Inter-rater Reliability of Hand Hygiene Observers with an Electronic Monitoring System

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INTRODUCTION

- Traditionally, hand hygiene (HH) has been monitored through self-reporting and direct (secret) observations
  - Limited utility as observers are limited
- There is increasing interest in automated monitoring of HH though systems are expensive.
- There can be radiofrequency interference with the Bluetooth technology syncing the system
- Evaluated the performance of the system with observations of HH, correlate with the technology.

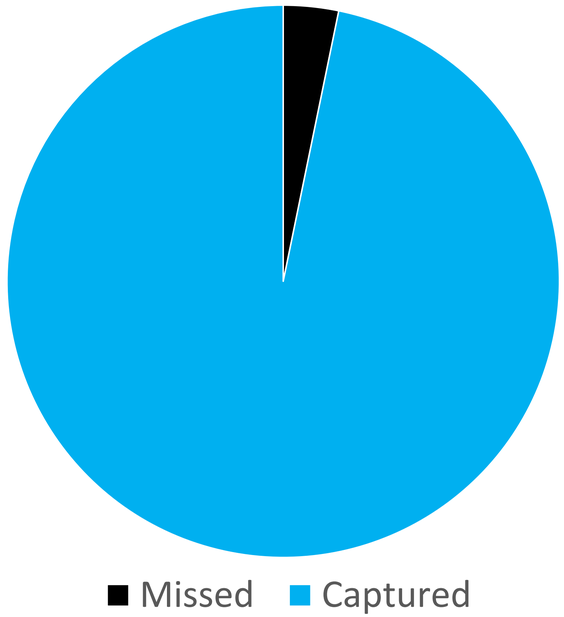
METHODS

- 865-bed tertiary care academic medical center in Richmond, VA.
- We implemented a wireless hand hygiene ECMS
  - Sensors: soap/sanitizer dispensers and beds
  - Badges: all employees with patient contact
- Trained HH observer in the patient environment
- Observed HH moments
  - Record time, employee name
- Review HH technology database for correlation

RESULTS

- Of 31 witnessed and recorded manually hand hygiene observations, 30 were also noted in the electronic system (96.7% correspondence).
- Noted that the electronic system recorded a hand hygiene event when the dispenser was out of sanitizer
- System also noted four events in quick succession if the dispenser was pushed four times

Figure 1. HH Opportunities



DISCUSSION

- There is excellent correspondence between the manual observations and the HH technology.
- As shown, there is significant limitation in what an observer can do, while the hand hygiene technology will average around 35,000 ‘observations’ on a daily basis
- Major barriers are inherent in the human factors involved in the technology: getting employees to wear the technology.
  - We performed significantly more observations, however when returning to the technology’s dashboard, found employees who had not been wearing their badges.