Sharps Injuries and associated hazards

Dr Aparna Jha Ahuja
MD, PG Hospital Management, IFCAP
Head of Clinical Affairs - PAS EMA
BD Diagnostics
1 Patient, 1 HCW, 1 Second…

This Cannot happen to me…
Worldwide, in the year 2000, at least 83,000 new cases of infection due to percutaneous exposures in healthcare workers were estimated: 16,000 HCV, 66,000 HBV, and 1,000 HIV.
Interesting Facts

• Healthcare workforce, 35 million people worldwide, suffer from **two million needlestick injuries** (NSI) per year resulting in infections with Hepatitis B, C and HIV.

• Projected two million NSI are probably a low estimate because of **lack of surveillance systems** and underreporting of injuries. Research has shown 40-75% of underreporting of NSI.

• WHO estimates global burden of disease from occupational exposure to be **40% of Hepatitis B & C and 4.4% of HIV infections among healthcare workers (HCW).**


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Independent studies have shown that training, safer working practices, and the use of safety-engineered devices can prevent more than 80% of needlestick injuries.*

Do you know the prevalence of bloodborne pathogens in your facility?

• A study of the Johns Hopkins Hospital Emergency Room determined prevalence of HCV, HBV and HIV in blood samples from 2,523 patients. Twenty-nine percent were infected with one of the three viruses. Of those patients:

Patient Disease State - Johns Hopkins Study

- Hep C: 20%
- Hep B: 5%
- HIV: 15%

The spread of infections through sharps injuries

<table>
<thead>
<tr>
<th>Seroconversion rates*</th>
<th>Source Patient Infection rates**</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV 0.3%</td>
<td>HIV 5.6%</td>
</tr>
<tr>
<td>HCV 1 to 10%</td>
<td>HCV 21.2%</td>
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<tr>
<td>HBV 6 to 30%</td>
<td>HBV 5.1%</td>
</tr>
</tbody>
</table>

*CDC report

**SIROH report

Sharps injuries are preventable!
CDC reports that up to 86% of needlestick injuries can be prevented by using safety-engineered devices
Needlestick Injury Deaths

Deaths Related to Needlestick Injuries

US Globally

Needlestick Injury Deaths by Profession

Doctors, 22%
Nurses, 39%
Techs, 39%

Techs Nurses Doctors

Percutaneous exposures by job category and area

Where, When, Who of Needlestick Injuries

Where sharps injuries occur?

- Patient’s room: 24%
- Operating room: 9%
- Emergency room: 7%
- ICU/CCU: 26%
- Other: 34%

When sharps injuries occur?

- Sample collection: 22%
- Injection: 17%
- IV: 16%

Recent CDC/NIOSH Alert on NSI estimated that as many as half of all sharps injuries go unreported.

(1) EPINet™
Where, When, Who of Needlestick Injuries

Timing of Needlestick injuries

- During or related to Device Disposal: 15%
- During Device Recapping: 5%
- During Device Use: 40%
- After Device Use, Before Disposal: 40%

Who gets injured?

- Nurse RN/LPN: 44%
- Physician: 15%
- Phlebotomist: 5%
- Housekeeper: 5%
- Surgery Attendant: 5%
- Other Attendant: 5%
- Technologist: 4%
- Clinical Lab Worker: 3%
- Other: 14%

In 1/3 of accidents the victim is not the original user of the device

(1) EPINet™
### Occupational infections following a needle/sharps injury

#### Bacterial
- Syphilis 1913
- Diphteritis 1923
- Leptospirosis 1937
- Scrub typhus 1945
- Gonhorrea 1947
- Brucellosis 1966
- Rocky Mountain Spotted Fever 1967
- Mycoplasmosis 1971
- Mycobacteriosis 1977
- Rickettsia typhi 1978
- Staph.aureus 1983
- Strept.pyogenes 1980
  - necrotizing fasciitis 1997
- Tuberculosis 1931

#### Viral
- Herpes Simplex 1962
- Haemorragic fevers (Ebola, Marburg, Machupo, Sabia, etc) 1974
- Kyasanur virus 1975
- Herpes Zoster 1976
- Hepatitis B 1982
- HIV 1984
- Hepatitis D 1986
- Creutzfeldt-Jakob 1988
- Herpesvirus simiae 1991
- Hepatitis C 1992
- Simian immunodeficiency virus 1994
- Dengue 1998
- Hepatitis G 1998
- West Nile virus 2002
- HTLV II 2006
- Chikungunya 2006
- HCV-NS3 recombinant vaccinia virus 2007
- Hepatitis E 2007
- Cytomegalovirus 2008
- Vaccinia virus 2008
- Crimean Congo Haemorrhagic Fever 2009

#### Protozoal
- Toxoplasmosis 1951
- Malaria 1972
- Leishmaniasis 1997
- Trypanosomiasis 2001

#### Fungal
- Blastomycosis 1903
- Sporotrichosis 1977
- Cryptococcosis 1985

#### Tumoral
- Human colonic adenocarcinoma 1986
- Sarcoma 1996

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### Occupational infections following a needle/sharps injury in healthcare

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<thead>
<tr>
<th><strong>Bacterial</strong></th>
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**Fungal**
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- Cryptococcosis 1985

**Tumoral**
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- Sarcoma 1996

It is not just about Numbers….  

1 Patient, 1 HCW, 1 Second…

One second. It’s the blink of an eye. A fleeting moment. But that’s all it takes for an accidental needlestick to change the life of a HCW.

We Are All At Risk
Personal Accounts of NSI

Lisa Black

- Lisa Black received a needlestick injury from a known end stage AIDS patient at a small hospital in Sparks, Nevada in 1997.

- Nine months after the needlestick, Lisa began to exhibit symptoms and was diagnosed with HIV and HCV.

- **Consequence:**
  - Her disability payments were reduced by 25% because she was not wearing gloves at the time of the needlestick.
  - As a divorced mother of two, she currently lives on $18,749 per year. Lisa is also forced to face her own mortality at a very young age.

“My first reaction was sheer panic, but this soon yielded to robot-like action.... By the time I left the patient’s room and walked to the nurses’ station, I was in tears”
Personal Accounts of NSI

Diane Mawyer

- Diane Mawyer—a nurse at the American Red Cross blood bank for 13 years. She was exposed to blood through needlesticks and splatter to the hands and face on a routine basis.

- It was not until 1993 that Diane was diagnosed with HCV.

- **Consequence:**
  - She has required 2 liver transplants and a kidney transplant.
  - Is now on dialysis 3x’s a week
  - She estimates her treatment costs close to $1 million so far
Patricia Wetzel

“There’s the initial panic, shock, and fear associated with the needlestick, and then the denial stage where you think, ‘Nothing bad will happen to me as a result.’"
“I tighten a tourniquet around my wrist to induce bleeding. My hand turns blue. It doesn’t matter, I’m too scared. Trembling, I finish caring for the patient.”
“My immediate concern was to finish the procedure. If I lost the IV line, then someone else would have to stick the patient… I went out to the desk and told the day-shift supervisor that I’d been stuck and asked her what I was supposed to do. It was my first stick.”
I remember my first reaction was to want to go back to triage as if nothing had happened. I was angry that I had been stuck...I also didn’t want to deal with what would follow once I reported my exposure...but a colleague who witnessed my needlestick convinced me to report.
Socio-Economical Approach

Direct cost:
+ Serological follow-up
+ Administrative expenses
+ Prophylactic/curative treatments
+ Labor Costs
  + Incremental Labor Expenses
  + Compensation Costs

Indirect cost *:
+ Time lost by the nurse
+ Time spent for the reporting of the NSI
+ Time spent for the serological follow-up
+ Loss of efficiency due to the anxiety
+ High staff turnover

Total Cost of a NSI

AND… the Psychological Impact to HCW and family

* Usually 3 to 4 times the direct cost
Advances in Exposure Prevention

- EPI Net data reports
- International news and reports
- Regulation, legislation and Policy updates
- New technology and product evaluations

Published by the International Health Care Worker Safety Center
• You need to know how the exposures are occurring in order to develop targeted prevention strategies

• To determine the effectiveness of prevention strategies, you need before and after data
EPINet™—The Exposure Prevention Information Network

- Developed in 1991 by Dr. Janine Jagger at the International Healthcare Worker Safety Center, University of Virginia

- Provides standardized methods to record and track Percutaneous Injuries (PIs)

- EPINet data for 1993 and 2001 demonstrated overall PI rates for nurses:

<table>
<thead>
<tr>
<th></th>
<th>1993</th>
<th>2001</th>
<th>% Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI rate per 100 Occupied Beds*</td>
<td>19.5*</td>
<td>9.6*</td>
<td>51%</td>
</tr>
</tbody>
</table>

* PIs per 100 Occupied Beds
What can you do with EPINet?

- analyze injury frequencies by attributes such as job, device, and procedure
- prepare quarterly or annual reports
- identify injuries that may be prevented
- evaluate the efficacy of new safety devices
- target injuries with high-risk devices
EPINet Use Within A Hospital

- after an employee sustains an exposure, it is reported to Employee Health
- employee fills out the EPINet form as part of routine post-exposure follow-up
- Employee Health nurse enters data into the computerized surveillance system
- at the end of the month/quarter/year, the Employee Health nurse analyzes the data using pre-programmed EPINet reports
Policy and Law

- Conducts scholarly, legal analyses of issues related to occupational infection risks of health care workers.
- Participates in developing sound national policy relating to health care worker safety.

Preventing Needlestick Injuries in Health Care Settings, 1999

**Employers** of health care workers should implement the use of improved engineering controls to reduce needlestick injuries.

Set priorities and strategies for prevention by examining local and national information about risk factors for needlestick injuries and successful intervention efforts.

**Health care workers** should take the following steps to protect themselves and their fellow workers from needlestick injuries:

- Analyze needlestick and other sharps-related injuries in your work area and identify hazards and injuries trends.
- Evaluate the effectiveness of previous prevention efforts and provide feedback on performance.
- Implement the use of devices with reduced risk of needlestick injury. Such devices can lead to serious or fatal infections such as hepatitis B virus, hepatitis C virus, and HIV.
- Prevent needlestick injuries can best be reduced through the use of engineering controls that are incorporated into a comprehensive program. Employers should implement the following program elements:
  - Establish procedures for and encourage reporting and timely follow-up of all needlestick and other sharps-related injuries.
  - Promote safety awareness in the work environment.
  - Modify work practices that pose a needlestick injury hazard to make them safer.
  - Provide training, ongoing training, and available and effective alternatives are available.
- Use devices with safety features provided by your employer.
- Avoid the use of needles where safe and effective alternatives are available.
- Help your employer select and evaluate devices with safety features.
- Consider using standard precautions for preventing exposure to bloodborne pathogens.
- When disposing of used needles:
  - Dispose of used needles promptly in appropriate sharps disposal containers.
  - Participate in bloodborne pathogen disease prevention practices, including vaccination.
  - If you observe hazards, report them to your employer.
  - Tell your employer about hazards that you observe in your work environment.
  - Avoid recapping needles.
by the Occupational Safety and Health Administration in 1998 on engineering and work practice controls used to eliminate or minimize the risk of occupational exposure to bloodborne pathogens due to percutaneous injuries from contaminated sharps. Comments were provided by health care facilities, groups representing healthcare workers, researchers, educational institutions, professional and industry associations, and manufacturers of medical devices.

(7) Numerous studies have demonstrated that the use of safer medical devices, such as needleless systems and sharps with engineered sharps injury protections, when they are part of an overall bloodborne pathogens risk-reduction program, can be extremely effective in reducing accidental sharps injuries.

(8) In March 2000, the Centers for Disease Control and Prevention estimated that, depending on the type of device used and the procedure involved, 62 to 88 percent of sharps injuries can potentially be prevented by the use of safer medical devices.

(9) The OSHA 200 Log, as it is currently maintained, does not sufficiently reflect injuries that may involve exposure to bloodborne pathogens in healthcare facilities. More than 98 percent of healthcare facilities responding to the RFI have adopted surveillance systems in addition to the OSHA 200 Log. Information gathered through these surveillance systems is commonly used for hazard identification and evaluation of program and device effectiveness.

(10) Training and education in the use of safer medical devices and safer work practices are significant elements in the prevention of percutaneous exposure incidents. Staff involvement in the device selection and evaluation process is also an important element to achieving a reduction in sharps injuries, particularly as new safer devices are introduced into the work setting.

(11) Modification of the bloodborne pathogens standard is appropriate to set forth in greater detail its requirement that employers identify, evaluate, and make use of effective safer medical devices.

**Purpose:**

- To achieve the safest possible working environment
- To prevent workers from injuries with all medical sharps – including needlesticks
- To protect workers at risk
- To set up an integrated approach, establishing policies in risk assessment, risk prevention, training, information, awareness raising and monitoring
- To put in place response and follow up procedures
Why The EU Directive?

- Sharps injuries are a common and serious risk to European healthcare workers, representing high costs for both healthcare systems and society.
- Over 1 million sharps injuries occur each year across the EU.
- The process of developing legislation specifically to address the risk of working with medical sharps in the EU began over five-years ago; with the final publication of The Directive on 1st June 2010.
Directive 2010/32/EU: Key Elements

- Health and safety of HCW is paramount and closely linked to the health of patients.
- To achieve the safest possible working environment, we must:
  - set up an integrated approach to prevention from needle & sharps injuries,
  - applying to all workers,
  - who should be well trained, adequately resourced and secure.
- Never assuming that there is no risk,
- employers and HCW shall work together, to create a safe working environment, for which
  - a combination of planning, awareness-raising, information, training, prevention and monitoring measures is essential,
  - promoting a no blame culture in reporting.
There is No Time to Delay

Delaying implementation of safety measures means healthcare workers remain at risk

EU Directive on the Prevention of Sharps Injuries in the Hospital and Healthcare Sector

- The EU Directive on the Prevention of Sharps Injuries in the Hospital and Healthcare Sector has become legally binding on 11th May 2013

The Directive was drafted by the European Commission and adopted by the European Council of Ministers. It incorporates the EU Framework Agreement on Sharps and Injuries negotiated by the European Federation of Public Services Union (EPSU) and the European Hospital and Healthcare Employer’s Association (HOSPEEM), it also responds to the EU Parliament report on needlestick injuries.
Proposed criteria for the definition of a **SAFETY-ENGINEERED DEVICE**

- The safety feature is an **integral part** of the device (1) (2) (3) (4) (5) (6) (7) (8)
- HCW’s hands are always **behind** the exposed sharp (1) (2) (3) (5) (6) (9)
- The use technique of the safety device is **similar** to the one required by a conventional device (2) (3) (7)
- **Quality, efficacy and safety** of the diagnostic-therapeutic action are not compromised or reduced by the adoption of the safety device (3) (5) (6) (7) (8) (9)
- The safety device must **not create other safety hazards** or sources of blood exposure (7) (i.e. it must be usable wearing gloves; it is not prone to be activated by improper handling technique)
Proposed criteria for the definition of a SAFETY-ENGINEERED DEVICE

Activation is:

- self-occurring or requiring only one hand (4) (5) (6) (7) (8) (9)
- as early as possible (2) (4) (6) (9)
- easy and intuitive (1) (2) (3) (5) (6) (7) (8)
- permanent and irreversible (1) (2) (3) (4) (5) (6) (7) (8) (9)
- visible or audible (4) (5) (6) (7) tactile (8) (9)
- If appropriate, the safety device is made available in different versions to encourage use in the highest number of situations (6)

References

6. ISPESL – Istituto Superiore per la Prevenzione e la Sicurezza sul Lavoro. Linee guida sugli standard di sicurezza e di igiene del lavoro nel reparto operatorio, December 2009
7. NHS Employers – Implementation Advice on Sharp Agreement. www.nhsemployers.org, October 2010
The highest risk of sharps injuries are those caused by hollow-bore, blood-filled needles.

Ippolito & Puro, 1996

Hierarchy of NSI risks using a hollow-bore, blood-filled needle

- hemoculture sampling
- other venous blood sampling
  - difficult veins
  - with a needle
  - from a catheter
- arterial blood sampling
- capillary blood sampling

Source: BEH n° 43/1993
Safety-Engineered Devices For Blood Collection

**Blood culture and difficult veins sampling**
- BD Vacutainer® Safety-Lok™ Blood Collection Set
- BD Vacutainer® Push Button Blood Collection Set

**Venous blood sampling with a needle**
- BD Vacutainer® Eclipse™ Blood Collection Needle
- BD Vacutainer® Passive Shielding Blood Collection Needle

**Arterial blood sampling with a needle**
- BD Preset™ Syringe with Luer-Lok™ Tip

**Vascular Access Device**
- BD Vacutainer® Luer-Lok™ Access Device

**Capillary sampling**
- BD Microtainer® Contact-Activated Lancet
- BD Microtainer® Quikheel™ Lancet
Impact of Safety Devices for preventing PCI related to phlebotomy procedures in HCWs
Rogues AM, et al. AJIC 2004;32:441-4

Table 1. Frequency of reported needlestick injuries by year

<table>
<thead>
<tr>
<th>Intervention period</th>
<th>Year</th>
<th>Needle-related injuries</th>
<th>Phlebotomy-related PIs (Vacuum-tube + winged steel needle)</th>
<th>Estimated number of phlebotomies performed</th>
<th>Rate per 100,000 devices purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>1993</td>
<td>413</td>
<td>77 (53 + 24)</td>
<td>Data not available</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>1994</td>
<td>399</td>
<td>80 (66 + 14)</td>
<td>Data not available</td>
<td>16.4</td>
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<tr>
<td></td>
<td>1995</td>
<td>444</td>
<td>87 (72 + 15)</td>
<td>459,499</td>
<td>10.1</td>
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<tr>
<td></td>
<td>1996</td>
<td>426</td>
<td>76 (70 + 6)</td>
<td>463,899</td>
<td>10.2</td>
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<tr>
<td>After</td>
<td>1997</td>
<td>385</td>
<td>46 (42 + 4)</td>
<td>455,700</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>1998</td>
<td>365</td>
<td>47 (43 + 4)</td>
<td>460,400</td>
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<td></td>
<td>1999</td>
<td>307</td>
<td>34 (32 + 2)</td>
<td>458,120</td>
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* safety needles and winged steel needles requiring 2-handed activation

→ An overall reduction of 48% in percutaneous injuries per $10^5$ phlebotomies

(p<0.001)
• NSIs rates per phlebotomy devices*: standard versus safety-engineered
  – Safety devices: $2.9 \times 10^5$ devices purchased
  – Non-safety devices: $11.1 \times 10^5$ devices purchased

* Peripheral Intravenous catheters, Winged steel needles, Vacuum tube blood-collection sytems

+ A 74% reduction in risk of NSIs ($p<0.001$)
NSI rates according to different types of SEDs
Results of a multicenter survey in a French hospital network (2005-2006)

Table – NSI rates per 100,000 item purchased according to the type of integrated safety feature

<table>
<thead>
<tr>
<th>Type of safety feature</th>
<th>No of devices purchased</th>
<th>No. of NSIs reported</th>
<th>No. of NSIs/10^5 devices purchased (95% CI)</th>
</tr>
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<tbody>
<tr>
<td>Manually activated protective sliding shield</td>
<td>5 829 655</td>
<td>303</td>
<td>5,20 (4,61 - 5,78)</td>
</tr>
<tr>
<td>Manually activated protective toppling shield</td>
<td>3 266 450</td>
<td>96</td>
<td>2,94 (2,35 - 3,53)</td>
</tr>
<tr>
<td>Semiautomatic safety feature</td>
<td>4 161 295</td>
<td>49</td>
<td>1,18 (0,85 - 1,51)</td>
</tr>
<tr>
<td>Automatic safety feature</td>
<td>8 875 480</td>
<td>5</td>
<td>0,06 (0,01 - 0,11)</td>
</tr>
</tbody>
</table>

Proven Results of SED Usage

Use of Safety Engineered Devices (SEDs) Reduces NSI Rates By:

- 74% in 32 French Hospitals
- 80% at a Toronto Hospital
- 83% at a USA Hospital
- 49% at a Australian Hospital
### BD Diagnostics – Preanalytical Systems

#### BD Sponsored Clinical Studies

<table>
<thead>
<tr>
<th>AUTHOR</th>
<th>YEAR</th>
<th>TITLE</th>
<th>JOURNAL</th>
<th>STUDY DESIGN</th>
<th>STUDY RESULTS</th>
<th>PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott &amp; Sullivan</td>
<td>1987</td>
<td>BD Vacutainer® RBC Collection Sets: An Inexpensive, Safe Need</td>
<td>n/a</td>
<td>Survey of 16 hospitals that compared BD Vacutainer® RBC Collection Sets with other products</td>
<td>Use of BD Vacutainer® RBC Collection Sets has shown improvements in safety and efficiency compared to other products.</td>
<td>BD Vacutainer® RBC Collection Sets</td>
</tr>
<tr>
<td>Mayo Clinic</td>
<td>1987</td>
<td>Effect of a Better-Engineered Preanalytical Device on Compliance &amp; Sharp Injuries</td>
<td>n/a</td>
<td>Follow-up of a study of the BD Vacutainer® RBC Collection Sets and its impact on compliance, sharp injuries, and patient satisfaction.</td>
<td>BD Vacutainer® RBC Collection Sets show a significant reduction in sharp injuries and improved compliance.</td>
<td>BD Vacutainer® RBC Collection Sets</td>
</tr>
<tr>
<td>Stanford University</td>
<td>1985</td>
<td>Anemia Study: Improving Blood Collection Practices</td>
<td>n/a</td>
<td>Pre-implementation study comparing conventional anemia testing with BD Vacutainer® Eclipse™ anemia testing</td>
<td>80% decrease in anemia testing errors using BD Vacutainer® Eclipse™ anemia testing.</td>
<td>BD Vacutainer® Eclipse™ Anemia Collection Systems</td>
</tr>
</tbody>
</table>
5 Technical requirements

5.1 Personnel

5.1.1 Laboratory management shall have an organizational plan, personnel policies and job descriptions that define qualifications and duties for all personnel.

5.1.2 Laboratory management shall maintain records of the relevant educational and professional qualifications, training and experience, and competence of all personnel. This information shall be readily available to relevant personnel, and may include:

a) certification or license, if required;

b) references from previous employment;

c) job descriptions;

d) records of continuing education and achievements;

e) competency evaluations;

f) provision for untoward incident or accident reports.

Other records available to authorized persons relating to personnel health may include records of exposure to occupational hazards and records of immunization status.
GEN.71150    Phase II

Have personnel reasonably expected to have direct contact with body fluids been identified and offered hepatitis B vaccinations free of charge?

COMMENTARY:

N/A


GEN.71200    Phase II

Is there a program for follow-up procedures after possible and known percutaneous, mucous membrane or abraded skin exposure to HIV, HBV, or HCV that includes the following elements?

1. HIV, HBV, and HCV testing of the source patient after consent is obtained
2. Appropriate clinical and serologic evaluation of the health-care worker
3. Follow-up procedures including consideration of appropriate prophylaxis for personnel acutely exposed to HIV, HBV, or HCV, based upon medical indications, the serologic status and the informed consent of the health-care worker
4. Reporting of the exposure as required by law

COMMENTARY:

N/A
GEN.73100  Phase II

Are sterile syringes, needles, lancets, or other blood-letting devices ("sharps") that are capable of transmitting infection used once only, and are all waste sharps discarded in puncture-resistant containers that are easily accessible, located in areas where needles are commonly used, and properly labeled to warn handlers of the potential hazard?

NOTE: Under U.S. law, shearing or breaking of contaminated sharps is prohibited. Bending, recapping, or removing contaminated needles is prohibited as a general practice. Needles are expected to be used and immediately discarded, un-recapped, into accessible sharps containers.

COMMENTARY:

N/A

Box 1. Applicable JCI Standards

Hazardous Materials
FMS.5 The organization has a plan for the inventory, handling, storage, and use of hazardous materials and the control and disposal of hazardous materials and waste.

Disaster Preparedness
FMS.6 The organization develops and maintains an emergency management plan and program to respond to likely community emergencies, epidemics, and natural or other disasters.
FMS.6.1 The organization tests its response to emergencies, epidemics, and disasters.

Fire Safety
FMS.7 The organization plans and implements a program to ensure that all occupants are safe from fire, smoke, or other emergencies in the facility.
FMS.7.1 The plan includes prevention, early detection, suppression, abatement, and safe exit from the facility in response to fires and nonfire emergencies.
FMS.7.2 The organization regularly tests its fire and smoke safety plan, including any devices related to early detection and suppression, and documents the results.
FMS.7.3 The organization develops and implements a plan to limit smoking by staff and patients to designated non–patient care areas of the facility.
Conclusion

- Risk factors of transmission are well known:
  - NSIs with hollow needle in a vein or artery must be targeted in prevention policies.

- The risk has decreased in some health care settings due to
  - progress in prevention and particularly SEDs use.

- SEDs penetration is:
  - Insufficient, depending on the type of SEDs.
  - Unequal, depending on the status of medical centers.
Conclusion

➢ To keep in mind that **SEDs are part of a global risk-reduction program and cannot prevent all the NSIs alone.**

➢ There is a **need:**
  
  ➢ To eliminate the use of needles in some cases if not essential
  ➢ To involve staff in SEDs evaluation and training
  ➢ To integrate SEDs usage in routine practices
  ➢ To recall the interest of using proper containers, within reach, to eliminate used sharps including SEDs

➢ **Risk assessment by standard occupational reporting system at local and national level** is key in planning and evaluating preventive strategies and SEDs introduction
Everyday Procedure
Everyday Hazard
Everyday Safety

- BD is a leading developer of safety-engineered devices
- At BD we have been helping healthcare workers to stay safe for more than 85 years.

BD is committed to raising awareness of the risks faced by healthcare workers and the methods for improving safety.

Our company’s goal is to educate and inform institutions and the people at risk.
THANKS
aparna_ahuja@europe.bd.com

It only takes one.
Don’t become just another figure