

ALL INDIA INSTITUTE OF MEDICAL SCIENCES, JODHPUR
STANDARD OPERATING PROCEDURE

Title: Guidelines for needle stick injury	
SOP Number : SOP / Micro/BMW/ 02	Pages 8
Revision number: 0/0	Department: MICROBIOLOGY
Effective Date: 28.05.2015	Replaces: NIL

AMENDMENT SHEET

S.No.	Date	Page no.	Revision No.	Nature of Amendment Section/ details	Authorization

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1. PURPOSE

The purpose of this SOP is to institutionalize the effective system in AIIMS, Jodhpur to prevent the risk of occupational exposure to HIV and hepatitis viruses among health care workers of all cadre working at AIIMS, Jodhpur hospital.

2. SCOPE

The incidence of hospital acquired Hepatitis B virus (HBV) infection (9-30%) & Hepatitis C virus (HCV) infection (1-10%) far exceeds that of Human Immuno deficiency virus (HIV) infection (0.3%). The SOP, will provide practical guidelines for all health care workers.

3. RESPONSIBILITY

It is the duty of Bio waste management (BMW) team to train and guide doctors, residents, nursing staff and hospital employees, time to time and instruct to follow this SOP for getting immunized against Hepatitis B, so as to prevent oneself from needle stick and sharp injuries, and also preventing from skin and mucous membrane exposure, preventing the transmission of infection of HIV, HBV & HCV from patients to health workers.

4. POTENTIALLY INFECTIOUS BODY FLUIDS

The potentially infectious material include blood, semen, vaginal secretion and body fluids like cerebrospinal, synovial, pleural, peritoneal, pericardial, amniotic & other fluids contaminated with visible blood.

5. HEALTH CARE WORKER WITH FREQUENT BLOOD EXPOSURES:

Health care worker with frequent blood exposures are nursing staff, nursing students, physicians, surgeons, emergency care providers, dentists, interns and medical students, labour and delivery room personnel, laboratory technicians, health facility cleaning staff and clinical waste handlers.

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6. FOLLOWING PRACTICES TO BE DONE TO REDUCE RISK

Certain work practises increase the risk of needle stick injury and require proper attention such as:

- 6.1 Avoid the use of needles where safe and effective alternatives are available e.g. use of closed system for blood collection i.e. vacutainer.
- 6.2 Take proper precaution during transfer of fluids between containers.
- 6.3 During handling of needles one should be very careful and it should be promptly disposed of only in sharp disposal containers, and avoid recapping needles.
- 6.4 All health care personnel should be vaccinated against the hepatitis B virus as per recommendation and then, the antibody titre should be monitored at different intervals. There is no vaccine or prophylaxis available against HIV & hepatitis C.
- 6.5 Any NSI case should be immediately brought into notice of the Infection control nurse (ICN) to the Dept. of microbiology.

7. MANAGEMENT OF NEEDLE STICK INJURY

- 7.1 Do not panic or put the pricked finger in mouth or squeeze the wound to bleed it.
- 7.2 Immediately wash the wound and surrounding skin with soap and water, and rinse.
- 7.3 Do not scrub or use bleach, chlorine, alcohol, betadine, iodine, antiseptics/detergents or any antibiotics on the wound

8. MANAGEMENT OF SPLASH, OF BLOOD OR BODY FLUIDS TO UNBROKEN SKIN/ EYE/ MOUTH:

- 8.1 To unbroken skin, immediately wash the area and do not use antibiotics.
- 8.2 For the eye irrigate exposed eye immediately with water, sit in a chair, tilt head back and ask a colleague to gently pour water over the eye. Do not use soap or disinfectant on the eye.
- 8.3 If wearing contact lens, leave them in place while irrigating, as they form a barrier over the eye and will help protect it. Once the eye is cleaned, remove the contact lens and clean them in the normal manner. This will make them safe to wear again.

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8.4 For Mouth, Spit out the fluid immediately rinse the mouth thoroughly, using water or saline and spit again. Repeat this process several times and do not use soap or disinfectant in the mouth.

8.5 Consult the designated physician of the institution for the management of exposure immediately.

9. EVALUATION FOR POST EXPOSURE PROPHYLAXIS (PEP)

The evaluation to be done by designated PEP I/C at ICTC preferably within 2 hours but certainly within 72 hours. The first dose of PEP should be administered preferably within the first 2 hours of exposure but certainly within 72 hours.

If the risk is insignificant, PEP could be discontinued, if already commenced.

10. ASSESSMENT OF EXPOSURE AND RISK OF TRANSMISSION

Categories of exposure based on amount of blood/fluid involved and the entry port these includes

10.1 **Mild exposure:** Mucous membrane/ non-intact skin with small volumes e.g.: A superficial wound (erosion of the epidermis) with a plain or low calibre needle, contact with the eyes or mucous membranes, or subcutaneous injections following small bore needles

10.2 **Moderate exposure:** Mucous membrane/non intact with large volumes or percutaneous superficial exposure with solid needle, e.g.: A cut or needle stick injury penetrating gloves.

10.3 **Severe exposure:** Percutaneous with large volume: e.g.: An accident with a high calibre needle (≥ 18 G) visibly contaminated with blood; A deep wound (haemorrhagic wound and/or very painful); Transmission of a significant volume of blood; an accident with material that has previously been used intravenously or intra- arterially.

In case of an exposure with material such as discarded sharps/needles, contaminated for over 48 hours, the risk of infection becomes negligible for HIV, but still remains significant for HBV. Hepatitis B virus survives longer than HIV outside the body.

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11. ASSESSING THE HIV STATUS OF SOURCE AND THE PERSON EXPOSED

- 11.1 A baseline rapid HIV testing after proper counselling should be done before starting PEP of the person exposed; and if required, of the source;(in case the status of the source is unknown).
- 11.2 Informed consent should be obtained before testing of the source as well as person exposed.
- 11.3 Initiation of PEP where indicated should not be delayed while waiting for the results of HIV testing of the source of exposure.
- 11.4 Exposed individual who are known or discovered to be HIV positive should not receive PEP. They should be offered counselling and information on prevention of transmission and referred to antiretroviral therapy (ART) centre after their complete laboratory work up which also include testing for hepatitis B & C virus infection.
- 11.5 Post exposure prophylaxis is given to the individuals as per below mentioned guidelines:

Exposure	HIV Post-exposure Prophylaxis evaluation (as per NACO guidelines)		
	Status of source		
	HIV + and asymptomatic	HIV + and Clinically symptomatic	HIV status unknown
Mild	Consider 2-drug PEP	Start 2 drug PEP	Usually no PEP or Consider 2 drug PEP
Moderate	Start 2-drug PEP	Start 3-drug PEP	Usually no PEP or Consider 2 drug PEP
Severe	Start 3-drug PEP	Start 3-drug PEP	Usually no PEP or Consider 2 drug PEP

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12. IN SPECIAL CIRCUMSTANCES AS BELOW, EXPERT OPINION MAY BE OBTAINED

- 12.1 Delay in reporting exposure (> 72 hours).
- 12.2 Unknown source:
- 12.3 Known or suspected pregnancy
- 12.4 Breastfeeding issues in the exposed person. Consider stopping breastfeeding if PEP is indicated.
- 12.5 If source patient is on ART or possibly has HIV drug resistance:
- 12.6 Major toxicity of PEP regimen: minor side effects may be managed symptomatically.
- 12.7 In case of major psychological problem refer to psychiatry dept.

13. REFERENCES:

National AIDS Control Organization (NACO) 2007 May. Guidelines on Antiretroviral Therapy Guidelines for HIV-Infected Adults and Adolescents Including Post-exposure Prophylaxis. [Accessed on 31 March 2015].

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Appendix 1

PERFORMA FOR OCCUPATIONAL EXPOSURE FOR BLOOD BORNE PATHOGEN

Date/Time: _____ Filled by: _____

1. DEMOGRAPHICS

- 1.1. Name: _____
- 1.2. Age: _____ Sex: _____
- 1.3. Employment No.: _____ Department: _____
- 1.4. Hepatitis B Vaccination (Complete /Incomplete /Unvaccinated): _____
- 1.5. Anti HBs level in past (Done / Not done /Value) _____

2. DETAILS OF INJURY

- 2.1. Date / Time: _____
- 2.2. Time since injury: _____
- 2.3. Source (Known/Unknown): _____
- 2.4. Source Location / Details: _____
- 2.5. Source HIV / HBsAg / HCV at the time of exposure: (Known / Unknown) _____
- 2.6. Body Fluid (Blood / other body fluids): _____
- 2.7. Type of Injury: (Mucosal / superficial percutaneous / deep percutaneous) _____
- 2.8. Procedure: (IM inj / SC inj / Blood Glucose / IV access / Garbage bag) _____
- 2.9. Wound Care after injury : _____

3. CHECKLIST FOR ICTC

- 3.1. Source blood sent (Yes/No): _____
- 3.2. Exposed blood sent (Yes/No): _____
- 3.3. HBV vaccine: _____ (Not Indicated/ Indicated and given/ Indicated and Not given)

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3.5. Time of starter pack since injury (Time in hrs.): _____

3.6. Referral and counselling: _____

4. FOLLOW UP

4.1. Source HIV/HBV/HCV status: _____

4.2. Exposed baseline HIV/HBV/HCV status: _____

4.3. HBV vaccination details: _____

4.4. ARV details (Regime, duration, side effects, adherence): _____

4.5. HIV/HBV/HCV of exposed at 3 months: _____

4.6. HIV/HBV/HCV of exposed at 6 months: _____

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