

Poisson regression analysis, and their 95% confidence interval rates were estimated.

The characteristics of the patients enrolled in both studies were compared. After the intervention, the trend was to attend patients with more severe conditions: higher frequency of liver failure, chronic obstructive lung disease, higher proportion of dirty surgical wounds, and higher scores on both Study on the Efficacy of Nosocomial Infection Control (SENIC) and National Nosocomial Infections Surveillance System indices. There were no significant differences in emergency surgery, duration of surgery, age, and gender. After the intervention, unnecessary chemoprophylaxis was reduced drastically, and a significant reduction in preoperative stay was observed. The nosocomial incidence rate fell from 18.4 to 14 per 1,000 patient-days. This reduction yielded an incidence rate ratio of 0.56 (95% confidence interval, 0.43-0.74%), adjusted for several variables (SENIC index, serum creatinine level, serum albumin level, antihistamine H<sub>2</sub> level, surgical wound, body mass index, chemoprophylaxis, and community-acquired infection). Significant reductions in surgical-site infection and urinary tract infection were observed, but the rate of respiratory tract infection remained unchanged.

The authors concluded that surveillance was effective in reducing NI.

FROM: Delgado-Rodriguez M, Gomez-Ortega A, Sillero-Arenas M, Martinez-Gallego G, Medina-Cuadros M, Llorca J. Efficacy of surveillance in nosocomial infection control in a surgical service. *Am J Infect Control* 2001;29:289-294.

## Non-Touch Sink Taps Possible Source of Bacteria

Halabi and colleagues recently published a study that pointed out that non-touch fittings are associated with bacterial contamination. Hospitals and other health-care facilities have begun to install touchless water taps to lower water consumption as a cost-saving measure and to prevent healthcare workers from touching the tap, thus promoting hygiene. This study analyzed the bacteriological water quality of 38 non-touch water taps in different settings in a 450-bed secondary-care hospital in Upper Austria. Two different tap types were installed: 23 taps were without temperature selection, and 15 were with temperature selection (cold and warm). A membrane filtration method was used for bacteriologic assays, and the authors screened for both indicator organisms and *Pseudomonas aeruginosa* in 100-mL water samples. In 10 non-touch taps without temperature selection, the authors also screened for *Legionella* species in 500 mL water samples.

Seventy-four percent of the taps without temperature selection and 7% of the taps with temperature selection showed contamination with *P aeruginosa* ( $P < .001$ ). None of the taps showed contamination with indicator organisms. Detailed analysis of the source of contamina-

tion revealed that the magnetic valve and the outlet itself were heavily contaminated, whereas the junction from the central pipe system was free of contamination. All 10 analyzed taps showed contamination with *Legionella* species. The authors concluded that the local contamination of non-touch fittings is a result of the low amount of water that flows through the outlet, the low water pressure, and the column of water, which is "still-standing" and has a temperature of approximately 35°C, thus providing nearly ideal growth conditions for *P aeruginosa*. Additionally, the presence of materials such as rubber and PVC in the fittings enhances the adhesion of *P aeruginosa* and thus the production of biofilms.

FROM: Halabi M, Wiesholzer-Pittl M, Schoberl J, Mittermayer H. Non-touch fittings in hospitals: a possible source of *Pseudomonas aeruginosa* and *Legionella* spp. *J Hosp Infect* 2001;49:117-121.

## Epidemiology of VRE in Liver Transplant Patients

Vancomycin-resistant enterococci (VRE) are increasingly important as pathogens in liver transplant patients. To guide control efforts, Bakir and coinvestigators, from the University of Chicago Hospitals, conducted an epidemiological study of the frequency, source, and modes of transmission of VRE at their institution. During September 1998 through August 1999, weekly surveillance cultures were obtained from consenting liver transplant patients and from environmental surfaces in their rooms. Pooled handwash specimens from personnel also were obtained. Specimens were processed on selective media to detect VRE, and isolates were typed by pulsed-field gel electrophoresis. Information was collected from patient records concerning in-hospital treatment and clinical course.

Serial cultures were obtained during 33 admissions of 29 patients. VRE were detected in initial specimens from 6 admissions, and nosocomial acquisition of VRE occurred in 12 (44%) of the remaining 27 admissions. Seven different strain types of VRE were detected. The initial site of acquisition was stool in all cases; bile became culture-positive in only 2 patients. Overall, 16 (55%) of the 29 patients became colonized, usually after transplantation. VRE were detected in environmental cultures during 10 admissions and in 2 of 21 pooled hand washes. No statistically significant differences in clinical status or treatment were found when colonized patients were compared to non-colonized controls. The only VRE infection resulted from a choledochojunostomy anastomotic leak.

The authors concluded that alimentary tract colonization by VRE occurred commonly in liver transplant patients, probably by cross-transmission. The clinical consequences were modest in the patients studied, but colonized transplant patients provide a substantial reservoir for continued VRE transmission in hospitals.

FROM: Bakir M, Bova JL, Newell KA, Millis JM, Buell JF, Arnow PM. Epidemiology and clinical conse-