

## Medical News

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Additional new items in this issue: *Computer-Generated Dot Map Identifies Source of Toxoplasma gondii Outbreak*, page 308; *Nosocomial Endocarditis in the ICU*, page 318; *Decrease in Nosocomial Infections During 3-Year Period in Norwegian Hospitals*, page 323; *Endoscopic Disinfection and Reprocessing of Endoscopic Accessories: A Must Read*, page 342; *Catheter-Associated UTI Is Rarely Symptomatic*, page 346.

### Decrease in Nosocomial Infection Rates During Past Decade

Hospital-acquired infections are adverse patient events that affect approximately 2 million persons annually in the United States. The CDC's National Nosocomial Infection Surveillance (NNIS) System is a voluntary, hospital-based reporting system established to monitor hospital-acquired infections and to guide the prevention efforts of infection control practitioners. In 1999, 285 hospitals in 42 states in the United States participated in NNIS. The CDC recently reported that there was a decrease in infection rates reported in NNIS hospitals during 1990 to 1999.

Patients in ICUs are at high risk for nosocomial infections. As such, by ICU type, these patients have been monitored using site-specific, risk-adjusted infection rates. During 1990 to 1999, risk-adjusted infection rates decreased for all three body sites (respiratory tract, urinary tract, and bloodstream) monitored in ICUs. Bloodstream infection (BSI) rates decreased substantially in medical (nonsurgical) ICUs (44%), coronary ICUs (43%), pediatric ICUs (32%), and surgical ICUs (31%). NNIS uses data from 1997 to 1999 as its benchmark. Device-use ratios, the proportion of days spent in the ICU in which the patient's treatment included invasive devices, also were calculated. Urinary catheter-associated urinary tract infection (UTI) rates were highest in medical (nonsurgical) ICUs and lowest in pediatric ICUs (6.5 vs 5.6 UTIs/1,000 catheter-days). Central line-associated BSI rates were highest in pediatric ICUs and lowest in coronary ICUs (7.7 vs 4.3 BSIs/1,000 central line-days). Ventilator-associated pneumonia (VAP) rates were highest in surgical ICUs and lowest in pediatric ICUs (13.0 vs 5.0 cases of pneumonia/1,000 ventilator-days). The percentiles represent a measure of the variations in device-associated rates in NNIS ICUs. For example, the 25th percentile for VAP rates in the medical (nonsurgical) ICU was 3.3 (ie, 25% of reporting medical [nonsurgical] ICUs had a VAP rate of >3.3). Device-use ratios ranged from 0.22 for ventilators in coronary ICUs to 0.85 for urinary catheters in surgical ICUs.

The Institute of Medicine reported that preventable adverse patient events, including hospital-acquired infections, are responsible for 44,000 to 98,000 deaths annually at a cost of \$17 to \$29 billion. In 1990, one of the national

health objectives for 2000 was to reduce by at least 10% the incidence of surgical-wound infections and nosocomial infections in ICU patients in US hospitals (objective 20.5). NNIS data indicated that almost all goals have been achieved or surpassed. This report demonstrated the value of NNIS as a model to prevent hospital-acquired infections. The elements of NNIS critical for rate reduction included the following: (1) voluntary participation and confidentiality; (2) standard definitions and protocols; (3) targeted, high-risk populations (eg, intensive care and surgical patients); (4) site-specific, risk-adjusted infection rates comparable across institutions; (5) adequate numbers of trained infection control practitioners; (6) data dissemination to healthcare providers; and (7) links between monitored rates and prevention efforts.

The CDC noted that these findings are subject to a few limitations, including the effect of other national efforts to prevent infections (eg, new research findings and prevention guidelines), the shift in the US healthcare system from hospital-based care to nonhospital settings, and the use of patient-record review versus (nonvalidated but possibly more efficient) electronic information retrieval. The CDC also noted that the wide range of infection-rate percentiles suggests that a better understanding of this variability is needed.

FROM: Centers for Disease Control and Prevention. Monitoring hospital-acquired infections to promote patient safety—United States, 1990-1999. *MMWR* 2000;49:149-153.

### Case of Nurse-to-Patient HIV Transmission Reported in France

Dr. C. Goujon and colleagues at the University of Paris have reported a case of presumed nurse-to-patient transmission of HIV. The report indicates that an HIV-negative patient with no risk factors experienced HIV type 1 (HIV-1) primary infection in July 1996, 4 weeks after being hospitalized for surgery. Among the medical staff, only two night-shift nurses were identified as HIV-1 seropositive. Nurse 1, who was originally from Zaire, was aware of his HIV-positive status, but had not received antiretroviral therapy. As of February 1997, his viral load was fairly low, and his CD4 count was close to normal. Nurse 2 was unaware