STANDARD OPERATING PROCEDURE

Management of Needle Stick and Sharp Injuries (NSI)

Department of Health • Special Region (1)

Version 1.0 | Effective: 20 February 2026 | Review: Every 2 Years

Approved by: Internal Medicine Unit

SCOPE	All hospital personnel exposed to blood or body fluids
FIRST AID	Wash wound ≥15 min → antiseptic → report within 1 hour
HIV PEP	Start within 2 hours (max 72 h) • 28-day regimen
TESTING	Day 0 → 6 weeks → 3 months → 6 months

1. Purpose

To provide a standardized protocol for the immediate management, risk assessment, treatment, and follow-up of healthcare workers who sustain needle stick or sharp injuries. This protocol is designed to minimize the risk of transmission of blood-borne pathogens, including HIV, Hepatitis B (HBV), and Hepatitis C (HCV), and to ensure timely, evidence-based medical intervention.

2. Scope

This SOP applies to all hospital personnel, and anyone exposed to blood or body fluids on the premises. Applicable roles include:

- Doctors and medical staff
- Nurses and midwives
- Laboratory staff
- General workers and waste handlers
- Students and trainees

3. Definition

A Needle Stick or Sharp Injury (NSI) refers to percutaneous injuries from needles, scalpels, or other sharp instruments. It also includes any injury involving exposure to blood or potentially infectious body fluids via mucous membranes (eyes, mouth) or broken skin.

4. Immediate First Aid (Within Minutes)

Percutaneous Injury (Needle/Sharp)	Mucosal Exposure (Eye/Mouth)
1. Stop the current procedure immediately. 2. Wash the affected area thoroughly with soap and running water for a minimum of 15 minutes. 3. Allow the wound to bleed gently; do NOT squeeze the wound aggressively. 4. Apply an appropriate antiseptic (povidone-iodine or chlorhexidine). 5. Do NOT use bleach or caustic chemicals on the wound.	1. Rinse the affected area immediately with copious amounts of clean water or normal saline. 2. Do NOT use chemical disinfectants in the eyes.

5. Reporting Procedure

Timeframe: Reporting must occur within 1 hour of exposure. Failure to report is considered a severe safety violation.

- Report the incident immediately to the Ward In-Charge / Supervisor, the Infection Control Nurse, and the Duty Medical Officer.
- Complete an Incident Report Form documenting the exact date and time of exposure.
- Document the type of device involved and the nature of the injury (deep vs. superficial).
- Document the presence of any visible blood.

- Document source patient details, if known.

6. Risk Assessment & Laboratory Testing

A qualified physician must conduct a prompt risk assessment evaluating the exposure type (high vs. low risk), depth of injury, device type (e.g., hollow-bore needles pose a higher risk), vein/artery involvement, and source patient status.

Immediate Baseline Testing Protocol:

- Exposed Staff: Test for HIV Ag/Ab, HBsAg, Anti-HCV, and Anti-HBs (if vaccination status is unknown).
- Source Patient (requires consent): Test for HIV, HBsAg, and Anti-HCV.

7. Post-Exposure Prophylaxis (PEP)

7A. HIV Exposure

- Start PEP as soon as possible, ideally within 2 hours.
- The maximum window to initiate PEP is within 72 hours.
- Continue the PEP regimen for a full 28 days.

Risk Evaluation for HIV PEP:

Type of Exposure	HIV Positive Source	HIV Status Unknown	HIV Negative Source
Percutaneous exposure (needle-stick, open wound)	HIGH RISK → Start PEP	MODERATE RISK → Usually Start PEP	LOW RISK → No PEP
Mucous membrane exposure to infectious fluid (eye, mouth)	HIGH RISK → Start PEP	MODERATE RISK → Consider PEP	LOW RISK → No PEP
Mucous membrane exposure to non-infectious fluid	LOW RISK → No PEP	LOW RISK → No PEP	LOW RISK → No PEP
Intact skin exposure to any fluids	LOW RISK → No PEP	LOW RISK → No PEP	LOW RISK → No PEP

Recommended HIV PEP Regimen:

- First line: Tenofovir + Lamivudine (or Emtricitabine) + Dolutegravir
- Alternative: Tenofovir + Lamivudine + Efavirenz

7B. Hepatitis B Exposure

- If the staff member is vaccinated and Anti-HBs is >10 mIU/mL, no action is required.
- If unvaccinated, administer Hepatitis B Immunoglobulin (HBIG) and start the Hepatitis B vaccination series immediately.

7C. Hepatitis C Exposure

- There is no approved PEP available for HCV.
- Management relies on early detection and close medical monitoring.

8. Follow-Up Schedule

Strict adherence to the follow-up testing schedule is mandatory for all exposed personnel.

Time After Exposure	Required Blood Tests
Day 0 (Immediate)	Baseline HIV, HBV, HCV
6 Weeks	HIV
3 Months	HIV, HCV
6 Months	Final HIV, HCV (Additional monitoring if clinically indicated)

9. Work Restrictions & Psychological Support

- Staff may generally continue working unless medically advised otherwise by the occupational health team.
- Avoid blood donation during the entire follow-up period.
- Practice safe sex until final medical clearance is granted.
- Adhere strictly to all standard infection control precautions.
- Because NSIs cause significant anxiety, the hospital provides confidential counselling, medical reassurance, and mental health referrals if necessary.

10. Prevention Policy

All staff must strictly adhere to the following preventative measures:

- Never recap needles under any circumstances.
- Dispose of sharps immediately into designated, puncture-proof containers.
- Never overfill sharps containers.
- Use Personal Protective Equipment (PPE) appropriately for all procedures.
- Attend mandatory annual infection control training sessions.

11. Documentation, Confidentiality, & Responsibility

- All exposure incidents, results, and medical records must be documented and kept strictly confidential.
- Access to these records is limited exclusively to the Infection Control Team and authorized personnel.
- The implementation and enforcement of this SOP are the responsibility of the Infection Control Committee, Hospital Administrator, and Department Heads.

12. References

1. Centres for Disease Control and Prevention. Updated US Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis. MMWR; 2013. https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm

2. World Health Organization. Post-Exposure Prophylaxis to Prevent HIV Infection: WHO Best Practice Recommendations. WHO; 2014. https://www.who.int/publications/i/item/9789241516817

3. British HIV Association and UK Health Security Agency. Occupational Post-Exposure Prophylaxis (PEP) Guidelines. https://www.bhiva.org/occupational-post-exposure-prophylaxis

4. World Health Organization. Guidelines on Hepatitis B and C. WHO; latest edition. https://www.who.int/publications/i/item/9789241549986

5a. Centres for Disease Control and Prevention (CDC). Hepatitis B: Management of Occupational Exposures. https://www.cdc.gov/hepatitis/hbv/professionals/patientmanage/postexposureoccupation.htm

5b. Centres for Disease Control and Prevention (CDC). Hepatitis C: Guidance Post Exposure Testing. https://www.cdc.gov/hepatitis/hcv/pdfs/GuidancePostExposureTesting.pdf

6. Centres for Disease Control and Prevention (CDC). Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV. MMWR. 2013. https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm