

Appropriateness Evaluation Protocol. *Am J Infect Control* 2000;28:109-115.

Team Approach to Reducing Ventilator-Associated Pneumonia

Ventilator-associated pneumonia (VAP) rates in a medical-surgical intensive care unit first exceeded the 90th percentile in September 1997 and were significantly ($P < .05$) higher than National Nosocomial Infections Surveillance (NINS) System pooled mean data. In January 1998, a multidisciplinary "Critical Care Bug Team" was developed by the Infection Control Committee to review 1997 NNIS System data for four adult ICUs in a 583-bed tertiary-care hospital. Membership included clinical nurse specialists, a dietitian, a pharmacist, a respiratory therapist, an infection control professional, a research specialist, and a physician adviser. Having the team report directly to the hospital's Infection Control and Adult Critical Care committees maximized support for recommendations and provided a direct link from patient care to hospital administration. By identifying issues, evaluating patient-care processes, performing literature searches, and monitoring compliance, the team implemented numerous interventions, including policy and procedure changes, purchasing of equipment, and implementation of various education tools.

Each member of the Critical Care Bug Team contributed to a synergized effort that may have produced the desired outcome of decreasing VAP rates. Except for August 1998, VAP rates have been below the 75th percentile since May 1998.

This study illustrates the effectiveness of a multidisciplinary team approach devised to reduce and stabilize VAP rates in a medical-surgical intensive care unit.

FROM: Kaye J, Ashline V, Erickson D, Zeiler K, Gavigan D, Gannon L, et al. Critical care bug team: a multidisciplinary team approach to reducing ventilator-associated pneumonia. *Am J Infect Control* 2000;28:197-201.

PCR Typing of *E. cloacae* in an NICU

Enterobacter cloacae has become a common cause of nosocomial infections. Bryan and Cole, from the Department of Microbiology and Immunology and the Department of Laboratory Medicine, Georgetown University Medical Center, conducted a study to investigate the pattern of spread of *E. cloacae* during an outbreak in a neonatal intensive care unit (NICU). Enterobacterial repetitive intergenic consensus polymerase chain reaction was used to examine 111 *E. cloacae* isolates from 17 patients, including 81 from surveillance cultures, 23 from endotracheal tubes, 3 from eyes, and 1

each from blood, urine, skin, and throat. Antibiotic susceptibility profiles were also obtained.

Infection with *E. cloacae* resulted from endogenous bacteria and from horizontal transmission. One group of 61 isolates, a third of which were obtained from clinical specimens, was uniformly susceptible to imipenem and ciprofloxacin only. A second group of 50 isolates, only 18% of which were obtained from clinical specimens, was susceptible to all antibiotics tested except for aminopenicillins and first-generation cephalosporins.

These data indicate that patient-to-patient spread is an important cause of *E. cloacae* infection in the NICU and that highly antibiotic-resistant *E. cloacae* may emerge during an outbreak.

FROM: Peters SM, Bryan J, Cole MF. Enterobacterial repetitive intergenic consensus polymerase chain reaction typing of isolates of *Enterobacter cloacae* from an outbreak of infection in a neonatal intensive care unit. *Am J Infect Control* 2000;28:123-129.

Educational Approach to Improving Patient Isolation Practice

Kidd and colleagues from the University of Cincinnati (Ohio) College of Medicine recently described a workable plan for the successful education of a large, diverse group of healthcare workers in a university hospital setting. They did a prospective, nonrandomized study of compliance with infection control isolation practice following various educational interventions in a 300-bed tertiary-care academic medical center with outpatient clinics. Study participants were hospital employees and contract workers.

The infection control department introduced a plan to implement the CDC's new isolation guidelines. A comprehensive proposal was presented to administration. It included a time line for institution and a comprehensive educational and performance-improvement plan, including standard lectures and a video that explained Standard and Transmission-Based Precautions. Follow-up consisted of customized in-services and one-on-one continued education tailored to the individual units.

Compliance with isolation procedure after standardized lectures and video alone was poor. Compliance improved after institution of smaller, more intensive in-services tailored to individual departments and given during all shifts. The authors concluded that intensive, individualized education is the key to compliance. This requires sufficient infection control staffing and administrative support.

FROM: Kidd F, Heitkemper P, Kressel AB. A comprehensive educational approach to improving patient isolation practice. *Clinical Performance and Quality Health Care* 1999;7:74-76.