Occupationally Acquired HIV Infection Surveillance Data (5/03)


Data from case surveillance efforts in the US have remained important in understanding occupationally acquired HIV infection and have been widely used in that context. The data have been valuable in the development of infection control measures, which have been shown to be effective at reducing the frequency of health-care workers' exposures to blood - a potential source of infection with HIV and other bloodborne pathogens. This article summarizes the national surveillance data on HIV infection and acquired immunodeficiency syndrome (AIDS) among health-care workers in the US reported through December 2001, focusing on those with documented occupationally-acquired HIV infection.

Of 57 health-care workers with documented occupationally acquired HIV infection, most (86%) were exposed to blood, and most (88%) had percutaneous injuries. The circumstances varied among 51 percutaneous injuries, with the largest proportion (41%) occurring after a procedure, 35% occurring during a procedure, and 20% occurring during disposal of sharp objects. Of 55 known source patients, most (69%) had AIDS at the time of occupational exposure, but some (11%) had asymptomatic HIV infection. Eight (14%) of the health-care workers were infected despite receiving postexposure prophylaxis (PEP). Prevention strategies for occupationally acquired HIV infection should continue to emphasize avoiding blood exposures. Health-care workers should be educated about both the benefits and limitations of PEP, which does not always prevent HIV infection following an exposure. Technologic advances (e.g., safety-engineered devices) may further enhance safety in the health-care workplace.

DIS Comment: As of June 2001, there were no dental health-care workers among the 57 US health-care workers with documented HIV seroconversion following a specific exposure to a known HIV-infected source patient. Out of the possible 138 additional health-care workers considered to have possible occupational HIV transmission, only six were dental health-care workers. Each of these reported a history of occupational percutaneous or mucous membrane exposure to blood or body fluids in the dental setting, but HIV seroconversion could not be linked to a specific exposure. Other evidence supporting the low risk of occupationally acquired HIV infection among dental health-care workers includes HIV seroprevalence studies showing low rates of HIV infection among dental health-care workers, including oral surgeons. Even though the overall risk of infected patients transmitting HIV to dental health-care workers is very small, preventive measures must be taken to avoid occupational blood exposures. All dental practices should develop a comprehensive written program for preventing and managing occupational exposures to blood (USAF Dental Services are not required to prepare a separate, comprehensive, exposure control plan if they are covered under a Medical Treatment Facility or installation plan). Reducing percutaneous injuries can be accomplished through engineering controls, such as using safer devices (e.g., those with engineered sharps-injury prevention features) and by modifying work practices (e.g., used needles should never be recapped or otherwise manipulated using both hands.) Personal protective equipment (e.g., gloves, mask, protective eyewear with solid sideshields, protective apparel) is used to prevent skin and mucous membrane exposures.

Selected References