Govt. of India, Central Institute of Psychiatry, Ranchi

STANDARD OPERATING PROCEDURE FOR NEEDLE STICK INJURY

Annexure - VI

1. **PURPOSE**

The purpose of this SOP is to institutionalize an effective system to ensure that all Health Care workers of Central Institute of Psychiatry (CIP), Ranchi who experience a needle stick injury, or have a mucocutaneous exposure to blood or body fluids, are aware of the correct action to take to deal with the situation rapidly and appropriately.

2. **SCOPE**

The SOP will provide practical guidelines for all health care workers of Central Institute of Psychiatry (CIP), Ranchi who sustains an exposure injury.

3. **RESPONSIBILITY**

It is the duty of Hospital Infection Control Committee (HICC) 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. **INFECTIOUS AND NON-INFECTIOUS MATERIAL**

Potentially Infectious	**Non-Infectious (Unless Contaminated with Visible Blood)**
Blood/Serum/Plasma	Tears
Semen	Saliva
Vaginal Secretions	Urine
Body fluids—Cerebrospinal, Synovial, Pleural, Peritoneal, Pericardial, Amniotic fluids.	Stool
Any other fluids / Secretions contaminated with visible blood	Sputum
Tissues	Nasal secretions
Laboratory specimens that contain concentrated virus	Sweat
	Vomitus

Mini 10/12/2024

POST-EXPOSURE MANAGEMENT

Steps to be followed after accidental exposure to blood/other potentially infectious materials:

1. First aid.
2. Report to Emergency Medicine/HICC (Hospital Infection Control Committee).
3. Identify the source status.
4. Risk assessment by Casualty Medical Officer (based on type of injury and source status).
5. Report to Deputy Nursing Superintendent.
6. Testing for HIV, HBV and HCV for source and Health Care Worker (HCW).
7. Take first dose of PEP for HIV (based on source status).
8. Decision on prophylactic treatment for HIV and HBV.
9. Monitoring and follow up of HIV, HBV and HCV status.
10. Documentation and recording of exposure.

5.1 (a) Dos and Don'ts for the Exposed Individual

Don'ts	Do's
1. Do not panic	1. Stay calm
2. Do not place the pricked finger into the mouth reflexly	2. Remove gloves, if appropriate
3. Do not squeeze blood from wound	3. Wash exposed site thoroughly with running water and soap. Irrigate thoroughly with water, if splashes have gone into the eyes or mouth
4. Do not use bleach , Alcohol , Iodine , Antiseptic, Detergent, etc.	4. Consult the designated Physician / Personnel immediately as per Institutional guidelines, for management of the Occupational exposure.

5.1 (b) First Aid: Management of Exposed Site

FOR SKIN	FOR THE EYE	FOR MOUTH
1. Immediately wash the wound and surrounding skin with water and soap, and rinse with flowing water or normal saline. 2. In case of skin and mucus membrane exposure immediately wash	1. Immediately irrigate the exposed eye thoroughly with running tap water or normal saline at least for 5 min for blood splash (15 min for chemical splash). 2. If wearing contact lenses, leave them in place while irrigating as they form a barrier over the eye and will help protect it.	1. Spit fluid out immediately. 2. Rinse the mouth thoroughly using water or saline and spit again. Repeat the process several times. 3. Do not use soap or
the area and do not use antibiotics. 3. Do not scrub. 4. Do not use antiseptics or skin washes	3. Once the eye is cleaned, remove the contact lens and clean them in a normal manner. This will make them safe to wear again. 4. Do not use soap or disinfectant on the eye.	disinfectant in the mouth.

5.2 Identify the Source

If source is found to be **negative**, first dose of Post Exposure Prophylaxis (**PEP**) for exposed person is **not required** but the exposure should be reported to the HICC in writing for documenting the Needle Stick Injury (NSI).

If the source status is unavailable or found as **positive** for HIV or source is unknown, then first dose of **PEP is essentially required**.

5.3 Reporting to the Infection Control Team

Immediately report to Emergency Medicine (Casualty) and Consult Casualty Medical Officer / designated Infection Control Nurse (who so ever is available earliest) for the management of exposure immediately.

5.4 Risk Assessment

The evaluation to be done by Casualty Medical Officer preferably within 2 hours and certainly initiate PEP within 72 hours if required. Categories of exposure based on amount of blood/fluid involved and the entry port. These include:

5.5.1 Mild Exposure

Mucous membrane / non-intact skin with small volumes.

Example: 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.

5.5.2 Moderate Exposure

Mucous membrane / non-intact skin with large volumes or percutaneous superficial exposure with solid needle.

Example: A cut or needle stick injury penetrating gloves.

5.5.3 Severe Exposure

Percutaneous with Large Volume

Example: An accident with a high calibre needle (2:18G) 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.

5.6 Take First Dose of PEP

Referral may be done to **RIMS, Ranchi** to start immediate prophylaxis and further management. 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.
*Consult at nearest Integrated Counseling and Treatment Centre.

5.7 Testing for HIV, HBV and HCV for Source and HCW

- Once the HCW reports to the HICC, both the source (in case the status of the source is unknown and source is available for) and the HCW are tested for their baseline status for HIV (Antibody), HCV (Antibody), and HBV (HBsAg) by rapid methods.
- If the HCW is Prior Vaccinated for Hepatitis-B, then Check for HBsAb (Anti HBsAg) Titre.
- (HCW's baseline status is determined. Otherwise, it may be difficult to attribute the infection acquired due to exposure in the occupational setting.
- A baseline HIV testing should be done after proper Counseling; Informed consent should be obtained before testing of the source as well as person exposed. Initiation of PEP, where indicated, should not be delayed while waiting for the results of HIV testing of the source of exposure.
- Exposed individual who are known or discovered to be HIV positive should not receive PEP. They should be offered Counseling and information on prevention of transmission and referred to Anti-retroviral-Therapy (ART) Centre after their complete laboratory work up which also includes testing for Hepatitis B and C virus infection.

5.8 Follow up

HIV antibody testing should be done for at least 6 months post-exposure (e.g. at baseline, 6 weeks, 3 months, and 6 months) to ensure no transmission has occurred.

5.9.1 PEP for Hepatitis B

Hepatitis B measures are as follows:

- For vaccinated HCW with subsequent documented Anti-HBs > 10mIU/ml No need to assess the source status. No post-exposure management is necessary.
- For vaccinated HCW with Anti HBs < 10mIU/ml after two complete vacc
- Assess the source status as soon as possible. If the source status is positive or unknown give 2 doses of HBIg, one month apart.

When to check HBsAb titre?

- Done after 1–2 months of the last dose of Hepatitis B vaccine. When immunoglobulin is received along with vaccination, post-vaccination serology is done after 4 – 6 months to avoid detection of passively administered Anti-HBs.

There is no known effective post-exposure prophylaxis for Hepatitis C. The risk of HCV infection after exposure is approximately 1.8%. Testing should occur within 48 hours of exposure, and the typical guidelines for management and treatment of Hepatitis C should be followed.

6. Monitoring and follow up of HIV, HBV and HCV status

- Whether or not PEP prophylaxis has been started, follow up is indicated to monitor for possible infections and provide psychological support.
- HIV testing (HIV Ab) follow-up is done: at 6weeks, 3 months and 6 months after exposure.
- HBV (HbsAg) and HCV (Anti HCVAb) testing follow- up is done: at 3 months and at 6 months after exposure.

Precautions during the follow up period: During the follow up period, especially the first 6–12 weeks, the following measures are to be adopted by the HCW.

- Refraining from Blood, Semen, Organ donation
- Abstinence from sexual inter course or use of latex condom
- Women should not breast-feed their infants.
- The exposed person is advised to seek medical evaluation for any febrile illness that occurs within 12 weeks of exposure.

6.1 Documentation and Recording of Exposure

- All needle-stick/sharp injuries should be reported to the immediate supervisor, and then to the Infection Control Nurse.
- An entry is to be made in the Needle-Stick Injury Register in the Matron Office.
- A structured Performa **(annexure A)** should be used to collect the information related to exposure: Date, time, and place of exposure, type of procedure done, type of exposure: percutaneous, mucus membrane, etc., duration of exposure and exposure source and volume; type of specimen involved.

- Consent form: For prophylactic treatment the exposed person must sign a consent form. If the individual refuse to initiate PEP, it should be documented. The designated officer for PEP should keep this document.

REFERENCES

[1] NACOPEP Guidelines

[2] CDC Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Post Exposure Prophylaxis.

[3] Guidelines for Implementation of "Kayakalp" Initiative by MoHFW

10/12/2024

Dr. V.K. Chaudhary

Director

Govt. of India, Central Institute of Psychiatry, Ranchi

ANNEXURE A

NEEDLE STICK INJURY REPORTING FORMAT

(To be completed by treating physician and sent to the HICC/ Infection Control Nurse)

Needle Stick Sharp Injury Protocol

Date and Time: _____

Name of HCW_____

Designation & Duty Area_____

Date of Needle Stick/Sharp Injury/Body Fluid Exposure _____

Date of Reporting to Casualty_____

Site & Depth of Injury_____

Nature of Injury: Needle Prick/Sharp Cut/Laceration/Splash of Fluids/Splattered Glass

Action taken in Casualty

Hep. B. vaccination given: Yes/No

HBIG Yes/No

If immunised: Date_____ Intra-dermal/Intramuscular

Anti Hbs Ag Titre_____

Hbs Ag Positive/Negative

HIV antibody Positive/Negative

Information about Source of Contamination (if available)

- Whether the patient has symptoms of HIV infection or no symptoms
- Serum sent for: (Reports to be entered in follow-up visit)

1. Anti-HIV 2. HBs-Ag 3. Anti-HCV 4. CD4/CD8 counts

(Name & Signatures of immediate Supervisor/HOD) **(Name & Signatures of MO I/C)**

Source: Guidelines for Implementation of "Kayakalp" Initiative

Govt. of India, Central Institute of Psychiatry, Ranchi

PEP Informed Consent/Refusal Form

ANNEXURE B

Date: .....

(When PEP has been advised this form should be filled in and signed by the exposed person, and signed by the

designated officer for PEP. This should be kept in the file)

Name: .....

Date of birth: ..... Gender: .....

Date of the accidental exposure: .....

I, the undersigned, hereby declare:

- ***That I have been informed of the recommendations with regard to prophylactic treatment after accidental exposure to HIV/HBV***

- ***That I understand the risk of transmission after accidental exposure to blood***

- ***That I have been informed of the effectiveness and the possible side-effects of this treatment***

(Please select one option in the following section)

- ***That I have been offered prophylactic treatment, and***

o ***That I have decided not to take it***

o ***I agree to follow this prophylactic treatment for a period of 28 days/as recommended and I agree to accept medical supervision and follow up testing for this***

Signature of the Exposed Person **Signature of the Designated Officer**

Source: Guidelines for Implementation of "Kayakalp" Initiative