

Impact of an Automated Hand Hygiene Monitoring Technology on Hand Hygiene Compliance and Infection Rates

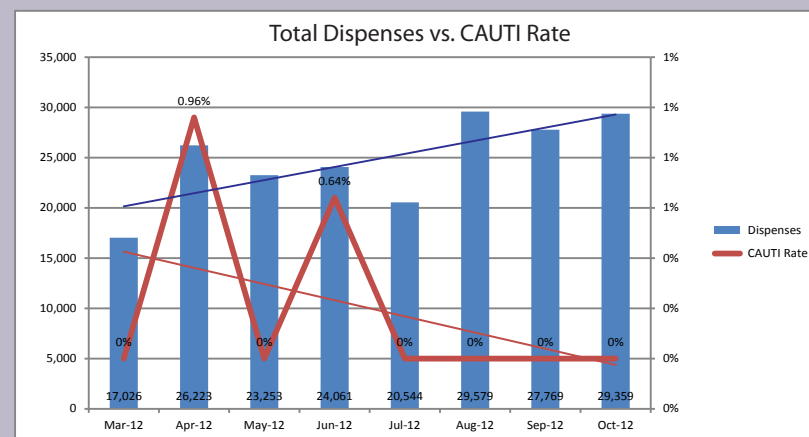
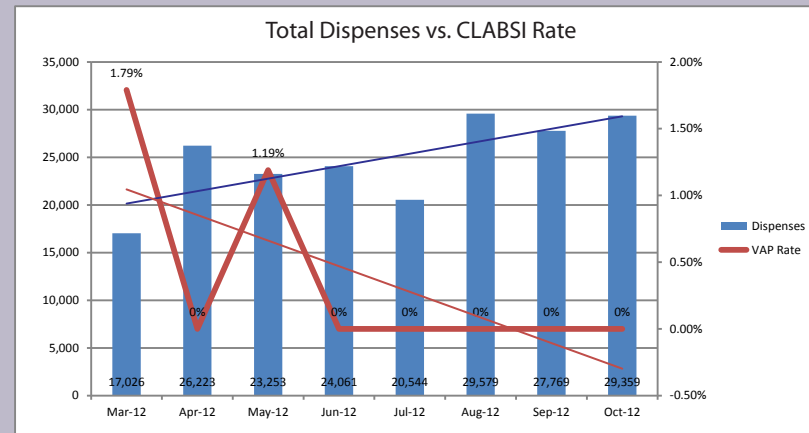
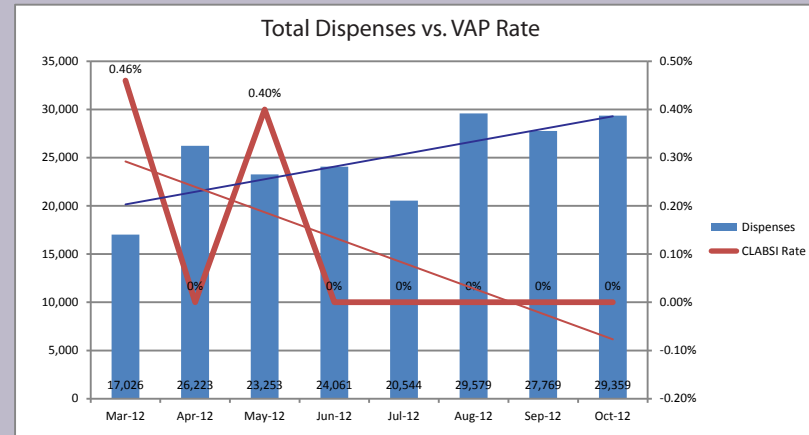
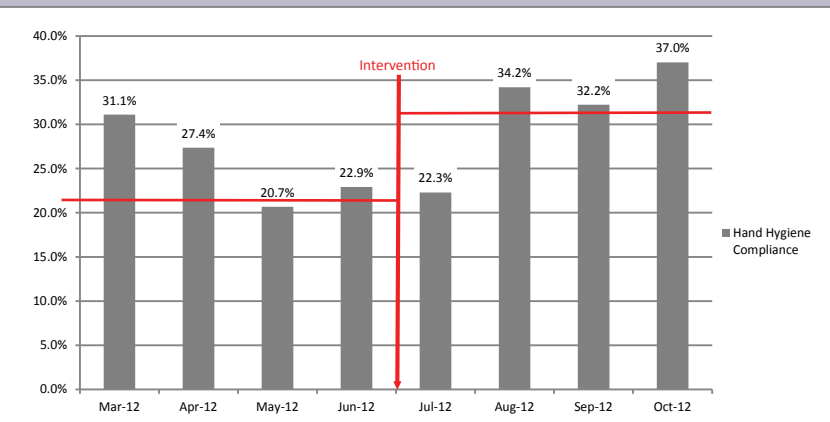
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Issue

Faced with the challenges of improving and sustaining hand hygiene compliance through conventional means, increasing regulatory requirements and a desire to improve patient safety, Baptist Memorial Hospital Memphis, TN made the decision to evaluate an automated hand hygiene monitoring system. Improvements in aggregate and individual hand hygiene rates were achieved when the technology received clear executive support, visible leadership involvement, goal setting and a caregiver awareness/engagement campaign including individual accountability and transparency with posted weekly reports.

Project

The hospital worked with Proventix Systems to install a wireless hand hygiene monitoring system in the 12-bed Organ Transplant unit. Dispenses from 26 soap dispensers, 22 alcohol-based hand rub (sanitizer) dispensers and 49 employees including nurses, patient care assistants, unit clerks, etc. were monitored. Hand hygiene solution dispensing, hand hygiene compliance and healthcare associate infection rates were measured and reported from March 2012 through October 2012.



Results

The Organ Transplant unit experienced increases in soap- and alcohol-based hand rub dispensing after the technology installation. During the first four months of service, there was a 36% increase in soap dispensing, a 61.5% increase in sanitizer dispensing and a 41.3% increase in total hand hygiene solution dispensing. Despite the increase in hand cleansing, for the same time period there was a 16.2% decrease in hand hygiene compliance. In July 2012, leadership involvement was apparent, unit level goals were set, employee education had been initiated and the accountability campaign “kicked-off”. Following this reenergizing, there was a reported 62.9% increase in sanitizer dispensing, a 42.9% increase in total hand hygiene solution dispensing and a 65.9% improvement in hand hygiene compliance. During this same time frame, individual hand hygiene compliance rate increases for Solid Organ Transplant employees were statistically significant (Student’s t-test, paired t = 5.77416 (33), p = 1.8764E-06, SAS). When comparing first and last months of the project (March 2012-October 2012), hand hygiene solution dispensing increased by 72.4% and hand hygiene compliance rates increased by 35.3%. Ventilator-associated pneumonia, central line-associated bloodstream infection and catheter-associated urinary tract infection rates were decreased by 5.2%, 66.2% and 72.3% respectively. These reductions equated to an associated cost savings of greater than \$300,000.

