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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

protected against droplet infections by masks. Forty-three (45%) HCWs perceived obstacles to using mask. Masks were considered a barrier to a trusting provider-patient relationship: 20 HCWs felt that a provider in a mask increased worries among patients, and 26 thought that the mask was a barrier to communicating with patients. Thirty respondents indicated that wearing a mask was uncomfortable and/or a burden. HCWs were less likely to perceive obstacles if they recognized a risk for patient-to-patient transmission (27/35 versus 31/61;  $P=0.0095$ ).

**CONCLUSIONS:** Our findings suggest several potential barriers among HCWs to mask use, despite a recent pertussis outbreak in the hospital. HCWs may benefit from education regarding the risk of nosocomial transmission of respiratory pathogens such as SARS, influenza, and pertussis. Patients should be educated on the benefits of HCW mask use and its association with quality medical care.

## **Evaluation of a Steam Autoclave for Sterilizing Medical Waste at a University Health Center**

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**BACKGROUND:** As healthcare institutions search for methods to decrease costs associated with medical waste disposal, many are turning to the use of steam autoclaves. Steam autoclaving theoretically saves money by sterilizing large loads of medical waste, making it safe for disposal in a public landfill. There are no national standards for challenging medical waste autoclaves and no guidelines for parameters of sterilization for medical waste. When Louisiana State University Health Sciences Center—Shreveport (LSUHSC—S) tested one steam autoclave marketed as a medical waste autoclave, the machine repeatedly failed the tests. A complete description of the challenge testing and results are presented.

**METHODS:** A test scenario was developed using biological indicators (BI) and chemical indicators distributed throughout four loads of clean waste which were controlled for weight, volume, and density. BI ampules and chemical strips were wrapped inside an adult diaper, which was tied in a common plastic bag and placed inside an open medical waste bag, reflecting common diaper disposal methods. At least five prepared bags were distributed throughout each load. Loads were run at 270° F, 30 pounds per square inch (psi), for 30 minutes, or at 270° F, 30 psi, for 60 minutes.

**RESULTS:** Bacterial growth occurred in 18 out of 22 ampules, and chemical indicators failed in 19 out of 22 locations.

**CONCLUSIONS:** Steam did not fully penetrate the load, and bacteria were not killed. Despite assurances from marketers of medical waste autoclaves, institutions considering this method must test autoclaves carefully to ensure safety and compliance with local health regulations.

## **William A. Rutala Research Award; Blue Ribbon Abstract Award: A Novel Method for Evaluating the Effectiveness of Environmental Cleaning/Disinfection in Healthcare Facilities**

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**BACKGROUND/OBJECTIVES:** Although the use of environmental disinfectants in conjunction with appropriate housekeeping practices have become a cornerstone of patient care, assessment of actual compliance with such