



# Pre-Exposure Prophylaxis Reducing Human Immunodeficiency Virus (HIV) Risk with Pre-Exposure Prophylaxis (PrEP)

**VA**



**U.S. Department of Veterans Affairs**

Veterans Health Administration  
PBM Academic Detailing Service

# **Pre-Exposure Prophylaxis**

## **Reducing Human Immunodeficiency Virus (HIV) Risk with Pre-Exposure Prophylaxis (PrEP)**

A VA Clinician's Guide

**VA**



**U.S. Department of Veterans Affairs**

Veterans Health Administration  
*PBM Academic Detailing Service*

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# Take-home Points

Veterans who have sex or share injection equipment with HIV infected people should be offered PrEP.	11
PrEP should not be started in anyone with signs/symptoms of acute HIV.	13
Ensure Veterans understand the importance of adherence with PrEP. Protection against HIV infection with PrEP is directly correlated with adherence.	16
If a Veteran becomes HIV positive while taking PrEP, stop PrEP immediately and refer urgently for HIV care.	19

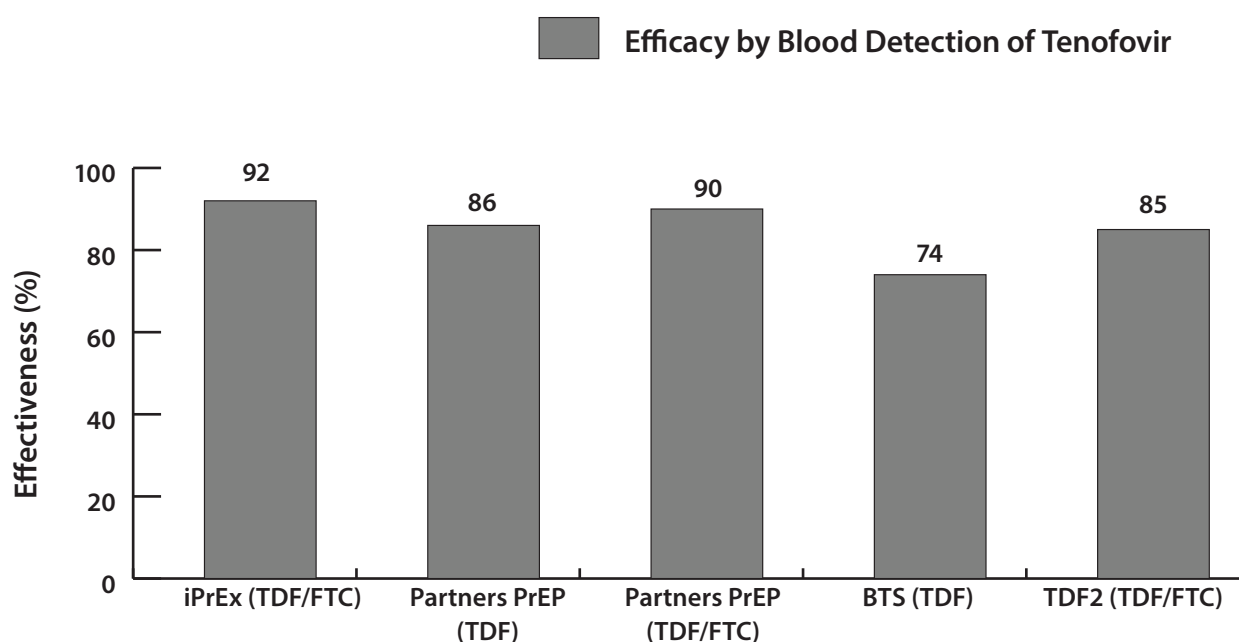
# Pre-exposure Prophylaxis (PrEP)

Pre-exposure prophylaxis (PrEP) is an effective way for people who are at high risk for human immunodeficiency virus (HIV) infection – but do not have HIV – to prevent HIV infection.

The FDA approved medication for PrEP consists of:

- Tenofovir\* (TDF) 300 mg and emtricitabine (FTC) 200 mg (Truvada®)
- Combined into a single tablet taken once daily
- Consistent daily use of this medication can greatly reduce the risk of HIV-1 infection in Veterans when used in combination with other preventative measures such as condoms, clean needles, and other practices

**Figure 1. PrEP Adherence Determines Effectiveness of Protection<sup>1-6</sup>**



Trials of oral TDF and TDF/FTC show that adherence is very important to the effectiveness of PrEP. When tenofovir levels were measured, having detectable levels directly correlated to a lower risk of acquiring HIV. iPrEx – Preexposure Prophylaxis Initiative Trial in MSM comparing TDF/FTC to placebo. Partners PrEP – Trial for the prevention of HIV in uninfected partner in HIV-discordant heterosexual couples comparing TDF, TDF/FTC and placebo. BTS – Bangkok Tenofovir Study comparing TDF to placebo for HIV prevention among Intravenous drug users (IDUs). TDF2 – Study in heterosexual men and women comparing TDF/FTC to placebo.



## HIV PrEP lowers risk of HIV infection by >90%

PrEP is one part of a comprehensive strategy to prevent HIV

- Safer sexual practices
- Barrier methods (e.g., condoms)
- Needle exchange program(s) where available

\*Tenofovir currently comes in two forms tenofovir disoproxil fumarate (TDF) and tenofovir alafenamide fumarate (TAF). All reference of tenofovir in this document correspond to TDF unless otherwise specified. TAF and TDF are not interchangeable. TAF preparations should not be used for PrEP.<sup>7</sup>

# PrEP Utilization is Increasing in the Department of Veterans Affairs (VA)

Figure 2. Between July 2012 and June 2017, TDF/FTC Prescribing Rose Among Men in the VA<sup>8</sup>

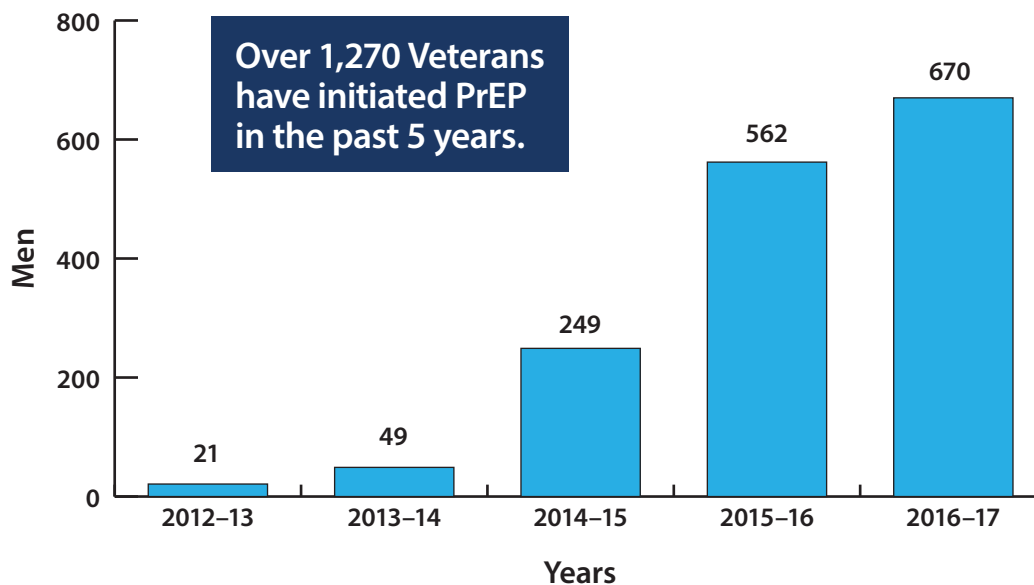




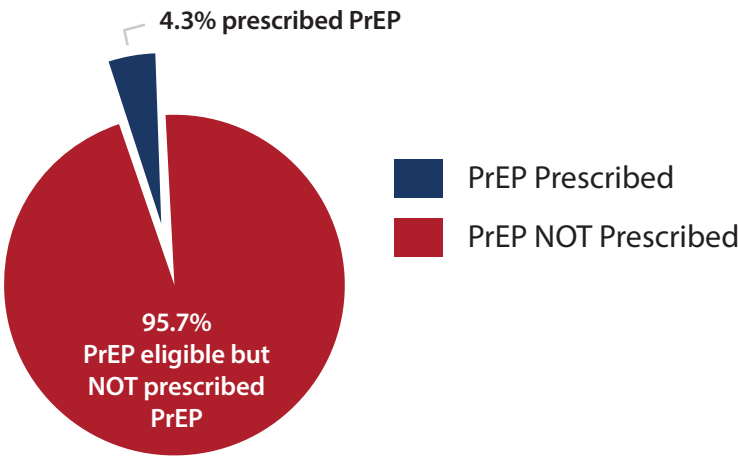
Table 1. Characteristics of Veterans in VA Prescribed PrEP<sup>8</sup>

VA Prescribed PrEP	
Veteran Characteristics	Percent
Male	97
White	66
Reside in Urban Areas	88
History of ≥1 Mental Health Diagnosis	75
Age (mean)	41 years old
Prescribing Facility Characteristics	Percent
West Coast	35
East Coast	21
Tertiary Care Facilities	64



# Opportunities for PrEP Continue to Outpace Utilization

Figure 3. Over 1.2 million People in the US Could Benefit from PrEP<sup>9,10</sup>



Over 1.2 million people considered eligible for PrEP include:

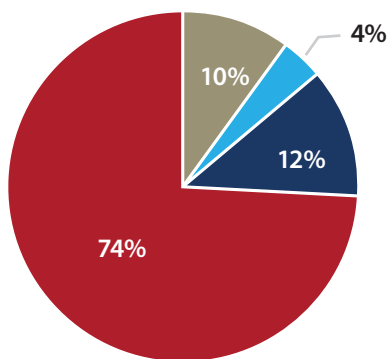
- 492,000 men who have sex with men (MSM)
- 624,000 heterosexual men and women
- 115,000 injection drug users (IDU)

### Ensure Equality in Offering PrEP

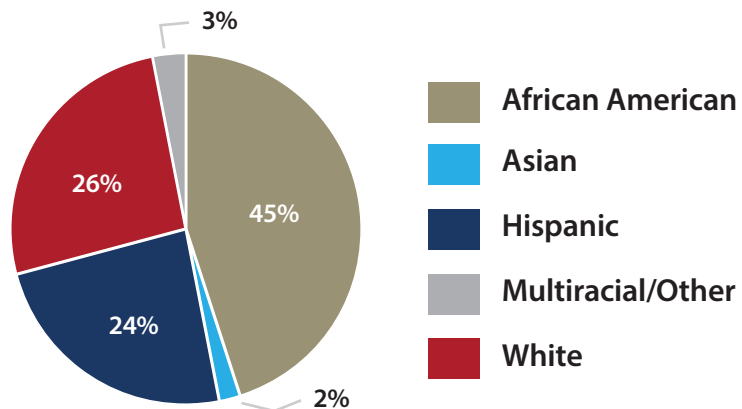
Despite the greater percentage of African Americans who are diagnosed with HIV, PrEP is predominantly used by whites. Ensure that all patients at high risk for HIV, especially men who have sex with men (MSM), are offered PrEP when appropriate.

**Figure 4. Ethnic Groups with the Highest Rates of New HIV Infections are not Receiving Enough PrEP<sup>9</sup>**

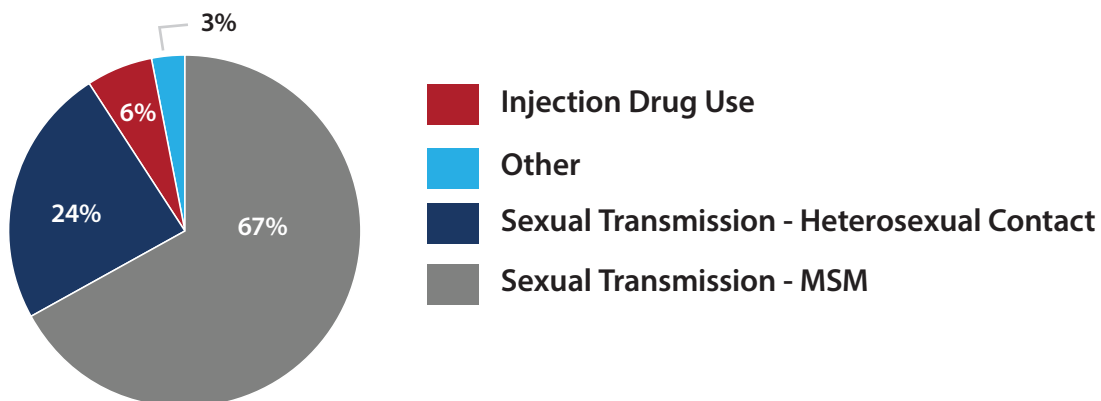
**PrEP Utilization by Race/Ethnicity  
Sept 2015, US**



**Estimated New HIV Infections,  
2015, US**



**Figure 5. Routes of HIV Transmission**

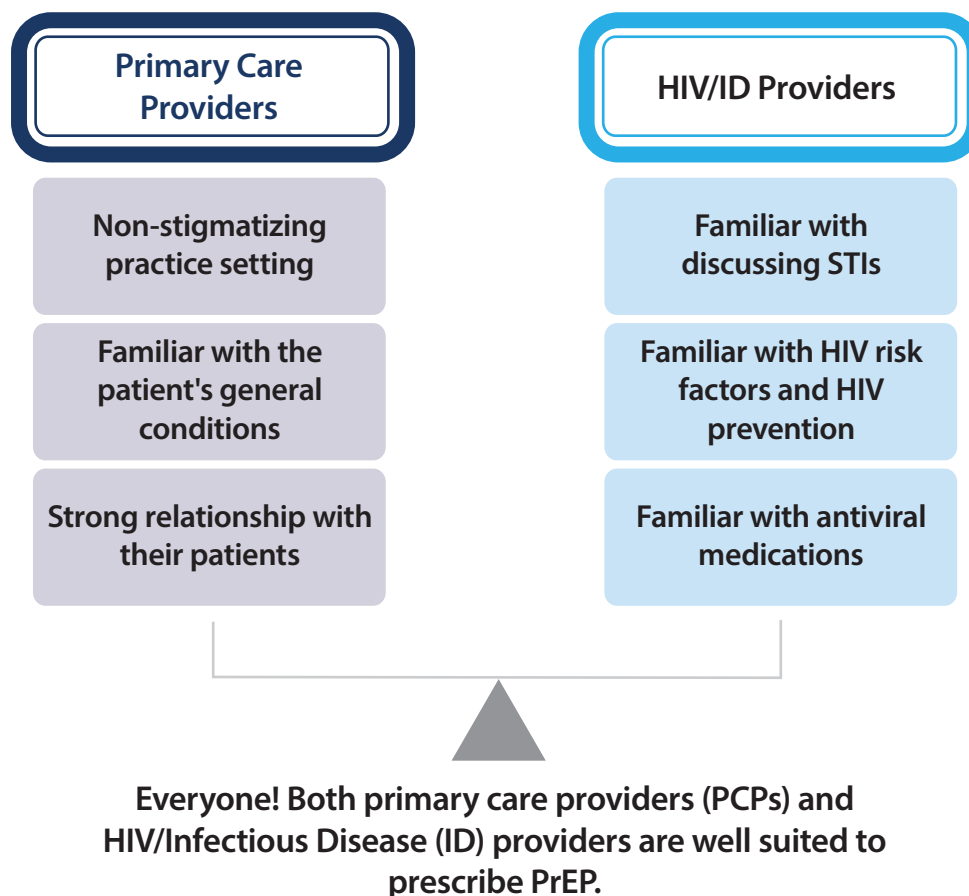


## What Can Primary Care Providers do to Decrease HIV Infections?

In addition to counseling on risk reduction strategies, promoting and/or prescribing PrEP can reduce HIV infections.

- Why primary care providers?
- Do other providers have more knowledge about HIV management and sexual health?

Figure 6. Who Should Prescribe PrEP?

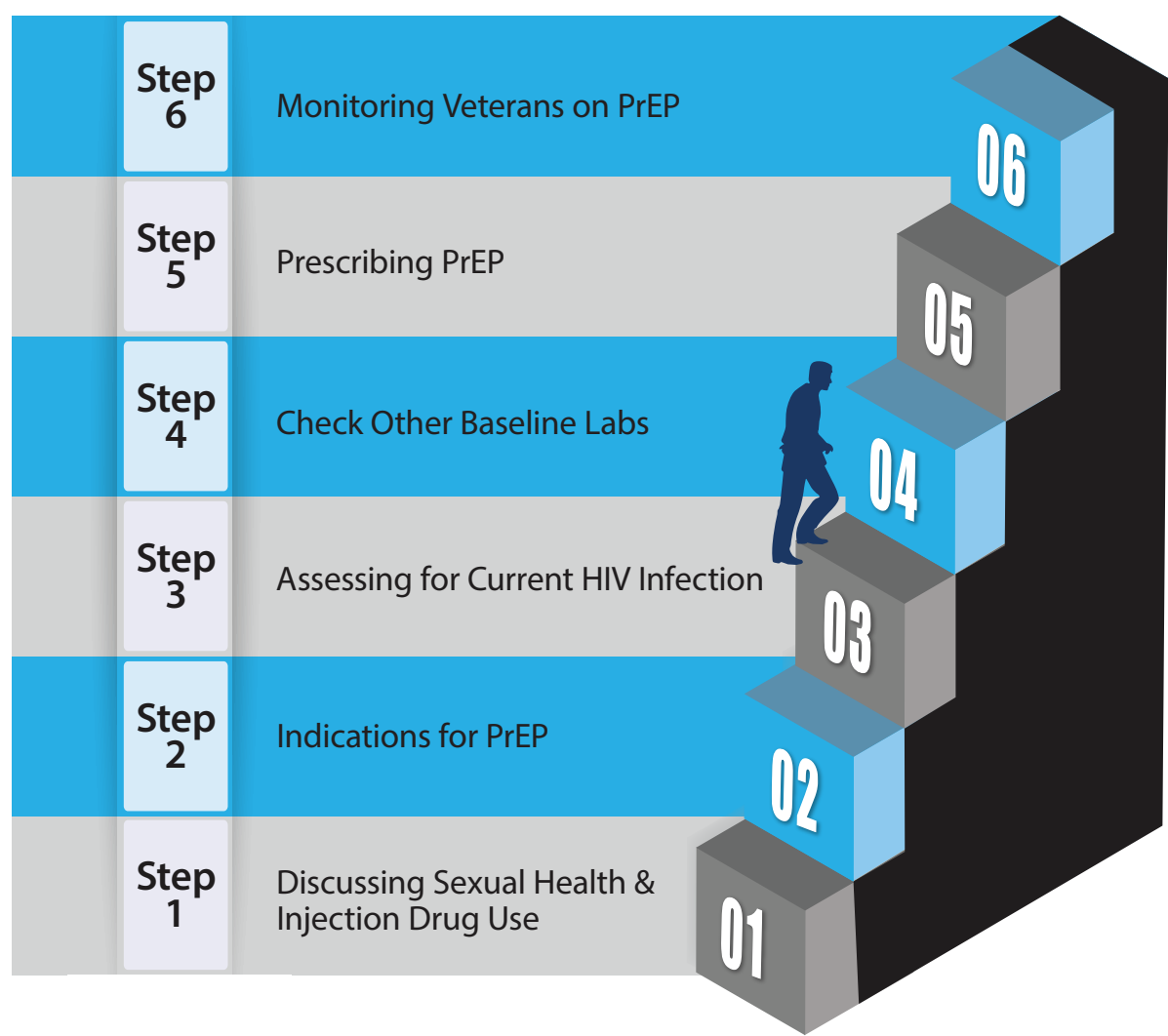




# Prescribing PrEP is Straightforward

When evaluating patients for PrEP, follow a step-wise approach to evaluate the risk of HIV infection and determine if PrEP is indicated. **HIV testing is essential since PrEP should only be used in patients who are HIV negative.** Counseling on methods to reduce HIV transmission and emphasizing the important of medication adherence with PrEP are very important to provide the greatest efficacy of the treatment.

Figure 7. Step-wise Approach to Prescribing PrEP



## Step 1

### *Discussing Sexual Health & Injection Drug Use*

A Veteran's risk for HIV requires understanding of their social behaviors involving sex and drugs. Although a detailed history is useful, it is not necessary in determining if risk of HIV infection is at stake. For example, recent unprotected anal intercourse between MSM with unknown HIV status is sufficient risk to recommend PrEP regardless of other past or current behaviors.

#### *Let's Talk About Sex*

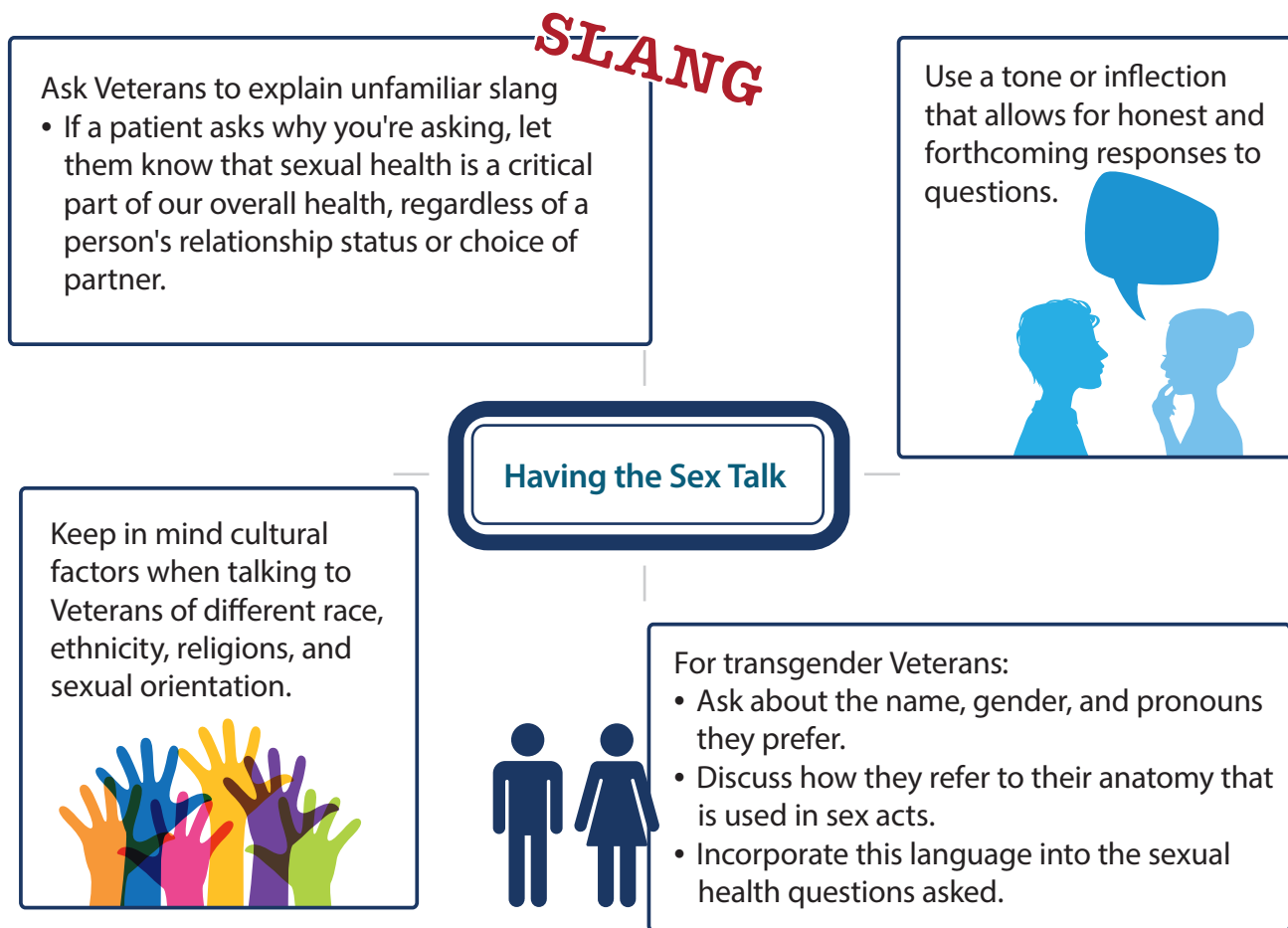
Figure 8. Questions About Sex Should:<sup>11</sup>

	<b>Be Open-ended</b> <ul style="list-style-type: none"><li>• Tell me about any new sex partners since your last visit</li></ul>
	<b>Use Non-judgmental Language</b> <ul style="list-style-type: none"><li>• Do you have sex with men, women, or both?</li></ul>
	<b>Use Normalizing Language</b> <ul style="list-style-type: none"><li>• Some people don't use condoms every time they have sex. How is it for you?</li></ul>



C O M M U N I C A T I O N

Figure 9. Pearls for Talking About Sex

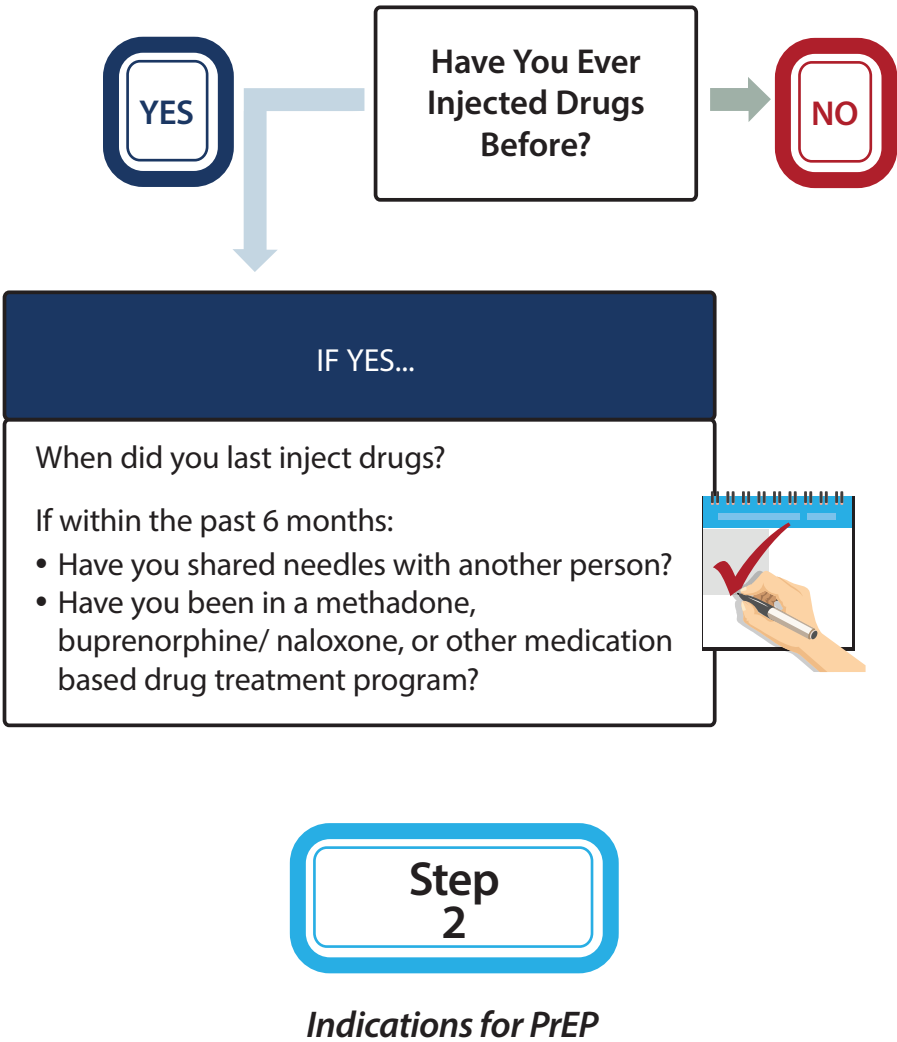


For some Veterans, understanding the reasons for sex acts identifies those at increased risk of HIV and sexually transmitted infections (STIs).



**Figure 10. Talking About Injection Drug Use**

The National Institute on Drug Abuse (NIDA) has a comprehensive screening tool for primary care<sup>12</sup>. A quick screening question can be used to ask about illicit drug use.



Assess behaviors within the past 6 months and discuss PrEP with Veterans who meet any of these risks.

**Table 2. CDC Recommended Indications for PrEP<sup>6</sup>**

Population	Applies to	PrEP Indicated if Any is True
Sex or IDU with HIV Infected People	Any type of sexual activity or IDU with shared equipment	PrEP indicated in all Veterans in this category

Population	Applies to	PrEP Indicated if Any is True
<b>Men who Have Sex with Men (MSM)</b>	Any male sex partners in past 6 months (if also has sex with women, see Box below)  Not in a monogamous partnership with a recently tested, HIV-negative man	Any anal sex without condoms in the past 6 months  Any STI diagnosed or reported in the past 6 months  Is in an ongoing sexual relationship with an HIV-positive partner
<b>Heterosexually Active Men and Women</b>	Any sex with opposite sex partners in past 6 months  Not in a monogamous partnership with a recently tested, HIV-negative partner	A man who has sex with both women and men (behaviorally bisexual). If yes, evaluate MSM criteria above  Infrequently uses condoms during sex with 1 or more partners of unknown HIV status who are known to be at substantial risk of HIV infection (IDU or bisexual male partner)  Is in an ongoing sexual relationship with an HIV-positive partner
<b>IDU</b>	Any injection of drugs in the past 6 months	Any sharing of injection or drug preparation equipment in the past 6 months  Participant in a medication assisted treatment/ OUD clinic (methadone or buprenorphine/ naloxone) in the past 6 months  Risk of sexual acquisition (see above categories)
<b>Contraindications for PrEP</b> <ul style="list-style-type: none"><li>• HIV positive or unknown HIV status</li><li>• Creatinine clearance (CrCl) &lt;60 mL/min</li><li>• Prior severe reaction to TDF/FTC</li></ul>		

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Veterans who have sex or share injection equipment with HIV infected people should be offered PrEP.

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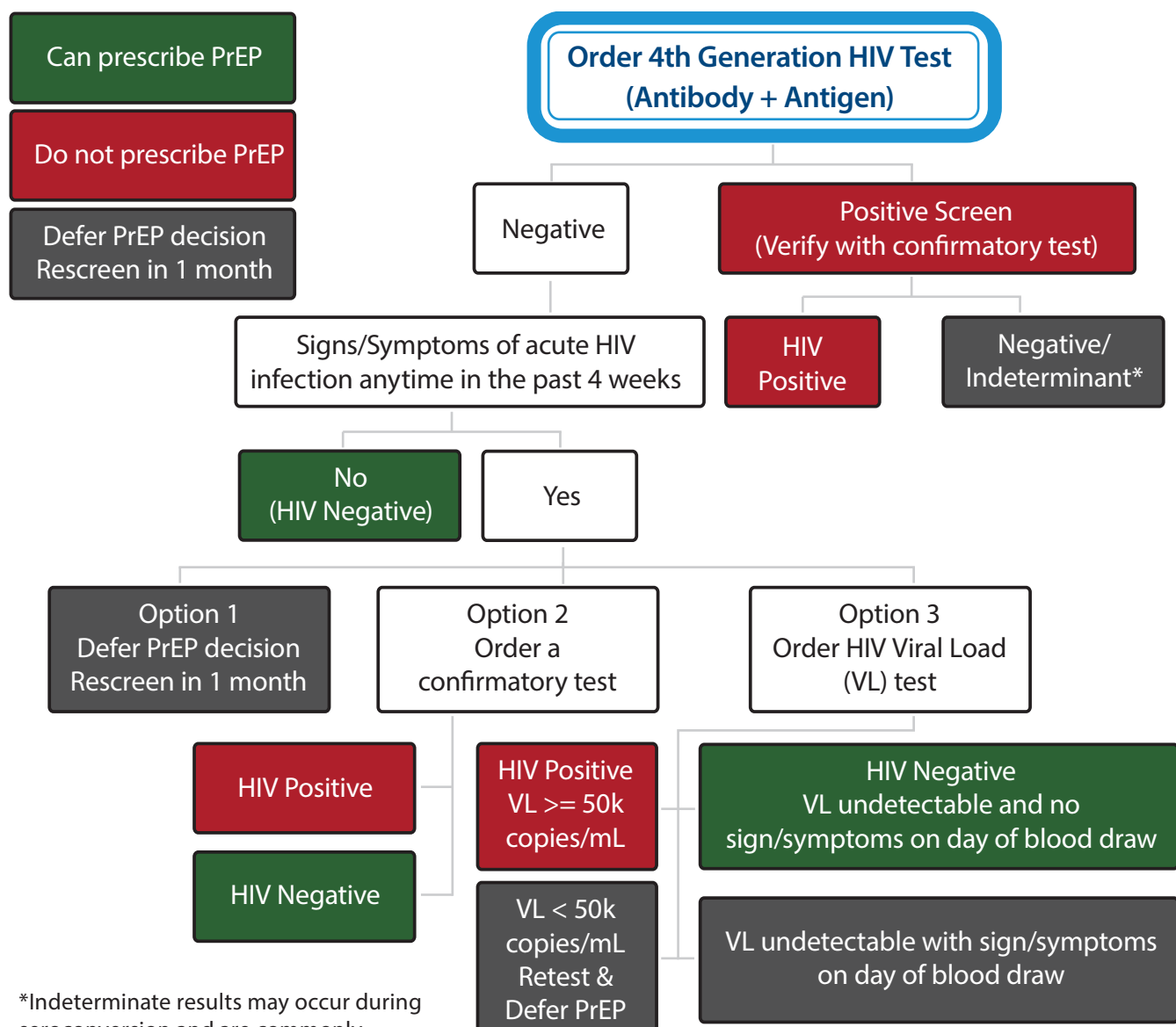
### Step 3

#### Assessing for Current HIV Infection

##### Testing for HIV

Prior to starting PrEP, all patients must be tested for HIV and assessed for signs and symptoms of acute HIV infection. **HIV testing should be completed within 1 week prior to PrEP initiation.**<sup>6</sup> Refer HIV positive patients to an Infectious Disease Specialist. Use 4<sup>th</sup> generation assays, which test for both HIV antibodies and antigens, whenever possible, as this will detect HIV infections earlier (14 days vs 21 days or longer from exposure)<sup>13</sup>. All positive screens require a confirmatory test.

Figure 11. CDC's HIV Determination Algorithm<sup>6</sup>



\*Indeterminate results may occur during seroconversion and are commonly associated with a positive screen and negative or unknown confirmatory test. Defer PrEP decision until rescreened.

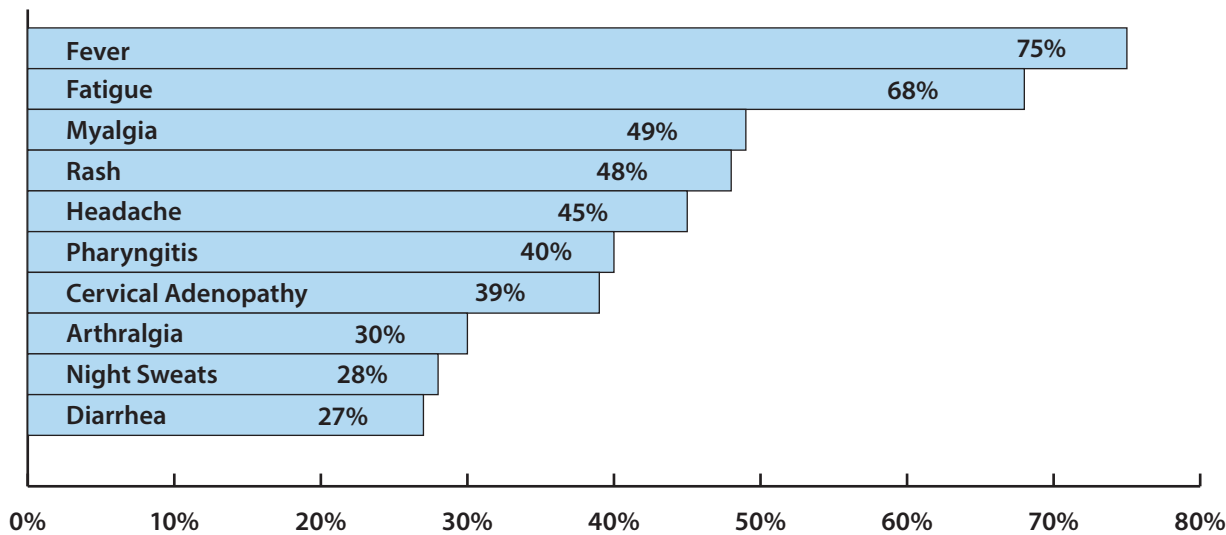


Assessment of Signs and Symptoms of HIV



All patients should be evaluated for signs and symptoms of acute HIV occurring within the past 4 weeks: If signs or symptoms of HIV infection are present, defer PrEP and retest for HIV in one month.

Figure 12. Frequency of Sign/Symptom During Acute HIV Infection<sup>6</sup>



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PrEP should not be started in anyone with signs/symptoms of acute HIV.

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Step  
4

Check Other Baseline Laboratory Tests

The following tests should be performed prior to PrEP initiation to ensure treatment with PrEP is appropriate:

**Table 3. Check Other Baseline Laboratory Tests<sup>6</sup>**

Status	Laboratory Tests	General Information
<b>Renal Function</b>	Serum Creatinine	TDF/FTC is renally excreted and should be not used if creatinine clearance (CrCl) <60 mL/min
<b>Sexually Transmitted Infections (STIs)</b>	Syphilis (RPR or FTA)	Swab samples should be obtained from all anatomically exposed sites (e.g., genital, rectal, pharyngeal)  If positive, treat the STI or refer for treatment  Both PrEP and STIs can be treated at the same time
	Gonorrhea*	
	Chlamydia*	
<b>Hepatitis B Virus (HBV)</b>	Hepatitis B surface antibody (Anti-HBs)	If unvaccinated (Anti-HBs is negative), initiate HBV vaccination** series  If HBsAg is positive (suggestive of chronic HBV infection): <ul style="list-style-type: none"><li>• Check HBV viral load</li><li>• Refer for hepatitis B evaluation</li><li>• Advise of risk of HBV reactivation if PrEP is stopped</li></ul>
	Hepatitis B surface antigen (HBsAg)	
	Hepatitis B core antibody (Anti-HBc)	
<b>Hepatitis C Virus (HCV)</b>	Hepatitis C Virus Antibody (HCV Ab)	Screening is recommended prior to starting PrEP  If the HCV Ab screen is positive, check HCV RNA viral load  If the HCV RNA is detectable, refer for evaluation of chronic HCV infection and possible treatment
<b>Pregnancy</b>	Urine beta-HCG (Pregnancy test)	PrEP can be safe in women who are pregnant or trying to conceive  Determine pregnancy status and discuss the risks and benefits  If attempting to conceive or pregnant with an HIV (+) spouse, refer to ID/fertility specialist for additional support

\*Nucleic Acid Amplification Tests (NAAT) should be utilized if available.

\*\*Consider additional screenings and vaccinations for MSM: Hepatitis A Vaccine, Human papilloma vaccine (Gardasil) for Veterans under 26 years old. FTA = fluorescent treponemal antibody; RPR = rapid plasma reagin; Urine Beta-HCG = urine beta-human chorionic gonadotropin.

Step  
5

Prescribing PrEP

When prescribing PrEP, ensure that baseline laboratory testing is performed. If PrEP is indicated, prescribe initially as a 30 day supply. If the Veteran is tolerating it well, then subsequent prescriptions can be issued for up to a 90 day supply.

Figure 13. How to Prescribe PrEP and Baseline Laboratory Tests

✓ HIV Negative

✓ CrCl >= 60 mL/min

✓ Screened for:

- HBV
- HCV
- Pregnancy
- STIs (Syphilis, G/C)

FOR \_\_\_\_\_ DATE \_\_\_\_\_

R<sub>x</sub>

ADDRESS \_\_\_\_\_

Truvada (Tenofovir 300 mg / Emtricitabine 200 mg)  
Take 1 tablet by mouth daily # 30

Refills: 0

DR. \_\_\_\_\_ DR. \_\_\_\_\_

SUBSTITUTION PERMITTEDDISPENSE AS WRITTEN

DEA NO. \_\_\_\_\_

Table 4. Key Discussion Points<sup>6</sup>

Discussion Points	
Adherence & Effectiveness	<p>PrEP is most effective when taken every day – not just after sex</p> <p>PrEP is highly effective (&gt;90%) when combined with other ways to reduce the risk of HIV transmission like using condoms or avoiding risky sexual behavior and using clean needle exchanges or receiving opioid use disorder (OUD) treatment.</p> <p>PrEP does not lower the risk of other STIs (e.g., syphilis, gonorrhea, herpes, or chlamydia).</p> <p>PrEP is continued while the patient is engaging in behaviors that put them at a high risk for acquiring HIV. When those risk factors change, the patient should be re-evaluated to determine if PrEP is still needed.</p>

15

Discussion Points	
Side Effects	<p>Side effects are minimal and TDF/FTC is generally well tolerated</p> <ul style="list-style-type: none"><li>• Headache and nausea may occur but lessen within the first few weeks</li><li>• Bone loss (1–3%) and reduced kidney function (3–5%) can occur with treatment but usually improve when PrEP is stopped</li></ul>
Other	<ul style="list-style-type: none"><li>• Veterans with hepatitis B, who are started on PrEP, should not stop the medication suddenly as rebound hepatitis may occur</li><li>• PrEP can be administered while trying to conceive and during pregnancy. HIV-uninfected persons trying to conceive with an HIV-infected partner should be referred to an ID or fertility specialist for counseling on strategies for preventing HIV transmissions, including PrEP</li><li>• Since the VA is not able to provide care for non-Veterans, refer partners of patients to community providers who provide PrEP<ul style="list-style-type: none"><li>• <a href="https://preplocator.org/">https://preplocator.org/</a></li></ul></li></ul>
General Risk Reduction Strategies	<ul style="list-style-type: none"><li>• Discuss behaviors to reduce risk of HIV infection, such as knowing the HIV status of a partner and using barrier methods for protection</li><li>• For IDUs, discuss knowing the HIV status of injecting partners, utilizing clean needles or needle exchanges and engaging in treatment for addiction</li><li>• Refer Veterans with substance use or mental health disorders to appropriate treatment</li></ul>

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Ensure Veterans understand the importance of adherence with PrEP. Protection against HIV infection with PrEP is directly correlated with adherence.

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**Step  
6**

***Monitoring Patients on PrEP***






Veterans who are prescribed PrEP should be evaluated for comorbidities like substance use disorder (SUD) and medication adherence with PrEP should be discussed at every visit. Laboratory testing, including HIV testing, should be monitored to ensure that using PrEP is still indicated.

**Table 5. Frequency of Monitoring Patients on PrEP<sup>6</sup>**

Category	Screen/Test	General Information
<b>Every Visit</b>		
<b>Mental Health</b>	Substance Use Disorder	Refer to as necessary or consider managing in Primary Care if Veteran prefers
<b>General Counseling</b>	N/A	Provide risk reduction counseling
<b>Medication Adherence</b>	N/A	Ask the patient about adherence <ul style="list-style-type: none"> <li>• How does the Veteran remind him/herself</li> </ul> Review fill history
<b>Monitor Every 3 Months</b>		
<b>HIV Status</b>	HIV test Acute HIV signs/symptoms	Use a 4th Generation test – See <a href="#">page 12</a> Signs and symptoms – See <a href="#">page 13</a>
<b>Pregnancy</b>	Urine beta-HCG	
<b>Monitor Every 6 Months</b>		
<b>STIs</b>	Syphilis Gonorrhea* Chlamydia*	RPR or FTA Swab samples should be obtained from all anatomically exposed sites (e.g., genital, rectal, pharyngeal)
<b>Renal Function</b>	Serum Creatinine	Consider more frequently in patients with additional risks: <ul style="list-style-type: none"> <li>• Chronic kidney disease</li> <li>• Hypertension</li> <li>• Diabetes</li> <li>• Age &gt;50</li> </ul>
<b>Monitor Every 1 Year</b>		
<b>Reassessment</b>	N/A	Re-evaluate the need for PrEP
<b>Hepatitis C Status</b>	HCV Antibody (Ab)	For those injecting drugs
Note: Long term use of PrEP (TDF/FTC) should include osteoporosis screenings every 2–3 years		

\*Nucleic Acid Amplification Tests (NAAT) should be utilized. FTA = fluorescent treponemal antibody; RPR = rapid plasma reagin; Urine Beta-HCG = urine beta-human chorionic gonadotropin.

Figure 14. Stopping PrEP? When Should This Be Considered?<sup>6</sup>

	HIV seroconversion
	Reduction or elimination of risk factors
	Intolerable side effects
	Poor adherence
	Renal function on PrEP (glomerular filtration (CrCl<60 mL/min)) <ul style="list-style-type: none"><li>• If the CrCl drops by 20% from baseline but remains &gt;60, repeat creatinine testing after 2–4 weeks to verify stability</li><li>• If the CrCl continues to drop, consider discontinuing PrEP.*</li></ul>

\*Decisions to discontinue PrEP should balance the Veteran's risk for HIV infection versus risk for further deterioration in renal function. CrCl = creatinine clearance.

Veterans should be advised not to stop taking PrEP without speaking to their provider, especially if they have hepatitis B as clinically significant rebound hepatitis may occur.

VA guidance recommends continuing PrEP for 28 days beyond the last risky exposure.<sup>14</sup>

When PrEP is discontinued, document:

- Veteran's HIV status
- Reason for discontinuation
- Recent adherence
- Recent risk behaviors



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If a Veteran becomes HIV positive while taking PrEP, stop PrEP immediately and refer urgently for HIV care.

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*Talking to Veterans About Positive HIV Test Results*

Delivering the result of an HIV test can be a critical interaction between a Veteran and health care provider. Results should be discussed in person (and within 7 days – for results requiring action – and 14 days for all others as described in the **VHA Directive 1088 Communicating Test Results to Providers and Patients**) and the discussion should help them understand the significance of the result. Patients should be referred for medical follow up and other appropriate services. In the event that the patient is too overwhelmed with the test results to process additional information, make a second visit to go over referral and other resources.

**Table 6. Framing the Conversation Around HIV Test Results**

Step	Key Considerations
1. Greet the patient and frame the discussion.	✓ Example: “You are here for your HIV test results. Are you ready for those or is there anything you’d like to discuss first?”
2. Deliver the HIV test result with a very brief interpretation.	✓ Use simple, direct language and a neutral tone ✓ Example: “your test result is (negative/positive). This means...”
3. Pause to allow the patient time to react.	✓ Do not assume you know what the result means to the patient; do not make value comments about it ✓ If the result is positive, patients often do not hear anything after the result is delivered. Give time for the patient to absorb the information



Step	Key Considerations
4. Provide support, education, and counseling according to what the patient needs and accepts.	<ul style="list-style-type: none"> <li>✓ Patients' reactions may be strong and emotional</li> <li>✓ It may take time for the patient to process new information and be ready for questions, additional information, or referrals</li> <li>✓ Schedule another session for information and counseling if patients are unable to hear anything beyond the test result</li> <li>✓ Support and counseling may include: emotional support, support around stigma, information about notification and protection of partners, recommendations for preventing HIV transmission to others, and accurate information about HIV and its medical management</li> <li>✓ If patients have a history of psychiatric illness or substance use, notify their mental health providers in advance so they can be present or available during the session</li> <li>✓ For patients with depression or a history of depression, be sure to assess for suicidal ideation and connect them to services appropriately</li> </ul>
5. Summarize the discussion.	<ul style="list-style-type: none"> <li>✓ Provide a brief summary of what you discussed and next steps</li> </ul>
6. Give referrals, as appropriate, in writing.	<ul style="list-style-type: none"> <li>✓ If negative: <ul style="list-style-type: none"> <li>• Assess for risk factors (see pages <a href="#">pages 10–11</a>)</li> <li>• Refer for prevention resources and give recommendations about future HIV testing</li> </ul> </li> <li>✓ For HIV-positive patients: <b>LINK THEM TO MEDICAL CARE.</b> Ideally, provide the newly diagnosed patient with an appointment to be seen in a VA or community clinic within 1–2 weeks. If you have questions about who best to refer patients to, contact your Infectious Disease Service prior to seeing the patient</li> <li>✓ Provide any referrals to mental health services and other services as appropriate</li> </ul>
7. Document the HIV result in the patient's chart.	<ul style="list-style-type: none"> <li>✓ Include a summary of the education and counseling given to the patient, the patient's mental status, and referrals made</li> </ul>

### *What About Intermittent Use of PrEP?*

The CDC recommends only continuous daily use of oral PrEP with TDF/FTC.<sup>6</sup> PrEP used less frequently may not yield the same results.

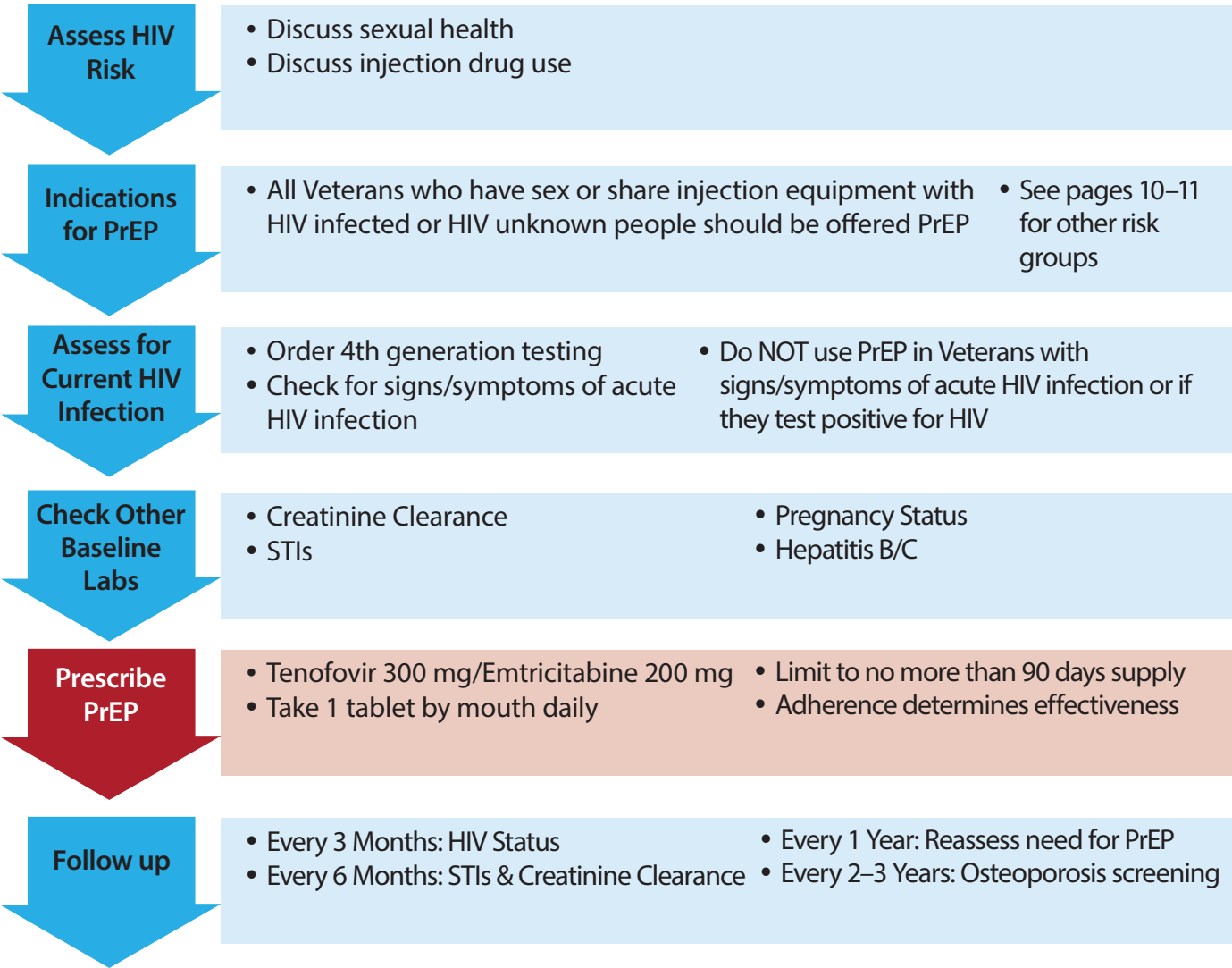
*What About Drug Resistance?*

Little evidence supports drug resistance as a significant problem in either clinical trials or real-world prescribing of PrEP.<sup>6,15</sup> However, even an adherent person can become infected with a HIV strain resistant to PrEP. One such case has been reported.<sup>16</sup>

**A Note about Non-Occupational Post-Exposure Prophylaxis (nPEP): nPEP ≠ PrEP**

**Non-occupational post-exposure prophylaxis (nPEP)** prevents HIV infection after a known or suspected HIV exposure and is started within 72 hours of the event (e.g., unprotected sex with someone who is HIV positive). nPEP involves a regimen of three antiretroviral agents used for the treatment of HIV over a limited period of time, such as 28 days – recommended by CDC and Department of Health and Human Services (DHHS).<sup>17</sup> Discuss PrEP with all Veterans who have completed nPEP.

Summary



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## Notes

[illegible]



## Notes

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## **U.S. Department of Veterans Affairs**

This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing Service SharePoint.

These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

VA PBM Academic Detailing Service Email Group  
**[PharmacyAcademicDetailingProgram@va.gov](mailto:PharmacyAcademicDetailingProgram@va.gov)**

VA PBM Academic Detailing Service SharePoint Site  
**<https://vaww.portal2.va.gov/sites/ad/SitePages/Home.aspx>**

VA PBM Academic Detailing Public WebSite  
**<http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp>**