

**Occupational Safety and Health Administration**

Bloodborne Pathogens and Needlestick Prevention

Bloodborne Pathogens Menu**Workers' Rights**

Evaluating and Controlling Exposure

Studies show that as many as one-third of all sharps injuries occur during disposal. Nurses are particularly at risk, as they sustain the most needlestick injuries. The Centers for Disease Control and Prevention (CDC) estimates that 62 to 88 percent of sharps injuries can be prevented simply by using safer medical devices. The following references provide information regarding possible solutions for bloodborne pathogens and needlestick hazards.

Please Note: Articles/references that are dated before April 18, 2001 may not reflect the changes of the new Bloodborne Pathogens Standard but still provide relevant, general information.

Control Programs

- [STOP STICKS Campaign - Safer Sharps Devices](#). National Occupational Research Agenda (NORA).
- [Bloodborne Pathogens - Personal Protective Equipment \(PPE\) Reduces Exposure to Bloodborne Pathogens](#). OSHA Fact Sheet, (January 2011).
- [Bloodborne Pathogens - Hepatitis B Vaccination Protection](#). OSHA Fact Sheet, (January 2011).
- [Preventing Exposures to Bloodborne Pathogens among Paramedics](#). U.S. Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH) Publication No. 2010-113, (April 2010).
- [Information for Employers Complying with OSHA's Bloodborne Pathogens Standard](#). U.S. Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH) Publication No. 2009-111, (March 2009).
- [Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program](#). Centers for Disease Control and Prevention (CDC), (2008).

- Model Plans and Programs for the OSHA Bloodborne Pathogens and Hazard Communications Standards. OSHA Publication 3186, (2003). Includes a model exposure control plan that meets the requirements of the OSHA Bloodborne Pathogens Standard and can be tailored to meet the specific requirements for an establishment.
- HIV and Occupational Exposure. Centers for Disease Control and Prevention (CDC). Offers recommendations to prevent transmission of HIV to healthcare personnel in the workplace.
- A Best Practices Approach for Reducing Bloodborne Pathogens Exposure. Cal/OSHA Consultation Service, Department of Industrial Relations, (2001).
- Safety in surgery:
 - American College of Surgeons. Revised Statement on Sharps Safety, (October 1, 2016).
 - Association of periOperative Registered Nurses. AORN Guidance Statement: Sharps Injury Prevention in the Perioperative Setting, (2005), AORN Journal, 81(3), 662-671.
- International Safety Center provides the Exposure Prevention Information Network (EPINet®) free of charge to healthcare facilities around the world as a means to standardize methods for recording and tracking needlesticks, sharps injuries, and blood/body fluid exposure incidents. EPINet consists of Reports for both Needlestick and Sharp Object Injuries and Blood and Body Fluid Exposures. EPINet publishes very detailed data from its surveillance network annually. Data includes information required by the Sharps Injury Log as well as additional information about each exposure incident that allows facilities to assess whether they have the appropriate controls and protections in place.

Safer Needle Devices

- FDA, NIOSH and OSHA Joint Safety Communication: Blunt-Tip Surgical Suture Needles Reduce Needlestick Injuries and the Risk of Subsequent Bloodborne Pathogen Transmission to Surgical Personnel. (May 30, 2012).
- Use of Blunt-Tip Suture Needles to Decrease Percutaneous Injuries to Surgical Personnel: Safety and Health Information Bulletin. OSHA and the National Institute for Occupational Safety and Health (NIOSH) Publication No. 2008-101, (October 2007). Supersedes NIOSH Publication 2007-132.
- Stop Sticks Campaign: Devices with Sharps Injury Protection Features. National Occupational Research Agenda (NORA). Offers links to organizations that provide information on evaluating sharps devices and lists of safer devices.
- Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program. (2008).
- Evaluation of Blunt Suture Needles in Preventing Percutaneous Injuries Among Health-Care Workers During Gynecologic Surgical Procedures; New York City, March 1993-June 1994. Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR)

46(02);25-29, (January 17, 1997). Identifies the effectiveness of blunt needles in reducing percutaneous injuries (PIs) and suggests that they should be considered for more widespread use in surgical procedures.

- Evaluation of Safety Devices for Preventing Percutaneous Injuries Among Health-Care Workers During Phlebotomy Procedures -- Minneapolis-St. Paul, New York City, and San Francisco, 1993-1995. Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR) 46(02);21-25, (January 17, 1997). Indicates that the use of phlebotomy safety devices significantly reduces phlebotomy-related percutaneous injury (PI) rates.
- Needlestick and Other Risks from Hypodermic Needles on Secondary I.V. Administration Sets - Piggyback and Intermittent I.V. Food and Drug Administration (FDA) Safety Alert, (April 16, 1992). Urges the use of needleless systems or recessed needle systems to reduce the risk of needlestick injuries.
- Safer Medical Device Implementation in Health Care Facilities - Sharing Lessons Learned. National Institute for Occupational Safety and Health (NIOSH). NIOSH developed this forum to assist health care facilities that are working through the process of implementing safer needle devices in their workplaces.

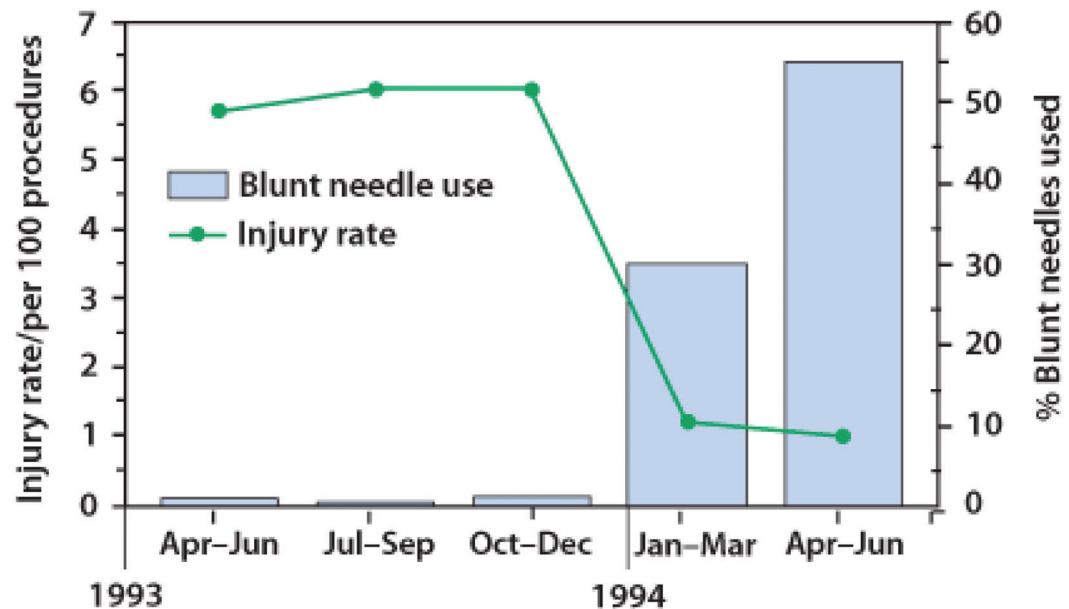


Figure 1. Rate of injury associated with the use of curved suture needles during gynecologic surgical procedures and percentage of suture needles used that were blunt, by quarter—three hospitals, New York City hospitals, April 1993–June 1994

Decontamination

- Selected EPA-registered Disinfectants. Environmental Protection Agency (EPA), (January 9, 2009). Includes lists of EPA registered anti-microbial products to assist in choosing the appropriate decontaminant.

Post-exposure Evaluation

According to the NIOSH Alert Preventing Needlestick Injuries in Health Care Settings, it is estimated that 600,000 to 800,000 needlestick injuries (NSIs) and other percutaneous injuries (PIs) occur annually among health care workers. PIs are caused by sharp objects such as hypodermic needles, scalpels, suture needles, wires, trochanters, surgical pins, and saws. Additional exposure incidents include splashes and other contact with mucous membranes or non-intact skin. Post-exposure management is an integral part of a complete program for preventing infection following exposure incidents.

The following references provide useful information about the management of occupational exposure incidents to blood or other potentially infectious materials.

- Bloodborne Pathogens - Bloodborne Pathogen Exposure Incidents. OSHA Fact Sheet, (January 2011).
- Bloodborne Infectious Diseases: Emergency Needlestick. National Institute for Occupational Safety and Health (NIOSH).
- A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States. Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR) 55(RR16);1-25, (December 8, 2006).
- Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis. Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR) 54(RR09);1-17, (September 30, 2005). Updates U.S. Public Health Service recommendations for the management of health-care personnel (HCP) who have occupational exposure to blood and other body fluids that might contain human immunodeficiency virus (HIV).
- Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis. Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR) 50(RR11);1-42, (June 29, 2001). Updates and consolidates recommendations for the management of health-care personnel (HCP).
- Immunization of Health-Care Workers: Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report (MMWR) 46(RR-18);1-42, (December 26, 1997). Summarizes recommendations of the

ACIP concerning the use of certain immunizing agents in health-care workers (HCWs), and assists workers and administrators, in optimizing infection prevention and control programs.

- HIV Testing. Centers for Disease Control and Prevention (CDC). This page discusses HIV testing, new testing techniques as well as provides information regarding rapid testing and how the tests can be implemented in different settings and research on the effectiveness and possible uses of the tests.
- National HIV/AIDS Clinicians' Consultation Center. The University of California - San Francisco. Offers post-exposure prophylaxis information as well as information via a telephone consultation service.

Engineering Controls

Engineering controls are defined in OSHA's Bloodborne Pathogens standard as controls that isolate or remove the bloodborne pathogens hazard from the workplace [29 CFR 1910.1030(b)]. The standard states "Engineering and work practice controls shall be used to eliminate or minimize employee exposure" [29 CFR 1910.1030(d)(2)(i)]. This means that if an effective and clinically appropriate safety-engineered sharp exists, an employer must evaluate and implement it.

OSHA Standards Enforcement Topics Media Center Contact Us



U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration
200 Constitution Ave NW
Washington, DC 20210
☎ 1-800-321-OSHA
1-800-321-6742
www.osha.gov

FEDERAL GOVERNMENT  **OCCUPATIONAL SAFETY & HEALTH** 

- White House
- Benefits.gov
- Coronavirus Resources
- Disaster Recovery Assistance
- DisasterAssistance.gov
- USA.gov
- Notification of EEO Violations
- No Fear Act Data
- U.S. Office of Special Counsel
- Frequently Asked Questions
- A - Z Index
- Freedom of Information Act - OSHA
- Read The OSHA Newsletter
- Subscribe to the OSHA Newsletter
- OSHA Publications
- Office of Inspector General

ABOUT THE SITE

- Freedom of Information Act
- Disclaimers
- Plug-ins Used on DOL.gov
- Accessibility Statement

Connect With OSHA



- Site Map
- Important Website Notices
- Privacy & Security Statement