Disclaimer: This clinical pathway is provided as a general guideline for use by Licensed Independent Provider’s (LIP) in planning care and treatment of patients. It is not intended to be and does not establish a standard of care. Each patient’s care is individualized according to specific needs.

Sexual Assault Pathway

Inclusion Criteria:
Patients of sexual assault exposed to potentially hazardous body fluids

Exclusion Criteria:
Neonates (postnatal age < 4 weeks)
Recommend ID consult to assist with HIV PEP

How to Perform a Sexual Abuse/Assault Exam in the ED

Body Site Testing:
- Gonorrhea (Urine NG(GC) PCR)*
- Chlamydia (Urine Chlamydia PCR)*
- Urine Trichomonas PCR
- Syphilis Screening PCR
- Pregnancy Test

≤ 72 hours since exposure

How to Perform a Sexual Abuse/Assault Exam in the ED

Substantial risk of HIV acquisition (Assailant is known to be HIV-positive)

Discuss key issues with family and patient before initiating PEP

Select appropriate Pediatric Post-Exposure Prophylaxis regimen based on age

Post-Exposure Prophylaxis (PEP) not recommended

Post-Exposure Management for Hepatitis B Virus

Review HPV Vaccine Status if ≥ 9 years

Review tetanus vaccine status
*Patients with tetanus-prone wounds (e.g., exposure to dirt or soil): administer tetanus immunoglobulin (if primary series of tetanus vaccine is incomplete) and/or tetanus toxoid vaccine, as clinically appropriate

Order Labs:
- Complete blood count with differential *
- Comprehensive metabolic panel * **
- HIV 1/2 Ag/Ab
- Hepatitis B surface antibody
- Hepatitis B surface antigen ¶
- Hepatitis B core antibody ¶
- Hepatitis C antibody **
- Rapid plasma reagin (RPR)

Ceftriaxone 500 mg IM x 1 (1 g for persons weighing ≥ 150 kg)
AND
Doxycycline 100 mg PO BID x 7 days
Azithromycin 1g PO x1 if concern for poor compliance and unlikely to complete 7 day course
AND
Metronidazole 500 mg PO BID x 7 days (FEMALES ONLY)
Metronidazole 2g PO x1 if concern for poor compliance and unlikely to complete 7 day course

Refer to TCAR for follow-up
Indications for Infectious Diseases Referral:
- Neonates (postnatal age < 4 weeks)
- Patient or assailant with known HIV infection
- Monitoring

* Obtain cultures from any other sites of penetration (eg. pharynx, rectum)

Postpubertal

Prepubertal

YES

NO

YES

NO

NO

NO

YES

0 if decision to initiate HIV PEP is made
¶ if not completely vaccinated for Hepatitis B, or if vaccination status is unknown
** If sex trafficking is suspected OR source is known to have Hepatitis C or is a known IV drug user

Case-by-case determination for PEP
Consider additional factors that increase risk

How to Perform a Sexual Abuse/Assault Exam in the ED

DISCLAIMER
Post-Exposure Prophylaxis (PEP) should be initiated as soon as possible, and no more than 72 hours after the exposure. If the exposure occurred more than 72 hours before presentation, PEP is unlikely to be effective in reducing transmission. Even if PEP is not initiated (window period has elapsed or patient/parental refusal), testing and follow up are still indicated.

**Case-by-Case Determination**

**Case-by-Case Evaluation for PEP**

Assess for factors that increase for HIV acquisition and discuss risk/benefits with patient/caregiver before recommending initiation of PEP.

- HIV status of assailant is unknown
- Reported exposure presents a substantial risk for transmission of the source does have HIV infection
  - Insertive anal intercourse
  - Insertive penile-vaginal intercourse
  - Oral-vaginal contact (receptive & insertive)
  - Oral-anal contact (receptive & insertive)
  - Receptive penile-oral contact with or without ejaculation
  - Insertive penile-oral contact with or without ejaculation
- Assailant is known to be from a high-risk group (i.e., man who has sex with men, person who injects drugs who shares needles or equipment)
- Oral mucosa that is not intact (patient or assailant)
  - Oral lesions
  - Gingivitis
  - Wounds
- Blood exposure
  - Note: blood exposure can be minimal and may not be recognized by exposed person
- Assailant has presence of genital ulcer disease or other sexually transmitted infections

Factors that increase risk:

- Oral mucosa that is not intact (patient or assailant)
  - Oral lesions
  - Gingivitis
  - Wounds
- Blood exposure
  - Note: blood exposure can be minimal and may not be recognized by exposed person
- Assailant has presence of genital ulcer disease or other sexually transmitted infections

Risk of HIV acquisition depends on the characteristic of the exposure. It is important to understand the risk of transmission when evaluating the pediatric patient. This information can be used by physicians and families to decide if use of PEP would be beneficial. Risk of HIV transmission is summarized below:

<table>
<thead>
<tr>
<th>Type of Exposure</th>
<th>Risk* per 10,000 exposures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive anal intercourse</td>
<td>138</td>
</tr>
<tr>
<td>Insertive anal intercourse</td>
<td>11</td>
</tr>
<tr>
<td>Receptive penile-vaginal intercourse</td>
<td>8</td>
</tr>
<tr>
<td>Insertive penile-vaginal intercourse</td>
<td>4</td>
</tr>
<tr>
<td>Insertive and receptive oral intercourse</td>
<td>Low</td>
</tr>
<tr>
<td>Biting and spitting ^</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

* Factors that may increase the risk of HIV transmission include sexually transmitted diseases, acute and late-stage HIV infection, and high viral load.

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

Discuss Key Issues

Initiation of HIV PEP is time-sensitive and decision should not rely on testing of offender

1. Significance and timing of the exposure in relationship to the potential risk of HIV transmission:
   • PEP should be initiated as soon as possible and no more than 72 hours after the exposure
   • PEP is unlikely to be beneficial in reducing transmission if the exposure occurred more than 72 hours prior to presentation

2. Adherence:
   • Assess readiness and likeliness of adherence for the family/caregiver(s) to administer and/or child/adolescent to take antiretroviral therapy (2-3 drugs for 30 days)

3. Importance of clinical and laboratory follow-up with provider
   • Even if PEP is not initiated, testing and follow-up are still indicated

4. Potential risk and benefits of antiretroviral therapy, including common side effects:

<table>
<thead>
<tr>
<th>Drug</th>
<th>Common Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenofovir (TDF)</td>
<td>Abdominal pain, Nausea, vomiting, Diarrhea, Insomnia, Headache</td>
</tr>
<tr>
<td>Avoid in chronic kidney disease</td>
<td></td>
</tr>
<tr>
<td>Emtricitabine (FTC)</td>
<td>Headache, Insomnia, Nausea, vomiting, Diarrhea, Abdominal pain, Hyperpigmentation, Rash</td>
</tr>
<tr>
<td>Raltegravir (RAL)</td>
<td>Nausea, diarrhea, Fatigue, Increase serum ALT</td>
</tr>
<tr>
<td>Zidovudine (ZDV; AZT)</td>
<td>Headache, Nausea, vomiting, Anemia, Rash</td>
</tr>
<tr>
<td>Lamivudine (3TC)</td>
<td>Headache, Nausea, Rash</td>
</tr>
<tr>
<td>Lopinavir/Ritonavir (LPV/RTV)</td>
<td>Nausea, Vomiting, Diarrhea</td>
</tr>
</tbody>
</table>

5. Contact TCAR (501-364-2680) during business hours or ED (501-364-1186) during evenings and weekends immediately if experiencing the following signs or symptoms: fever, generalized gland swelling, sore throat, rash (theses may indicate acute HIV infection)

If ACH Outpatient Pharmacy is open (M-F 8a-6p & Sat 10am-2pm): 28 day supply prescription should be e-prescribed to ACH Outpatient Pharmacy.
   • If sending prescription to outpatient pharmacy on Saturday, send prescription by 12PM

If ACH Outpatient Pharmacy is closed: 28 day supply prescription should be printed and sent to Inpatient Pharmacy to fill (see order set for further details)
Post-Exposure Management for Hepatitis B Virus (HBV)

Review vaccination records of patient

Patient has been previously and completely vaccinated for Hepatitis B

Assailant is known to be Hepatitis B surface antigen positive

Administer HBV vaccine in ED
- To complete Hepatitis B vaccine series in follow-up

Post vaccination testing (Hepatitis B Surface Antibody) confirms seroprotection

Administer HBV vaccine and HBIG (Hepatitis B Immunoglobulin)
- To complete Hepatitis B vaccine series in follow-up

Administer HBV vaccine booster in ED

HBV vaccine not indicated

Return to Sexual Assault Pathway
Human Papillomavirus Virus (HPV) Vaccine Status

Review vaccination records of patient

Patient has been completely vaccinated for HPV

YES → HPV Vaccine not indicated

NO → Has patient ever been vaccinated for HPV?

PARTIALLY → Administer HPV vaccine in ED if adequate time has elapsed since previous vaccine (CDC HPV Vaccination)

PARTIALLY → Administer HPV vaccine in ED

NO → Administer HPV vaccine in ED
### Monitoring Labs

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>4-6 weeks after exposure</th>
<th>3 months after exposure</th>
<th>6 months after exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC diff</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMP</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV 1/2 Ag/Ab</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B surface antigen</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B surface antibody</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B core antibody</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis C antibody</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Hepatitis C PCR</td>
<td></td>
<td></td>
<td>★</td>
<td></td>
</tr>
<tr>
<td>Syphilis testing (RPR)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Gonorrhea PCR</td>
<td>✔</td>
<td>✔</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td>Chlamydia PCR</td>
<td>✔</td>
<td>✔</td>
<td>★</td>
<td></td>
</tr>
<tr>
<td>Trichomonas PCR</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

0 If decision to initiate HIV PEP is made

† If not completely vaccinated for Hepatitis B, or if vaccination status is unknown

‡ If sex trafficking is suspected OR source is source is known to have Hepatitis C or is a known IV drug user

¶ If source is known to have Hepatitis C

* In person with pharyngeal gonorrhea, test of cure is indicated

** When non-adherence is suspected or if azithromycin regimen was prescribed during initial evaluation, post-treatment evaluation is recommended
Vaccine Follow-Ups

Hepatitis B Vaccine (HBV)

Review Post-Exposure Management for Hepatitis B Virus

Was HBV vaccine administered in the ED as indicated?

- Yes
  - Complete HBV series as indicated
    - 2nd HBV vaccine 1-2 months after first dose
    - 3rd HBV vaccine 4-6
- No
  - Administer HBV vaccine

No further testing/vaccine indicated
Vaccine Follow-Ups

Human Papillomavirus

- HPV vaccination can be administered beginning at the age of 9 years and catch-up HPV vaccination recommended for all persons through age 18 years if not adequately vaccinated

- 2- or 3-dose series depending on age at initial vaccination

- Age 9-14 years at initial vaccination: 2-dose series at 0, 6-12 months

- Age 15 years or older at initial vaccination: 3-dose series at 0, 1-2 months after first dose, 6 months after first dose
# HIV Post-Exposure Prophylaxis

## Antiretroviral Regimens

<table>
<thead>
<tr>
<th>Age group</th>
<th>Preferred Regimen</th>
<th>Medication</th>
</tr>
</thead>
</table>
| Adults and adolescents aged > 13 years (including pregnant women) with normal renal function | 3-drug regimen consisting of:  
  - Tenofovir and fixed dose combination Emtricitabine  
  - Raltegravir  
  
  **Raltegravir (Isentress) 400 mg PO twice daily**  
  AND  
  **Truvada 1 tablet PO once daily**  
  (Truvada = Tenofovir 300 mg + Emtricitabine 200 mg) | |  
| Children aged 2 – 12 years (or those who cannot take pills) | 3 drug regimen consisting of:  
  - Tenofovir DF  
  - Emtricitabine  
  - Raltegravir  
  
  **Raltegravir (Isentress)**  
  AND  
  **Tenofovir (Viread)**  
  AND  
  **Emtricitabine (Emtriva)**  
  
  *Each drug dosed to age and weight* | |  
| Children > 4 weeks to < 2 years                | 3 drug regimen consisting of:  
  - Zidovudine  
  - Lamivudine  
  - Lopinavir/Ritonavir | |  

Return to Sexual Assault Pathway
# HIV Post-Exposure Prophylaxis

## Antiretroviral Dosing

<table>
<thead>
<tr>
<th>Drug</th>
<th>Formulation</th>
<th>Age and/or Weight (kg)</th>
<th>Dose Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tenofovir (TDF)</strong></td>
<td>Powder: 40 mg/supplied scoop&lt;br&gt;• (Mix with 2-4 oz of soft food (e.g. applesauce, yogurt). Stir with a spoon until well mixed. Ingest immediately to avoid bitter taste. Do not add liquid since powder will float to top.)&lt;br&gt;Tablet: 150 mg 200 mg 250 mg 300 mg</td>
<td>2 – 11 years and &gt; 10 kg&lt;br&gt;17 – &lt;22 kg&lt;br&gt;22 to &lt;28 kg&lt;br&gt;28 to &lt;35 kg&lt;br&gt;≥ 35 kg</td>
<td>8 mg/kg/dose once daily&lt;br&gt;150 mg once daily&lt;br&gt;200 mg once daily&lt;br&gt;250 mg once daily&lt;br&gt;300 mg once daily</td>
</tr>
<tr>
<td><strong>Emtricitabine (FTC)</strong></td>
<td>Capsule: 200 mg&lt;br&gt;Oral solution: 10 mg/mL</td>
<td>&gt;33 kg&lt;br&gt;1-3 months&lt;br&gt;≥ 3 months</td>
<td>200 mg capsule once daily OR Liquid based on age and weight below&lt;br&gt;3 mg/kg once daily&lt;br&gt;6 mg/kg once daily</td>
</tr>
<tr>
<td><strong>Raltegravir (RAL)</strong></td>
<td>Tablet: 400 mg&lt;br&gt;Chewable Tablet: 25 mg 100 mg</td>
<td>≥ 6 years and &gt;25 kg&lt;br&gt;11 to &lt;14 kg&lt;br&gt;14 to &lt;20 kg&lt;br&gt;20 to &lt;28 kg&lt;br&gt;28 to &lt;40 kg&lt;br&gt;≥ 40 kg</td>
<td>400 mg twice daily OR Chewable tablet based on weight below&lt;br&gt;75 mg twice daily&lt;br&gt;100 mg twice daily&lt;br&gt;150 mg twice daily&lt;br&gt;200 mg twice daily&lt;br&gt;300 mg twice daily</td>
</tr>
<tr>
<td><strong>Zidovudine (ZDV; AZT)</strong></td>
<td>Syrup: 10 mg/mL&lt;br&gt;Tablet: 300 mg</td>
<td>4 to &lt; 9 kg&lt;br&gt;9 to &lt; 30 kg&lt;br&gt;≥ 30 kg</td>
<td>12 mg/kg/dose twice daily&lt;br&gt;9 mg/kg/dose twice daily&lt;br&gt;300 mg tablet twice daily</td>
</tr>
<tr>
<td><strong>Lamivudine (3TC)</strong></td>
<td>Solution: 10 mg/mL&lt;br&gt;Tablet: 150 mg</td>
<td>≥ 4 weeks to 3 months and &lt; 14 kg&lt;br&gt;≥ 3 months and &lt; 14 kg&lt;br&gt;14 to &lt;20 kg&lt;br&gt;20 to &lt;25 kg&lt;br&gt;≥25 kg</td>
<td>4 mg/kg/dose twice daily&lt;br&gt;5 mg/kg/dose twice daily&lt;br&gt;75 mg/dose ( ½ tablet ) twice daily&lt;br&gt;75 mg ( ½ tablet) in AM and 150 mg (1 tablet) in PM&lt;br&gt;150 mg/dose (1 tablet) twice daily</td>
</tr>
<tr>
<td><strong>Lopinavir/Ritonavir (LPV/RTV)</strong></td>
<td>Solution: 80/20 mg/mL (max 400/100 mg [5ml] /dose)</td>
<td>&gt;4 weeks to 12 months&lt;br&gt;12 months to 24 months&lt;br&gt;&lt; 15 kg&lt;br&gt;15 to 40 kg&lt;br&gt;≥ 40 kg</td>
<td>16 mg/kg/dose twice daily LPV&lt;br&gt;12 mg/kg/dose twice daily LPV&lt;br&gt;12 mg/kg/dose twice daily LPV&lt;br&gt;10 mg/kg/dose twice daily LPV&lt;br&gt;400 mg twice daily LPV</td>
</tr>
</tbody>
</table>
Contributing Members

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References


