Success with Technology to Increase Hand Hygiene Compliance
Joan E. Wofford; DNP, CRNP, ACNP-BC, Coordinator Cardiac Service Line

Issue: Hand hygiene is widely accepted as the most effective means of reducing healthcare associated infection (HAI) occurrence; yet, most studies show hand hygiene compliance rates for healthcare workers (HCW) are below 50%. This hospital understood the need for improved hand hygiene compliance to improve patient safety and quality.

Project: This 881-bed hospital installed the Proventix nGage™ wireless hand hygiene technology in a 25-bed medical-surgical unit. The study measured hand hygiene solution dispensing, hand hygiene compliance, and HAI rates from December 2011 through January 2013 and included:
- 41 alcohol based hand rub (sanitizer) dispensers
- 9 soap dispensers
- 60 employees including Registered Nurses, Patient Care Technicians, Nurse Practitioners, Ancillary Technicians, Clinical Instructors, and Executive Staff

Financial Results: An electronic proxy for healthcare associated infection called the Nosocomial Infection Marker® (NIM-Carefusion) was reduced by 18.8%, resulting in a direct cost savings of $112,472, and 97.44 days length of stay avoided.

Lessons Learned: The hospital’s initial improvements after implementation of the electronic hand hygiene monitoring system were further improved with increased leadership involvement, clear goal-setting, and the initiation of caregiver education, communication, and an incentive program. The combination of these elements increased hand hygiene performance and resulted in improved clinical and financial outcomes.

Leadership Intervention: Leadership increased their involvement in August 2012 to include:
- Employees, patients, and visitors were educated about the importance of hand hygiene compliance
- Caregiver communications included an employee accountability campaign with:
  - Open posting of individual compliance rates weekly
  - A five-team inter-unit competition
  - Goal setting with 80% compliance as a minimum
  - Consultation with individual non-compliance
  - Reward top performers with an incentive plan approved by senior leaders

Results after Leadership Intervention:
- 173.6% increase in hand hygiene solution dispensing
- 236.7% improvement in hand hygiene compliance

Initial Results:
- Total hand hygiene solution dispensing increased 48.7%
- Hand hygiene compliance increased 40.7% to an average rate of 37.2%