

PrEP: Let's talk about safe sex

Presentation by: Paris Collier, MD

Sponsored by the Reproductive Health Track and Dr. Moe, MD

Objectives

- Discuss the basics of HIV acquisition
- Highlight groups that are at highest risk of HIV acquisition and may benefit most from PrEP
- Compare different formulations of PrEP for preventing acquisition of HIV
- Empower providers to feel confident in discussing HIV and PrEP with their patients
- Discuss PEP and options for STIs beyond HIV

HIV basics

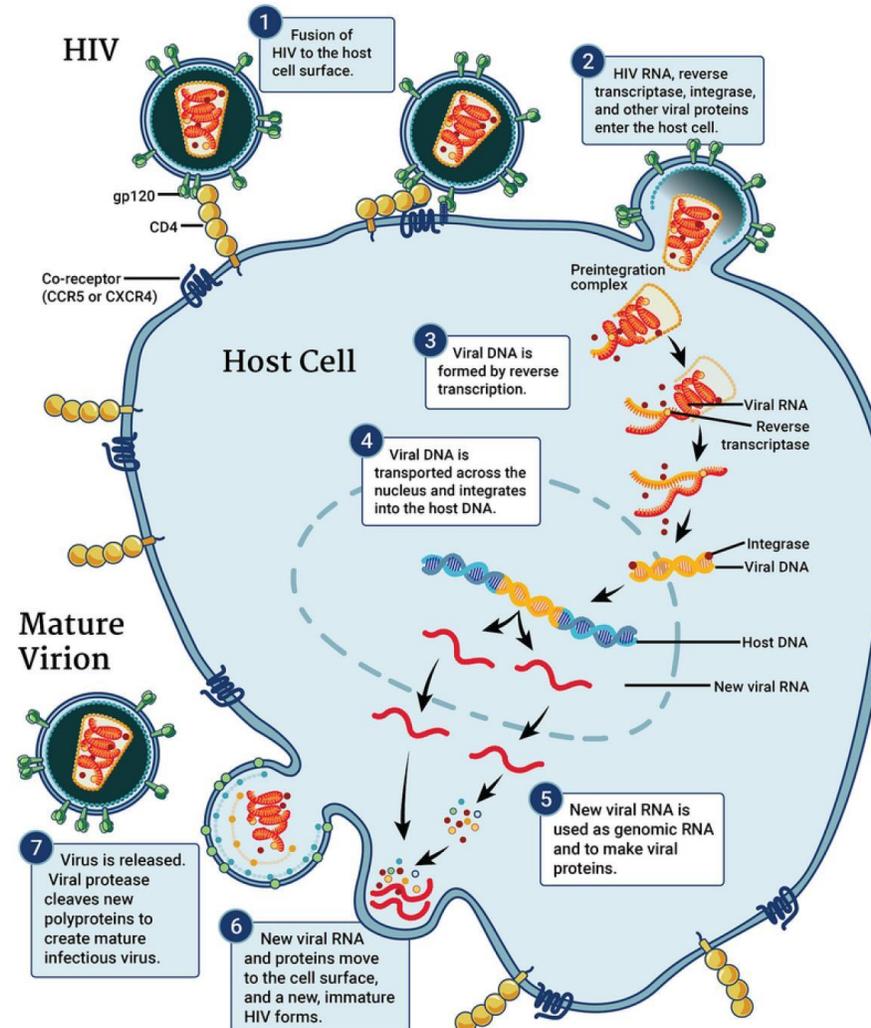
- What is HIV?
 - Human immunodeficiency virus, a retrovirus that originated in primates and made the jump to humans that causes AIDS (acquired immunodeficiency syndrome)
- What's the difference between HIV and AIDs?
 - HIV is the virus that can lead to the disease AIDS
 - AIDS is defined as CD4 count <200
 - AIDS defining illness
- How is HIV spread?
 - Sexual transmission
 - IV drug use with contaminated supply
 - Vertical transmission- mother to infant



Potential AIDS Defining Event	N	Screening Rate
Burkitt's or immunoblastic lymphoma or primary lymphoma of brain	2,980	3.0%
Encephalopathy	2,066	5.0%
Invasive cervical cancer	958	4.4%
Candidiasis of bronchi, trachea, lung, or esophagus	542	7.0%
Histoplasmosis, disseminated or extrapulmonary	370	2.2%
Wasting /Cachexia	350	4.3%
Disseminated herpes or herpes meningitis	94	13.8%
<i>M. avium</i> or <i>M. kansasii</i> , disseminated or extrapulmonary	67	13.4%
<i>Pneumocystis carinii</i> pneumonia	48	10.4%
Kaposi's sarcoma	35	8.6%
Progressive multifocal leukoencephalopathy	20	0.0%
CMV pneumonia or retinitis	16	25.0%
Coccidioidomycosis, disseminated or extrapulmonary	13	7.7%
Cryptococcosis, extrapulmonary	11	9.1%
Misc (toxoplasmosis of brain, chronic isosporiasis, salmonella septicemia, chronic cryptosporidosis)	5	20.0%

Photo: HIV Testing and Monitoring in Privately Insured Members Recently Diagnosed with Potential AIDS Defining Events

How does HIV infect the host?



Who is at greatest risk of contracting HIV?

- MSM- men who have sex with men
- Transgender women
- Sex-workers or people who exchange sex for other goods
- Unhoused or unstable housing
- IV drug users
- Lower SES
- Receptive partners

Clinical stages of HIV infection

- According to the WHO(World Health Organization) classification
- Primary HIV: asymptomatic or retroviral syndrome
- Stage 1: asymptomatic or persistent generalized lymphadenopathy
- Stage 2: Unexplained moderate weight loss (<10%), recurrent fungal/viral/bacterial infections
- Stage 3: Unexplained severe weight loss (>10%), chronic diarrhea, fever, persistent opportunistic infections
- Stage 4: AIDs defining illnesses

What is PrEP?

- Pre-exposure (prior to intercourse) prophylaxis
- Using ART (antiretroviral therapy) to prevent infection in high risk individuals
- Medication taken prior to exposure and for one month after exposure



Who would benefit from PrEP?

- Men who have sex with men (MSM)
- Persons with HIV positive partners
- Inconsistent or no condom use
- Recent STIs within 6 months
- Individuals who inject drugs
- Persons who exchange sex for money



HIV PrEP options

- Oral
 - Truvada
 - Descovy
- Injectables
 - Apretude
 - *Coming soon*
 - Lenacapavir



Prelim workup prior to PrEP

- HIV negative test and no signs of acute HIV infection
- Normal renal function
- For insurance coverage:
 - Documented criteria for need for HIV prevention

Truvada

- tenofovir disoproxil fumarate and emtricitabine
- Requires renal and liver considerations
- Contraindicated alone for use in persons with HIV
- Need to know Hep B status
- Can lead to:
 - Renal impairment
 - Bone loss and mineralization defects
 - Lactic acidosis
 - Hepatomegaly or steatosis

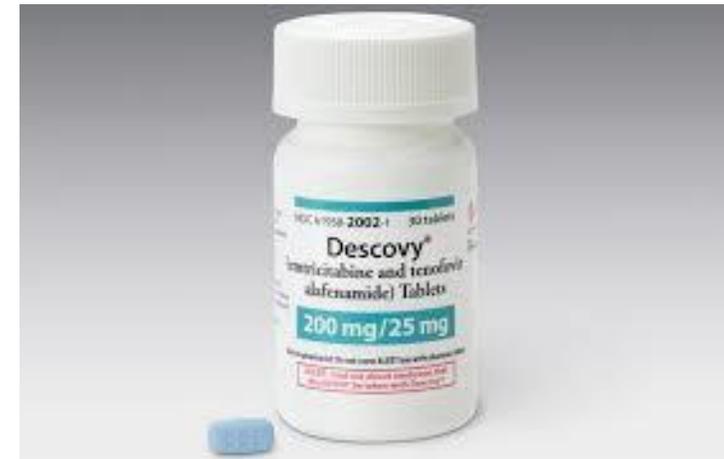


Side Effects:

- Nausea
- Fatigue
- Headache
- Dizziness
- Depression
- Insomnia
- Dreams
- Rash

Descovy

- Tenofovir alafenamide fumarate and emtricitabine
- Requires renal and liver considerations
- Contraindicated alone for use in persons with HIV
- Need to know Hep B status
- Can lead to:
 - Renal impairment (lower rates)
 - Lactic acidosis
 - Hepatomegaly or steatosis



Side Effects:

- Nausea
- Diarrhea

Apretude

- Cabotegravir and rilpivirine
- The every two month* injectable
 - Can trial oral cabotegravir before LAI
 - *After a 2 monthly doses to start
- Requires renal and hepatic considerations
- Can lead to:
 - Hypersensitivity- hence trial before inject
 - Interactions with psychiatric drugs



Side Effects:

- Headache
- Diarrhea
- Gaitigue
- Sleep issues
- Abdominal pain
- Vomiting
- Rash
- Appetite changes

Management of care for individuals on PrEP

Labs every 3 months

- HIV
- STI screening
- Pregnancy test

Every 6 months

- CMP

Every 12 months

- Continuation of medication necessary?

Every visit

- Side effects and risk behaviors

The future? Lenacapavir

- The every 6 month injection!

Injectable Cabotegravir vs Injectable Lenacapavir: Key Differences

	Cabotegravir (CAB)	Lenacapavir (LEN)
ARV drug class	Integrase Strand Transfer Inhibitor	Capsid Inhibitor
Injection type	Intramuscular	Subcutaneous
Injection site	Gluteal muscle (buttocks)	Abdomen
Injection volume	One 3 ml injections	Two 1.5 ml injections
Frequency/interval	First injection followed by a second one month later, then every 2 months	First injection along with two oral tablets, followed by two more tablets on day 2 and then injections every 6 months
Efficacy	Very high efficacy in all populations	Very high efficacy among cisgender women; data in other populations pending
Regulatory approvals and guidelines	19 regulatory approvals as of June 2024; WHO recommendation as additional prevention option in July 2022	Regulatory submissions and potential normative guidance anticipated in 2025
Price in LMICs	±\$180/year	TBD
Developer/Manufacturer	ViiV Healthcare	Gilead Sciences
Generic Manufacturers	Three licenses through MPP to Aurobindo, Cipla and Viartis – all Indian-based manufacturers, with expected earliest market access in 2027	Gilead announced its intention to sign direct voluntary licenses with generic drug makers in several regions

Whoops...
let's talk
about PEP



HIV PEP

- A short course of ART taken after a potential exposure to HIV
- As soon as possible after exposure- best within 72 hrs
- 3 drug cocktail - 28 day course
 - Truvada- 2 drugs
 - Plus one off
 - Dolutegravir
 - Raltegravir

Doxycycline PEP

- Reduces the risk of chlamydia, gonorrhea, or syphilis
- 200mg of doxycycline within 24-72 hours of intercourse
- Microbial resistance?
- GI side effects



Resources for providers and their patients

- [CDC guidelines](#)
- Up-to-date
- Gilead brochures- from the developers
- [NIH](#)

Learning question

A 35-year-old woman comes to employee health services 30 minutes after a work-related incident. She works as a phlebotomist and reports that blood splashed into her right eye when she was drawing blood from a 30-year-old male patient. Immediately following the incident, she flushed her eye with water for several minutes. The patient from whom she drew blood was admitted for hemoptysis, weight loss, and night sweats. He is an intravenous drug user and is sexually active with several male and female partners. The phlebotomist has no history of serious illness and takes no medications. Her immunizations are up-to-date. Physical examination shows no abnormalities. In addition to drawing her blood for viral serologies, which of the following is the most appropriate next step in management?

☰ KEY INFO

🔍 ATTENDING TIP

📄 LABS

...

A Start raltegravir, tenofovir, and emtricitabine

×

B Start zidovudine

×

C Start tenofovir and emtricitabine

×

D Provide reassurance

×

E Start sofosbuvir and velpatasvir

×

F Administer hepatitis B immune globulin and vaccine

×

A

Start raltegravir, tenofovir, and emtricitabine

52%



The combination of raltegravir (or dolutegravir), tenofovir, and emtricitabine is the preferred three-drug regimen for HIV postexposure prophylaxis (PEP) following high-risk occupational exposure. The overall risk of transmission is very low but depends on multiple factors, including the type of exposure, the viral load of the source patient, and, in the case of a needle-stick injury, the type of needle involved. While the HIV status of the source patient is unknown, he has multiple risk factors for HIV infection (IV drug user, sexually active), and **PEP should be offered as soon as possible**, ideally within a few hours but at least within 72 hours.

Other steps that should be taken immediately after occupational exposure include testing the source person for HCV (HCV Ab or HCV RNA), HBV (HBV surface Ag), and HIV (HIV Ag/Ab or HIV Ab, rapid test preferred). Nucleic acid amplification testing (e.g., viral load testing) should not be performed as an initial screening test for HIV because it has a higher rate of false positives than antibody-based tests, and, furthermore, an undetectable HIV viral load in the source patient or the exposed patient does not rule out HIV transmission.

 Human immunodeficiency virus infection GIVE FEEDBACK



Questions?



Sources

- About HIV and AIDS 6th edition, Paul E. Sax
- CDC
- WHO
- NIH
- AMBOSS
- Up to Date
- Amboss for questions seen in this presentation