PrEP Implementation in Real-Life (Case-Based Presentation)

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ASIA-PACIFIC HIV CLINICAL FORUM

PrEP Implementation in Real Life

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Case 1

Mr. A

- 32 years old, single MSM
- Sales manager
- Came to your clinic for PEP
- Had unprotected insertive anal intercourse at the sauna yesterday
- Sought for PEP service second time this year; also had used PEP several times in other hospitals in the last three years
- No previous history of STIs
- Had received HBV vaccination at childhood

Mr. A

"I have HIV tests almost every three months. My last test result was negative when I completed PEP three months ago."

"Usually I used condom, but sometimes if the partner asked for barebacking at the sauna, I wouldn't wear it and regretted it."

"Oh yes I heard about PrEP before. I don't want to take pills every day. I don't have sex often, probable once weekly. Though I know drugs like PEP can prevent HIV. "

HIV combo(-), syphilis(-)
Anti-HBs(+), HBsAg(-), anti-HCV(-)
Normal liver and kidney functions

How would you suggest him?

From "Crystal Boys" (2020)

Management of recent HIV exposure with PEP

People who have been exposed to HIV in the preceding 72 hours should be offered PEP. PEP should be offered as soon as possible after exposure. WHO recommends PEP consisting of TDF/3TC (or FTC), preferably combined with a boosted protease inhibitor, for 28 days. After 28 days of PEP, PrEP can be started without a gap if the HIV test remains negative and there is substantial ongoing risk of HIV acquisition *(9)*. In people with ongoing potential exposure to HIV, there should be no gap between finishing PEP and starting PrEP.

WHO PEP GUIDANCE[3]

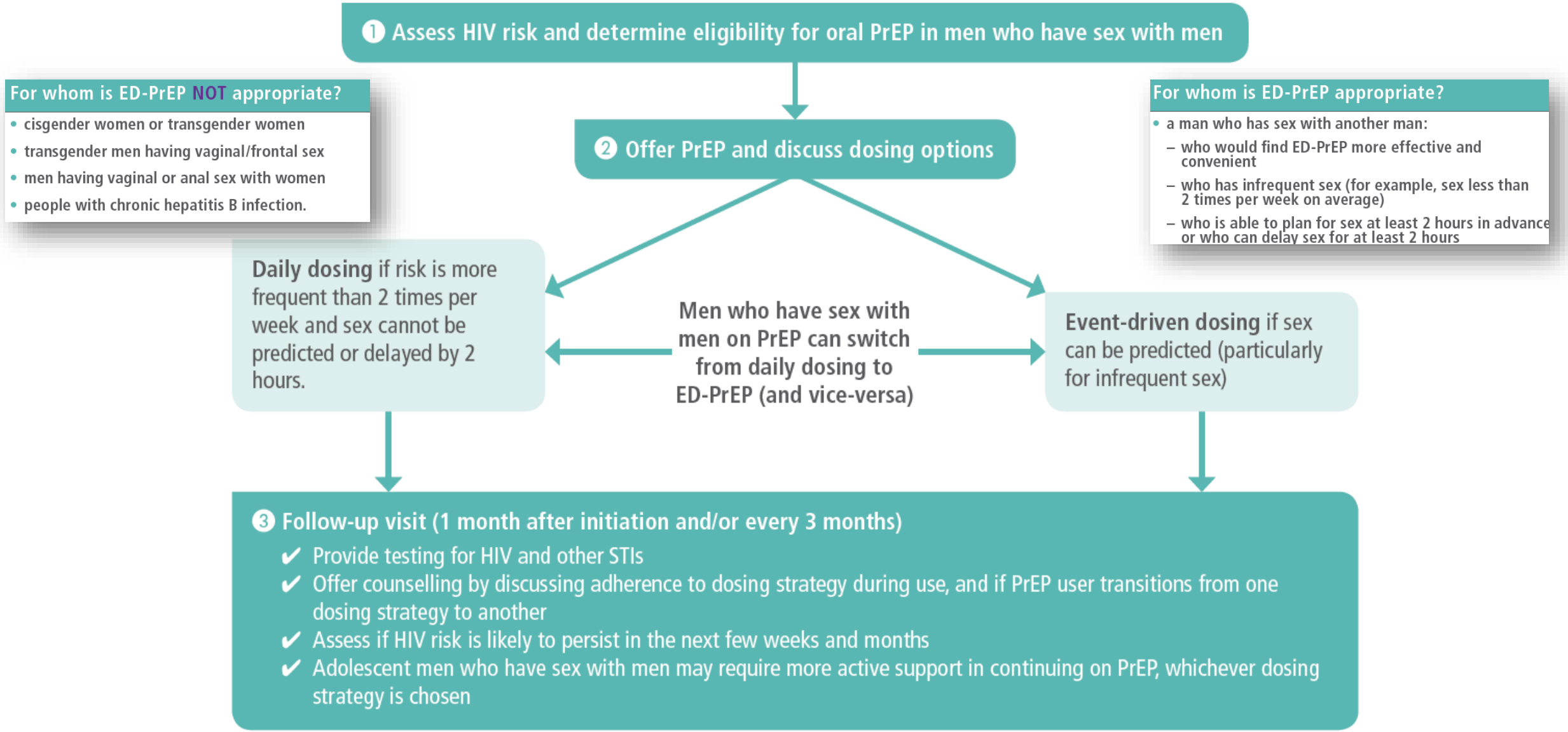
TDF + 3TC (or FTC) is recommended as the preferred backbone regimen for HIV post-exposure prophylaxis for adults and adolescents. (*Strong recommendation, low-quality evidence*)

Lopinavir/ritonavir (LPV/r) or atazanavir/ritonavir (ATV/r) is recommended as the preferred third drug for HIV post-exposure prophylaxis for adults and adolescents. (*Conditional recommendation, very low quality evidence*)

Where available, raltegravir (RAL), darunavir/ritonavir (DRV/r) or efavirenz (EFV) can be considered as alternative options.

WHO Implementation tool for pre-exposure prophylaxis of HIV Infection. Module 1: Clinical. WHO. 2017

Fig. 2. Proposed algorithm for PrEP providers when considering how to offer ED-PrEP



Event-driven oral pre-exposure prophylaxis to prevent HIV for men who have sex with men: Update to WHO's recommendation on oral PrEP. WHO. 2019

Case 2

Mr. B

- 25 years old, single MSM
- Trainer in the gym
- Came to your clinic for PrEP
- Had unprotected insertive anal intercourse last weekend
- Had used “ice” or crystal methamphetamine during sex almost weekly
- Had history of gonococcal urethritis one year ago
- Never used PEP before
- Had received HBV vaccination at childhood

Mr. B

"I used saliva-based HIV self-test two months ago and it was negative."

"Last time I had condomless anal sex it was last weekend, and the time before the last [condomless anal sex] was two weeks ago."

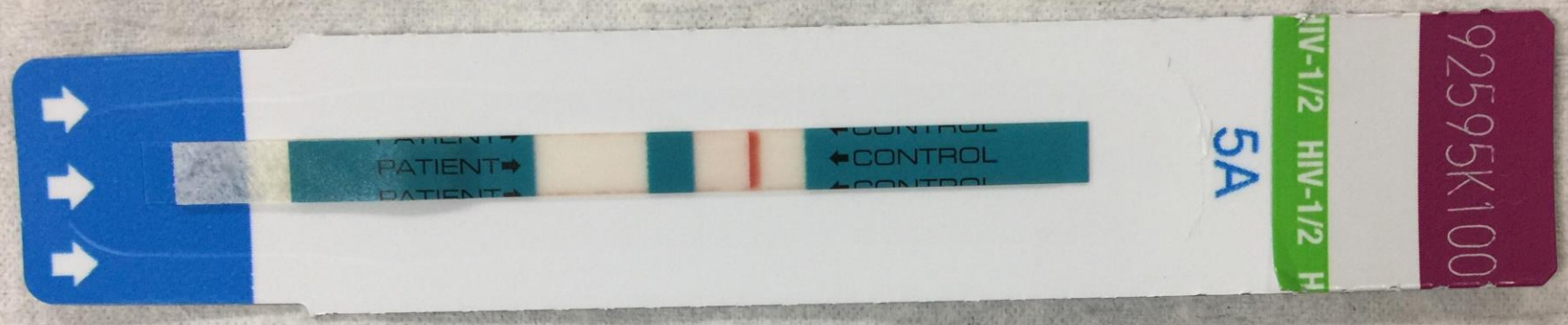
"I started to had 'high fun' one year ago and 'slamming' just recently. We usually don't wear condom when we are high because it's not comfortable."

"I don't have fever, sore throat, headache, rash, or diarrhea now."

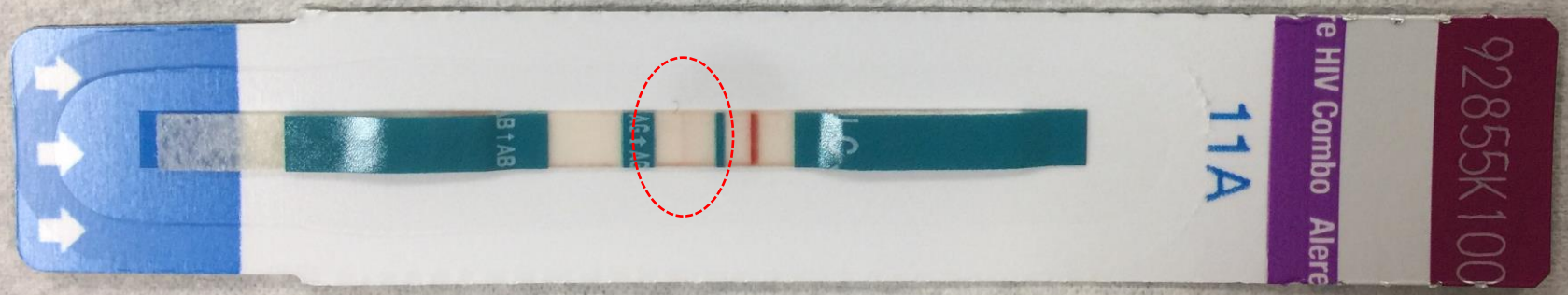
What would you do first?

From "The Teacher" (2019)

Third-generation HIV rapid test



Fourth-generation HIV rapid test



Signs and symptoms of acute HIV infection

Acute HIV infection is often symptomatic, including signs and symptoms of fever, sore throat, aches and pains, lymphadenopathy (swollen glands), mouth sores, headache or rash. The signs and symptoms of acute HIV infection are not specific, and the majority of people with acute viral syndromes will have infections other than HIV *(5, 33)*. Nonetheless, if an acute viral syndrome is present in someone reporting condomless sex in the past 14 days, acute HIV infection should be suspected. Starting PrEP in the setting of acute infection involves a risk of drug resistance, even if the seroconversion is detected within four weeks of starting PrEP *(23)*.

Considerations for using 4th generation assays and NAT technologies for HIV testing in PrEP programmes

Early detection of HIV, including acute infection, allows earlier diagnosis and linkage to treatment, and reduces the risk of developing HIV drug resistance from starting PrEP while acutely infected *(3–5)*.

The risk of acute infection in people who seek PrEP services is expected to range between 1:50 and 1:300 at baseline depending on the underlying HIV incidence in the population *(8)*. Because of this risk and where feasible, there may be benefits to using assays that have the ability to detect HIV earlier, such as 4th generation serology assays that detect HIV-1/2 antibodies and HIV p24 antigen, and NAT technologies (see Fig. 4), for HIV testing prior to starting or restarting PrEP.

WHO Implementation tool for pre-exposure prophylaxis of HIV Infection. Module 1: Clinical; Module 10: Testing. WHO. 2017

Case 3

Ms. C

- 34 years old, heterosexual woman
- Office worker
- Came to your clinic with her boyfriend for PEP
- Her boyfriend lives with HIV and has been on suppressive ART for many years
- They would get married and planned to have children
- No history of injection drug use
- No history of STIs

Ms. C

"I know my boyfriend has HIV and we have been together for three years. I really want to get married with him. We are considering to have baby without artificial reproductive technology."

"Last time I had rapid HIV test three months ago and it was negative."

"We are still using condom while having sex. Last time we had sex without condom it was more than half year ago. Perhaps we will stop using condom if I start PrEP and prepare for having baby."

How would you suggest her?

From "Dear Ex" (2018)

Panel's Recommendations

For Couples Who Want to Conceive When One or Both Partners are Living with HIV:

- Expert consultation is recommended to tailor guidance to couples' specific needs **(AIII)**.
- Both partners should be screened and treated for genital tract infections before attempting to conceive **(AII)**.
- Partners with HIV should achieve sustained viral suppression (e.g., two recorded measurements of plasma viral loads that are below the limits of detection at least 3 months apart) before attempting conception to maximize their health, prevent HIV sexual transmission **(AI)** and, for pregnant persons with HIV, to minimize the risk of HIV transmission to the infant **(AI)**.
- For couples with differing HIV statuses, sexual intercourse without a condom allows for conception with effectively no risk of sexual HIV transmission to the partner without HIV when the partner with HIV is on antiretroviral therapy (ART) and has achieved sustained viral suppression **(BII)**.
- Additional guidance may be required in the following scenarios:
  - The partner with HIV has not achieved sustained viral suppression or the partner's HIV viral suppression status is unknown,
  - There are concerns that the partner with HIV may be inconsistently adherent to ART during the periconception period, *or*
  - The provider needs to share additional information with the patient regarding options to prevent sexual HIV transmission during the periconception period.
- In these circumstances, providers may choose to counsel their patient about the following options:
  - Administration of antiretroviral pre-exposure prophylaxis (PrEP) to the partner without HIV is recommended to reduce the risk of sexual acquisition of HIV **(AI)**. Timing condomless sex to coincide with ovulation (peak fertility) is an approach that can optimize the probability of conception **(AIII)**.
  - Even within couples with differing HIV statuses who attempt conception when the partner with HIV has achieved viral suppression, some partners without HIV may still choose to take PrEP **(CIII)**.

Recommendations for the use of antiretroviral drugs in pregnant women with HIV infection and interventions to reduce perinatal HIV transmission in the United States. DHHS. 2019

Pregnancy

PrEP may be offered or continued during pregnancy in women at substantial risk of HIV acquisition.

Many serodiscordant couples desire pregnancy and PrEP can be considered as a strategy for safer conception *(60)*. In Sub-saharan Africa, some HIV-negative women continue to be at high risk of HIV infection during pregnancy and breastfeeding *(61, 62)*. HIV infection acquired during pregnancy is more likely to be transmitted to the infant *(3, 63)*. There were no differences in pregnancy outcomes, infant birth weight or congenital malformations in PrEP users compared to placebo users among serodiscordant couples in the Partners PrEP study *(50)*. TDF, in combination with other medicines, is frequently used for HIV treatment. Use of TDF for hepatitis B treatment has not been associated with adverse pregnancy outcomes *(50)*. Therefore, PrEP may be offered or continued during pregnancy if the pregnant woman remains at substantial HIV risk.

Breastfeeding

PrEP may be offered or continued during breastfeeding in women at substantial risk of HIV acquisition.

Although experience with PrEP during breastfeeding is still lacking, there is substantial experience with TDF/FTC during breastfeeding by women with HIV on ART. TDF and FTC are secreted in breast milk at very low concentrations (0.3–2% of the levels required for treatment of HIV infection in infants) *(64, 65)*. If a woman becomes infected with HIV during breastfeeding, the risk of transmission to her infant may be higher than if she is already infected because of high viral load soon after seroconversion *(3, 63)*. Therefore, PrEP may be continued or offered during breastfeeding.

WHO Implementation tool for pre-exposure prophylaxis of HIV Infection. Module 1: Clinical. WHO. 2017

Case 4

Mr. D

- 17 years old, single MSM
- High school student
- Referred to your clinic by LGBT NGO for PEP
- Had unprotected receptive anal intercourse with someone from dating app yesterday
- Had PEP once one year ago
- Denied chemsex
- History of anogenital warts
- Had received HBV vaccination at childhood

Mr. D

"I have HIV tests almost every 6 months. I would always wear condom when I had sex, but sometimes people took off their condoms without telling you."

"When I was with my ex- boyfriend, we didn't use condom either because we trusted each other."

"This time I hook up with this guy on dating app. I didn't tell him how old I really am."

"I had PEP one year ago. I told my parents because I couldn't afford PEP. They were really angry and almost kicked me out of home. I don't think they will accept me as gay."

Should he take PrEP?

From "Your Name Engraved Herein" (2020)

- **Age of consent for providing HIV testing and PrEP.**

  HIV testing is the entry point to PrEP services: A confirmed negative test result is required before starting PrEP, and regular testing is required thereafter for PrEP users to monitor break-through infections. Thus, to use PrEP, clients must be able to consent to testing. Some countries, such as South Africa *(99)*, have adopted legislation that reflects an adolescent's evolving capacity to consent independently for specific health services and interventions.

  Ministries of health in countries implementing PrEP are encouraged to review their HIV testing age of consent policies in light of the need to uphold adolescents' rights to make choices about their own health and well-being (with consideration for differences in levels of maturity and understanding).

- **Provision of PrEP.** Country restrictions on prescribing to younger age groups without parental consent may need review. Often, restrictions on prescription are due to concerns about safety in prescribing medications to individuals at younger ages. The United States Food and Drug Administration (FDA) has recently approved the fixed-dose combination of TDF/FTC for PrEP, in combination with safer sex practices, to reduce the risk of sexually acquired HIV in adolescents at risk of HIV acquisition who weigh at least 35 kg *(100)*. The extended indication to include adolescents was based on data from the ATN 113 study, which demonstrated that TDF/FTC is safe and well tolerated in HIV uninfected at-risk adolescent males ages 15–17 years.

  Countries should assess their current legal frameworks and see what the limitations and possibilities are for offering PrEP to adolescents without parental/guardian consent, if parents/guardians are not supportive.

- **Reporting requirements.** Legal reporting requirements may have to be considered in situations where reporting is mandatory should a young person disclose engaging in sexual activity with an adult or, in the case of key populations, criminalizes activities such same-sex behavior, sex work or substance use. Health-care providers need to feel protected in order to provide PrEP to adolescents.

WHO Implementation tool for pre-exposure prophylaxis of HIV Infection. Module 12: Adolescent and young adults. WHO. 2018

Table 1. Ideas that have been used to support adherence counselling for adolescents

Frequent contact	• To maximize PrEP engagement and continuation, adolescents may need to be seen more often. • Ask a young person, "When would you like to come back?" and help young people to cope with the need for frequent follow-up. • Offer interim contact between visits if desired, including text messages or phone calls.
Counselling strategies	• The relationship between the counsellor and the patient is a critical component of success. Trust has to be earned through genuine and nonjudgmental interactions. • More directive approaches to counselling may work better for adolescents. Counsellors should be active, asking questions and suggesting topics of discussion. • Skills-building activities can be included in counselling with adolescents (for example, role-playing, decisional balance activities, homework).
Additional support	• Discuss supportive others in the adolescent's life: Explore who might be a PrEP ally for them. • Consider peer-support strategies such as adherence buddies, social support groups and adherence clubs. • Provide information on available social media support groups such as Whatsapp, chat forums and others. • Provide adherence tools that are adolescent-friendly, such as attractive bags, pill containers that are key chains, lipstick holders and so forth. • Discuss economic barriers such as transportation costs. • Ask about gender-based violence if indicated. • Refer to other services such as voluntary medical male circumcision, STI diagnosis and treatment, contraception and harm reduction alongside PrEP.

WHO Implementation tool for pre-exposure prophylaxis of HIV Infection. Module 12: Adolescent and young adults. WHO. 2018

Lesson Learned From Real-life Cases

- Issues regarding different populations
  - **MSM**: event-driven dosing ("2-1-1") is recommended if the clients have no HBV infection, be able to plan sex, and have sex infrequently.
  - **Serodiscordant couples**: HIV-negative women can safely use PrEP during pregnancy and breastfeeding as an additional prevention for HIV regardless of male partner's viral load.
  - **Adolescents and young adults**: PrEP is indicated for at-risk individuals though retention in care, adherence to medication, and other structural barriers mandate more multidisciplinary support.
- PrEP can be initiated immediately after completion of PEP if the clients remain HIV-negative and at risk for HIV infection.
- Acute HIV infection should be considered in individuals who have condomless sex in the past 14 days with acute retroviral syndrome, and screening with a fourth-generation Ag/Ab combo test is recommended.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