

GUIDELINES FOR POST EXPOSURE PROPHYLAXIS (PEP) [Hepatitis B, C, HIV]

1.0 Introduction and Rationale of PEP

Information about primary HIV infection indicates that systemic infection does not occur immediately after exposure, leaving a brief window of opportunity during which administration of PEP might prevent viral transmission and replication. Commencement of PEP within 2 hrs after exposure might inhibit or prevent systemic infection. After an exposure the following steps should be pursued:

2.0 First Aid

Following any occupational exposure, the following are recommended before reporting:

1. Wash percutaneous injuries with soap under running water (tap or stored water) and allow the wound to bleed freely; do not compress to stop bleeding.
2. Use water to flush out nose, mouth or areas of the skin (broken) that have been splashed with blood.
3. Irrigate eyes when exposed with saline or clean water
4. Report and document incident immediately through supervising officer.
5. Index worker and supervisor should consult an expert or the designated persons listed immediately.

3.0 Evaluate exposure risk Assessment

3.1 Low risk

- Solid needle injury
- Superficial sharps injuries
- Exposure to blood / fluid from asymptomatic HIV patient with low viral load or suppressed viral load on therapy
- Exposure to a small amount of infected blood / fluid
- Splash of blood on intact skin

3.2 High risk

- Deep injury with hollow especially large bore needle
- Exposure to blood / fluids of patient with AIDS or advanced HIV infection or acute sero-conversion illness
- Extensive and deep sharp injury
- Exposure to large volume of infected blood / fluid
- Splash of blood on broken skin.

4.0 **Evaluation of exposure source**

- 4.1 **Known Source**
- Enquire whether patient is known to be infected with HIV, HBV or HCV
 - Evaluate HIV infected patients' stage, performance status, CD4 cell count (or lymphocyte counts) and clinical condition
 - If status unknown, test for HBsAg, HCV and HIV antibodies using rapid HIV testing technique with informed consent. [Screening for HIV should not be delayed or deferred to await HBV and HCV screening]
 - If source is not infected with any of the above viruses, baseline testing or further follow-up is not necessary (unless strong suspicion or possibility that he / she is in the window period – should especially suspect sexually active individuals).
 - If source person refuses testing, consider clinical presentation, diagnoses and history of risk behaviors; consider source infected if sexually active.
- 4.2 **Unknown Source**
- Evaluate the likelihood of exposure to a source at high risk for infection
 - Consider the likelihood of infection among patients in the exposure setting

5.0 Recommended HIV/AIDS Post Exposure Prophylaxis (PEP) for Needle Stick/Sharps Injuries

Exposure	HIV +ve source*	Unknown status	Unknown source	HIV –ve
Low risk	3- drug PEP recommended	No PEP recommended but 2 – drug PEP can be considered for source with risk factors [or 3-drugs in those with acute-seroconversion illness]	No PEP recommended but where exposure to HIV+Ve persons is likely 2 –drug PEP can be given	No PEP recommended but 3-drug PEP considered in those with symptoms or suspicion of acute seroconversion illness
High risk	Recommend 3- drug PEP	Consider-2 drug PEP for source with HIV Risk factors [or 3- drugs in those with acute-seroconversion illness]	Consider-2 drug PEP if source is suspected to be infected	No PEP recommended but 3-drug PEP considered in those with symptoms or suspicion of acute seroconversion illness

* If viral load is available then those source patients with fully suppressed viral load on therapy may be considered low risk source and 2-drug PEP recommended

6.0 Post exposure prophylaxis for blood splash to eye, mucus membrane and non-intact skin.

Type of exposure	HIV +ve source	Unknown status	Unknown Source	HIV- ve
Small volume of blood / body fluid.	2-drug PEP	PEP is optional but 2-drug PEP can be considered for source with risk factors	Consider 2-drug PEP where exposure to infected persons is likely.	No PEP recommended but 2 – drug PEP can be considered for sources with symptoms or suspicion of acute seroconversion illness
Large volume of blood / body fluid .	2-drug PEP	Consider 2 –drug PEP if there are risk factors.	Also consider 2-drug PEP where exposure to infected persons is likely.	No PEP recommended but 2 – drug PEP can be considered for sources with symptoms or suspicion of acute seroconversion illness

(a) 2 drug PEP:

- Stavudine 40mg po BD + Lamivudine 150mg po BD for 4 weeks
- Zidovudine 300mg po BD + Lamivudine 150mg po BD (i.e. Combivir I tab po BD) for 4 weeks
- Tenofovir 300mg po OD + Lamivudine 150mg po BD for 4 weeks

(b) 3 drug PEP:

- Stavudine 40mg po BD + Lamivudine 150mg po BD + Lopinavir/ ritonavir 400mg/100mg po BD for 4 weeks
- Zidovudine 300mg po BD + Lamivudine 150mg po BD + Lopinavir/ ritonavir 400mg/100mg po BD for 4 weeks
- Tenofovir 300mg po OD + Lamivudine 150mg po BD + Lopinavir/ ritonavir 400mg/100mg po BD for 4 weeks

(c) Lopinavir/ ritonavir can be replaced with ritonavir boosted Indinavir or Saquinavir. Where these are unavailable Efavirenz 600mg po OD may be used as replacement; HCWs should be informed about the possibility of short-term CNS toxicity. Efavirenz and/or Tenofovir should not be used in pregnancy

(d) In exposures where the source is suspected to have a resistant virus (i.e. a patient on ARV with poor clinical response or a high viral load), choice of PEP should take into

account the source's failing regimen. All PEP for suspected resistant virus should be 3 drug and include a Protease Inhibitor at this time. In addition, if the source patient was failing on a stavudine or zidovudine containing regimen the PEP should include tenofovir.

(e) PEP for HIV is usually given for 4 weeks and monitoring of adverse effects recommended: baseline FBC, UEC and LFT to be repeated at 2 weeks

(e) If source person is known positive for HIV or sexually active at high risk for infection and status exposure warrants PEP, antiretroviral drugs should be started immediately without delay regardless of test results.

(f) Both source patient and HCW should be tested with rapid testing – if HCW is positive already, then PEP should not be embarked upon or should be discontinued immediately. The HCW should be appropriately referred.

(g) The HCW should be re-tested at 1, 3 and 6 months whether PEP is used or not.

7.0 Recommended Baseline Testing and Evaluation of Exposed HCW to HBV

Exposed Person	Exposure source		
	HBsAg+	HBsAg-	Status unknown
Unvaccinated	Give HBIG 0.06ml/Kg im; initiate HB vaccine	Initiate HB vaccine	Initiate HB vaccine and if possible, check HBsAg of source person
Vaccinated (antibody status unknown)	Measure anti-HBs on exposed person: If titre ≥ 10 MIU/ml; no rx If titre < 10 MIU/ml or test not available, give HBIG + 1 dose HB vaccine	No rx necessary	Measure anti-HBs on exposed person: If titre ≥ 10 MIU/ml; no rx If titre < 10 MIU/ml or test not available, give 1 dose HB vaccine (+1 dose HBIG if source high risk)

8.0 Management of HCW exposed to HCV infected patients

Determine antibody to hepatitis C for both exposed person and, if possible, exposure source. If source +ve, follow-up HCV testing advised. No recommended prophylaxis; immune serum globulin not effective. Monitor for early infection, as therapy may reduce risk of progression to chronic hepatitis.

9.0 Exposure report

Once an exposure occurs, the incident should immediately (within an hour) be reported to any of the following contact persons for post exposure evaluation, counseling, possible prophylaxis and follow up. Eventually the incident should be reported to the hospital management (CMAC or medical officer in-charge) by the next working day.

9.1 Contacts [Names]

1 – Infection Control Nurse(s) – Mobile and land line number

2 – Physician member of Infection Control Committee – Mobile and land line number

3 – ACTION Project Medical Officer(s) / Medical Registrar(s) [Designated for PEP or HIV care] – Mobile and land line number

4 – Medical Officer(s) or Medical Registrar(s) [During on-call, out-of-office hours, weekends and public holidays] – On roster + mobile / land line number

5 – Social worker / counselor [Designated for PEP or HIV care] – Mobile and land line number

6 – Compound nursing sister (or nursing officer) on-duty – On roster + mobile / land line

7 – Pharmacist ± On-call at A&E [either designated for PEP, HIV care or manages the drugs]

8 – In areas that are inaccessible or lack the expertise hospital (facility) superintendent, VHW, dispenser or where available the District Medical Officer should be contacted. These individuals should be able to contact 2, 3 or 4 above to be advised on PEP.

9.2 Report [see attached reporting sheet]

Content of the occupational exposure form or report should include:-

- Biodata of the exposed HCW
- Date and time of exposure
- Details of the procedure or activity being performed including type of the sharp device, where and how the exposure occurred.
- Details of the exposure source and relevant medical history

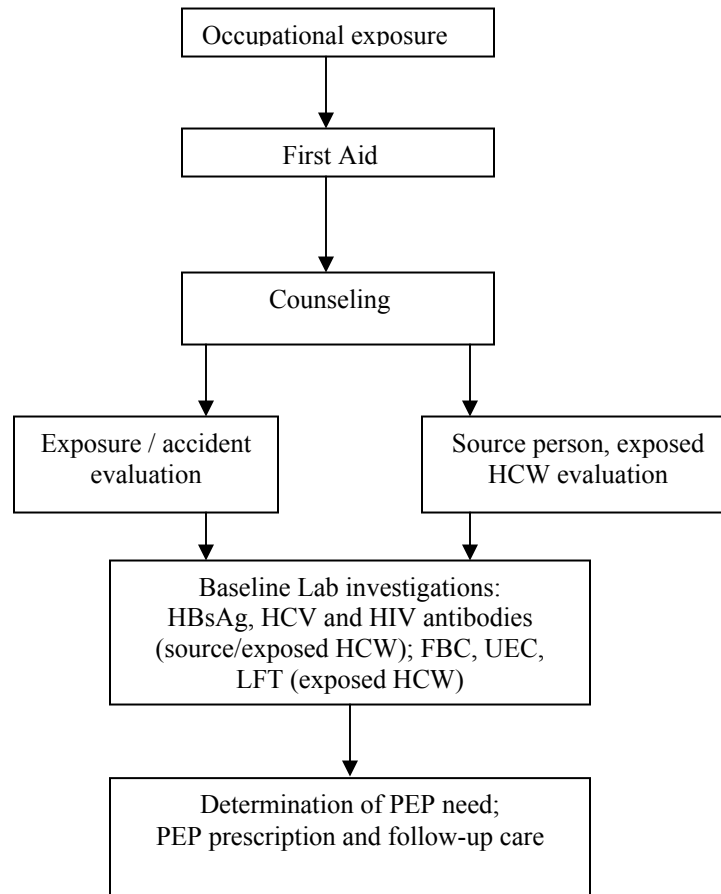
- Details about the exposed HCW including Hepatitis B, Hepatitis C and HIV virus status or relevant medical history
- Details about counseling and post exposure management done and follow-up

10.0 Guidelines for educating & counseling exposed HCW

It is the exposed HCW's decision whether to accept or reject PEP. They should be advised on the following especially in the initial 6-12 weeks after the exposure when most infected persons are expected to seroconvert:

- Exercise sexual abstinence or use condoms to prevent sexual transmission and to avoid pregnancy
- Refrain from donating blood
- If an exposed HCW is breastfeeding, she should be counseled about the risk of HIV transmission through breast milk and discontinuation of breast feeding should be considered especially in high risk exposure
- Information should be provided on drug toxicity, adverse drug reactions, drug interactions and potential for transmission despite instituting PEP.

11.0 FLOW CHART FOR OCCUPATIONAL EXPOSURE & PEP



CONTACT PERSONS [Name + HP Nos]

- 1 – Site ACTION Project Medical Officer [HP Nos]
- 2 – Medical Registrar On-Call [HP Nos]
- 3 – Infection Control Nurse [HP Nos]
- 4 – Pharmacist On-Call and i/c of A&E pharmacy [HP Nos]
- 5 – Compound Nurse On-Duty [HP Nos]
- 6 – Other [HP Nos]

* Occupational exposure should be reported immediately to supervising officer and above contact person(s). A detailed report should be submitted to ACTION Project Medical Officer/ Hospital / HIV-AIDS and Infection Control Committees by the next working day.