

# HIV Post-Exposure Prophylaxis (PEP)

(Updated 26-09-2018)

## Signs and Symptoms:

Subjection to a needlestick or direct contact with bodily fluids known or thought to be known to be HIV-infected.<sup>1</sup>

## Considerations:

1. HIV transmission risk associated with various routes of exposure are listed in Table 1.
2. If started soon after exposure, PEP can reduce the risk of HIV infection by over 80%. Adherence to a full 28 day course of Antiretroviral (ARV) medication is critical to the effectiveness of the intervention.<sup>2</sup>
  - a. PEP should be started as soon as possible after exposure; ideally within 4 hours.<sup>3</sup>
  - b. Advice should be sought from a HMA before initiating treatment however; if unable to contact within this window, treatment may be initiated and the patient later re-evaluated.<sup>3</sup>

## Contraindications:

1. Allergy to an indicated medication.
2. Exposure > 72hr. **Treatment is only effective if administered within 72hr of initial exposure.**<sup>1,2,3</sup>

## Management:

1. General management as per Figure 1 – *Algorithm for Management of Occupational Exposures to Blood and Body Fluids (BBFs)*.<sup>4</sup>
2. First aid as per Table 2 – *First Aid for Needle stick and Other Exposures to Blood and Bodily Fluids*.
3. If HIV PEP is indicated, initiate pharmacotherapy as per standing Director Force Health Protection instruction. The present standard for oral therapy is:

<b>Isentress</b> (Raltegravir 400mg)	+	<b>Truvada</b> (Tenofovir/Emtricitabine 300mg/200mg)
1 Tab PO twice daily for 28 days		1 Tab PO once daily for 28 days

## Disposition:

1. Pers for whom which HIV PEP has been initiated without HMA input should be re-evaluated regarding the actual requirement for treatment.
2. Contact a HMA to discuss ongoing treatment and possible employment limitations for pers undergoing full course HIV PEP pharmacotherapy.

1. Consult with PMED to determine endemic risk is respective AOOs.
2. <https://www.cdc.gov/hiv/pdf/workplace/cdc-hiv-healthcareworkers.pdf>
3. <http://www.who.int/hiv/topics/prophylaxis/info/en/>
4. CFHS Advisory 4400-09 – Prevention and Management of Occupational Exposures to Blood Borne Pathogens in CFHS Centres.

**Table 1 – Est. Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act\***

Type of Exposure	Risk per 10,000 Exposures	
<b>Parenteral</b>		
Blood Transfusion	9,250	<b>92.50%</b>
Needle-Sharing During Injection Drug Use	63	<b>0.63%</b>
Percutaneous (Needle-Stick)	23	<b>0.23%</b>
<b>Sexual</b>		
Receptive Anal Intercourse	138	<b>1.38%</b>
Insertive Anal Intercourse	11	<b>0.11%</b>
Receptive Penile-Vaginal Intercourse	8	<b>0.08%</b>
Insertive Penile-Vaginal Intercourse	4	<b>0.04%</b>
Receptive Oral Intercourse	Low	
Insertive Oral Intercourse	Low	
<b>Other<sup>^</sup></b>		
Biting	Negligible	
Spitting	Negligible	
Throwing Body Fluids (Including Semen or Saliva)	Negligible	
Sharing Sex Toys	Negligible	

\* Factors that may increase the risk of HIV transmission include sexually transmitted diseases, acute and late-stage HIV infection, and high viral load. Factors that may decrease the risk include condom use, male circumcision, antiretroviral treatment, and pre-exposure prophylaxis. None of these factors are accounted for in the estimates presented in the table.

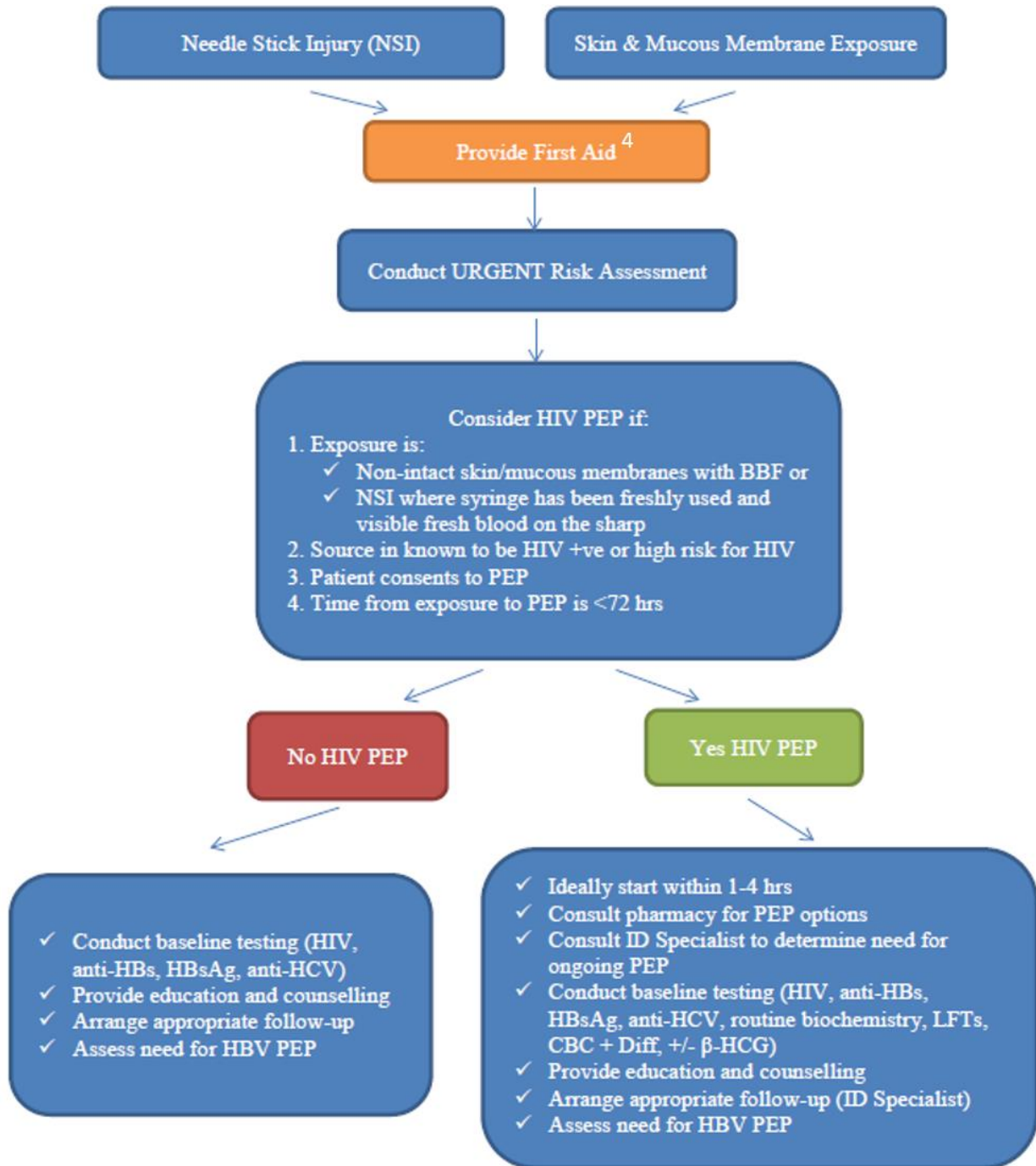
<sup>^</sup> HIV transmission through these exposure routes is technically possible but unlikely and not well documented.

#### References

1. Patel P, Borkowf CB, Brooks JT. Et al. Estimating per-act HIV transmission risk: a systematic review. AIDS. 2014. doi: 10.1097/QAD.0000000000000298.
2. Pretty LA, Anderson GS, Sweet DJ. Human bites and the risk of human immunodeficiency virus transmission. Am J Forensic Med Pathol 1999;20(3):232-239.

Table available from: <https://www.cdc.gov/hiv/risk/estimates/riskbehaviors.html>

**Figure 1 – Algorithm for Management of Occupational Exposures to Blood and Body Fluids (BBFs) <sup>3a</sup>**



3a. Annex A to CFHS Advisory 4400-09

4. Conduct first aid as per Table 2 – *First Aid for Needle stick and Other Exposures to Blood and Bodily Fluids*.

**Table 2 – First Aid for Needle stick and Other Exposures to Blood and Bodily Fluids.**<sup>3 (adapted)</sup>

<p><b><u>Aim</u> – The aim of first aid is to reduce contact time with the source person’s blood, body fluids or tissues and to clean and decontaminate the site of exposure.</b></p>	
Indication	Treatment
<p><b>1. Broken skin following an injury with an used needle or contaminated object.</b></p>	<ol style="list-style-type: none"> <li>1. Remove all contaminated clothing/PPE to allow bleeding of the wound.</li> <li>2. Allow any wound to bleed freely. Do not squeeze or rub the injury site.</li> <li>3. Gently wash the site using soap or a mild disinfectant solution that will not irritate the skin. (WHO recommends chlorhexidine gluconate solution)</li> <li>4. If running water is not available, clean the site with a gel or other hand-cleaning solution.</li> <li>5. Do not use strong solutions, such as bleach or iodine, to clean the site as these may irritate the wound and make the injury worse.</li> </ol>
<p><b>2. Splash of blood or bodily fluids to intact skin**.</b></p> <p>**Contact with intact skin is <u>not</u> normally considered a risk for HIV transmission**</p>	<ol style="list-style-type: none"> <li>1. Remove all contaminated clothing/PPE.</li> <li>2. Wash the area immediately.</li> <li>3. If running water is not available, clean the area with a gel or other hand- rub solution.</li> <li>4. Do not use strong disinfectants</li> </ol>
<p><b>3. Splash of blood or bodily fluids to the eye(s).</b></p>	<ol style="list-style-type: none"> <li>1. Irrigate the exposed eye immediately with water or normal saline (use an eyewash station if available).</li> <li>2. Sit in a chair, tilt the head back and have a colleague gently pour water or normal saline over the eye, pulling the eyelids up and down to make sure the eye is cleaned thoroughly (15 minute flush recommended).</li> <li>3. If contact lenses are worn, leave these in place while irrigating the eye, as they form a barrier over the eye and will help protect it. Once the eye has been cleaned, remove the contact lenses and clean them in the normal manner.</li> <li>4. Do not use soap or disinfectant on the eye.</li> </ol>