



ANSELL CARES FOR HANDS THAT CARE

An information and educational programme for the hospital and medical community

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## **PREVENTION OF SHARPS INJURIES IN THE HEALTHCARE SETTING**



## OVERVIEW

Ansell has an ongoing commitment to the development of quality products and services for the healthcare industry. This self-study, Clinical Reference Manual: PREVENTION OF SHARPS INJURIES IN THE HEALTHCARE SETTING is one in a series of continuing education services provided by Ansell. This education module examines sharps injuries and the EU Directive 2010/32/EU.

Accidental sharps injuries in the peri-operative setting are serious problems. Many healthcare workers acquire infectious diseases from bloodborne pathogens or injuries in the course of their work. The cost of injury and exposure takes an emotional and financial toll on the healthcare worker, their families and the facility. Awareness of the risk associated with these exposures has led to an emphasis on protection for healthcare workers. European Directive 2010/32/EU on the prevention of sharps injuries in the healthcare sector provides guidelines and regulations as a means of protection and safety. This education module examines basic strategies and processes that can raise awareness of and help minimize the risk of sharps injuries.

## PROGRAM OBJECTIVES

At the conclusion of this module, the participant should be able to:

1. Understand the problem
2. Identify who is at risk
3. Describe when sharps injuries occur
4. Explain the European Directive on Prevention of Sharps Injuries (2010/32/EU)
5. Describe solutions to sharps safety issues

## INTENDED AUDIENCE

The information contained in this self-study guidebook is intended for use by healthcare professionals who are responsible for, or involved in, the following activities related to this topic:

- Educating healthcare workers
- Establishing institutional or departmental policies and procedures
- Decision-making responsibilities for sharps safety products
- Maintaining regulatory compliance
- Managing employee health and infection prevention services
- Purchasing responsibilities



# PREVENTION OF SHARPS INJURIES IN THE HEALTHCARE SETTING

## INSTRUCTIONS

AnsellCares educational courses are accepted by the European Operating Room Nurses Association (EORNA), under the EORNA Accreditation Council for Education (ACE). Obtaining full credit for this offering depends on completion of the self-study materials on-line as directed below.

Acceptance refers to recognition of educational activities only and does not imply endorsement of any product or company displayed in any form during the educational activity.

Nurses can access the offering through the EORNA Academy (online via [www.eorna.eu](http://www.eorna.eu)). Courses and tests can be taken online, delivering final results and accreditation points through an EORNA ACE certificate.

For more information about our educational programs or healthcare-related topics, please go to [www.anselleurope.com/medical/index.cfm?page=spec-prog\\_cares&lang=EN](http://www.anselleurope.com/medical/index.cfm?page=spec-prog_cares&lang=EN).

## PLANNING COMMITTEE MEMBERS

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*The planning committee members declare that they have an affiliation and financial relationship as employees of Ansell which could be perceived as posing a potential conflict of interest with development of this self-study module. This module will include discussion of commercial products referenced in generic terms only.*

***Disclaimer: The information provided is an academic presentation which cannot apply to every specific fact or situation...it is not considered a substitute for any provisions of the European Directive 2010/32/EU on the prevention of sharps injuries in the healthcare sector.***



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# Guidance to support implementation of the EU Directive 2010/32/EU on the prevention of sharps injuries in the healthcare sector

## WHAT IS THE PROBLEM?

Sharps injuries occur following a cut or puncture wound to the skin, most often from a needle or other medical sharp such as a scalpel. In a few cases sharps injuries to the eyes can also occur, but are rare. Injuries caused by needles and other sharp medical devices are a major threat to the health and safety of healthcare workers across the EU. Accidental exposure to blood and body fluid due to sharps injuries continues to be a serious problem, especially in the surgical setting (operating room). It is estimated that 1 million needle stick injuries are suffered by healthcare workers in Europe each year, with approximately 23% of these occurring in the operating room<sup>1</sup>. However, needlestick injuries are notoriously underreported and many expect this figure to be much higher in reality<sup>2,3</sup>.

If the sharp is contaminated with blood there is a risk of transmitting infectious agents. More than 20 dangerous bloodborne pathogens are transmitted by contaminated needles, including hepatitis B, hepatitis C and human immunodeficiency virus (HIV).

While sharps injuries in the non-surgical setting have decreased since 2000, injuries in the surgical setting have increased by 6.5%. However, most sharps injuries can be prevented, and there is a legal requirement on employers to take steps to prevent healthcare staff being exposed to infectious agents from sharps injuries.

## WHO IS AT RISK?

Anyone is at risk who comes into contact with a sharp instrument previously used on a patient. But, perhaps unsurprisingly, the majority of sharps injuries occur to nurses because they are most likely to be carrying out procedures using sharps, such as giving injections, cannulating or taking blood.

Other primary users of sharps, who may also be at risk, include doctors, paramedics, dentists, operating department assistants and phlebotomists. Laboratory workers, podiatrists, radiographers and physiotherapists may also be at risk.

In addition, ancillary staff who work in healthcare environments or handle healthcare waste or equipment, such as security staff, porters, laundry workers and maintenance workers, can be exposed to sharps injuries from needles that haven't been disposed of correctly by a primary user. However, reported injuries in these professions remain low<sup>4</sup>.

Analysis of incidents shows that the majority of injuries occur in wards, theatres, accident and emergency and intensive care units. But, sharps injuries can also occur in community settings such as health centres and in patients' homes<sup>4</sup>.



### WHEN DO SHARPS INJURIES OCCUR?

Lancets, scalpels, syringe needles, suture needles, razors, scissors, test tubes and even fragments of bones or patients' teeth can all cause sharps injuries. Injuries from these instruments can occur during or after use (before disposal), between steps in procedures, during disposal or while resheathing or recapping a needle.

The majority of injuries (75%) occur during use or passing of the devices. Procedures with a high risk of injury include intra-vascular cannulation and venepuncture, with sharps injuries following blood sampling, which includes procedures such as venepuncture, being the most commonly reported in the healthcare setting <sup>4</sup>. Most of the sharps injuries that occur are caused by needles, with hollow bore needles, e.g. syringe needles, accounting for 68% and a further 19% being due to solid needles, e.g. suture needles <sup>4</sup>.

### WHAT IS THE RISK OF INFECTION?

Percutaneous exposure injuries carry the greatest risk for the transmission of bloodborne pathogens in the healthcare setting <sup>5,6</sup>. The risk of infection following a percutaneous injury, especially deep penetrating injuries involving a hollowbore needle or a device visibly contaminated with blood, has been estimated at 1 in 3 for hepatitis B <sup>7</sup>, 1 in 30 for hepatitis C <sup>8</sup> and 1 in 300 for HIV <sup>8</sup>.

In the UK, at least 17 healthcare workers have contracted hepatitis C and there have been five documented cases of HIV transmission between the late 1990s and 2009 <sup>4,9</sup>.

## THE EUROPEAN DIRECTIVE

There are a number of existing and new laws that require employers to protect healthcare workers from sharps injuries. The European Directive on Prevention of Sharps Injuries (2010/32/EU) was introduced in May 2010 and requires all member states to introduce further protection for healthcare workers exposed to the risk of sharps injuries. It is an obligation to adjust national laws and regulations in order to implement the directive in all EU countries by May 2013.

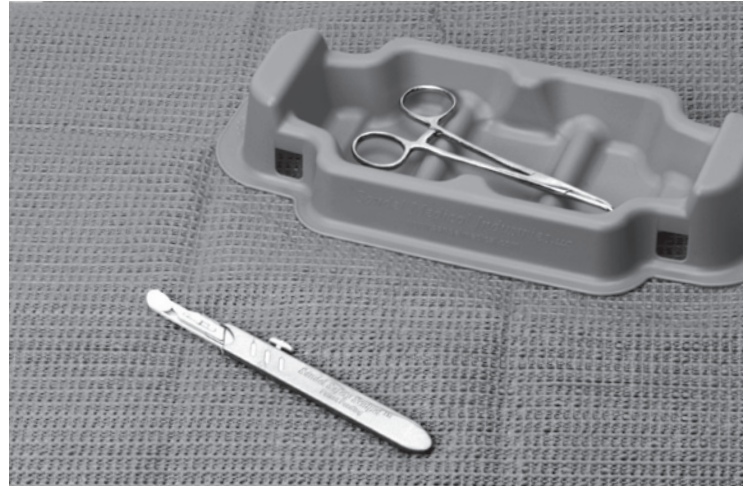
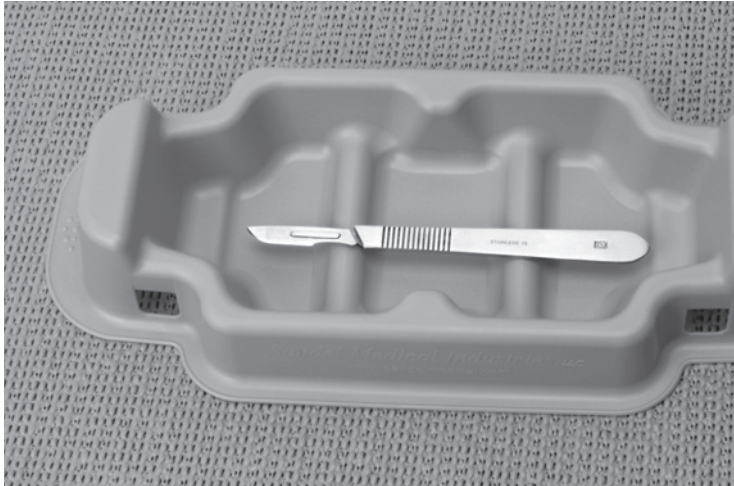
The objective of the Directive is to achieve the safest possible working environment by preventing injuries to workers caused by all medical sharps (including needle stick injuries) and to protect workers at risk in the hospital and healthcare sector.

The Directive requires that risk assessments be carried out and where possible exposure to sharps be eliminated. Where exposure cannot be eliminated, exposure should be prevented through:

- implementing safe procedures for using and disposing of sharp medical instruments and contaminated waste
- eliminating the unnecessary use of sharps by implementing changes in practice and providing medical devices incorporating safety-engineered protection mechanisms
- providing sharps disposal equipment as close as possible to the assessed areas where sharps are being used or found
- banning the practice of recapping.

The Directive applies to all workers in the hospital and healthcare sector, including staff working in the private and public sector. Students and agency nurses are also covered, along with healthcare staff in other workplaces such as prisons.

The legislation specifically addresses one of the priority objectives of the EU's current strategy for health and safety at work, which aims to cut workplace accidents by 25% by 2012.



### IMPLEMENTATION OF THE EU DIRECTIVE

The Directive requires that employers implement safe working practices by:

- developing an overall prevention policy
- providing staff training on a regular basis (e.g. on the correct use of medical devices incorporating sharps protection mechanisms, correct disposal of sharps and risks associated with blood and fluid exposure)
- monitoring staff health
- ensuring use of personal protective equipment (e.g. gloves)
- vaccinating workers and students free of charge (e.g. for hepatitis C)
- making information available and increasing awareness of the risks
- implementing policies and procedures to care for injured workers (e.g. medical treatment/counseling and investigation of the cause)

Healthcare workers are required to report immediately any sharps injuries to the employer and/or person responsible for health and safety.



## PREVENTION OF SHARPS INJURIES IN THE HEALTHCARE SETTING



Use of safety devices and safer working practices can reduce the incidence of injuries due to sharps. Examples of ways to reduce sharps injuries include:

- Double gloving during surgical procedures.
- Use of scalpels with safety blades.
- Use of next-generation safety scalpel handles that will work with any standard blade.
- Adoption of a hands-free technique of passing sharps and suture needles between peri-operative team members, i.e. via use of hands-free transfer trays.
- Use of a hands-free neutral or safe zone, i.e. a designated area on the sterile field where sharps can be placed and picked up. (It is important to note that 25% of suture needle injuries and >50% of scalpel injuries occur when an instrument is passed from one person to another.)
- Use of blunt-tip suture needles.
- Safe disposal of sharps, e.g. by using blade and needle counting and disposal boxes designed to help with the safe removal and disposal of both scalpel blades and needles.



### SUMMARY

Occupational exposure to bloodborne pathogens via percutaneous injuries is one of the most serious dangers healthcare workers face on a daily basis. The risk of sustaining a percutaneous injury can be reduced through implementation of the EU Directive, employee education, clear communication, implementation of engineered devices, and focused work practice controls. Facilities should comply with regulatory requirements for adoption of safer technologies, and promote policies and practices that have shown to reduce blood exposure.

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