

Medical News

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Nosocomial Bloodstream Infection Doubles Length of Stay in ICU

Researchers at the University of Iowa Hospital and Clinics (UIHC) recently reported that critically ill patients with nosocomial bloodstream infections had a high mortality rate—a doubling of the stay in the surgical intensive care unit (SICU).

Dr. Didier Pittet et al at UIHC found that nosocomial bloodstream infections complicated 2.67 per 100 admissions to the SICU during the study period. The crude mortality rates from cases and controls were 50% and 15%, respectively ($P < 0.01$); thus, the attributable mortality rate was 35%. The median length of hospital stay differed significantly between cases and controls (40 versus 26 days, respectively; $P < 0.01$). When only matched pairs who survived bloodstream infections were considered ($N = 41$), cases stayed in the hospital a median of 54 days versus 7 days for controls. Thus, extra hospital and SICU length of stay attributable to bloodstream infection was 24 and 8 days, respectively. Extra costs attributable to the infection averaged \$40,000 per survivor.

Overall, extra annual costs of more than \$1.5 million were attributable to bloodstream infections, which affected less than 3% of the population admitted to SICU at UIHC. The authors suggested that the results of this study would help in evaluating potential benefits in terms of survival and health expenditures that may be expected from new therapies for severe sepsis and bloodstream infections in such populations.

FROM: Pittet D, Tarara D, Wenzel RP. Nosocomial bloodstream infection in critically ill patients. *JAMA* 1994;271:1598-1601.

Low Prevalence of HIV Among Healthcare Workers Donating Blood

To estimate the prevalence of HIV among healthcare workers (HCWs) who donate blood, Dr. Mary Chamberland from the Centers for Disease Control and Prevention (CDC), in collaboration with the Irwin Memorial Blood Center and the American Red Cross, conducted a point prevalence survey of blood donors from 20 U.S. blood centers. Between March 1990 and August 1991, 8,519 healthcare workers (HCWs) donated blood at six of the centers. Three persons were HIV positive: two reported being HCWs and having nonoccupational risk factors for HIV infection; the occupation and other possible risk factors of the third seropositive donor could not be determined. The highest overall prevalence of HIV among HCWs at these six centers was 0.04%. The researchers estimated that during the same period approximately 36,329 healthcare workers were tested for HIV at all 20 centers. Twenty-seven persons infected with HIV were identified; seven did not return for

interviews, so their healthcare occupations could not be verified. Thus, the highest estimated overall prevalence of HIV among HCWs at 20 blood centers was 0.07% (27 of 36,329). Of the 20 known HCW donors, 11 reported nonoccupational risks for HIV; 3 of the remaining 9 HCWs described occupational blood exposures that could have resulted in transmission of HIV.

Although this approach has potential limitations, the authors noted that these findings suggest that among the many HCW donors in this study, HIV infection attributable to occupational exposure was uncommon.

FROM: Chamberland ME, Peterson LR, Munn VP, et al. HIV among health care workers who donate blood. *Ann Intern Med* 1994;121:269-273.

Similar Needle Device-Specific Injury Rates in Italy and U.S.

Dr. Giuseppe Ippolito et al conducted a longitudinal survey to identify the types of medical devices causing needlestick injuries among Italian HCWs. A total of 2,524 injuries from hollow-bore needles were reported. Disposable syringes and hypodermic needles accounted for 59.3% of injuries, followed by winged steel needles (33.1%), intravenous catheter stylets (5.4%), and vacuum-tube phlebotomy needles (2.2%). Intravenous catheter stylets had the highest needlestick injury rate (15.7 per 100,000 devices used).

The device-specific needlestick injury rates in Italy were found to be similar to those reported in the United States, suggesting similar exposure experience; however, in contrast to the United States, the authors noted that hypodermic needles are not used for piggyback connections and intermittent intravenous (IV) therapy in Italy. Needleless intravenous access to IV lines with the use of stopcocks and Luer locks is standard practice. The authors note that a previous study in the United States found that needles used for IV connections had the highest injury rate of any device (36.7 per 100,000 devices used) and accounted for 25.8% of all injuries from hollow-bore needles. This category of occupational injury is absent in Italian hospitals, substantially reducing exposures to needles.

FROM: Ippolito G, DeCarli G, Puro V, et al. Device-specific risk of needlestick injury in Italian health care workers. *JAMA* 1994;272:607-610.

Additional news items in this issue: NIOSH Accused of Concealing Respirator Deficiencies During Certification (page 690), CDC Announces Availability of Update Epi Info Computer Programs (page 716), CDC Releases Strategic Plan for Emerging Infectious Diseases (page 723).
