

Blue Ribbon Abstract Award: A Systems Approach to Improving Hand Hygiene on an Inpatient Surgery Unit

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ISSUE: Low hand hygiene (HH) adherence rates have been linked to transmission of nosocomial pathogens. We thus set out to improve HH rates among all healthcare workers in an inpatient surgery unit by applying principles of the Toyota Production System to routine work of patient care.

PROJECT: Baseline data were obtained by observing healthcare providers during patient encounters, revealing low HH adherence rates. Follow-up surveys, focus groups, and individual conversations were conducted to assess healthcare workers' knowledge, attitudes, and beliefs about pathogen transmission. Training addressed misunderstanding about the need for HH, hand-sanitizer effectiveness, and appropriate gloving. Improvements were made to the physical environment, including water pressure control and hand sanitizer instructional labeling and location. Assertiveness training addressed cultural barriers that inhibited feedback between healthcare workers regarding HH practice. A sign was placed in each patient room that encouraged patients to remind healthcare workers to perform HH. Staff also received weekly feedback about their unit-specific infection and colonization rates. Follow-up observations were conducted 5 months following initial observations.

RESULTS: HH adherence data were collected during observation of 333 pre-intervention patient encounters and 420 post-intervention encounters. During encounters with patients requiring only Standard Precautions, pre-intervention HH adherence upon room entry and exit was 7% and 31%, respectively. Adherence improved to 51% and 70%, respectively, following the intervention ($p < 0.001$ for both). During encounters with patients on Contact Precautions there was no change in entry HH (24% versus 22%; $p = 0.52$), while exit HH improved from 66% to 75% following the intervention ($p = 0.05$).

LESSONS LEARNED: A systems approach can improve HH if it addresses all the healthcare workers' needs for 1) understanding principles of pathogen transmission; 2) availability of hygiene materials and a supportive physical environment; 3) rapid feedback on results linking HH to patient outcomes; and 4) recognition of cultural factors affecting HH.

Achieving a Corporate Goal for Influenza Vaccination Using Nurse Champions

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ISSUE: Our medical center is a three-hospital system with 913 licensed beds and 5826 employees. While employee influenza vaccination has been a focus for the Infection Control Committee and the Epidemiology Department for many years, employee vaccination rates had only reached approximately 30%. In 2003 administration set a corporate goal to achieve a 50% vaccination rate among patient-contact employees.

PROJECT: In summer 2003, the nursing Retention and Recognition Council (R&R) members were asked to act as champions for the employee influenza vaccination campaign. R&R membership consists of clinical registered nurses (RNs) from each nursing department (about 40 members). A training session was held with R&R to provide materials members could use to educate others. Members also agreed to vaccinate fellow employees in clinical departments. This allowed employee health nurses to focus attention on departmental visits in other areas. In addition to receiving the vaccine in nursing departments and employee health, employees could receive the vaccine in the emergency department during off-hours. R&R nurses were also responsible for documenting vaccination and submitting documentation to employee health for recordkeeping. Managers supported staff nurse administration of vaccine to limit time away from patient care. Posters and badges were developed by the marketing department to advertise the vaccination campaign. Administrative staff received departmental vaccination rates during the campaign. Individuals and departments who were successful in reaching the corporate goal were eligible to receive an award.

RESULTS: Employee vaccination rates increased to 55% in clinical areas (47% hospital-wide). The R&R plans to adopt this as an ongoing program.

LESSONS LEARNED: Having a team of clinical RN champions to implement the program at the department level encouraged other employees to receive the vaccine. Some employees preferred vaccination by a peer. Disseminating vaccine to clinical nursing departments made the vaccination process more convenient for employees and supported continuity of patient care.

Healthcare Worker Perceptions of Mask Use during a Nosocomial Pertussis Outbreak—Pennsylvania, 2003

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BACKGROUND: Recent experiences with severe acute respiratory syndrome (SARS) and influenza have led to new Respiratory Hygiene and Cough Etiquette (RHCE) recommendations that include use of surgical masks by healthcare workers (HCWs) who come within 3 feet of all patients with symptoms of respiratory infection. In September 2003, prior to these recommendations, eight HCWs at a Pennsylvania tertiary-care hospital developed respiratory symptoms after exposure to an infant with pertussis. We observed that HCWs did not routinely wear masks while caring for patients with cough illness. Anticipating the new recommendations and in an effort to understand potential barriers for implementation, we evaluated perceptions of mask use among HCWs in this hospital.

METHODS: We conducted focus group discussions (FGDs) with two groups of nurses and one group of physicians (n1=4, n2=6, n3=9). Based on the discussions, we developed a structured, self-administered questionnaire for distribution to all HCWs present during two consecutive hospital shifts.

RESULTS: Overall, 96 of 120 (80%) HCWs responded. Forty-nine (51%) respondents viewed coughing patients as potentially contagious to other patients and HCWs, and 67 (70%) believed that they and their patients would be