Indian Health Service

Initiating HIV PrEP in Indigenous Communities

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JUNE 27, 2023

Which of the Following Best Describes your Experience with PrEP?

A. Have never heard of PrEP before this

B. Familiar with PrEP but have never recommended it

C. Have prescribed PrEP a few times before

D. Have extensive experience prescribing PrEP to patients

HIV PrEP Case

36 year old cis-gender male

Risk factors: MSM, receptive anal sex, inconsistent condom use, history of rectal gonorrhea/chlamydia, history of IVDU (methamphetamines/chemsex)

Started HIV PrEP (FTC/TDF) in 2012

- On-demand PrEP

Switched to HIV PrEP (FTC/TAF) in 2020

- Kidney/Bone

Stopped HIV PrEP in 2022

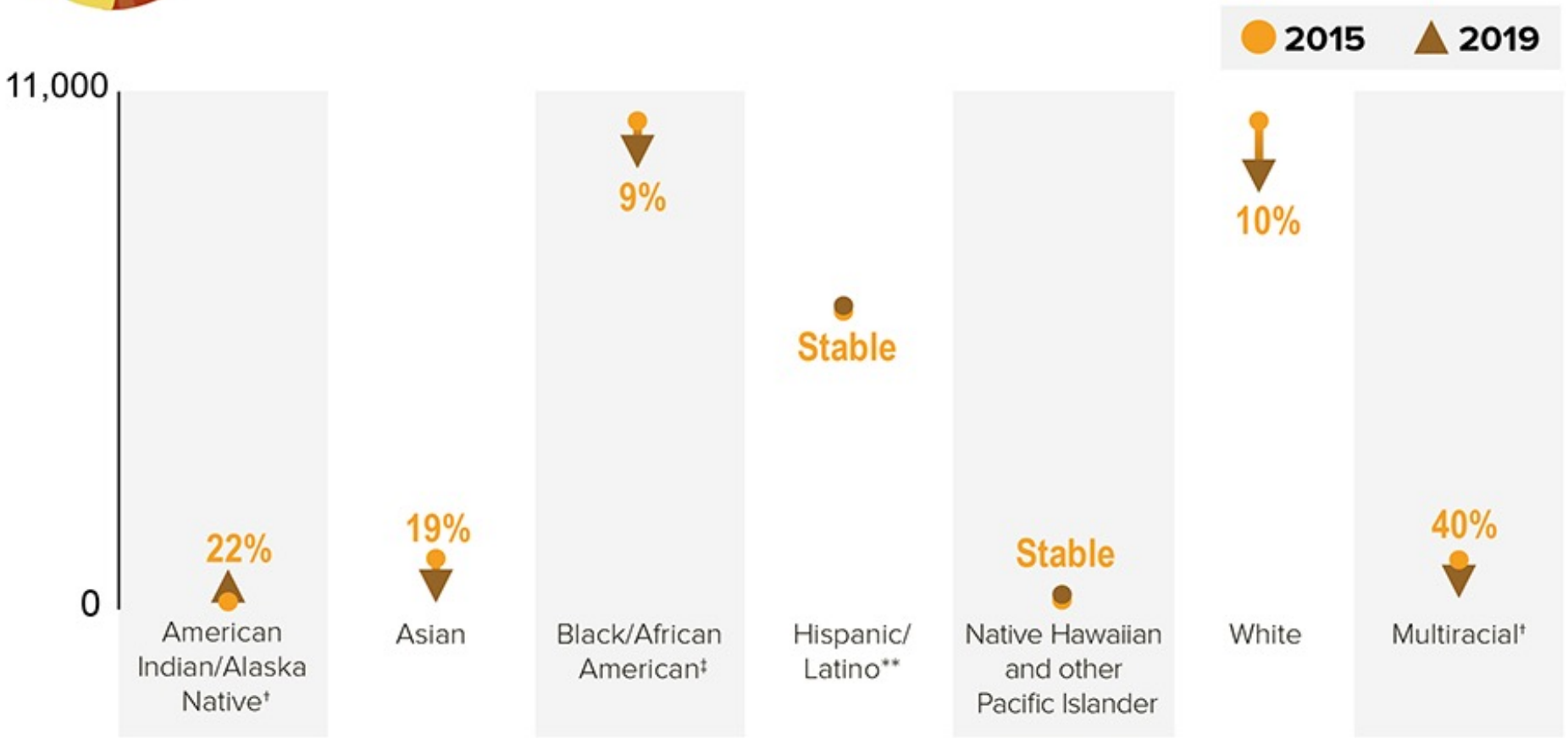
- Undetectable=Untransmissible (U=U)

Considering restarting HIV PrEP in 2023

- Long-acting injectable

New HIV Diagnoses in the US and Dependent Areas by Race/Ethnicity, 2015-2019

Trends by Race and Ethnicity

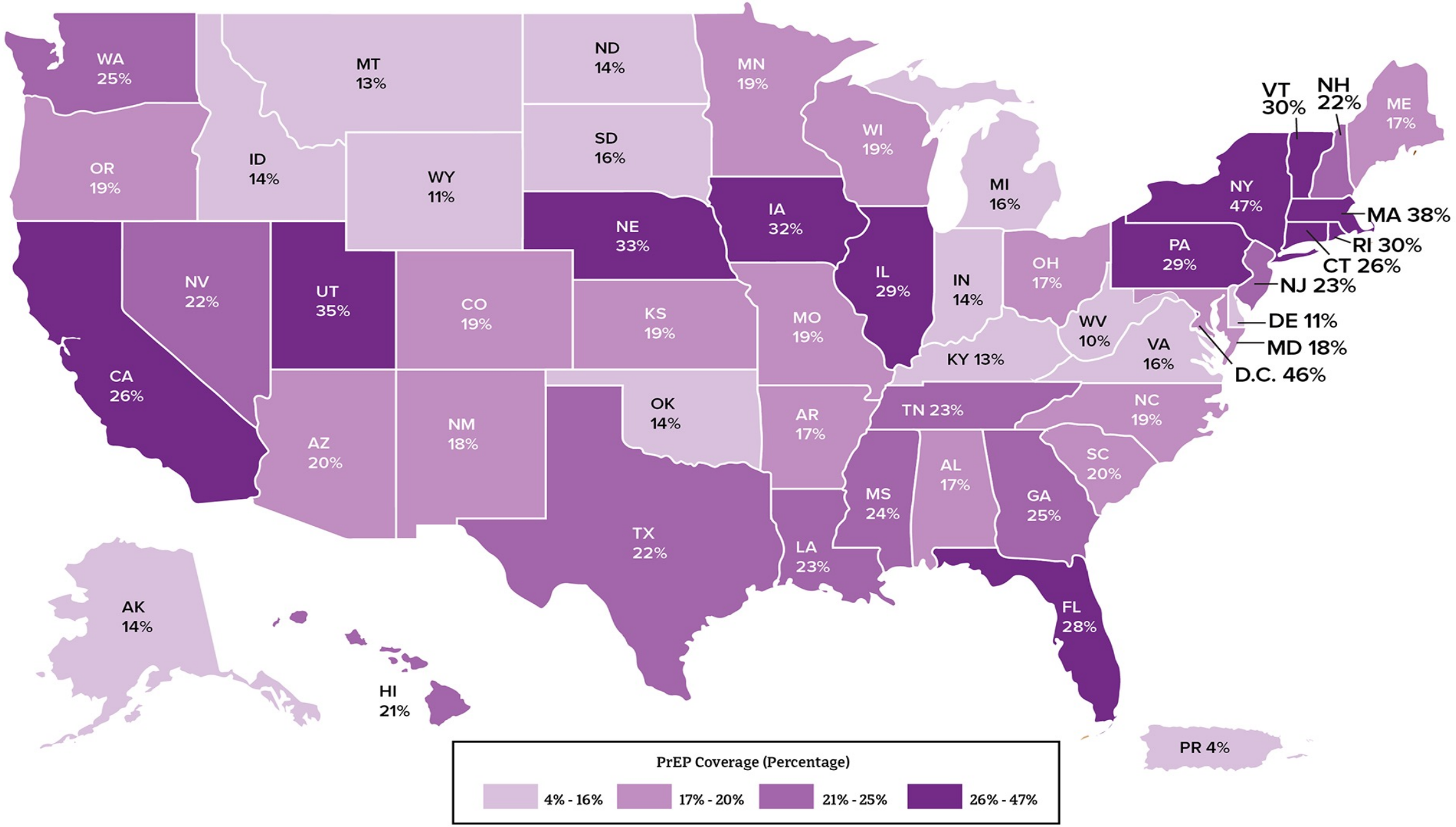


PrEP Data

Ending the HIV Epidemic

Overall Goal: Increase the estimated percentage of people with indications for PrEP classified as having been prescribed PrEP to at least 50% by 2025 and remain at 50% by 2030.

Of the 1.2 million people in the United States and Puerto Rico who could benefit from PrEP, only 25% of people were prescribed PrEP in 2020.


WA 25%
OR 19%
CA 26%
ID 14%
NV 22%
MT 13%
WY 11%
UT 35%
AZ 20%
CO 19%
NM 18%
ND 14%
SD 16%
NE 33%
KS 19%
OK 14%
TX 22%
MN 19%
IA 32%
MO 19%
AR 17%
LA 23%
WI 19%
IL 29%
MS 24%
MI 16%
IN 14%
KY 13%
TN 23%
AL 17%
OH 17%
WV 10%
GA 25%
FL 28%
SC 20%
NC 19%
VA 16%
PA 29%
NY 47%
VT 30%
NH 22%
ME 17%
MA 38%
RI 30%
CT 26%
NJ 23%
DE 11%
MD 18%
D.C. 46%
AK 14%
HI 21%
PR 4%
PrEP Coverage (Percentage)
4% - 16%
17% - 20%
21% - 25%
26% - 47%

HIV Prevention Strategies

- Sexual behavior modification
- Condom use
- Test and treat STIs
- HIV treatment as prevention (U=U)
- **PrEP: Pre-Exposure Prophylaxis**
- PEP: Post-Exposure Prophylaxis
- Offer sterile, personalized injection drug use equipment for people who inject drugs

What is PrEP?

Pre-exposure prophyla

medication to lower thei

- Helps
  who is H

Medication

- Tenofo

  OR
- Cabotegravi
  initiation inj

ake antiretroviral

partner

intramuscul two

months thereafter

PrEP is not a substitution for other HIV prevention interventions!

PrEP does not protect against other STIs!

Why PrEP?

PrEP is highly effective for reducing HIV risk

When taking oral PrEP daily or consistently (*at least 4 times per week*) the risk of acquiring HIV is reduced by:

- about 99% among men who have sex with men (MSM)
- an estimated 74 – 84% among people who inject drugs (PWID)

Who should be offered PrEP?

The federal guidelines recommend that PrEP be considered for people who are HIV negative a
- Have **had anal or vaginal sex in the past 6 months and**:
  - Have a sexual partner with HIV (especially if the partner has an unknown or detectable v or
  -
  -
  - report continued risk behavior, or
  - have used multiple courses of PEP

Anyone who is at risk for acquiring HIV

Oral PrEP

Consider Tele-PrEP!

– can help decrease barriers to obtaining PrEP for some patients!

Baseline Labs for Oral PrEP

- Renal function
- Hepatitis B serology:
  - Hep B Surface Ab
  - Hep B Surface Ag
  - Hep B Core Ab
- Lipid profile (F/TAF)
- HIV 1/2 Ab/Ag

Plus other STI Screening

HIV RNA (Viral Load)

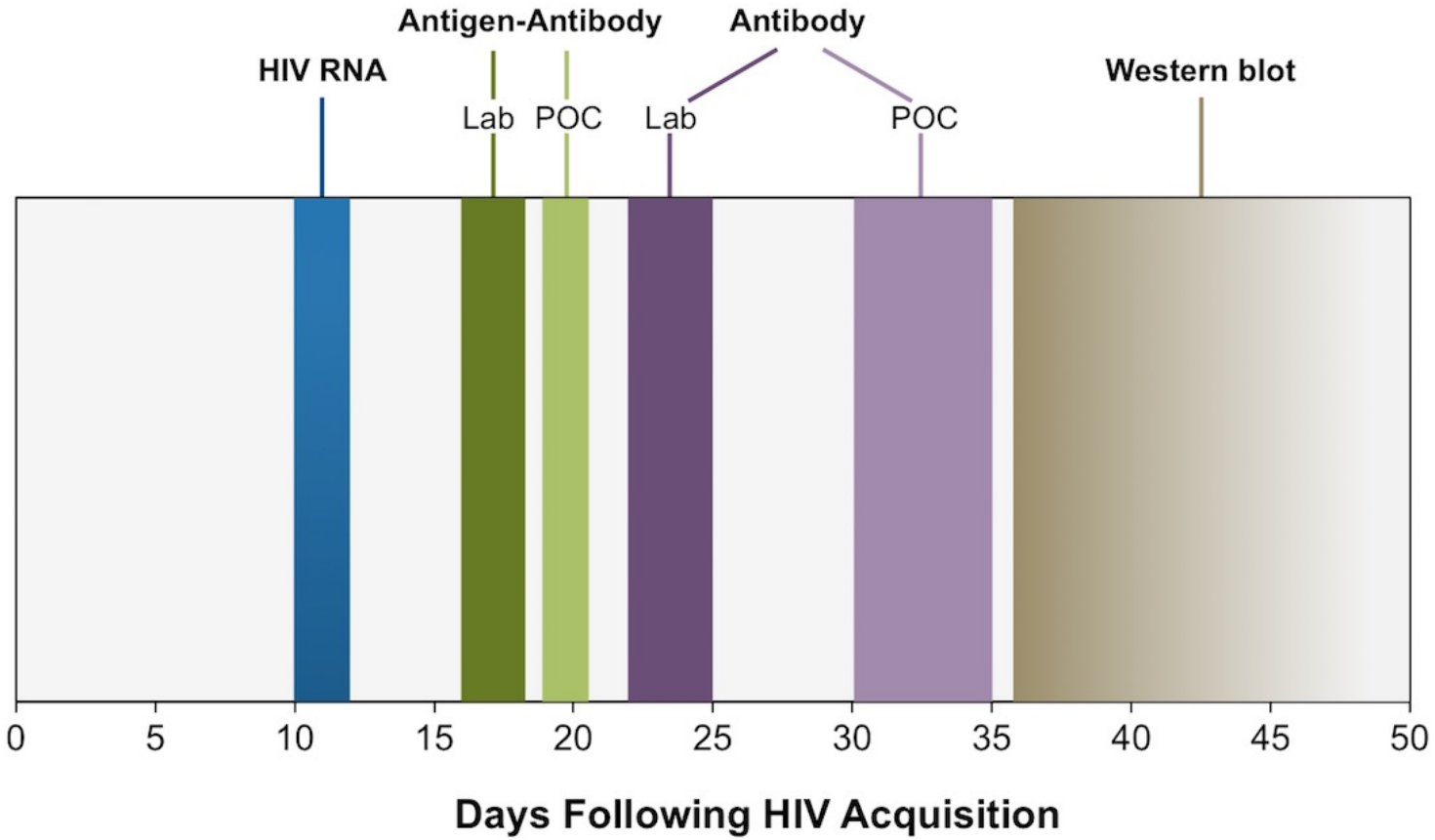
- Anyone who has taken oral PrEP in the last 3 months and/or has received a CAB injection in the last 12 months

https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf

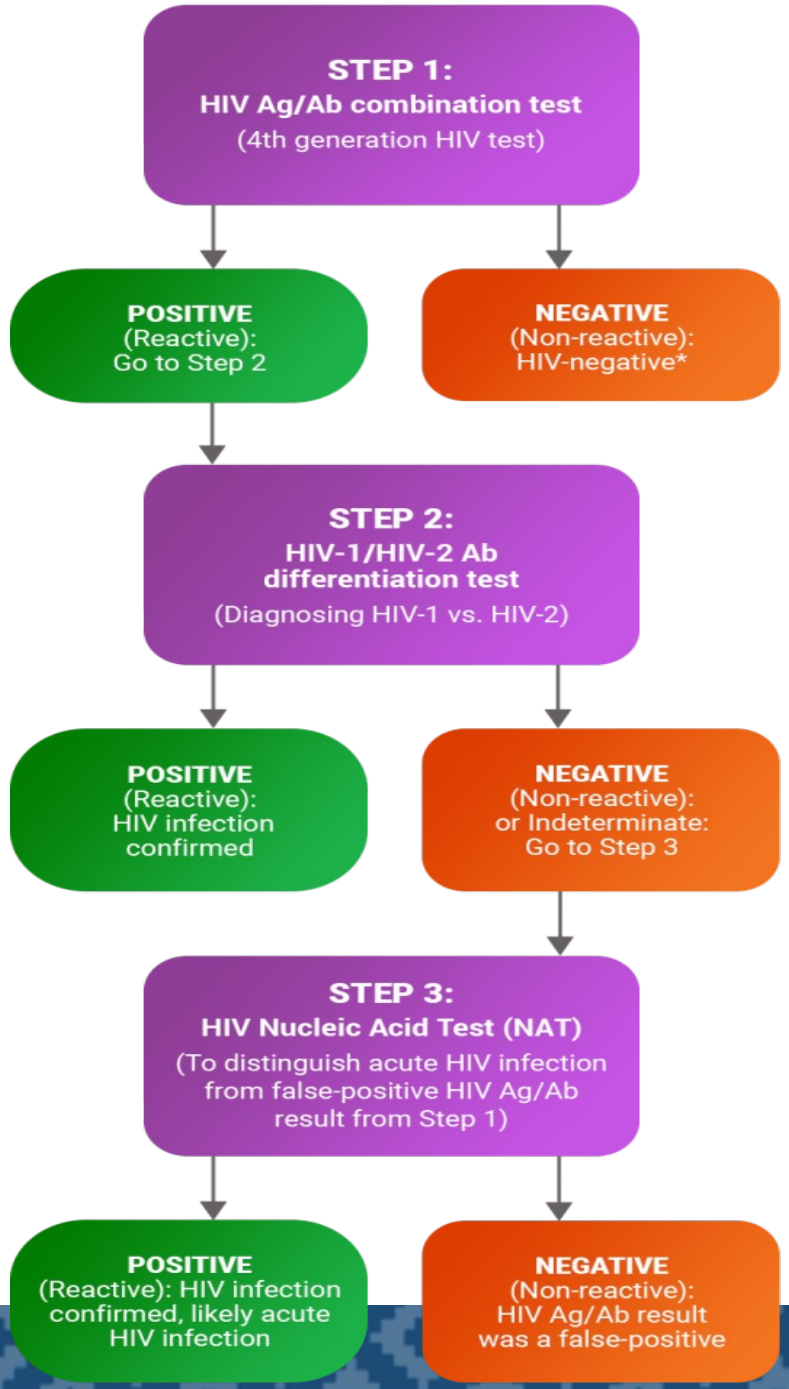
Time to positivity of HIV diagnostic tests

Test	Target of detection	Approximate time to positivity (days)
Enzyme-linked immunoassay		
IgG sensitive tests	IgG antibody	35 to 45
	IgG antibody	25 to 35
IgM/IgG-sensitive tests	IgM and IgG antibody	20 to 30
Ag/Ab Immunoassays	IgM and IgG antibody and p24 antigen	15 to 20
Western blot		
	IgM and IgG antibody	35 to 50 (indeterminate)
		45 to 60 (positive)
HIV viral load test		
Sensitivity cutoff 50 copies/mL	RNA	10 to 15
Ultrasensitive cutoff 1 to 5 copies/mL	RNA	5

Timing of Positivity for HIV Diagnostic Tests



HIV Testing Algorithm



Hepatitis B Lab Interpretation

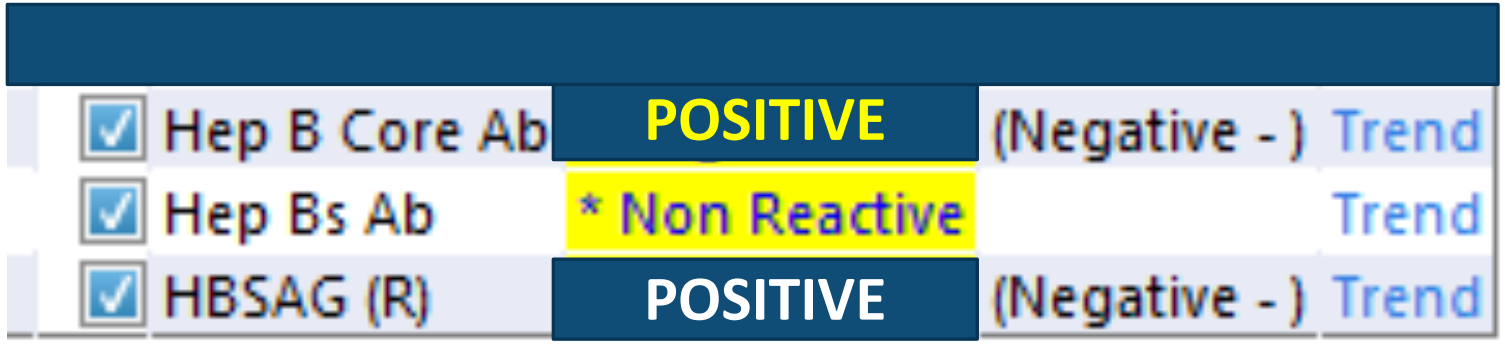
☑ Hep B Core Ab	* Negative	(Negative -)	Trend
☑ Hep Bs Ab	* Non Reactive		Trend
☑ HBSAG (R)	* Negative	(Negative -)	Trend

This patient has NOT had Hepatitis B infection and does not have immunity AND NEEDS vaccination.

Hepatitis B Lab Interpretation

This patient has been vaccinated and is immune. No further workup.

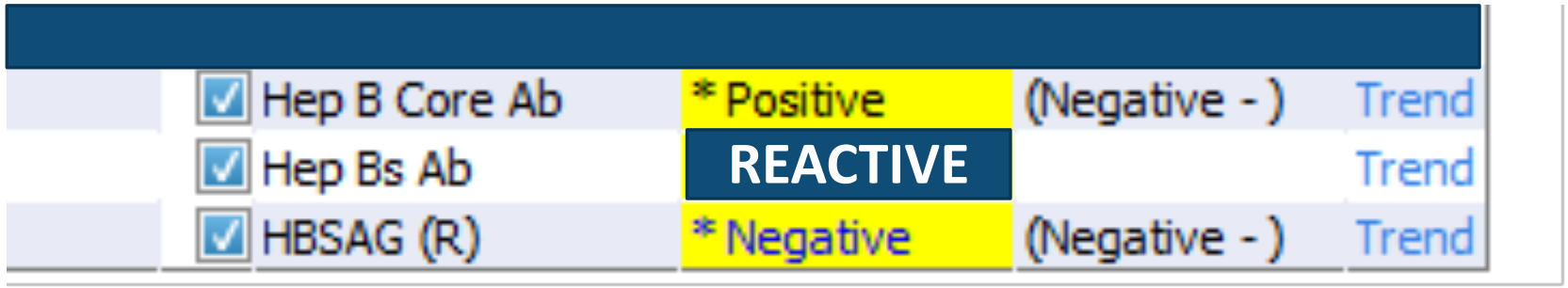
Hepatitis B Lab Interpretation



☑ Hep B Core Ab	POSITIVE	(Negative -)	Trend
☑ Hep Bs Ab	* Non Reactive		Trend
☑ HBSAG (R)	POSITIVE	(Negative -)	Trend

This patient has had Hepatitis B infection and has a chronic infection, needs to be evaluated for treatment of Hepatitis B.

Hepatitis B Lab Interpretation



☑	Hep B Core Ab	* Positive	(Negative -)	Trend
☑	Hep Bs Ab	REACTIVE		Trend
☑	HBSAG (R)	* Negative	(Negative -)	Trend

In this case, the patient has had Hepatitis B and can reactivate under certain circumstances such as immunosuppression or HCV treatment.

Oral PrEP

Recommended Oral PrEP Medications

Generic Name	Trade Name	Dose	Frequency	Most Common Side Effects[109,110]
F/TDF	Truvada	200 mg/300 mg	Once a day	Headache, abdominal pain, weight loss
F/TAF	Descovy	200 mg/25 mg	Once a day	Diarrhea

Adherence and F/TDF PrEP Efficacy in MSM

Weekly Medication Adherence Estimated by Drug Concentration	HIV Incidence per 100 person/years
None	4.2
≤2 pills/week	2.3
2-3 pills/week	0.6
≥4 pills/week	0.0

Oral PrEP Follow-up

Every 3 months:

- Repeat HIV testing
- Assess for signs or symptoms of acute HIV infection
- Provide RX for no more than 90 days (until the next HIV test)
- Assess medication adherence and risk-reduction behaviors
- Conduct STI testing if symptoms of infection
- Conduct STI screening for asymptomatic MSM at high risk for syphilis, gonorrhea, or chlamydia

Features	Overall (n = 375) %
Fever	75
Fatigue	68
Myalgia	49
Skin rash	48
Headache	45
Pharyngitis	40
Cervical adenopathy	39
Arthralgia	30
Night sweats	28
Diarrhea	27

Oral PrEP Follow-up

Every 6 months:

- Monitor eCrCl for persons age ≥50 years or who have an eCrCl <90 ml/min at PrEP initiation
  - If other threats to renal safety are present (e.g., hypertension, diabetes), renal function may require more frequent monitoring or may need to include additional tests (e.g., urinalysis for proteinuria)
  - A rise in serum creatinine is not a reason to withhold treatment if eCrCl remains ≥60 ml/min for F/TDF or ≥30 for F/TAF
  - If eCrCl is declining steadily (but still ≥60 ml/min for F/TDF or ≥30 ml/min for F/TAF), ask if the patient is taking high doses of NSAID or using protein powders; consultation with a nephrologist or other evaluation of possible threats to renal health may be indicated
- Conduct STI screening for sexually active persons (i.e., syphilis, gonorrhea, for all PrEP patients and chlamydia for MSM and TGW even if asymptomatic)
- Assess need for continuing or discontinuing PrEP

Oral PrEP Follow-up

At least every 12 months:

- Monitor eCrCl for all patients continuing on PrEP medication
- Monitor triglyceride, cholesterol levels, and weight for patients prescribed F/TAF for PrEP
- Conduct chlamydia screening for heterosexual women and men even if asymptomatic

Timing of Oral PrEP-associated Lab Tests

Test	Screening/Baseline Visit	Q 3 months	Q 6 months	Q 12 months	When stopping PrEP
HIV Test	X*	X			X*
eCrCl	X		If age ≥50 or eCrCL <90 ml/min at PrEP initiation	If age <50 and eCrCl ≥90 ml/min at PrEP initiation	X
Syphilis	X	MSM /TGW	X		MSM/TGW
Gonorrhea	X	MSM /TGW	X		MSM /TGW
Chlamydia	X	MSM /TGW	X		MSM /TGW
Lipid panel (F/TAF)	X			X	
Hep B serology	X				
Hep C serology	MSM, TGW, and PWID only			MSM,TGW, and PWID only	

* Assess for acute HIV infection

Discontinuing Oral PrEP

Provider should document:

- HIV status at the time of discontinuation
- Reason for discontinuation
- Recent medication adherence and reported sexual risk behavior
- Education: continue to take PrEP for 28 days since last exposure

Restarting PrEP requires same initial evaluation, minus the Hep B serology

Injectable PrEP

Injectable PrEP

Cabotegravir (CAB) 600 mg (brand name Apretude®)

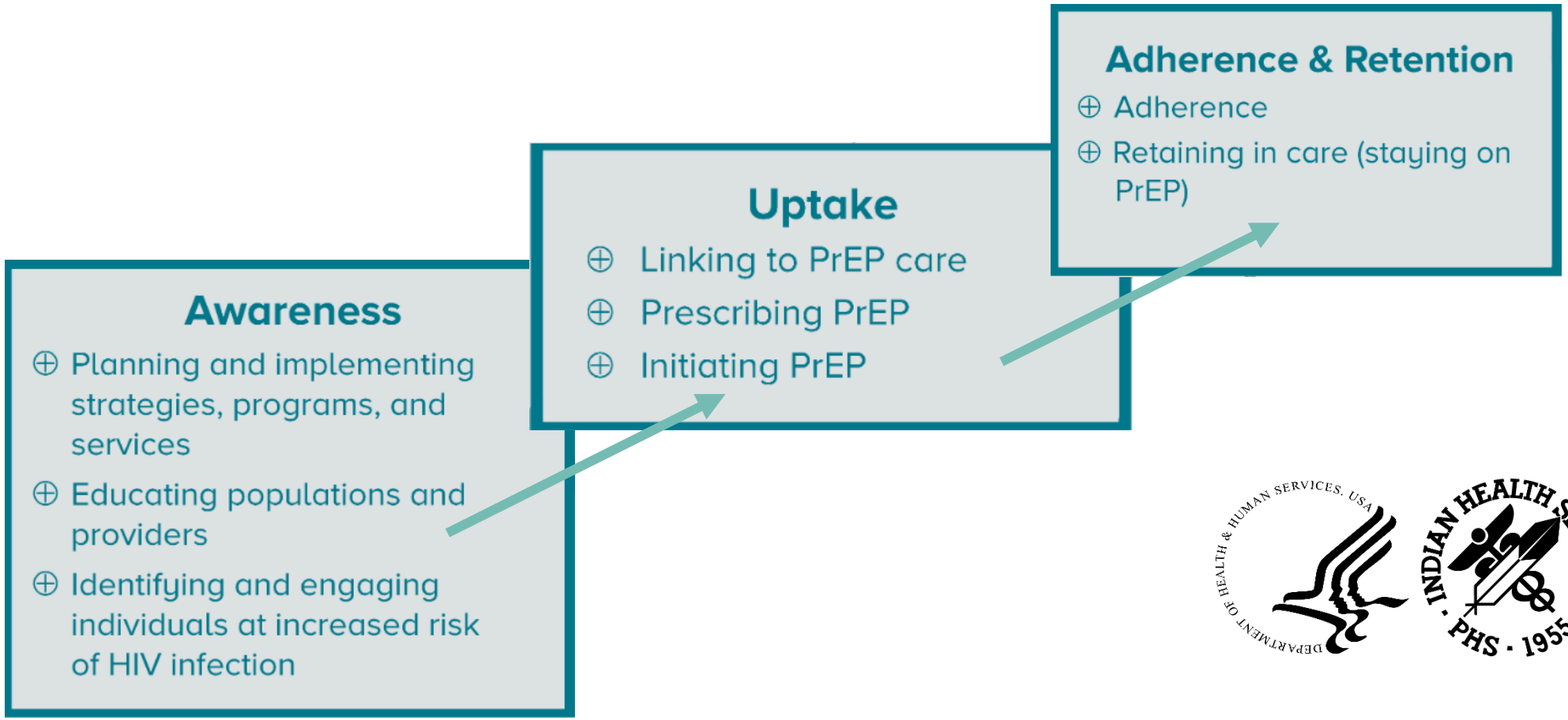
Only for patients whose risk factors for HIV include sexual transmission only (not for PWID)

Adults and adolescents who weigh at least 35 kg (77 lb)

CAB injections may be a good option for PrEP for people who

- Have problems taking oral PrEP as prescribed
- Prefer getting a shot every 2 months instead of taking oral PrEP
- Have serious kidney disease that prevents use of oral PrEP medications

Continuum of PrEP Care



*Modified from Nunn, et al. Defining the HIV pre-exposure prophylaxis care continuum. *AIDS* 2017; 31(5):731-734.

Role of the PCP in PrEP

Consider PrEP for at-risk individuals

- Take a good sexual health history to find at-risk individuals
- Ask about injection drug use

Discuss with the patient the principles of PrEP

Offer brochures for PrEP in your office

Decide:

- Is this something I will offer my patient?
- If not me, who? If not now, when?

Post-Exposure Prophylaxis (PEP)

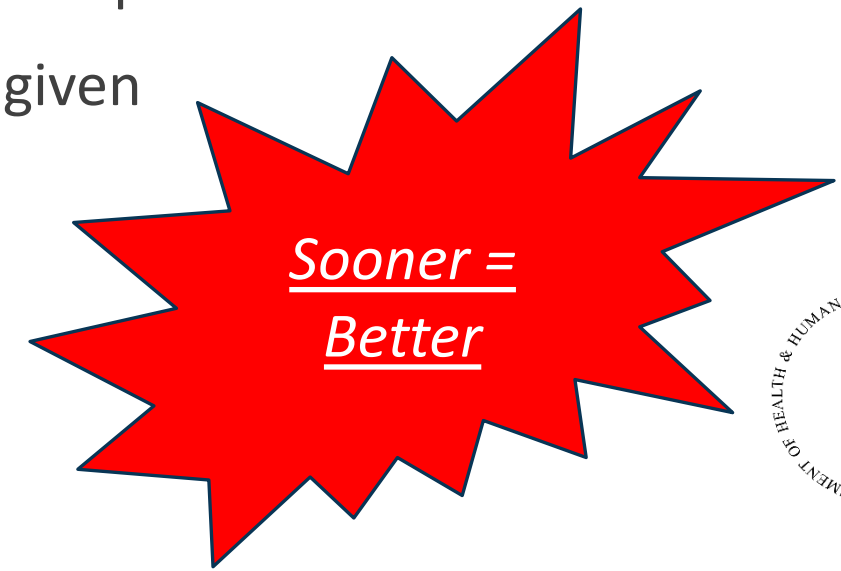
Exposure to HIV is an Emergency!

The ideal time to administer PEP – within 2 hours of exposure!

- Consider giving the first dose, aka emergency dose, immediately upon presentation

Can be given up to 72 hours after exposure

After 72 hours, it should not be given



Who should be offered PEP?

Individuals who are HIV negative or unknown HIV status who:

- May have been exposed to HIV during sex
- Shared needles or other equipment (works) to inject drugs
- Were sexually assaulted
- May have been exposed to HIV at work

Determining Exposure Risk

Negligible Risk for HIV Acquisition

Exposure of
Vagina, rectum, eye, mouth or other mucous membrane, intact or nonintact skin, or percutaneous contact

With
Urine, nasal secretions, saliva, sweat, or tears if not visibility contaminated with blood

Regardless
Of the known or suspected HIV status of the source

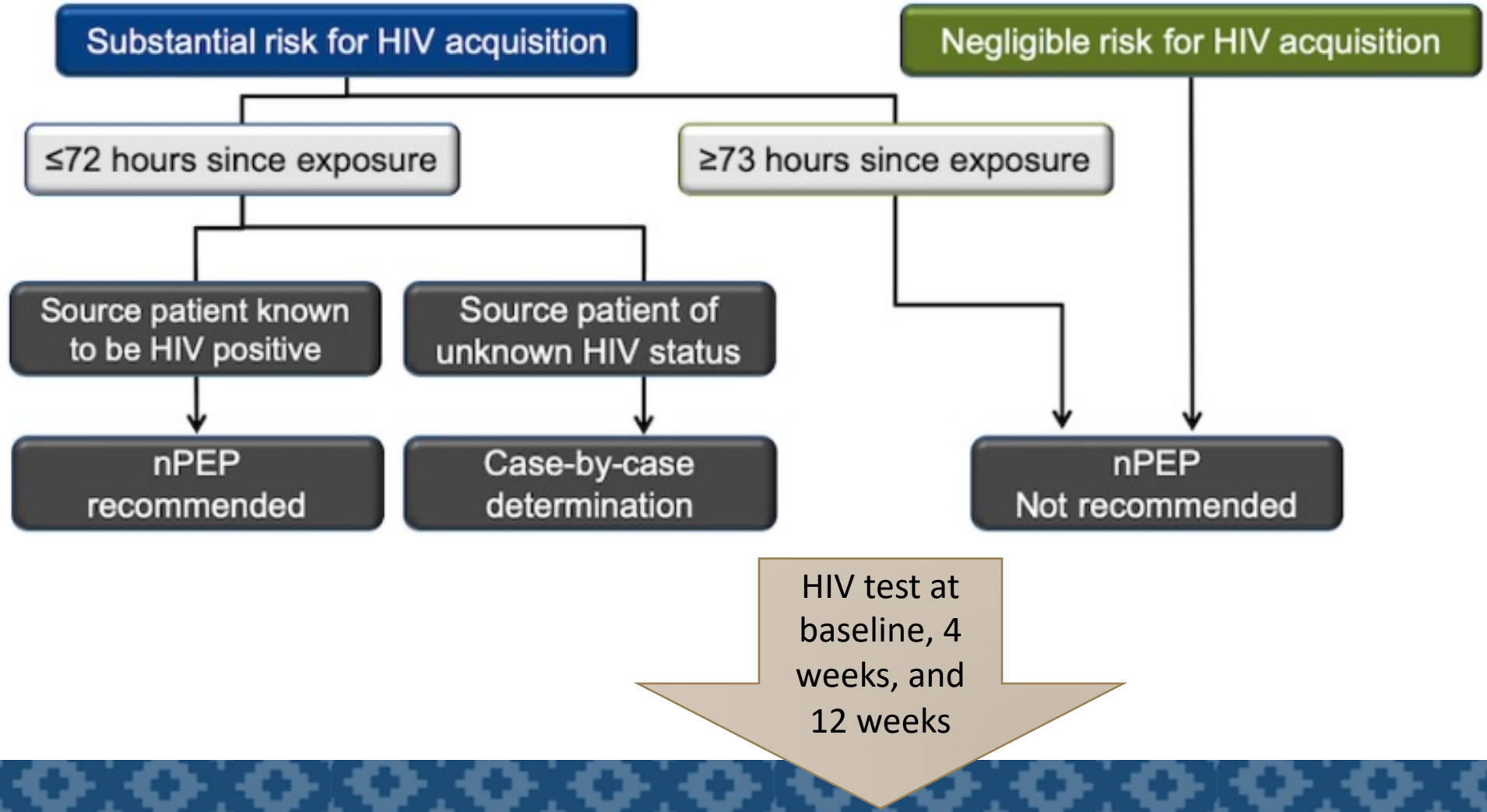
Substantial Risk for HIV Acquisition

Exposure of
Vagina, rectum, eye, mouth or other mucous membrane, nonintact skin, or percutaneous contact

With
Blood, semen, vaginal secretions, rectal secretions, breast milk, or any body fluid that is visibly contaminated with blood

When
The source is known to be HIV-positive

Algorithm for Evaluation and Treatment of possible nonoccupational HIV exposures



Recommended Labs for nPEP evaluation

Baseline	4-6 weeks	3 months	6 months
☐ HIV Ab/Ag test	☐ HIV Ab/Ag test	☐ HIV Ab/Ag test	☐ Syphilis serology*
☐ Hep B Surface Ab	☐ Cr/AST/ALT**		☐ HIV Ab/Ag test if acquired HCV from the exposure
☐ Hep B Surface Ag	☐ Syphilis serology*		
☐ Hep B core Ab	☐ Gonorrhea*^		☐ Hep B serologies if not immune
☐ Hep C Ab	☐ Chlamydia*^		☐ Hep C Ab
☐ Cr/AST/ALT	☐ Pregnancy*		
☐ Syphilis serology*			
☐ Gonorrhea*^			
☐ Chlamydia*^			
☐ Pregnancy*			

*Sexual exposure only; ^Screen all sites of contact; **Only if taking oral PEP

Recommended Regimens for PEP

Adults and adolescents aged ≥13 years with normal renal function (creatinine clearance ≥60 mL/min), including pregnant women

Preferred Regimens:

- Raltegravir (400 mg twice daily) plus tenofovir DF-emtricitabine (300-200 mg once daily)
- Dolutegravir (50 mg once daily) plus tenofovir DF-emtricitabine (300-200 mg once daily)

Alternative Regimen:

- Darunavir (800 mg once daily) plus ritonavir (100 mg once daily) plus tenofovir DF-emtricitabine (300-200 mg once daily)

Adults and adolescents aged ≥13 years with renal dysfunction (creatinine clearance ≤59 mL/min)[+]

Preferred Regimens:

- Raltegravir (400 mg twice daily) plus zidovudine (dose adjusted) plus lamivudine (dose adjusted)
- Dolutegravir (50 mg once daily) plus zidovudine (dose adjusted) plus lamivudine (dose adjusted)

Alternative Regimen:

- Darunavir (800 mg once daily) plus ritonavir (100 mg once daily) plus zidovudine (dose adjusted) plus lamivudine (dose adjusted)

[a]These recommendations do not reflect current Food and Drug Administration-approved labeling for antiretroviral medications listed in this table.

[b]Ritonavir is used in clinical practice as a pharmacokinetic enhancer to increase the trough concentration and prolong the half-life of darunavir, lopinavir, and other protease inhibitors. Ritonavir is not counted as a drug directly active against HIV in the above "3-drug" regimens.

[+]The dose adjustments for zidovudine and lamivudine are made based on degree of renal function

Costs

FTC/TDF: generics available and priced at <$1/pill
- On IHS National Core Formulary

FTC/TAF: no generic options
- Not currently on IHS National Core Formulary
- Limited to men/trans women
- Patent protected until 2032

Long-Acting Injectable Cabotegravir: ~$25,000/year out of pocket
- Not currently on IHS National Core Formulary
- Covered by some insurers, patient assistance programs available

DoxyPEP (Post-Exposure Prophylaxis)

Take 1 dose, **Doxycycline 200mg within 72 hours** of having condomless sex

Repeat as needed, but no more than 1 dose within 24 hours

DoxyPEP

Open-label DoxyPEP study (2022): 501 MSM and TGW living with HIV (N=174) or on HIV PrEP (N=327) in San Francisco and Seattle

Randomized to either take DoxyPEP up to once daily (intervention group) vs no medication prophylaxis (control group).

Primary endpoint was incidence of at least 1 STI per follow-up quarter

Study ended early after the data safety monitoring board found a **66% reduction in STIs overall** for the intervention group

In the intervention arm, 86% reported taking doxycycline always/often and 71% reported never missing doxycycline

DoxyPEP

Further analyses are needed to determine the effects of intermittent doxycycline use on antimicrobial resistance and long-term effects on the gut

Studies with promising results do not include females assigned at birth at this time. One study conducted in Kenya did not show a significant decrease in STIs, but confounding factors may have contributed

Doxycycline is contraindicated for pregnant people. Doxycycline may cause fatty liver disease in pregnant people and fetal tooth staining and decay

CDC/IHS Position

CDC has acknowledged that providers and patients have started to use DoxyPEP off-label and provided considerations for its use:

- Reminder that current studies with promising results are only inclusive of MSM and transgender women
- Only Doxycycline has been studied, no other antibiotics

IHS acknowledges that any current use of DoxyPEP or DoxyPrEP is considered off-label

- IHS does not yet officially endorse use of DoxyPEP or DoxyPrEP as the standard of care. Any use of DoxyPEP or DoxyPrEP will be made at the individual provider level
- Currently awaiting CDC to publish guidelines

Implementation

Who should receive DoxyPEP?

- MSM/TGW on HIV PrEP or living with HIV.
- If not on HIV PrEP, MSM/TGW with history of STIs within the past 12 months, sex work, chemsex

3 month schedule: Provide enough meds and replenish after STI screening

If having signs and symptoms of an STI: patient's should come in for immediate screening and treatment per traditional protocol, and abstain until 1 week post treatment

Resources

- **HIV/PrEP Warm Line: (800) 933-3413**
  - HIV/AIDS Management | National Clinician Consultation Center (ucsf.edu)
  - Clinicians are available Monday through Friday, 9:00 a.m. to 8:00 p.m. EST. Voice mail is available 24 hours a day.

- **Indian Country ECHO**
  - http://www.indiancountryecho.org
  - HIV ECHO, 2nd Wednesday of every month
    2-3 pm ET

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