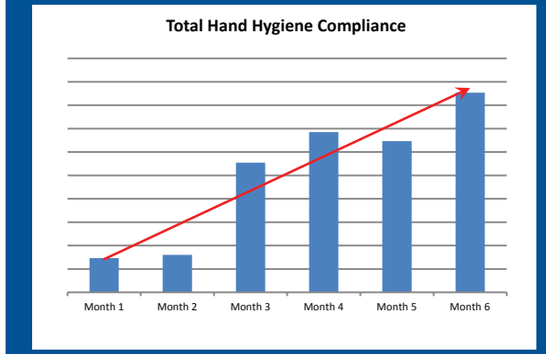
At the end of the six month data collection period, researchers noted an 82.6% increase in both soap and alcohol based hand sanitizer dispenses when stratified by admission. Patient satisfaction survey results where the patient responded "always" increased by 9% overall.

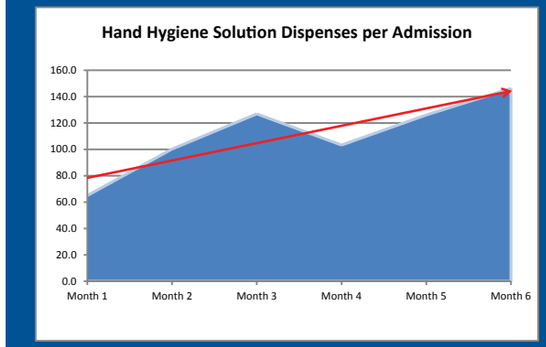
Conclusion:

The implementation of an electronic hand hygiene monitoring device resulted in an increase in hand hygiene compliance and soap and sanitizer usage. This confirms numerous studies that indicate that while hand hygiene education is important, compliance improves to a greater degree when personnel are monitored.

1. Erasmus V, Daha TJ, Brug H, et al. Systematic review of studies on compliance with hand hygiene guidelines in hospital care. Infect Cont Hosp Ep. 2010; 31(3): 283-294.







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Nothing to disclose.