BLOOD OR BODILY FLUID EXPOSURE IN THE COMMUNITY (NON-OCCUPATIONAL)

ALGORITHM 1. Sexual Assault

Inclusion criteria:
- Patient reports sexual assault, AND/OR
- Patient’s parent/caregiver reports concern for sexual assault

Assess whether patient meets criteria for SANE evaluation
- *Refer to Sexual Assault Nurse Examiner (SANE), Care of the Patient Policy

Assess risk of exposure: Has bodily fluid made contact with a mucosal surface?

No specific labs or prophylaxis indicated
- Remainder of medical care based on medical history, provider discretion, or patient/family concern

Yes/Suspected

Obtain labs (see Table 1):
- Hepatitis B antiGEN
- GC/CT PCR
- Hepatitis C antibody
- HIV 1 and 2 antibody screen
- Urine pregnancy test
- Syphilis testing
- Trichomonas urine PCR
- If starting antiretrovirals (ARVs) for HIV (see below), order CBC and CMP as baseline labs

Recommended prophylaxis for pre-pubertal patients (see Table 2):
- Hepatitis B vaccine for all exposed patients; HBIG if indicated
- Call ID and/or CPT to determine need for prophylaxis against STIs and pregnancy

Recommended prophylaxis for post-pubertal patients (see Table 2):
- Ulipristal (Ella®) for emergency contraception
- Antibiotics for GC/CT/Trichomonas
- Hepatitis B vaccine for all exposed patients; HBIG if indicated

How long since exposure occurred?

>72 hours
- No HIV prophylaxis indicated; if assailant or type of contact high risk for HIV, discuss with ID – ARVs may be recommended

≤72 hours
- Consider the risks and benefits of ARVs for HIV prophylaxis (see Table 4). If patient desires ARVs, give first dose in ED AND give starter pack AND prescription to take home

Follow Up:

Combined Child Protection Team / Infectious Disease Clinic:
- For patients seen in the Denver area, follow up at Anschutz in CPT/ID clinic on Thursday mornings. For patients seen in the Colorado Springs area, call CPT to arrange follow up.
- Patients on HIV prophylaxis should be seen within 7 days. All other sexual assault patients should be seen within 2 weeks.

PCP follow up for coordination of care, laboratory testing, hepatitis B vaccines, mental health support:
- Laboratory tests may be indicated at 1-2 weeks, 6 weeks, 3 months, and 6 months after exposure (see Table 5)
- Additional hepatitis B vaccines are indicated if patient previously received less than 3 doses and/or 6 week titer is below protective level
ALGORITHM 2. Needle Stick or Other Bodily Fluid Exposure

**Inclusion criteria:**
- Needle sticks/injuries penetrating skin AND/OR
- Mucosal exposure to blood or bodily fluid (e.g., bites or ingestion)

**Exclusion criteria:**
- Injuries in which skin was not broken AND blood/bodily fluids did not contact mucous membranes
- Occupational exposures

**Assess risk of exposure:**
Has a sharp object potentially contaminated with blood/bodily fluid punctured the skin, **AND/OR** Has blood/bodily fluid made contact with a mucosal surface?

- **No**
  - No specific labs or prophylaxis indicated
    - Remainder of medical care based on medical history, provider discretion, or patient/family concern

- **Yes/Suspected**
  - **Obtain labs (See Table 1):**
    - Hepatitis B antiGEN
    - Hepatitis C antiBODY
    - HIV 1 and 2 antiBODY screen
    - If starting antiretrovirals (ARVs) for HIV (see below), order CBC and CMP as baseline labs

  - **Recommended prophylaxis (See Table 2):**
    - Hepatitis B vaccine for all exposed patients; HBIG if indicated
    - Tetanus vaccine if >5 years since last immunization; TIG if indicated

  - **How long since exposure occurred?**
    - If >72 hours:
      - No HIV prophylaxis indicated; if source of bodily fluid or type of contact high risk for HIV, discuss with ID – ARVs may be recommended
    - If ≤72 hours:
      - Consider the risks and benefits of ARVs for HIV prophylaxis (See Table 4). If patient desires ARVs, give first dose in ED AND give starter pack AND prescription to take home

**Follow Up:**
- If ARVs are started for HIV prophylaxis, schedule appointment with Infectious Disease Clinic within 7 days
- PCP follow up for coordination of care, laboratory testing, and hepatitis B vaccines
  - Laboratory tests may be indicated at 6 weeks, 3 months, and 6 months after exposure (see Table 5)
  - Additional hepatitis B vaccines are indicated if patient previously received <3 doses and/or 6 week titer is below protective level
TARGET POPULATION: SEXUAL ASSAULT

Inclusion Criteria

- Pediatric patients reporting sexual assault—defined as any forced or coerced sexual behavior that occurs without consent/assent, **AND/OR**
- Pediatric patients whose parents report concern for sexual assault

Exclusion Criteria

- Severe physical trauma necessitating emergent operation or repair (Must address trauma first, proceed with workup and prophylaxis once stable. Alert CPT and/or ID to pending need for workup and prophylaxis).

TARGET POPULATION: NEEDLE STICK INJURY / OTHER BLOOD OR BODILY FLUID EXPOSURE

Inclusion Criteria

- Needle sticks that penetrate the skin, due to discarded needles found in a community setting, **AND/OR**
- Other injuries that penetrate that skin, due to any sharp object contaminated with blood or bodily fluids, **AND/OR**
- Mucosal exposure to blood or bodily fluid, such as a bite injury, or ingestion of any material contaminated with blood or body fluid

Exclusion Criteria

- Any injury in which skin was not broken AND blood/bodily fluids did not contact mucous membranes
- Occupational needle sticks or other injuries or exposures that occur in a workplace setting (refer to Occupational Health Services)
BACKGROUND | DEFINITIONS
These clinical care recommendations are designed to help medical providers identify, screen, and treat children at-risk of transmission of infectious agents from blood or bodily fluid exposure in the community (including community needle sticks and sexual exposures).

Definitions
- **ARV**: Antiretroviral drugs
- **CPT**: Child Protection Team
- **CSH**: Colorado Springs Hospital
- **HIV**: Human Immunodeficiency Virus
- **ID**: Infectious Diseases
- **PEP**: Post-Exposure Prophylaxis
- **SANE**: Sexual Assault Nurse Examiner
- **STI**: Sexually Transmitted Infection

INITIAL EVALUATION: SEXUAL ASSAULT
Prior to evaluation of unconscious, intoxicated, or altered patients, consult with CPT.

History
- Details of exposure
  - Type of sexual contact
  - Mucosal surface(s) involved
  - Bodily fluid contact
- Patient factors
  - Pubertal status
  - Vaccination status for hepatitis B
- Assailant risk factors
  - Is the assailant known to be infected with HIV, hepatitis B, or hepatitis C?
  - Does the assailant agree to be tested for HIV, hepatitis B, or hepatitis C?

Physical Exam
- Perform a comprehensive physical exam, noting any injuries that could increase the risk of exposure
- Exam should be performed by a trained provider

INITIAL EVALUATION: NEEDLE STICKS AND OTHER EXPOSURES

History
- Details of exposure
  - In what setting was the contaminated object or material found?
  - If needle stick, was blood visible in the syringe? Was the sharp hollow bore or solid?
- Patient factors
  - Vaccination status for tetanus
  - Vaccination status for hepatitis B
- If the source of blood/body fluid is known:
  - Is the source known to be infected with HIV, hepatitis B, or hepatitis C?
  - Does the source agree to be tested for HIV, hepatitis B, or hepatitis C?
- If the source of blood/body fluid is unknown:
  - Blood from discarded needles should NOT be tested for viral infections.

Physical Exam
- Perform a comprehensive physical exam, noting any injuries
- Document the location and severity of any wounds that penetrated skin.

CLINICAL MANAGEMENT
Laboratory Studies

Labs indicated for: Patients with a blood or bodily fluid exposure of ANY TYPE, including sexual assault

- Hepatitis B AntiGEN – to rule out infection prior to current exposure. Hepatitis B antiBODY is not indicated, as Hepatitis B vaccination is recommended for all exposed patients, regardless of antibody titers
- Hepatitis C AntiBODY – to rule out infection prior to current exposure
- HIV 1 and 2 AntiGEN and AntiBODY screen – to rule out infection prior to current exposure

Labs indicated for: MALES AND FEMALES with known or suspected oral, vaginal, penile, or anal sexual contact

- Gonorrhea/Chlamydia (GC/CT PCR from all sites of penetration/attempted penetration) – In females, urine can be sent in place of vaginal/cervical swab. Urine culture was previously gold standard, but PCR is sufficiently sensitive to make a diagnosis. Ensure that patient does not clean their genitals prior to collecting urine sample. Swabs can also be sent from swabs of the throat and/or rectum depending on sites exposed during assault.
- Syphilis screening
  - At Anschutz and Network of Care: send RPR (rapid plasma reagin)
  - At CSH: send Treponema antibody (LAB1197)

Labs indicated for: FEMALES with known or suspected vaginal sexual contact

- Urine Pregnancy Test – to determine whether patient was already pregnant at time of suspected assault, as it would be too early to diagnose new pregnancy
- Trichomonas Urine PCR – should be sent in place of vaginal pathogen screen

Labs indicated for: Patients who will be starting ARVs for HIV post-exposure prophylaxis

- Complete Blood Count (CBC) with differential – to provide a baseline; if patient is severely neutropenic, anemic, or thrombocytopenic, call ID.
- Comprehensive Metabolic Panel (CMP) – to provide a baseline; if renal function is abnormal or liver enzymes are elevated, call ID.

### TABLE 1: Recommended Immediate Testing after Exposure

<table>
<thead>
<tr>
<th>ALL At-Risk Exposures</th>
<th>ADD IF Sexual Exposure</th>
<th>ADD IF Starting HIV PEP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hep B Surface AntiGEN</td>
<td>Hep C Ab</td>
</tr>
<tr>
<td>Source* (If available)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Exposed Patient</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

* Send samples from all sites of penetration/attempted penetration. Performance characteristics of the urine GC/CT PCR have not been established for children 13 years of age and younger.

# “Source” is defined as the person whose blood or bodily fluids contacted the patient. In the case of sexual assault, “source” refers to the assailant. In the case of a needle stick, blood from a syringe should never be tested for infections.
CLINICAL PATHWAY

Prophylaxis

Prophylaxis for patients with a blood or bodily fluid exposure of ANY TYPE, including sexual assault:

- HIV – consider PEP after discussion of risks/benefits (see pages 8-10)
- Hepatitis B – give vaccine to all exposed patients. Give Hep B Immune Globulin (HBIG) only if the exposed patient is unvaccinated, has received <3 doses of vaccine, or vaccination status is unknown, AND source is KNOWN TO BE INFECTED with hepatitis B1,2.
- Hepatitis C – no prophylaxis is available.
- Tetanus – vaccine is indicated for needle stick or wound, if most recent tetanus vaccine was >5 years ago. Give Tetanus Immune Globulin (TIG) only if the exposed patient is unvaccinated, has received <3 doses of vaccine, or vaccination status is unknown3.

Prophylaxis against STIs for post-pubertal MALES or FEMALES with known or suspected sexual exposure:

- Gonorrhea – all post-pubertal patients with sexual exposure (do not await results of PCR testing)
  - Weight ≤ 45 kg: Ceftriaxone IV/IM 250 mg once
  - Weight >45 - <150 kg: Ceftriaxone IV/IM 500 mg once
  - Weight ≥ 150 kg: Ceftriaxone IV/IM 1000 mg once
  - If renal insufficiency, please contact ID for alternative
- Chlamydia – all post-pubertal patients with sexual exposure (do not await results of PCR testing) [PREFERRED REGIMEN]4
  - Weight < 45 kg: Doxycycline 2 mg/kg/dose PO BID x7 days (first dose given immediately)
  - Weight ≥ 45 kg: Doxycycline 100 mg PO BID x7 days (first dose given immediately)
  - OR for patients who are unable to fill a prescription or complete a 7 day course of medication [POST TREATMENT EVALUATION/TESTING IS NEEDED DUE TO THE POSSIBILITY OF TREATMENT FAILURE]4
    - Weight < 50 kg: Azithromycin 20 mg/kg PO once
    - Weight ≥ 50 kg: Azithromycin 1000 mg PO once

Prophylaxis against STIs and pregnancy for post-pubertal FEMALES with known or suspected sexual exposure:

- Trichomonas – post-pubertal patients who weigh ≥ 40 kg with positive trichomonas PCR. Note that tinidazole can cause nausea and vomiting; consider pre-medicating with ondansetron. Recent consumption of alcohol greatly increases the likelihood of nausea and vomiting.
  - Tinidazole 2000 mg PO once
- Pregnancy – female patients with negative pregnancy test, <120 hours since sexual contact
  - Ulipristal (Ella®) 30 mg PO once

Prophylaxis against STIs and pregnancy for pre-pubertal children with known or suspected sexual exposure:

- Call ID and/or CPT for all sexual assaults in pre-pubertal patients to determine the need for STI and/or pregnancy prophylaxis.
- If prophylaxis is not administered after discussion with ID and/or CPT, perform all screening labs and PCP should follow up on these labs and treat if necessary. Labs should be repeated at 1-2 weeks post exposure or sooner if symptomatic.
### TABLE 2: Recommended Prophylaxis for Exposed Patients

<table>
<thead>
<tr>
<th>Condition</th>
<th>Population Indicated</th>
<th>Prophylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV</td>
<td>Patient/parent decision after discussion of risks/benefits (see pp. 8-10)</td>
<td>HIV PEP regimen PO x4 weeks</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>All exposed patients, even if fully vaccinated</td>
<td>Hep B vaccine</td>
</tr>
<tr>
<td></td>
<td>Patients who are unvaccinated against Hep B, received &lt;3 doses of Hep B vaccine, or vaccination status unknown</td>
<td>Source is KNOWN TO BE INFECTED with Hep B</td>
</tr>
<tr>
<td></td>
<td>AND</td>
<td>Hep B vaccine PLUS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hep B Immune Globulin (HBIG) 0.06 mL/kg IM</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Tetanus</td>
<td>Needlestick/Wounds: more than 5 years since most recent tetanus vaccine</td>
<td>Tetanus vaccine only</td>
</tr>
<tr>
<td></td>
<td>Needlestick/Wounds: unvaccinated or &lt;3 doses tetanus vaccine</td>
<td>Tetanus vaccine PLUS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tetanus Immune Globulin (TIG) 250 Units IM</td>
</tr>
<tr>
<td>Gonorrhea*</td>
<td>Sexual Exposure, weight less than or equal to 45 kg</td>
<td>CefTRIAXone IV/IM 250 mg once</td>
</tr>
<tr>
<td></td>
<td>Sexual Exposure, weight greater than 45 to less than 150 kg</td>
<td>CefTRIAXone IV/IM 500 mg once</td>
</tr>
<tr>
<td></td>
<td>Sexual Exposure, weight greater than or equal to 150 kg</td>
<td>CefTRIAXone IV/IM 1000 mg once</td>
</tr>
<tr>
<td>Chlamydia*</td>
<td>Sexual Exposure, able to fill Rx, weight less than 45 kg</td>
<td>Doxycycline 2mg/kg/dose PO BID x7 days (first dose immediately)</td>
</tr>
<tr>
<td></td>
<td>Sexual Exposure, able to fill Rx, weight greater than or equal to 45 kg</td>
<td>Doxycycline 100mg PO BID x7 days (first dose immediately)</td>
</tr>
<tr>
<td></td>
<td>Sexual Exposure, UNABLE to fill Rx, weight less than 50 kg</td>
<td>Azithromycin 20mg/kg/dose PO once</td>
</tr>
<tr>
<td></td>
<td>Sexual Exposure, UNABLE to fill Rx, weight greater than or equal to 50 kg</td>
<td>Azithromycin 1000 mg PO once</td>
</tr>
<tr>
<td>Trichomonas*</td>
<td>Sexual Exposure, positive trichomonas PCR, weight greater than or equal to 40 kg</td>
<td>Tinidazole PO 2000 mg once</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Sexual Exposure (within 120 hours), negative pregnancy test, patient choice</td>
<td>Ulipristal (Ella®) PO 30 mg once</td>
</tr>
</tbody>
</table>

* For pre-pubertal patients, call ID and/or CPT to determine the need for prophylaxis.

^Post treatment evaluation/testing is needed due to the possibility of treatment failure.

**HIV Post-Exposure Prophylaxis (PEP)**

The risk of HIV transmission varies greatly depending on the particular exposure. Given that each exposure is unique in its risk profile, a discussion of the risks of transmission, potential benefits of PEP, and potential complications of PEP with the patient/parents is recommended using the information provided below. Please call the on-call infectious diseases provider for help with PEP recommendations.

**Potential Benefits of HIV Post-Exposure Prophylaxis**

The potential benefit of HIV PEP depends on the efficacy of the regimen, timing of PEP initiation after exposure, and adherence to the entire regimen.

1. **Efficacy of Regimen**: PEP using single-drug therapy following occupational exposure decreases transmission by 81%\(^1\). Experts now recommend the use of a multi-drug regimen with more potent antiretroviral agents, which is likely to increase this efficacy.
2. **Timing of Exposure**: PEP is most effective when begun as soon as possible after exposure and becomes less effective as time from exposure increases. PEP is less likely to be effective 72 hours after exposure, but the interval after which no benefit is gained is unknown\(^1\). If >72 hours have passed since exposure to a source
whose HIV status is unknown, PEP is not recommended; however, testing per Table 1 should still be conducted. If >72 hours have passed since exposure to a source who is known to be HIV infected, please contact ID for recommendations on PEP.

3. **Adherence to PEP:** The efficacy of PEP depends upon adherence to the entire 28-day course of medication. The most common reason for PEP discontinuation is side effects. Although side effects of PEP regimens are common, they are rarely severe or serious (see Table 3 for regimen-specific side effects). The side effect profile of newer antiretrovirals is improved compared with older drugs.

**PEP Drug Regimens**

All regimens are FOUR WEEKS in duration.Prescribe 7 days of ondansetron (Zofran®) with every PEP regimen to ensure tolerability.

A. **Weight ≥25 kg and can swallow pills:**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biktarvy® ADULT DOSE (50mg bictegravir/200mg emtricitabine/25mg tenofovir alafenamide; BIC/FTC/TAF)*</td>
<td>1 tablet PO once daily</td>
</tr>
</tbody>
</table>

*Absorption is impaired by simultaneous administration of medications that contain polyvalent cations, such as antacids, laxatives, or multivitamins, UNLESS taken with food.

B. **Weight ≥14 kg to <25 kg and can swallow pills:**

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biktarvy® PEDIATRIC DOSE (30mg bictegravir/120mg emtricitabine/15mg tenofovir alafenamide; BIC/FTC/TAF)*</td>
<td>1 tablet PO once daily</td>
</tr>
</tbody>
</table>

*Absorption is impaired by simultaneous administration of medications that contain polyvalent cations, such as antacids, laxatives, or multivitamins, UNLESS taken with food.

C. **Weight <14 kg and/or cannot swallow pills.** Prescribe ALL THREE DRUGS:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Strength</th>
<th>Weight</th>
<th>Dose (given BID)</th>
<th>Max dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamivudine (3TC)</td>
<td>10 mg/ml liquid</td>
<td>&lt;25 kg</td>
<td>4 mg/kg/dose</td>
<td>150 mg/dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥25 kg</td>
<td>150 mg</td>
<td></td>
</tr>
<tr>
<td>Zidovudine (AZT, ZDV)</td>
<td>10 mg/ml liquid</td>
<td>4-&lt;9 kg</td>
<td>12 mg/kg/dose</td>
<td>300 mg/dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9-&lt;30 kg</td>
<td>9mg/kg/dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥30 kg</td>
<td>300 mg</td>
<td></td>
</tr>
<tr>
<td>Raltegravir (RAL)*</td>
<td>100mg chew tab dissolved in 5 mL water#</td>
<td>4-&lt;6 kg</td>
<td>30 mg (1.5 ml)</td>
<td>300 mg/dose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6-&lt;8 kg</td>
<td>40 mg (2 ml)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8-&lt;10 kg</td>
<td>60 mg (3 ml)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10-&lt;14 kg</td>
<td>80 mg (4 ml)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14-&lt;20 kg</td>
<td>100 mg (5 ml)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>20-&lt;28 kg</td>
<td>150 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>28-&lt;40 kg</td>
<td>200 mg</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥40 kg</td>
<td>300 mg</td>
<td></td>
</tr>
</tbody>
</table>

*Absorption is impaired by simultaneous administration of medications that contain polyvalent cations, such as antacids, laxatives, or multivitamins, UNLESS taken with food.

# RAL chew tabs dissolve in water after ~15 minutes. The tablet should be fully dissolved before administration.

**TABLE 3. Common Side Effects Experienced with the Recommended PEP Regimens**

<table>
<thead>
<tr>
<th>Intended patients</th>
<th>PEP regimen</th>
<th>Adverse Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight ≥14kg and can swallow pills</td>
<td>Biktarvy®</td>
<td>Common but mild: fatigue, dizziness, insomnia, headache, nausea, diarrhea, liver enzyme elevation. Rare but severe: muscle pain due to myositis.</td>
</tr>
<tr>
<td>Weight &lt;14 kg and/or cannot swallow pills</td>
<td>Lamivudine / zidovudine / raltegravir</td>
<td>Common but mild: fatigue, dizziness, insomnia, headache, nausea, diarrhea, anemia, neutropenia, liver enzyme elevation, rash. Rare but severe: muscle pain due to myositis.</td>
</tr>
</tbody>
</table>
RISK OF TRANSMISSION

Risk of transmission of HIV or hepatitis B or C is based on the probability that the source was infected, the viral load of an infected source, and the type of exposure.

1. Probability source was infected:
   a. HIV: As of 2020, the Colorado Dept. of Public Health and Environment estimated that there were about 15,012 people in Colorado living with HIV\(^5\). This results in a prevalence of 0.26% (260 HIV-infected persons per 100,000 people). Certain risk groups, including injecting drug users and men who have sex with men, may have a higher seroprevalence. Seroprevalence also varies by county, with higher rates in Denver metro, Arapahoe and El Paso counties.
   b. Hepatitis B: The Colorado Dept. of Public Health and Environment does not track prevalence estimates for chronic hepatitis B virus infection in Colorado. However, a publication in 2020 estimated the prevalence of chronic HBV infection in the US as 0.71% (range of 0.51-1.02%)\(^6\). Applying this prevalence estimate to the 2020 Colorado population data results in an estimated total of 40,993 people living with chronic active HBV in Colorado (710 HBV-infected persons per 100,000 people). Certain risk groups, including incarcerated persons, injecting drug users, and persons experiencing homelessness, may have a higher seroprevalence.
   c. Hepatitis C: As of 2021, the Colorado Dept. of Public Health and Environment estimates that there are currently about 39,142 people in Colorado living with chronic, unresolved HCV\(^7\). This results in a prevalence of 0.68% (678 HCV-infected persons per 100,000 people).

2. Risk of HIV Transmission Based on Type of Exposure\(^1\) – See Table 4 on the next page.
# TABLE 4. Risk of HIV Transmission Based on Exposure Type

<table>
<thead>
<tr>
<th>Exposure Type</th>
<th>Transmission Risk per Exposure to a Known HIV Positive Source</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exposure to Contaminated Sharp</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidental needle stick</td>
<td>0.23% (1 per 435)</td>
<td>• Discarded needles are low-risk exposures, as HIV is intolerant to environmental conditions. There has never been a reported case of HIV transmission from a discarded needle, as of 2022.</td>
</tr>
<tr>
<td>Needle-sharing during injection drug use</td>
<td>0.63% (1 per 159)</td>
<td>• Risk of transmission from a needle stick depends on the bore of the needle and depth of penetration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Discarded small bore needles (i.e. insulin syringes) or solid sharps (i.e. scalpels) with shallow penetration from a low-risk population (i.e. diabetics) would be of very low risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Newly discarded hollow bore needles with visible blood from areas frequented by high HIV seroprevalent populations (i.e. injecting drug users) would be of higher risk.</td>
</tr>
<tr>
<td><strong>Sexual Exposures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receptive anal intercourse</td>
<td>1.38% (1 per 72)</td>
<td>• Risk of HIV transmission due to sexual assault or abuse associated with trauma, bleeding, and tissue injury is significantly higher than that of consensual sexual contact.</td>
</tr>
<tr>
<td>Receptive vaginal intercourse</td>
<td>0.08% (1 per 1,250)</td>
<td>• The presence of other STIs, especially with genital ulcerations, also increases the risk of HIV transmission.</td>
</tr>
<tr>
<td>Insertive anal intercourse</td>
<td>0.11% (1 per 909)</td>
<td>• Although oral sex with intact mucosa is a low-risk transmission event, the presence of oral sores or mucosal injuries increases the risk of transmission.</td>
</tr>
<tr>
<td>Insertive vaginal intercourse</td>
<td>0.04% (1 per 2,500)</td>
<td>• Most experts would recommend PEP in cases of sexual assault or abuse, or sexual contact with a known HIV-positive source.</td>
</tr>
<tr>
<td>Oral sex with ejaculation</td>
<td>Low risk</td>
<td></td>
</tr>
<tr>
<td><strong>Mucous Membrane Exposures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral exposure to blood</td>
<td>Negligible</td>
<td>• Biting: HIV transmission from bites is extremely rare. A bite without a break in the skin is not considered an exposure. A bite involving a high-risk source with breaks in the skin and blood exposure increases transmission risk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Kissing/ Mouth to Mouth Resuscitation: Should not be considered an exposure without mucosal damage or blood exposure.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Saliva contaminated with blood poses a substantial exposure risk. HIV transmission by this route has been reported.</td>
</tr>
<tr>
<td><strong>Non-intact Skin Exposures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Rare cases of HIV transmission after non-intact skin exposure to infected blood have been documented, but the risk has not been quantified.</td>
</tr>
</tbody>
</table>
DISCHARGE PLANNING CHECKLIST

LABS
[ ] Obtain proper laboratory studies (see Table 1):

<table>
<thead>
<tr>
<th>All Exposures</th>
<th>Sexual Exposure</th>
<th>Starting HIV PEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>[] Hep B Surface AntiGEN</td>
<td>[] GC/CT PCR</td>
<td>[ ] CBC with differential</td>
</tr>
<tr>
<td>[] Hep C Antibody</td>
<td>[] Syphilis test</td>
<td>[ ] CMP</td>
</tr>
<tr>
<td>[] HIV 1 and 2 Antibody Screen</td>
<td>[ ] Pregnancy Test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[ ] Trichomonas PCR</td>
<td></td>
</tr>
</tbody>
</table>

PROPHYLAXIS
[ ] Provide prophylaxis for Hepatitis B, tetanus, GC/CT, trichomonas, and/or pregnancy as indicated in Table 2.

[ ] Discuss risks/benefits of HIV PEP (pp. 8-10). If starting PEP:
  [ ] Enter order in Epic to obtain PEP STARTER PACK (Free 7-day supply of ARVs dispensed from Children’s Hospital Colorado pharmacy, intended to bridge patient until follow-up in ID/CPT clinic.) Patient should LEAVE THE ED WITH STARTER PACK in hand.
  [ ] Give FIRST DOSE of ARVs in the Emergency Department with ondansetron (Zofran®) 4mg PO once.
  [ ] Write a 7-day PRESCRIPTION FOR ONDANSETRON (Zofran®).
  [ ] Write a 28-day PRESCRIPTION FOR ARVs. Instruct patient NOT TO FILL PRESCRIPTION unless directed by ID or CPT.

FOLLOW-UP
[ ] Schedule follow up in ID and/or CPT clinics via one of the following:
  1) EPIC in-basket message (link in discharge SmartSet; preferred method)
  2) Fax the PEP Follow-Up Request Form to 720-777-7295 (see attached)
  3) For victims/survivors of sexual assault seen at CSH, call CPT Colorado Springs at 719-305-6919 to schedule follow up. CPT will arrange in-person follow-up along with an ID provider.

Victims/survivors of sexual assault on HIV PEP should follow up WITHIN 7 DAYS. At Anschutz, a combined ID/CPT clinic for victims/survivors of sexual assault occurs EVERY THURSDAY beginning at 8:30am. At CSH, ID/CPT appointments will occur on an as-needed basis.

Victims/survivors of sexual assault NOT on HIV PEP should follow up within 2 weeks in CPT clinic.

Victims of needle sticks or other exposures on HIV PEP should follow up within 7 days in ID clinic. (If not on HIV PEP, these patients should follow up with PCP only; see guidance below.)

[ ] Notify Social Work of all cases of confirmed or suspected sexual assault. Consider SANE consult; discuss with charge RN.

[ ] Contact Information: Confirm preferred patient contact information, including confidential contact number if adolescent sexual assault. List both in Demographics section of chart and on PEP Follow-Up Request Form, if using.

[ ] Give copy of PATIENT/PARENT EXPOSURE HANDOUT.

[ ] PCP Follow-Up is important for coordination of care, follow-up laboratory testing, vaccines, and mental health support. Follow-up tasks include labs as per Table 5, and vaccines as follows:
  o HPV vaccines should be administered according to the routine 3-dose series.
  o Hepatitis B vaccines may be indicated to complete the 3-dose series (see CDC catch-up immunization schedule). Indications for additional Hepatitis B vaccines:
    • Patient determined to be unvaccinated/under vaccinated against hepatitis B prior to the exposure
    • Hepatitis B surface antibody at 6 weeks is below the protective level
**TABLE 5: Recommended Follow-Up Labs**

<table>
<thead>
<tr>
<th></th>
<th>ALL EXPOSURES</th>
<th>SEXUAL EXPOSURES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hep B Surface AntiGEN</td>
<td>Hep B Surface AntiBODY</td>
</tr>
<tr>
<td>1-2 Weeks</td>
<td>X⁹</td>
<td></td>
</tr>
<tr>
<td>6 Weeks</td>
<td>X⁹</td>
<td>X</td>
</tr>
<tr>
<td>3 Months</td>
<td>X⁹</td>
<td>X</td>
</tr>
<tr>
<td>6 Months</td>
<td>X⁹</td>
<td></td>
</tr>
</tbody>
</table>

⁹ Perform GC/CT testing of all sites of penetration/attempted penetration if any of the following are true: 1) Prophylaxis was not given during initial encounter; 2) Doxycycline was prescribed for prophylaxis, but patient reports poor adherence; 3) Patient reports symptoms of a STI at follow up.

³ If the 6-week Hep B surface antibody is adequate, no further testing for Hep B is indicated. If the 6-week antibody is below the protective level, administer 2 additional Hep B vaccines to complete the 3-dose series and obtain Hep B testing at 6 months.

³ Perform GC/CT testing of all sites of penetration/attempted penetration if a previous GC/CT PCR was positive AND any of the following are true: 1) Patient is pregnant; 2) Doxycycline was prescribed for treatment of chlamydia, but patient reports poor adherence; 3) Patient reports symptoms of a STI at follow up; 4) Reinfection is suspected after completing treatment.

¹ Only if did NOT receive emergency contraception during initial visit.

³ Only if 6 week Hep B Surface Antibody was inadequate and additional doses of Hep B vaccine were given.
COMMUNITY (NON-OCCUPATIONAL) BLOOD AND/OR BODILY FLUID EXPOSURE

Post-Exposure Prophylaxis Clinic Follow-Up Request:

FAX TO: 720-777-7295

This form required ONLY if ID or CPT teams were NOT notified by EPIC in-basket message

Patient Name (Last, First): _________________________________________________________

Date of Birth: ___________________ MR# __________________________________ Patient Weight: __________

Patient Address: _________________________________________________________________

Phone #: ___________________________ (H) __________________ (C)

Preferred Confidential Phone # (if adolescent sexual exposure): __________________________

Insurance: ________________________ Other ID #: ____________________________

Primary Care Physician: _______________ PCP Phone Number: __________________________

Exposure Date/Time: ________________________________

Brief Description of Exposure:

HIV PEP:

PEP started? [ ] yes [ ] no

If yes, regimen prescribed: Drug Dose

An-------------------------______________

An-------------------------______________

An-------------------------______________

First Dose Given in ED [ ] yes [ ] no

Starter Pack Given [ ] yes [ ] no

28-Day Prescription Given [ ] yes [ ] no

[ ] CBC/diff [ ] LFTs [ ] BUN/Cr

<table>
<thead>
<tr>
<th>WBC</th>
<th>AST</th>
<th>BUN</th>
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<tr>
<th>Hct</th>
<th>ALT</th>
<th>Cr</th>
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<tr>
<th>Plts</th>
<th>T bili</th>
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</tbody>
</table>

Other Lab Work/Prophylaxis:

[ ] HIV Antibody [ ] positive [ ] negative [ ] pending

STD screen sent (sexual exposures) [ ] Syphilis [ ] Chlamydia [ ] Gonorrhea [ ] Trichomonas

[ ] Prophylaxis given: Drug Dose/Duration

An-------------------------______________

An-------------------------______________

Other exposures:

[ ] Pregnancy Screen (sexual exposures) [ ] positive [ ] negative

[ ] Emergency Contraception given [ ] yes [ ] no

[ ] Hepatitis Screen

Hep B AntiGEN [ ] positive [ ] negative [ ] pending

Hep C AntiBODY [ ] positive [ ] negative [ ] pending

Hepatitis B Vaccine given [ ] yes [ ] no

If SOURCE is KNOWN TO BE Hepatitis B positive:

Hepatitis B Immune Globulin given [ ] yes [ ] no

[ ] Tetanus Vaccine [ ] up-to-date [ ] vaccine given [ ] TIG given

Treating Provider Name: _________________________ Pager #:________________

Date: ___________________________ Time: ___________________________
PATIENT | CAREGIVER EDUCATION

- Sexual Assault and Possible Exposure to Disease: For Teen
  - English
  - Spanish
- Sexual Assault and Possible Exposure to Disease: For Parent of Child
  - English
  - Spanish
- Needle Sticks and Other Exposure to Blood
  - English
  - Spanish
REFERENCES


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Liz Ficco | Clinical Effectiveness

APPROVED BY

Clinical Pathways and Measures Committee – March 25, 2022
Pharmacy & Therapeutics Committee – March 3, 2022

<table>
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<tr>
<th>MANUAL/DEPARTMENT</th>
<th>Clinical Care Guidelines/Quality</th>
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<tr>
<td>ORIGINATION DATE</td>
<td>June 23, 2014</td>
</tr>
<tr>
<td>LAST DATE OF REVIEW OR REVISION</td>
<td>January 18, 2023</td>
</tr>
</tbody>
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COLORADO SPRINGS REVIEWED BY

Michael DiStefano, MD
Chief Medical Officer, Colorado Springs

APPROVED BY

Lalit Bajaj, MD, MPH
Chief Quality, Equity, and Outcomes Officer

REVIEW | REVISION SCHEDULE

Scheduled for full review March 25, 2026
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ATENCIÓN: si habla español, bene a su disposición servicios gratuitos de asistencia lingüística. Llame al 1-720-777-9800.


注意: 如果您使用繁體中文，您可以免費獲得語言援助服務。請致電1-720-777-9800。

ВНИМАНИЕ: Если вы говорите на русском языке, то вам доступны бесплатные услуги перевода. Звоните 1-720-777-9800.

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