

Medical News

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Nosocomial Infections Prevented with Sinks Beside Beds

Dr. Jonathan Freeman of West Roxbury Veterans Administration Hospital in Massachusetts recently reported a reduction in nosocomial pneumonia and urinary tract infections associated with location of the sink for handwashing adjacent to the bedside.

Surveillance was conducted on 1,113 adult medical and surgical patients in a tertiary care hospital. The majority of these patients were housed on irregularly shaped intensive care units and open wards where beds were distant from the few sinks available for handwashing. Using Cox regression to account for censoring, patients were stratified by DRG, and comparisons of daily risk for first nosocomial infection were computed after further adjustment for DRG relative weight, comorbidities, service, gender, and prior infection. The adjusted relative risk of a first nosocomial infection for patients with sinks adjacent to the bedside was $RR=0.74$ (CI., 0.17 to 0.81) compared with patients in beds distant from sinks.

The largest protective effect of sinks adjacent to bedside was found among patients with nosocomial pneumonia: $RR=0.36$ (CI., 0.04 to 0.73). There was also a substantial preventive effect of sinks adjacent to the bedside for urinary tract infections in medical patients: $RR=0.38$. Researchers found no effect on postoperative wound infections. Overall, sinks for handwashing located adjacent to the bed-sides were associated with a 26% reduction in nosocomial infection risk in this hospital.

FROM: Freeman J. Prevention of nosocomial infections by location of sinks for handwashing adjacent to bedside. 33rd Interscience Conference on Antimicrobial Agents and Chemotherapy; New Orleans, LA, October 17-20, 1993. Abstract 60.

Italian Study Documents Occupational HIV Infection After Mucous Membrane Exposure to Blood

Dr. Giuseppe Ippolito et al at the Spallanzani Hospital in Rome reported the findings of a prospec-

tive study to determine the risk of occupationally acquired HIV infection. In collaboration with the Italian Study Group on Occupational Risk of HIV Infection, 29 acute-care public hospitals participated in the multicenter study between 1986 and 1990. Healthcare workers (HCWs) who reported percutaneous, mucous membrane, or nonintact skin exposures to blood or body fluids from HIV-infected patients were enrolled in the study.

Almost 5% of the injuries occurred as a result of inadvertent injury/needlestick from a coworker. The most common procedures associated with needlestick exposures were phlebotomy (27%), and continuous intravenous therapy (24%), followed by intravenous therapy (12%), intramuscular therapy 10%, suturing (10%), arterial puncture (2%), and other practices (15%). Hollow-bore needles accounted for more than 90% of the needlestick injuries. The most common site of mucous membrane contamination was the eye (70%). No barriers were worn during 69% of the mucous membrane exposures.

Two seroconversions were observed among a total of 1,488 HCWs followed for at least six months. One occurred in a student nurse who had been stuck with a needle used for an HIV antibody-negative, p24 antigen-positive drug addict; the other was a nurse who experienced mucous membrane contamination with a large quantity of blood from an HIV-positive hemophiliac patient while trying to clear a blocked arterial catheter.

The seroconversion rate in this study was 0.1% after percutaneous exposure (1/1,003) and 0.63% after mucous membrane contamination (1/158). Although there have been numerous case reports of occupational HIV infection following mucous membrane contamination, this is the first case reported from a prospective study.

This study demonstrates that transmission can occur during the "window period" of HIV infection and confirms the need for appropriate use of barriers and implementation of safer needle devices.

To estimate the risk of HIV infection more precisely, Dr. Ippolito pooled his data with the findings of 21 published prospective studies of HCWs exposed to blood or body fluids of HIV-infected patients. A total of 6,170 exposed HCWs were reported,