General Circular No. 01-19/2017

All Provincial / Regional Directors of Health Services,
All Directors of Teaching Hospitals,
All Heads of Specialized Campaigns,
All Heads of Government Medical Institutions,

Management of healthcare workers following occupational exposure to blood and other body fluids and post exposure prophylaxis for HIV


B). This circular outlines recommendations for the management of health care workers who experience occupational exposures to blood and other body fluids that might contain Human Immunodeficiency Virus (HIV).

C). Although preventing exposures to blood and other body fluids that might contain HIV is the primary means of preventing occupationally acquired HIV infection, appropriate post-exposure management is an important element of workplace safety. Department of Health has considered information available worldwide and recommends that the following procedure for post exposure prophylaxis (PEP) be followed in an accidental exposure. This circular recommends all health care workers with occupational exposures to HIV to attend a STD clinic with the source blood sample as early as possible for management and follow up.

D). It is the responsibility of the head of the institution to make sure

1. That there is a functional system of management of healthcare workers following occupational exposure to blood and other body fluids.
2. That antiretroviral drugs (ARV) are available for PEP.
E. Management of occupational exposures

- Inform Infection Control Unit
- Initial assessment of exposure and management
  - For HIV – By Venereologist or District MO STD (Initiation of PEP on indication and follow up).
  - For Hep B / Hep C – By Microbiologist / Virologist / Designated doctor.
- Initiation of Starter pack –
  When Venereologist or District MO STD is not accessible within 2 hours starter pack can be initiated by Microbiologist/ Virologist/ Designated Medical Officer.
  (However refer the health care worker to closest Venereologist or District MO STD for further management).

- Initial assessment of exposure by designated medical officer in the institution for the purpose. He/ She should :
  - Initiate Starter pack* as early as possible (preferably within 2 hours) if eligible
  - Contact Microbiologist / Virologist / On call MO Microbiology for Hep B / Hep C
  - Refer the health care worker to closest Venereologist or District MO STD on following working day for further management.
  - Inform Infection Control Unit as early as possible.

* Starter Pack - Antiretroviral medication for the post exposure prophylaxis for 5 days. We recommend keeping this starter pack in a readily accessible place / places such as OPD / ETU / ICU / PCU / Pharmacy.
F). Definition of a Health Care Worker (HCW) for the purpose of this circular

The term HCW refers to all persons working in the health care setting who has the potential for exposures to infectious materials, including body substances (e.g. blood, tissue and specific body fluids), contaminated medical supplies and equipment, and contaminated environmental surfaces(1).

G). Definition of Exposure

An “exposure” that may place a health care worker at risk for HIV infection and requires consideration of PEP is defined as follows:

1. Type of Exposure
   i. Percutaneous injury - Needle stick or cut with a sharp object.
   ii. Contact of mucous membranes
   iii. Non-intact skin- chapped, abraded or afflicted with dermatitis

2. Type of body fluid

With blood, tissue or other body fluids that are potentially infected.

(Semen, vaginal secretions, breast milk, cerebrospinal fluid (CSF), synovial fluid, pleural fluid, peritoneal fluid, pericardial fluid and amniotic fluid are considered potentially infectious)(2).

Saliva, urine, nasal secretions, vomitus and feces bear no risk of HIV infection in the absence of visible blood. Exposure to tears and sweat does not require post exposure prophylaxis (2)(3).

H). Risk of Occupational Transmission of HIV to HCWs from HIV infected blood

<table>
<thead>
<tr>
<th></th>
<th>Risk (%)</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td>Percutaneous injury</td>
<td>0.30%</td>
<td>95% CI = 0.2% - 0.5%(1)(3)(5)</td>
</tr>
<tr>
<td>Mucous membrane</td>
<td>0.09%</td>
<td>95% CI = 0.006% - 0.5%(1)(3)</td>
</tr>
</tbody>
</table>

I). Management of the Exposed Site

Exposed sites should be cleansed of contaminated fluid as soon as possible after exposure. Wounds and skin sites are best cleansed with soap and water, avoiding irritation of the skin. Exposed mucous membranes should be flushed with water. Alcohol, hydrogen peroxide,
betadine or other chemical cleansers are best avoided. HCWs should be made aware to avoid “milking” or squeezing out needle-stick injuries or wounds (AII)(2)(3).

J). Evaluating the Exposure

I. Prompt initiation of PEP is recommended for exposure to blood, visibly bloody fluids or other potentially infectious material from HIV-infected or HIV-unknown sources in any of the significant exposure situations outlined in Table 1(AII).

II. Whenever a worker has been exposed to potentially HIV-infected blood, visibly bloody fluids or other potentially infectious material through the percutaneous or muco-cutaneous routes or through non-intact skin, PEP is indicated. For these exposures, prompt initiation of PEP followed by telephone or in-person consultation with a clinician experienced in HIV PEP is recommended.

<table>
<thead>
<tr>
<th>Table 1: Exposures requiring initiation of starter Pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Break in the skin by a sharp object (including hollow-bore, solid-bore, and cutting needles or broken glassware) that is contaminated with blood, visibly bloody fluid, or other potentially infectious material, or that has been in the source patient’s blood vessel.</td>
</tr>
<tr>
<td>• Bitten by a person with visible bleeding in the mouth that causes break in the skin or mucosa of the exposed worker.</td>
</tr>
<tr>
<td>• Splash of blood, visibly bloody fluid or other potentially infectious material to a mucosal surface (mouth, nose, or eyes).</td>
</tr>
<tr>
<td>• A non-intact skin (e.g.: dermatitis, chapped skin, abrasion or open wound) exposure to blood, visibly bloody fluid or other potentially infectious material</td>
</tr>
</tbody>
</table>

K). Determine the HIV status of the source patient and initiation of PEP

a. Known Positive patient

Start PEP immediately with available three drug regimen.

Contact Consultant Venereologist (STD clinic) as early as possible.

b. Sero-status is unknown
I. When source patient is available

Consent for HIV testing of the source patient should be sought (AII) (2). If facilities are available, rapid HIV test on source sample should be carried out. This can be done at closest STD clinic or any other lab where rapid test is available.

II. Consent for HIV testing

- When the source patient has the capacity to consent to HIV testing, informed consent is required.
- When the source person does not have the capacity to consent, consent may be obtained from a surrogate, or anonymous testing may be done if a surrogate is not immediately available (2).
- If the result from testing source patient is not immediately available, considering severity of exposure and epidemiological likelihood of HIV status of the source, starter pack can be initiated (preferably within 2 hours of the exposure) while source testing and further evaluation are underway (2).

III. When source patient is not available (e.g. needles in sharp bins and laundry)

Considering severity of exposure and epidemiologic likelihood of HIV exposure, starter pack can be initiated. Decision regarding continuation of PEP where source patient is not available should be made on a case by case basis by Venereologist / MO-STD.

L). Timing of the Initiation of PEP

i. When a potential occupational exposure to HIV occurs, every effort should be made to initiate PEP as soon as possible, ideally within 2 hours (AII). A first dose of PEP should be offered to the exposed worker while the evaluation is underway (2).

ii. Decisions regarding initiation of PEP beyond 72 hours post exposure should be made on a case-by-case basis with the understanding of diminished efficacy when timing of initiation is prolonged (AIII)(2).

M). Recommended PEP regimen

Three drug regimen

TDF 300mg daily
FTC 200mg daily
LPV/r 400/100mg 12 hourly or ATV/r 300/100mg daily

Venereologist could decide on alternative regimens according to circumstances.

N). Duration of PEP Regimen

PEP need to be considered for 28 days (1)(2)(3).

When the source patient is confirmed to be HIV-negative, PEP could be discontinued (1)(3).

0). Baseline testing for the exposed health care worker and Follow up

i. Confidential baseline HIV testing of the exposed worker should be obtained at the time the occupational exposure is reported or within 3 days of the exposure (AIII).

ii. All exposed workers receiving PEP should be re-evaluated within 3 days of the exposure. This allows for further clarification of the nature of the exposure, review of available source patient data and evaluation of adherence to and toxicities associated with the PEP regimen (1)(3).

iii. The exposed worker should be evaluated weekly while receiving PEP to assess treatment adherence, side effects of treatment, interval physical complaints and emotional status.

iv. Clinicians should provide risk-reduction counseling to HIV-exposed workers to prevent secondary transmission during the 16-week follow-up period. HIV-exposed workers should be educated and counseled on:

   I. Use of condoms to prevent potential sexual transmission.
   II. Avoiding pregnancy and breast feeding (2).
   III. Avoiding needle sharing.
   IV. Refraining from donating blood, plasma, organs, tissue or semen.
   V. Identifying symptoms of primary HIV infection and report as soon as possible.
### Investigations recommended for the healthcare worker who are on PEP

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 10</th>
<th>Week 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinic visit</strong></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Or by telephone</td>
<td></td>
<td>Or by telephone</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pregnancy Test</strong></td>
<td>✓</td>
<td></td>
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<td></td>
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<tr>
<td>*<em>FBC <em>/LFT and RFT</em></em></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIV Test</strong></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*Follow-up FBC is indicated only for those receiving a Zidovudine-containing regime.

Week 10, 16 HIV testing should be done by using ELISA

HIV testing recommended for the healthcare worker who are not on PEP at baseline, week 6 and 12 from the exposure date.

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P). Exposed workers who are pregnant and breast feeding

1. Pregnancy and breast feeding are not contraindications for PEP and recommended regimens can be used (2).

2. Before administering PEP to a pregnant woman, the clinician should discuss the potential benefits and risks to her and to the fetus (2)(3).

3. Clinicians should counsel women who may have been exposed to HIV through occupational exposure to avoid breastfeeding for 3 months after the exposure (AII). If HIV infection is definitively excluded in the source patient at any time prior to 3 months post-exposure, the woman may resume breastfeeding.
Q). Exposure Report

If an occupational exposure occurs, the circumstances and post exposure management should be recorded in the HCW’s confidential exposure report (Annex I).

R). References


v. UK guidelines for the use of HIV post-exposure prophylaxis following sexual exposure. 2015.


S). Level of evidence

A - High quality evidence

B - Moderate quality evidence

C – Low quality evidence

D – Very low quality evidence

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Exposure Report

1. Date: ........................................
2. Institution: ....................................
3. Name / Designation of HCW: ....................................

4. Date / Time of Exposure:
   ........................................
   ........................................ am / pm

5. Details of the procedure:
   i. Laboratory / Theatre / Ward / Clinic / Labour Room / Others
   ii. How the exposure occurred:
       ........................................
       ........................................

6. Details of the exposure:
   Type of body fluid: ................................. Amount: Small / Large
   i. Percutaneous injury – Yes / No
      If Yes, Type of the device – Hollow bore needle / Solid needle / Other sharp devices / Blunt devices
   ii. Mucosal exposure: Yes / No
      If Yes, Site of exposure: .................................
   iii. Non – intact skin: Yes / No

7. Details of the source:
   - Source identified: Yes / No
   - If Yes: ........................................
     - If Already A HIV Positive
       - Stage of the disease: ........................................
       - Recent Viral Load: ........................................
       - CD4 Cell Count: ........................................
       - On ART - Yes / No. If Yes: ART Regimen: ........................................
       - Resistance Details: ........................................

   - If HIV status unknown: ........................................
     - Rapid Test / ELISA Test done
     - Results: Positive / Weakly Reactive / Negative
     - If HIV Negative: Possibility of Acute Infection / High Risk behavior
       Yes / No
   - Other blood borne pathogens
8. Management of post exposure

- PEP recommended: Yes/No
- PEP accepted by HCW: Yes/No
- If Yes...... ART Regimen

9. Follow up HIV Test on HCW

- 6/10 Weeks: Positive/Negative
- 12/16 Weeks: Positive/Negative

10. Name, Signature and Designation of Counselor

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