Medical News

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Acquisition of VRE During Scheduled Antimicrobial Rotation in an ICU

Scheduled rotation of treatment with gram-negative antimicrobial agents has been associated with reduction of serious gram-negative infections. The impact of this practice on other nosocomial infections has not been assessed. Puzniak and colleagues from the St Louis University School of Public Health conducted a study to determine if scheduled antimicrobial rotation reduced rates of acquisition of enteric vancomycin-resistant enterococci (VRE) among 740 patients admitted to an intensive care unit (ICU). The preferred gram-negative agent was ceftazidime during rotation 1 and ciprofloxacin during rotation 2. Unadjusted VRE acquisition rates were 8.5 cases per 1,000 ICU days during rotation 1 and 11.7 cases per 1,000 ICU days during rotation 2 ($P<.01$). However, scheduled antimicrobial rotation of ceftazidime with ciprofloxacin had no effect on the risk of acquiring VRE in the ICU after adjustment for known risk factors.

Independent predictors of acquisition of VRE were enteral feedings, higher colonization pressure, and increased duration of anaerobic therapy. The study findings can confirm no additional beneficial or adverse effect on VRE acquisition among ICU patients as a result of this practice.

FROM: Puzniak LA, Mayfield J, Leet T, Kollef M, Mundy LM. Acquisition of vancomycin-resistant enterococci during scheduled antimicrobial rotation in an intensive care unit. *Clin Infect Dis* 2001;33:151-157.

Patient Education Increases Staff Hand Washing

"Partners in Your Care," a patient-education behavioral model for increasing handwashing compliance and empowering patients with responsibility for their care, was evaluated in an acute-care hospital in Oxford, United Kingdom. McGuckin and coinvestigators conducted a controlled prospective intervention study comparing medical and surgical patients. Ninety-eight patients were eligible for the study.

Thirty-nine patients (40%) agreed to participate in the program, "Partners in Your Care," by asking all healthcare workers who were going to have direct contact with them, "Did you wash your hands?" Compliance with the program was measured through soap and alcohol use and hand washings per bed day before and after introduction of the program.

"Partners in Your Care" increased hand washing an average of 50%. Healthcare workers washed hands more often with surgical patients than with medical patients ($P<.05$). Alcohol gel was used on less than 1% of handwashing occasions. Sixty-two percent of patients in the study felt at ease when asking healthcare workers, "Did you wash your hands?" Seventy-eight percent received a positive response (ie, washed hands). All patients asked nurses, but only 35% asked physicians.

"Partners in Your Care" increased handwashing compliance in the United Kingdom. This program empowers patients with responsibility for their care, provides infection control staff with a continuing means for delivering handwashing education without additional staff, and can save costs for a hospital.

FROM: McGuckin M, Waterman R, Storr J, Bowler IC, Ashby M, Topley K, et al. Evaluation of a patient-empowering hand hygiene programme in the UK. *J Hosp Infect* 2001;48:222-227.

Antimicrobial Resistance in Food Animals Reduced by Limiting Antimicrobial Use

From 1995 to 2000, as part of the Danish program of monitoring for antimicrobial resistance, a total of 673 *Enterococcus faecium* and 1,088 *Enterococcus faecalis* isolates from pigs, together with 856 *E faecium* isolates from broilers, were tested for susceptibility to four classes of antimicrobial agents used for growth promotion. The four antimicrobials were avilamycin, erythromycin, vancomycin, and virginiamycin. Major changes in the use of antimicrobial agents for growth promotion have occurred during the last 6 years in Denmark. The government banned the use of avoparcin in 1995 and of virginiamycin in 1998. Furthermore, the producers have voluntarily stopped all use beginning in 1999.

The avoparcin ban in 1995 was followed by a decrease in the occurrence of glycopeptide-resistant *E faecium* (GRE) in broilers, from 72.7% in 1995 to 5.8% in 2000. The occurrence of glycopeptide resistance among isolates from pigs remained constant at around 20% from 1995 to 1997. It was shown that, in GRE from pigs, the genes encoding macrolide and glycopeptide resistance were genetically linked and that, following the decrease in the use of tylosin during 1998 and 1999, the occurrence of GRE in pigs decreased to 6.0% in 2000.

From 1995 to 1997, the occurrence of erythromycin resistance among *E faecium* and *E faecalis* isolates from pigs was almost 90%. Use of tylosin decreased considerably during 1998 and 1999, and this decrease was followed by