

GUIDELINE FOR SHARPS SAFETY

The following Guideline for Sharps Safety has been approved by the AORN Recommended Practices Advisory Board. It was presented as proposed recommendations for comments by members and others. The guideline is effective June 15, 2013. The recommendations in the guideline are intended to be achievable and represent what is believed to be an optimal level of practice. Policies and procedures will reflect variations in practice settings and/or clinical situations that determine the degree to which the guideline can be implemented. AORN recognizes the various settings in which perioperative nurses practice; therefore, this guideline is adaptable to various practice settings. These practice settings include traditional operating rooms (ORs), ambulatory surgery centers, physicians' offices, cardiac catheterization laboratories, endoscopy suites, radiology departments, and all other areas where operative and other invasive procedures may be performed.

Purpose

This document provides guidance to perioperative registered nurses (RNs) in identifying potential sharps hazards and developing and implementing best practices to prevent sharps injuries and reduce bloodborne pathogen exposure to perioperative patients and personnel.

Health care workers are at risk for percutaneous injury, exposure to bloodborne pathogens, and occupational transmission of disease.¹ Annually, an estimated 384,325 hospital health care workers sustain a percutaneous injury.² When non-hospital health care workers are included, the number increases to more than 500,000.³ Percutaneous injuries are associated primarily with occupational transmission of hepatitis B virus (HBV), hepatitis C virus (HCV), and HIV, but also may be implicated in the transmission of other pathogens.^{1,3-17} A 2006 review of pathogens transmitted in published cases since 1966 showed transmission of 60 pathogens or species, which included 26 viruses, 18 bacteria or *Rickettsia*, 13 parasites, and three yeasts.¹⁸

The occupational risk of HBV transmission is dependent on the level of exposure to blood and the type of hepatitis B antigens.¹⁹ Since the widespread adoption of HBV immunizations, the number of HBV infections in health care workers has declined significantly.¹⁹⁻²³ The reported number of HBV-infected providers in 1983 was 10,000 compared to approximately 100 in 2009.^{20,21} The rate of anti-HCV seroconversion after an occupational exposure to HCV positive blood ranges from 0% to 7% with an average rate of 1.8%.^{13,19,21,24,25} Although the risk of occupational transmission of HIV depends on the

type and severity of the exposure,^{19,26-28} the average risk is 0.3%.^{12,19,26,28,29}

Percutaneous injuries carry risks not only to perioperative personnel but to patients as well.^{20,21,25,30-33} If a health care worker infected with a bloodborne pathogen experiences a percutaneous injury and the object that caused the injury reconnects with the patient or the health care worker's glove perforation is undetected, the patient is at risk for infection.³⁴ There have been 132 documented cases of health care provider to patient transmission of HBV, HCV, or HIV worldwide.^{17,20,31,35-37}

The bloodborne pathogens standard 29 CFR 1910.1030 became effective March 6, 1992.³⁸ The standard includes definitions, an exposure control plan, engineering and work practice controls (eg, personal protective equipment [PPE]), vaccinations, post-exposure follow-up, employee training, and record keeping.³⁸ The purpose of the bloodborne pathogen standard is to limit health care worker exposure to HBV, HCV, HIV, and other potentially infectious materials in the workplace through the implementation of engineering and work practice controls.³⁹

The Needlestick Safety and Prevention Act was signed into law on November 6, 2000.⁴⁰ The act directs the Occupational Safety and Health Administration (OSHA) to revise the bloodborne pathogens standard. The revisions included adding engineering control definitions; including requirements for technology changes that eliminate or reduce bloodborne pathogen exposure in exposure control plans; including input from frontline, non-managerial employees in the identification, evaluation, and selection of safety-engineered devices and work practice controls; annually documenting the evaluation in the exposure control plan; including employee input in the exposure control plan; and maintaining a sharps injury log.⁴⁰⁻⁴²

Sharps injury prevention is a concern for all members of the perioperative team. Many perioperative professional associations have developed sharps safety position and guidance statements. AORN adopted its "Position statement on workplace safety" in 2003, identifying bloodborne pathogen exposures from percutaneous injuries as a risk in the perioperative environment.⁴³ The "AORN guidance statement: Sharps injury prevention in the perioperative setting," published in 2005, assisted perioperative nurses in developing sharps injury prevention programs and provided strategies to overcome compliance obstacles. Risk-reduction strategies included double gloving, using the neutral or hands-free zone, and using safety-engineered devices.⁴⁴

The Association of Surgical Technologists (AST) adopted its "Guideline statement for the implementation of the neutral zone in the perioperative

