Setting a High Bar: Increasing Hand Hygiene Compliance Rate using an Automated Hand Hygiene Monitoring Technology

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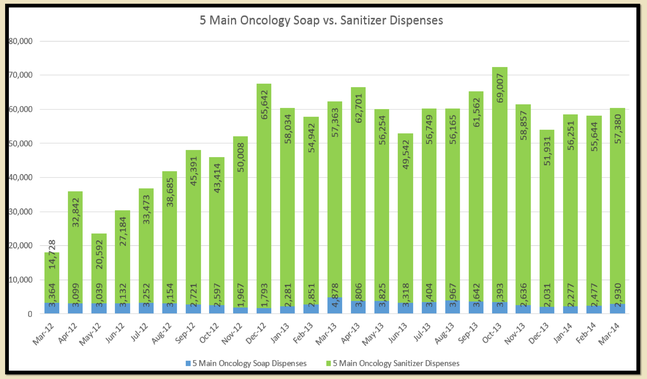
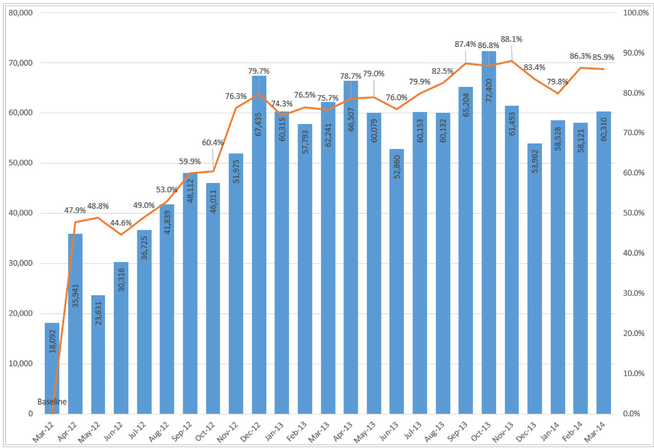
Background

A 20-bed Oncology unit within a 254-bed medical center sought a method to improve and sustain hand hygiene compliance. With executive support and involvement, they implemented a permanent, real-time technology solution to generate meaningful data and encourage long-term change in caregiver hand hygiene habits. In a 21-month effort, they combined an automated radio-frequency identification technology with education, performance feedback, guideline reinforcement and individual accountability to significantly improve hand hygiene compliance.





Methods

Utilizing the RFID technology from Proventix Systems, Inc., the team monitored 43 soap and sanitizer dispensers, and 60 caregivers including physicians, nurses, patient care technicians and support staff. The team began compiling hand hygiene dispensing and compliance data in March 2012 and April 2012 respectively. Through November 2013, they monitored 83,582 hours of caregiver activity, 382,850 patient-caregiver interactions and 1,079,254 hand cleansings. Clinical leaders set a 90% compliance goal and initiated a performance feedback and accountability campaign tying the goal to job descriptions. Based on five years of HAI data, there were significant C.*difficile* reductions after the implementation of technology and data driven staff accountability.

Results

Comparing baseline months to November 2013, the unit experienced a 239.9% increase in total hand hygiene solution dispenses, including a 299.6% increase in sanitizer use. Aggregate hand hygiene compliance increased 84.0% with statistically significant individual compliance increases (paired Student's t-test, $t = -9.43$ (22), $p < .0005$). The use of comprehensive and caregiver specific hand hygiene compliance rates helped engage staff and maintain hand hygiene performance for the last twelve months. The team achieved compliance greater than 90% and continues to strive for a full calendar month above their goal. The unit noted significant reductions in C.*difficile* HAI after implementing these improvement initiatives.

Conclusions

Seeking to be better stewards, educators and advocates for their patients, this organization focused on improving the delivery of quality care through a combined effort of information technology, leadership, accountability and education. Clear performance expectations, comprehensive and consistent feedback with positive messaging and reinforcement have effectively motivated healthcare workers to increase hand hygiene dispensing and compliance. These increases have contributed to improved overall patient and caregiver safety and a reduction in HAIs.

Nothing to disclose