POST-EXPOSURE PROPHYLAXIS (PEP)

Occupational and Non-occupational

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NEED HELP?

Contact the TOLL-FREE National HIV & TB Health Care Worker Hotline

0800 212 506 / 021 406 6782

Alternatively "WhatsApp" or send an SMS or "Please Call Me" to 071 840 1572

www.mic.uct.ac.za

HIV exposure is a medical emergency and HIV PEP must be initiated immediately. Do not wait for confirmatory results before initiating PEP. A step-wise approach is required.

STEP 1: IMMEDIATE MANAGEMENT

- Assess eligibility for PEP (Table 1).
- Start **HIV PEP** immediately (refer to Table 3). Do not wait for HIV ELISA results before initiating. **Provide a full 28 day supply of antiretrovirals.**
- Don't delay initiating HIV PEP if unsure about appropriate regimen as this can be modified after consultation with an expert.

STEP 2: BASELINE MONITORING AND OTHER PROPHYLAXIS

- **Do necessary baseline tests:** Table 2. Remember to provide thorough, confidential, pre-test counselling before HIV testing. Post-test counselling and results should be handled in strict confidence.
- Start appropriate prophylaxis (refer to Table 1 for maximum timeframe):
  - **Hepatitis B PEP:** Table 4.
  - **Emergency contraception:** Table 5.
  - **STI prophylaxis:** Table 6.

STEP 3: TEST SOURCE PATIENT, IF POSSIBLE

- Refer to Table 2.
- Offer source patient comprehensive and confidential pre-test counselling and ensure informed voluntary consent is obtained. If consent for HIV testing is refused the following two options can be considered:
  - ⇒ HIV test can be offered anonymously
  - ⇒ If there is an existing blood specimen, the HIV test can be done anonymously, after informing the source patient. Anonymous testing means that the blood sample will not be labelled with the source patient's details, thus the result cannot be connected to the source patient.
- If source patient is unknown or refuses testing, the health care worker/patient must be treated as if the source is HIV-positive and HBsAg-positive.

STEP 4: FOLLOW-UP AND MONITORING

- Ensure all baseline laboratory results have been received and acted upon within 72 hours.
- Follow-up testing and monitoring: refer to Table 2.
- Enquire about any side effects of ART and manage appropriately (see Table 7).
- Exposed patient should be counselled to practice safe sex (use condoms) for at least 4 months after the exposure to protect sexual partners.

SPECIAL CONSIDERATIONS

Pregnancy: PEP is not contra-indicated in pregnancy. Pregnant health care workers/patients should receive the same prophylaxis as adults, except for emergency contraception.

Breastfeeding: Although antiretrovirals are transmitted through the breastmilk, it is not considered to be harmful to the breastfed child. If the health care worker/patient is however infected with HIV, the risk of transmitting HIV to the baby during this early stage of infection is high. Interrupt breastfeeding for 12-24 hours after stat metronidazole dose.

Window period: HIV PEP is not indicated if the source patient is HIV-negative confirmed by laboratory ELISA test, unless acute antiretroviral syndrome is suspected (symptoms include: fever, lymphadenopathy, sore throat, rash, myalgia, arthralgia, headache).

Exposed person who is known to be HBsAg positive at baseline: If TDF part of PEP regimen, refer to higher level of care to assess continuing or discontinuing of TDF.

Exposed person HBsAg positive during follow-up testing: Refer for further assessment.

TABLE 1: PEP DECISION TOOL

TYPE OF PROPHYLAXIS	TYPE OF EXPOSURE: EXPOSURE TO BLOOD OR OTHER INFECTIOUS MATERIAL* VIA MUCOUS MEMBRANE OR NON-INTACT SKIN# including splash or contact with open wound and/or percutaneous exposure (needle stick)	TYPE OF EXPOSURE: SEXUAL	TIMEFRAME WITHIN WHICH PEP IS MOST LIKELY TO BE EFFECTIVE
HIV PROPHYLAXIS	✓	✓	Within **72 hours**
HEPATITIS B VIRUS PROPHYLAXIS**	✓	✓	Within **7 days** of perinatal and needle stick exposures Within **14 days** of sexual exposure
EMERGENCY CONTRACEPTION		✓	As soon as possible, **but within 5 days of unprotected intercourse**
STI PROPHYLAXIS		✓	Within **72 hours**

**Human bites that draw blood require HBV prophylaxis, antibiotic prophylaxis with amoxicillin/clavulanic acid and tetanus prophylaxis (refer to Standard Treatment Guidelines).

*INFECTIOUS MATERIAL

- Blood or any bloodstained fluids, tissue or other material
- Vaginal secretions or penile pre-ejaculate and semen
- Fluid from any body cavity such as pleural, pericardial, amniotic, peritoneal, synovial and cerebrospinal fluids
- Breast milk

NON-INFECTIOUS MATERIAL

Saliva, tears, vomitus, sweat and urine pose no risk of HIV, unless contaminated with infectious materials e.g. blood.

#Intact skin exposed to infectious or non-infectious materials poses no risk for acquiring HIV or HBV.

TABLE 2: TESTING (BASELINE AND FOLLOW-UP)

	SOURCE PATIENT	EXPOSED PATIENT		
	BASE-LINE	BASELINE	6 WEEKS	4 MONTHS
HIV*	HIV test	HIV test	HIV test	HIV test
Hepatitis B	Surface antigen	Surface antibody	-	Surface antigen
		HBV testing in exposed can be omitted if known to be protected (natural immunity or vaccination) or source is negative		
Hepatitis C	Antibody	Antibody Only if high risk for HCV, or if source is positive or unknown	PCR Only if source antibody positive and health care worker antibody negative	-
Serum creatinine	-	If TDF part of PEP: at baseline and repeat at 2 weeks	-	-
FBC and diff	-	If AZT part of PEP: at baseline and repeat at 2 weeks	-	-
For sexual exposures include the following tests:				
Pregnancy test	-	Beta hCG	-	-
Syphillis	RPR/TP antibody	RPR/TP antibody	-	-

*WHICH HIV TEST TO DO:

ADULTS: HIV Rapid test(s). Confirm with HIV ELISA

CHILDREN:

- **< 18 months of age:** HIV PCR
- **18 to 24 months:** HIV Rapid test (s). If positive confirm with HIV PCR or HIV VL
- **> 24 months:** HIV Rapid test(s) and confirm with HIV ELISA

Children can provide consent for HIV testing If ≥ 12 years of age; or if < 12 years and of "sufficient maturity"; or if < 12 years and not sufficiently mature: parent, caregiver, or the Provincial Head of the Department of Social Development may give consent.

Do not wait for ELISA or PCR result before initiating HIV PEP.
HIV-exposed tests negative: initiate PEP, and do confirmatory test.
HIV-exposed patient tests positive: do confirmatory test, and initiate ART.
Source patient's confirmatory ELISA is negative: PEP can be discontinued, unless the patient is showing signs of seroconversion illness. Discuss with virologist.

3TC = lamivudine; **ABC** = abacavir; **ART** = antiretroviral therapy; **ATV/r** = atazanavir and ritonavir; **AZT** = zidovudine; **BMI** = body mass index; **d4T** = stavudine; **DTG** = dolutegravir; **DRV/r** = darunavir and ritonavir; **ELISA** = enzyme-linked immunosorbent assay; **FBC and diff** = Full blood count and differential; **FTC** = emtricitabine; **HBV** = hepatitis B virus; **HCV** = hepatitis C virus; **HBIG** = hepatitis B immunoglobulin; **HBsAb** = hepatitis B surface antibody; **HBsAg** = hepatitis B surface antigen; **hCG** = human chorionic gonadotropin; **HIV** = human immunodeficiency virus; **IM** = intramuscular; **IUD** = intrauterine device; **LPV/r** = lopinavir and ritonavir; **NVP** = nevirapine; **PCR** = polymerase chain reaction; **PI** = protease inhibitor; **RAL** = raltegravir; **STI** = sexually transmitted infection; **TDF** = tenofovir; **TLD** = tenofovir + lamivudine + dolutegravir; **VL** = viral load

health Department: Health REPUBLIC OF SOUTH AFRICA

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TABLE 3: HIV PEP REGIMENS

PREFERRED REGIMEN

Adults and adolescents ≥ 10 years and ≥ 35 kg:	Children < 10 years:
TDF 300 mg + 3TC 300 mg + DTG 50 mg (TLD) once a day for 28 days	**Children < 10 years and 20-35 kg:** AZT + 3TC + DTG **Children < 10 years and < 20 kg:** AZT+ 3TC + LPV/r Refer to paediatric dosing chart for dosing

ALTERNATIVE OPTIONS:

A three-drug regimen should be used in all cases. If a drug is not tolerated, substitute with a suitable alternative and continue the non-offending antiretrovirals.

- TDF is better tolerated than AZT, but AZT can be used as an alternative in adults and adolescents who have poor kidney function or who are not tolerating TDF.
- RAL (if available) is a suitable alternative for LPV/r in children.
- DTG can be substituted for a protease inhibitor (LPV/r or ATV/r or DRV/r).

SPECIAL PRESCRIBER'S POINTS

- Always check for drug-drug interactions. ATV/r is contra-indicated with rifampicin and proton-pump inhibitors e.g. omeprazole, lansoprazole. Polyvalent cations (Mg^{2+}, Fe^{2+}, Ca^{2+}, Al^{3+}, Zn^{2+}) interact with DTG and RAL. Please check how to administer correctly. If you need help contact the Hotline.
- If the source patient is failing on a second line regimen or is on a third line regimen or salvage therapy, consult with an Infectious Disease Specialist or the Hotline.
- NVP and ABC should be avoided in PEP due to risk of hypersensitivity reactions.
- For the paediatric dosing chart contact the hotline or visit the website (www.mic.uct.ac.za).

TABLE 4: HEPATITIS B PEP

Vaccination status and antibody response of exposed patient	Source patient: HBsAg positive or unknown	Source patient: HBsAg negative
Unvaccinated OR vaccination incomplete	• HBIG, IM, 500 units* • Hep B vaccine (3 doses at monthly intervals)	Initiate Hep B vaccination (month 0, 1 and 6)
Vaccinated AND known to have HBsAb titre ≥ 10 units/mL#	No treatment	No treatment
Vaccinated AND HBsAb ≤ 10 units/mL OR unknown	• HBIG, IM, 500 units* • Hep B vaccine (3 doses at monthly intervals)	No treatment

*Refer to secondary level of care for HBIG, IM. HBIG should be given as soon as possible, preferably within 24-72 hours after exposure (or within 7 days)

#If obtaining HBsAb titre takes more than 24 hours, initiate treatment as for vaccinated with HBsAb ≤ 10 units/mL

Note: Repeat HBsAb 1-2 months after last vaccine dose to ensure adequate immune response (i.e. HBsAb > 10 units/mL)

TABLE 5: EMERGENCY CONTRACEPTION

Levonorgestrel 1.5 mg oral stat

Provide double the levonorgestrel dose in the following situations:

- Patients on enzyme inducing medicines (including efavirenz, rifampicin and carbamazepine), as they significantly reduce levonorgestrel levels.
- Women > 80 kg or BMI ≥ 30.

Special prescriber's points:

- Provide antiemetic to prevent nausea and vomiting: metoclopramide 10 mg 8 hourly as needed.
- If vomiting occurs within 2 hours of taking levonorgestrel, repeat the dose.
- Alternative options (e.g. Copper IUD) can be considered.

TABLE 6: STI PROPHYLAXIS

Adults and adolescents:
Ceftriaxone 250 mg IM **AND** azithromycin 1 g oral stat
AND metronidazole* 2 g oral stat

**First-trimester of pregnancy: metronidazole 400mg twice daily for 7 days preferred over stat dose*

Children:
Ceftriaxone (< 25 kg: 125 mg IM, ≥ 25 kg 250 mg IM)
AND
Azithromycin single oral dose
(< 45 kg: 20 mg/kg; ≥ 45 kg: 1g)
AND
Metronidazole
- 1-3 years: 50 mg tds for 7 days or 500 mg oral stat
- 4-7 years: 100 mg bd for 7 days or 600-800 mg oral stat
- 8-10 years: 100 mg tds for 7 days or 1 g oral stat
- > 10 years: metronidazole 2 g oral stat or metronidazole 400 mg bd orally for 7 days (preferred for children)

TABLE 7: POSSIBLE SIDE-EFFECTS OF ANTIRETROVIRAL TREATMENT

Atazanavir/ritonavir	Generally well tolerated. Jaundice with unconjugated hyperbilirubinaemia occurs commonly, but is benign, hepatitis (uncommon).
Dolutegravir	Generally well tolerated. Occasional insomnia.
Emtricitabine/Lamivudine	Generally well tolerated.
Lopinavir/ritonavir	Diarrhoea, nausea, vomiting, hepatitis.
Raltegravir	Generally well tolerated. Nausea, fatigue, Stevens-Johnson syndrome (rare).
Tenofovir	Generally well tolerated. Nausea, diarrhoea, vomiting, nephrotoxicity.
Zidovudine	Nausea, vomiting, headache, fatigue, anaemia, neutropenia.