Florida Council Against Sexual Violence
www.fcasv.org

1820 E. Park Ave., Suite 100
Tallahassee, FL 32301

Sexual Assault Nurse Examiner Program Guidance Document

PROPHYLAXIS MEDICATIONS

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(revised)

Sexual Violence shatters lives, wounds communities, and perpetuates injustice. The Florida Council Against Sexual Violence leads, informs, and inspires the people of Florida to create safe and just communities.

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INTRODUCTION

A sexual assault nurse examiner (SANE) uses the nursing process from the moment the victim of a sexual assault (patient) arrives at the facility to the time of discharge from the facility. The nursing process consists of five phases / steps (assessment, diagnosing, planning, implementing and evaluation) which the SANE utilizes as a matter of course when working with every patient. Discharge instructions and care is derived from the SANE's assessment, diagnoses, and discussion with the patient.

The assessment phase is the phase where the SANE obtains the patient's medical and sexual assault histories and conducts a head-to-toe physical assessment. The SANE uses the information acquired from the patient and the head-to-toe assessment to formulate the diagnoses. From the diagnoses emerge the planning and implementation phases of the nursing process, which result in the SANE's treatment, collaboration with the patient, and discharge planning instructions and actions.

Every patient presenting for a medical forensic examination (MFE) has been shaped by life experiences beyond the recent assault. A patient's experiences related to age, race, sex, gender identity and/or expression, socio-economic status, sexual orientation, cultural identity, religious affiliation (or non-affiliation), and immigration status may have been life-affirming, or discriminatory and oppressive, or both. SANEs should consider the current situation in the context of the patient's life, honor the patient's decisions, and treat each patient with respect. In doing so, the SANE can provide victim and patient-centered care throughout the MFE.

It is best practice to prophylactically treat all patient survivors for the three most common STIs acquired from a sexual assault. This document will focus on the prophylaxis medications offered to the patient for the prevention of sexually transmitted infections and patient education (STI) after a sexual assault.

This Guidance Document assumes the patient is medically stable and is discharged from your agency to a safe place.

A. PROPHYLAXIS MEDICATIONS

The CDC recommends prophylaxis medication after a sexual assault to prevent gonorrhea, chlamydia, trichomonas, HIV, and pregnancy. The provision of prophylaxis medication for STIs and HIV is based on the patient's sexual assault history. The provision of emergency contraception is based on the sexual assault history, the patient's menstrual cycle, and current contraceptive use and type (if any).

The most frequently diagnosed sexually transmitted infections after a sexual assault are gonorrhea, chlamydia, and trichomonas. However, a SANE must also assess and discuss the risk(s) of acquiring HIV and Hepatitis B after a sexual assault. Vaccinations to prevent human papilloma virus (HPV) and tetanus should be considered as well.

How a patient receives prophylactic medication varies among agencies. Some facilities provide the medications on site, others refer the patient to their primary health care provider, county health department, university health care center, community health clinic or hospital, while others provide prescriptions to take to the pharmacy. The **best practice** is providing the medication on site**.**

B. GENERAL GUIDELINES

- Informed consent to provide prophylactic medication is obtained; if a patient declines the medication this should be documented.
- Patients should receive information in a language they understand.
- If the sexual assault history indicates STI prophylaxis is warranted, offer the patient the medications, reiterate risks and benefits and answer any questions the patient may have.
- Consider giving an anti-emetic 15 minutes prior to patient taking the medication.
- Observe the patient for an allergic reaction for 30 minutes after the patient has taken the medication.
- Discuss HIV post-exposure prophylaxis (PEP) medication and hepatitis B vaccine and provide options to access the treatment.
- Encourage follow-up care (testing, immunizations, counseling, and treatment) and have a referral process in place.
- It is not recommended to do baseline cultures for STIs, nor is it a best practice.
- Test-of-cure to detect therapeutic failure (i.e., repeat testing 1–2 weeks after completing therapy) is not advised for persons treated with the recommended or alternative regimens, unless therapeutic adherence is in question, symptoms persist, or reinfection is suspected.
- CDC recommends follow up testing if a patient has STI symptoms after receiving treatment.
- All patients should practice abstinence or use a barrier method for 7 days after taking the medication.
- Follow your agency's protocols.

C. THE THREE MOST COMMON SEXUALLY TRANSMITTED INFECTIONS WITH A SEXUAL ASSAULT, TREATMENT AND PATIENT EDUCATION

2021 CDC Recommended Sexually Transmitted Infection Treatment Guidelines, 2021[1]

Recommended Regimen for Adolescent and Adult *FEMALE* Sexual Assault Survivors
Gonorrhea: Ceftriaxone sodium (Rocephin) 500 mg* IM in a single dose
*Give 1 gram IM if > 330 pounds
PLUS
Chlamydia: Doxycycline (Doryx) 100 mg PO twice a day for 7 days (do not give if pregnant)
PLUS
Trichomonas: Metronidazole (Flagyl) 500 mg PO twice a day for 7 days

Recommended Regimen for Adolescent and Adult *MALE* Sexual Assault Survivors
Gonorrhea: Ceftriaxone sodium (Rocephin) 500 mg* IM in a single dose
*Give 1 gram IM if > 330 pounds
PLUS
Chlamydia: Doxycycline (Doryx) 100 mg PO twice a day for 7 days

1. **GONORRHEA**
   Ceftriaxone (Rocephin) 500 mg IM in a single dose
   - May be diluted with 0.9 ml of 1% xylocaine to prevent patient discomfort
   - Inject in a large muscle (gluteus maximus preferred).
   - May inject in deltoid if the muscle is large and a small (22 gauge) needle is used
   - May be given in pregnancy (Category B).
   - Caution should be exercised when Rocephin is administered to a nursing woman, low concentrations of ceftriaxone are excreted in human milk.
   - On average, the incubation period for gonorrhea can be two to six days.
   - "Penicillin and cephalosporins both contain a ß-lactam ring. This structural similarity has led to considerable confusion regarding cross-reactivity of these drugs and the risks for allergic reactions from cephalosporins among penicillin-allergic patients. In most clinical settings, patients with reported penicillin allergy are precluded from treatment with such cephalosporin antibiotics as ceftriaxone. Third generation cephalosporins (e.g., ceftriaxone and cefixime) have lower cross-reactivity with IgE-mediated penicillin-allergic patients (<1%) compared with first- and second-generation cep[1]halosporins (range: 1%–8%). Moreover, anaphylaxis secondary to cephalosporins is extremely rare among persons who report a penicillin allergy and is estimated to occur at a rate of one per 52,000 persons."

[1] Centers for Disease Control and Prevention. *Sexually Transmitted Infections Treatment Guidelines, 2021.* MMWR Recommendations and Reports/Vol.70/No.4

PATIENT EDUCATION FOR CEFTRIAXONE:

- Abstinence or barrier method for 7 days after medication has been taken.
- May be tender at the site of injection.

ALTERNATIVE TREATMENTS

- Gentamicin (Garamycin) 240 mg IM single dose **PLUS** Azithromycin (Zithromax) 2 gm PO single dose
  OR
  Cefixime (Suprax) 800 mg PO single dose

2. **CHLAMYDIA**

Doxycycline (Doryx) 100 mg PO twice a day for 7 days

- **Do not give if pregnant**
- DO NOT give to a nursing mother unless the patient stops breastfeeding or will dispose of pumped milk and temporarily provide formula for the infant.
- Male genital chancroids are also treated by Zithromax (it does not treat genital chancroids in women).
- On average, the incubation period for chlamydia can be two to six days.
- Most infected people are asymptomatic and lack abnormal physical examination findings. Men are more likely to exhibit symptoms.
- Abstinence or barrier method for seven days after medication has been taken.

ALTERNATIVE TREATMENTS

Azithromycin 1 gram PO in a single dose

OR

Levofloxacin 500 mg PO daily for 7 days

PATIENT EDUCATION FOR DOXYCYCLINE:

- Abstinence or barrier method for seven days after medication has been taken.
- If diarrhea occurs the patient should be evaluated for clostridium difficile (even two to three months later).
- Limit sun exposure or artificial violet light (due to photosensitivity).
- Do not take antacids (they decrease the absorption).
- Drink plenty of water (reduces chance of esophageal irritation and ulceration).
- Consider giving antiemetic 30 minutes before giving.

3. **TRICHOMONIASIS**

Metronidazole (Flagyl) 500 mg PO 2 times a day for 7 days
OR
Tinidazole (Fasigyn or Tindamax) 2 gm PO single dose

- Metronidazole and Tinidazole treats bacterial vaginosis as well.
- DO NOT give in the first three months of pregnancy and use with caution if in the second or third trimester.
- DO NOT give if breastfeeding unless the patient stops breastfeeding or will dispose of pumped milk and temporarily provide formula for the infant.

- DO NOT give if allergic to tetracycline.
- DO NOT give if on an anticoagulant (increases prothrombin time).
- About 70% of people do not have symptoms when infected. When symptoms do occur, they typically begin 5 to 28 days after exposure.

PATIENT EDUCATION FOR METRONIDAZOLE OR TINIDAZOLE:

- Abstinence or barrier method for seven days after medication has been taken.
- If the patient has had alcohol within 24 – 48 hours of the assault, taking Flagyl will cause severe nausea and vomiting. Advise the patient not to take the Flagyl until at least 24 hours has passed, and do not drink alcohol for a minimum of 24 hours after taking it.
- Do not take an antacid within two hours before or after taking the Flagyl, as it decreases absorption.
- Get emergency medical help if you have any of these signs of an allergic reaction: hives; difficulty breathing; swelling of your face, lips, tongue, or throat.
- If you experience these serious side effects, contact your health care provider:
    - Diarrhea that is watery or bloody.
    - Headache with chest pain and severe dizziness, fainting, fast or pounding heartbeat.
    - Nausea, upper stomach pain, itching, loss of appetite, dark urine, clay-colored stools, jaundice (yellowing of the skin or eyes).
    - Severe skin reaction, fever or sore throat.
- It is the patient's choice to accept or decline the medication.
- Support the patient's decision.

D. STI FOLLOW-UP

Follow up examinations provide an opportunity to assess the well-being of the sexual assault survivor, conduct HIV, and Hepatitis testing and assess the presence of STI symptoms (females: itching, a bad smelling thin vaginal discharge, pain with sex and burning with urination – males and females).

A follow up visit is also an opportunity to discuss vaccinations with males and females and contraception for females, if indicated. If the survivor did not receive STI prophylaxis, STI cultures are recommended one to two weeks post assault.

E. EMERGENCY CONTRACEPTION (EC)[2]

Emergency contraception is available in the form of pills or a Copper T IUD and should be considered when the sexual assault could result in pregnancy.

1. **Levonorgestrel 1.5 mg PO single dose** (Plan-B / Plan-B One-Step; Take Action; Next Choice / Next [2]Choice One Dose; My Way; After Pill; Fallback; Opicion One Step) **OR** or **as a split dose** (1 dose of 0.75 mg of levonorgestrel followed by a second dose of 0.75 mg of levonorgestrel 12 hours later)

[2] Centers for Disease Control and Prevention. Reproductive Health, Emergency Contraception, accessed on 11.10.21 https://www.cdc.gov/reproductivehealth/contraception/mmwr/spr/emergency.html

OR

2. **Yuzpe** (combined estrogen and progestin in two doses) 100 μg of ethinyl estradiol plus 0.50 mg of levonorgestrel PO followed by a second dose of 100 μg of ethinyl estradiol plus 0.50 mg of levonorgestrel PO 12 hours later

OR

3. **Ella 30 mg PO single dose** (ulipristal acetate - UPA)
    - Ella is more effective in patients weighing 165 pounds or more and is more effective than Levonorgestrel after 72 hours post coitus.
    - Should be taken as soon as possible within five days (120 hours) of unprotected sexual intercourse.

For any of the above medications:

- Consider giving an antiemetic 30 minutes before giving.
- These medications do not work if the patient is already pregnant.
- These medications will not abort an already existing pregnancy.
- Explain in plain language how emergency contraception works.

The mechanism of action is not completely understood but it is known to:

- Delay or inhibit ovulation.
- Cause minor changes to the endometrium after ovulation, which may prohibit implantation.
- Interfere with the corpus luteum function.
- Thicken the cervical mucous, trapping sperm.
- Alter the tubal transport.

EC PATIENT EDUCATION

- EC is most effective if given within the first 120 hours of unprotected intercourse (the earlier the EC is taken the more effective it will be).
- Abstain from sexual intercourse or use barrier contraception for the next seven days after starting or resuming regular contraception or until her next menses, whichever comes first.
- With the progestin-only pill or combined EC pills, the patient can resume or start any birth control method right away. For the next seven days, the patient must also use a barrier method (condoms, diaphragm, and spermicides) along with the regular birth control method, or patient should not have sexual intercourse.
- No tests or procedures are needed after taking EC.
- The next period (menses) may not occur at the expected time. Irregular bleeding or spotting in the week or month after taking EC pills may occur and it goes away on its own.

- Short-term side effects of EC pills can include the following: headache, nausea, and vomiting (especially if you are taking combined EC pills), breast tenderness, abdominal pain, dizziness, fatigue.
- Obtain a pregnancy test if a period does not occur within a week of when expected.
- If the patient received Ella (ulipristal acetate) and wants to resume or start using a hormonal birth control method (pill, patch, ring, implant, shot, or hormonal IUD), they should wait five days after taking Ella.
- Using a hormonal birth control method and taking Ella at the same time can reduce the effectiveness of both medications.

4. **Copper T IUD**
   Emergency insertion of a copper IUD up to five days after sex can reduce pregnancy risk by more than 99% (an IUD must be inserted by a trained medical professional and is the most effective contraceptive method available).

F. ADDITIONAL CDC RECOMMENDED SEXUAL ASSAULT SEXUALLY TRANSMITTED INFECTION MEDICATION CONSIDERATIONS

1. HUMAN IMMUNODIFFICIENCY VIRUS (HIV)[3]

Preventive treatment for a non-occupational exposure to HIV is determined on a case by case basis and is based on the patient's risk (Appendix I, CDC's Algorithm for Risk Assessment of HIV). If the patient is at substantial risk for contracting HIV, the CDC recommends providing the patient with a three-to-five-day supply of the medication. Providers should emphasize that severe adverse effects are rare from PEP.

When clinicians do not have the experience with anti-retroviral therapy (ART), consultation with infectious disease or other HIV experienced clinicians should be considered.

- If PEP is offered the following information should be discussed with the survivor:
  - the necessity of early initiation of PEP to optimize potential benefits (i.e., as soon as possible after and <72 hours after the assault),
  - the importance of close follow-up,
  - the benefit of adherence to recommended dosing, and
  - potential adverse effects of antiretroviral medications.

NOTE: HIV seroconversion has occurred among persons whose only known risk factor was sexual assault or sexual abuse; however, the frequency of this occurrence likely is low.[3]

[3] Centers for Disease Control and Prevention. *Sexually Transmitted Infections Treatment Guidelines, 2021.* MMWR Recommendations and Reports/Vol.70/No.4

Postexposure HIV Risk Assessment of Adolescents and Adults <72 Hours After Sexual Assault:

- If possible, assess assailant's risk for HIV infection and request a test for HIV (ideally the HIV FDA approved rapid test or in a lab that can provide results within the hour). If positive, the assailant's viral load should be evaluated.
- Use the algorithm to evaluate the survivor's risk for HIV PEP (Appendix I).
- If the survivor appears to be at risk for acquiring HIV from the assault, discuss PEP, including benefits and risks.
- Refer to Appendix II for HIV Prophylaxis in Sexual Assault to be familiar with the recommended medications.
- Follow your facility's HIV treatment and referral protocol.
- Consult with a specialist in HIV treatment, as needed.

Sexual assault survivors often decline PEP, and many who do initiate it do not complete the full 28-day course.

- Consider a separate consent form for HIV prophylaxis and include the patient's agreement to obtain follow up care.
- PEP must be given less than or equal to 72 hours to be effective, the earlier the patient begins the therapy the more effective PEP will be.
- The patient can be provided a three-to-five-day supply of PEP and scheduled for follow-up at a time that allows for provision of the remaining 23 days of medication without interruption in dosing and baseline labs (CBC and serum chemistry).
- Patient should receive follow-up HIV tests at 4-6 weeks, 3 months, and 6 months to determine whether infection has occurred.
- Provide counseling about HIV transmission prevention to consensual partners (condoms until six-month HIV test completed and negative).
- Discuss reporting and confidentiality.
- Women should not breastfeed if risk of HIV transmission is high (i.e., known HIV positive assailant).

National Clinician's Post Exposure Prophylaxis (PEP) Hotline (1- 888-448-4911), available seven days a week from 9 AM – 2 AM at no charge for assistance with PEP questions

Special Considerations for Vulnerable Populations and HIV Prophylaxis

- Refer pregnant women to infectious disease physician and obstetrician for care. If the assailant is known to be HIV positive, PEP should be started as soon as possible and is effective for preventing HIV transmission the baby. Per CDC, *HIV Among Pregnant Women, Infants and Children*, "Advances in HIV research, prevention, and treatment have made it possible for many women living with HIV to give birth without transmitting the virus to their babies. The annual

number of HIV infections through perinatal transmission have declined by more than 95% since the early 1990s." [4]

- HIV can be transmitted in breast milk; women with HIV in the United States should not breastfeed their babies.
- Inmates - studies indicate that the risk for becoming infected in prison is less than the risk outside prison.
- Injection drug users - a history of injection drug use should not deter clinicians from prescribing PEP if the possible exposure provides an opportunity to reduce the risk of consequent HIV infection.

PATIENT EDUCATION

- PEP must be started within 72 hours of the assault and taken in its entirety to be effective.
- Most common side effect is nausea; other side effects are headaches, fatigue, vomiting, and diarrhea.
- Follow up and clinical management by a physician is necessary for close monitoring of liver enzymes.
- Severe adverse effects are rare from PEP.
- PEP is effective, but not 100%. Condoms should be used with sex partners, and safe injection practices should be followed while taking PEP.
- The patient may qualify for partial or total reimbursement for medicines and clinical care costs through the Office for Victims of Crime, funded by the US Department of Justice.
- Use condoms to prevent sexual transmission.
- Avoid pregnancy and breastfeeding.
- Avoid needle-sharing.
- Refrain from donating blood, plasma, organs, tissue, or semen.

2. HUMAN PAPILLOMA VIRUS (HPV)[5]

HPV vaccination prevents new HPV infections but does not treat existing infections or diseases

- **Children and adults aged 9 through 26 years**. HPV vaccination is routinely recommended at age 11 or 12 years; vaccination can be given starting at age 9 years. Catch-up HPV vaccination is recommended for all persons through age 26 years who are not adequately vaccinated.
    - Provide initial vaccination at the time of the initial sexual assault exam and follow up doses administered at one to two months and six months after the first dose.
    - A two-dose schedule (0 and 6 – 12 months) is recommended for persons initiating vaccination before age 15 years.

[4] Centers for Disease Control and Prevention. *Preventing Perinatal HIV Transmission,* accessed on 11.10.22, https://www.cdc.gov/hiv/group/gender/pregnantwomen/index.html

[5] Centers for Disease Control and Prevention. Reproductive Health, Emergency Contraception, accessed on 11.10.21, https://www.cdc.gov/hpv/hcp/schedules-recommendations.html

- **Adults aged >26 years**. Catch-up HPV vaccination is not recommended for everyone older than age 26 years.
    - For adults aged 27 through 45 years, public health benefit of HPV vaccination in this age range is minimal; shared clinical decision-making is recommended because some persons who are not adequately vaccinated might benefit.

3. **HEPATITIS (HBsAg) NON-OCCUPATIONAL EXPOSURE**[6]

Compliance with follow-up visits is poor among survivors of sexual assault, therefore the following routine presumptive treatment after a sexual assault is recommended.

- Postexposure hepatitis B vaccination (without HBIG) if the hepatitis status of the assailant is unknown and the survivor has not been previously vaccinated.
- If the assailant is known to be HBsAg positive, unvaccinated survivors should receive both hepatitis B vaccine and HBIG.
- The vaccine and HBIG, if indicated, should be administered to sexual assault survivors at the time of the initial examination, and follow-up doses of vaccine should be administered 1–2 and 4–6 months after the first dose.

See Appendix III for Hepatitis B Post Exposure Management.

PATIENT EDUCATION

- The most important part of PEP is the time between the exposure and treatment. PEP is most effective at preventing hepatitis B if it is given as soon as possible after the exposure.
- If the person is unvaccinated, the hepatitis B vaccine series should be completed to obtain maximum immunity against future exposures and the second and third doses of the vaccine should be separated by an interval of at least 8 weeks.
- The hepatitis B vaccine contains no live virus, so pregnancy nor lactation should be considered a contraindication to vaccination.

4. **TETANUS**[7]

Diphtheria and Tetanus Toxoids (Td) Vaccine 0.5cc IM or subcutaneous, single dose (Td is the **booster dose** for adolescents and adults for tetanus).

- Diphtheria spreads from person to person through secretions from coughing or sneezing
    - Diptheria is very rare.
    - Can cause a thick coating to form in the back of the throat.
    - It can lead to breathing problems, heart failure, paralysis, and death.
- Tetanus bacteria is found in soil, dust, and manure, and usually enters in through cuts or puncture wounds caused by contaminated objects.

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[6] Centers for Disease Control and Prevention. *Sexually Transmitted Infections Treatment Guidelines, 2021.* MMWR Recommendations and Reports/Vol.70/No.4

[7] Drugs.Com, accessed on 11.6.21. https://www.drugs.com/dosage/tetanus-toxoid.html#Usual_Adult_Dose_for_Tetanus_Prophylaxis

- Refer the patient who is at risk for tetanus and has not received a tetanus vaccine (Td) within the last 10 years.
- Being at risk for tetanus will depend on the sexual assault history and the last time she/he/they had a tetanus vaccine.
- The injection is administered intramuscularly into the anterolateral aspect of the thigh or the deltoid muscle of the upper arm. Do not inject in the gluteal area or areas where there may be a major nerve trunk or blood vessel.
- Td should not be given to individuals with thrombocytopenia or any coagulation disorder that would contraindicate intramuscular injection unless the potential benefit clearly outweighs the risk of administration.
- Td has been assigned to pregnancy category C by the FDA. Animal studies have not been reported. There are no controlled data in human pregnancy. Td is only recommended for use during pregnancy when benefit outweighs risk.
- There are no data on the excretion of Td into human milk.

Booster injection after injury (>=7 years):

- If primary immunization confirmed and the wound is clean and minor: no need for injection.
- If unknown or uncertain prior immunization (or less than 3 doses) in clean, minor wound, booster injection is indicated.
- All other dirty wounds (contaminated with feces, soil, and saliva): booster injection is indicated, 0.5 mL IM along with tetanus immune globulin. The next booster dose not needed for 10 years thereafter.

PATIENT EDUCATION

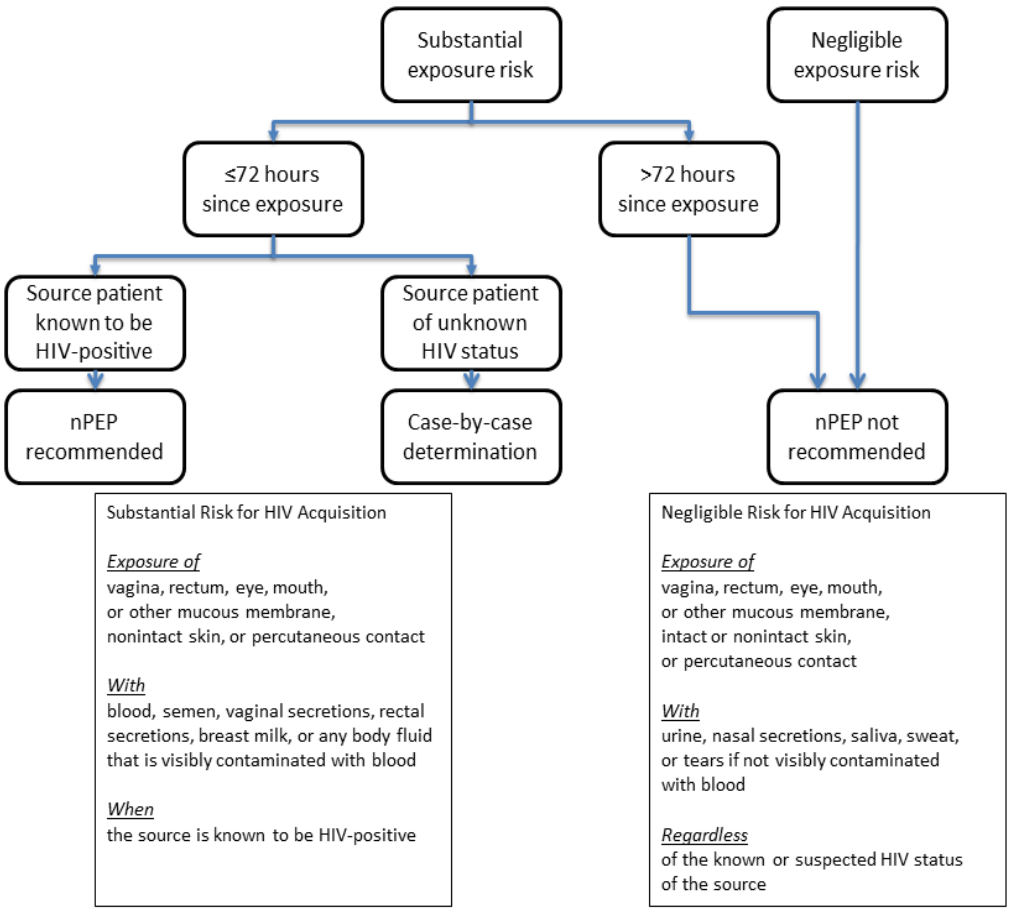
- Very uncommon (an average of thirty reported cases each year).
- All adults should have a tetanus booster vaccine every 10 years.
- If exposed to clostridium tetani and a vaccine has not been given within the last 10 years, painful muscle contractions may occur, making it hard to open the mouth or swallow (“lockjaw”).
- Other symptoms: headache, fever, jerking or staring (seizures), painful stiffness all over.

NOTE: Most Florida certified rape crisis centers do not offer HIV, HPV, Tetanus, and Hepatitis B vaccines on site. However, the SANE can educate the patient and recommend seeking the vaccine from the county health department or the patient’s primary health care provider.

APPENDIX I

CDC's Algorithm for Risk Assessment of HIV

Algorithm to evaluate the need for nonoccupational HIV post exposure prophylaxis (PEP) among adult and adolescent survivors of sexual assault.



Adapted from CDC's Figure, Centers for Disease Control and Prevention. *Sexually Transmitted Infections Treatment Guidelines, 2021.* MMWR Recommendations and Reports/Vol.70/No.4, page 131.

APPENDIX II

HIV Prophylaxis in Sexual Assault

Medication Summary

HIV PEP Regimens
Although the exact drug regimens for HIV PEP have changed in recent years, consensus remains that the preferred regimen is a 3-drug regimen given over a 28-day course. Anyone prescribed PEP should be given the full 28-day course. On occasion, a 30-day supply will be dispensed due to the cost of adjusting manufacturer-supplied bottles, but no added benefits have been shown for continuation of the treatment course beyond 28 days.

Adults and adolescents: Patients older than 13 years with normal renal function (CrCl ≥60 mL/min), including pregnant individuals.

The preferred 3-drug regimen is as follows:

- Tenofovir disoproxil fumarate 300 mg/emtricitabine 200 mg (Truvada) daily AND
- Dolutegravir 50 mg once daily (regardless of pregnancy status)

OR

- Tenofovir disoproxil fumarate 300 mg/emtricitabine 200 mg (Truvada) daily AND
- Raltegravir (Isentriss) 400 mg twice daily OR Raltegravir (Isentriss HD) 600 mg once daily may be used outside of pregnancy.

Caution: Coadministration of raltegravir or dolutegravir with antacids or cations (iron, calcium, or magnesium) can reduce drug absorption and therefore efficacy of PEP.

An alternative regimen is as follows:

- Tenofovir disoproxil fumarate 300 mg/emtricitabine 200 mg (Truvada) daily AND
- Darunavir 800 mg daily AND
- Ritonavir 100 mg daily OR cobicistat 150 mg daily (as pharmacokinetic booster)

Patients older than 13 years with chronic kidney disease (CrCl < 60 mL/min)
The preferred 3-drug regimen is as follows:

- Renally dose-adjusted zidovudine and lamivudine daily AND
- Raltegravir 400 mg twice daily OR dolutegravir 50 mg once daily

Caution: Coadministration of raltegravir or dolutegravir with antacids or cations (iron, calcium, or magnesium) can reduce drug absorption and therefore efficacy of PEP.
An alternative regimen is as follows:

- Renally adjusted zidovudine and lamivudine daily AND
- Darunavir 800 mg daily AND
- Ritonavir 100 mg daily OR cobicistat 150 mg daily (as pharmacokinetic booster)

- PEP is especially important in pregnant women and should not be avoided because of known or possible pregnancy.

Note that tenofovir alafenamide (TAF), a newer formulation of tenofovir, has not been specifically studied for HIV PEP and is not currently recommended for this indication. A TAF-containing co-formulation with emtricitabine (Descovy) is FDA-approved for the treatment of HIV infection in combination with other active agents, but its ultimate role in HIV PEP remains undefined at the time of this writing.

Infants and children

Children aged 2-12 years

Each drug dosed to age and weight
Preferred 3-drug regimen: Tenofovir DF AND emtricitabine AND raltegravir
Alternative regimens are as follows:

- Zidovudine AND lamivudine with raltegravir
- Lopinavir/ritonavir with raltegravir
- Tenofovir DF AND emtricitabine AND lopinavir/ritonavir

Children aged 3-12 years

Tenofovir DF AND emtricitabine AND darunavir/ritonavir (darunavir is approved in children aged 3 years or older)

Children aged 4 week to < 2 years

Preferred 3-drug regimen: Zidovudine AND lamivudine with raltegravir or lopinavir/ritonavir
Alternative regimen: Zidovudine AND emtricitabine with raltegravir or lopinavir/ritonavir

Children aged birth to 27 days

Consult a pediatric HIV specialist.

Source: Medscape, Infectious Diseases, *HIV Prophylaxis in Sexual Assault*. Updated: July 8, 2021. Author Derek T. Larson, D.O. https://emedicine.medscape.com/article/2141935-medication, accessed on 1.31.22.

APPENDIX III

HEPATITIS B POST EXPOSURE MANAGEMENT

TABLE 6: Postexposure management after distinct nonoccupational percutaneous or mucosal exposure to blood or body fluids

Management		
Exposure*	**Unvaccinated person**	**Previously vaccinated person**
HBsAg-positive source	HepB vaccine series and HBIG	HepB vaccine dose
HBsAg status unknown for source	Hep B vaccine series	No management

Abbreviations: HepB = hepatitis B; HBsAg = hepatitis B surface antigen; HBIG = hepatitis B immune globulin.
* Exposures include percutaneous (e.g., bite or needlestick) or mucosal exposure to blood or body fluids, sex or needle-sharing contact, or victim of sexual assault/abuse.

Source: CDC. Prevention of Hepatitis B Virus Infection in the United States: Recommendations of the Advisory Committee on Immunization Practices. MMWR / January 12, 2018 / Vol.67 / No. 1