Putting Prevention into Practice

An Evidence-Based Approach

Screening for HIV Infection and Preexposure Prophylaxis for the Prevention of HIV Infection

Howard Tracer, MD, Medical Officer, U.S. Preventive Services Task Force Program, Agency for Healthcare Research and Quality

Wilnise Jasmin, MD, MBA, MPH, General Preventive Medicine Resident, Johns Hopkins Bloomberg School of Public Health

Case Study

J.S., a 29-year-old transgender woman, presents for her first maintenance visit with a new family physician. It has been three years since her previous visit with a primary care physician. She has no chronic illnesses, stopped using tobacco products four years ago, and reports that she has never used illicit substances. She drinks alcohol occasionally, about two to three drinks per month. She has been single for the past two years and is actively dating, occasionally meeting others through dating apps. She is sexually active with men, engages in oral and anal intercourse, and uses condoms about two-thirds of the time. She shares that she does not always discuss her partners' sexual history prior to having sex; however, she knows that at least one of her recent sex partners was a man who has sex with both men and women. She requests to be screened for HIV infection.

Case Study Questions

1. Which of the following statements regarding the U.S. Preventive Services Task Force (USPSTF) recommendation statement on screening for HIV infection are correct?

- ☐ A. The USPSTF recommends that physicians screen for HIV infection in all people 15 to 65 years.
- ☐ B. The USPSTF recommends that physicians screen for HIV infection in all pregnant women.
- ☐ C. The USPSTF recommends that physicians screen for HIV infection in pregnant women in labor whose HIV status is unknown.
- ☐ D. The USPSTF recommends not screening people for HIV infection who have J.S.'s history because they have no risk factors.

2. J.S. returns for a follow-up visit and to review her laboratory results. The HIV test was negative, and the other tests for sexually transmitted infections (STIs) were negative. According to the USPSTF, which one of the following behaviors or factors makes J.S. a candidate for preexposure prophylaxis (PrEP)?

- ☐ A. J.S. regularly receives STI screenings by visiting urgent care centers.
- ☐ B. J.S. is a transgender woman.
- ☐ C. J.S. has never tested positive for STIs.
- ☐ D. J.S. occasionally does not use condoms when having sex with partners who are at high risk of HIV infection.
- ☐ E. J.S. has never engaged in transactional sex work.

See related U.S. Preventive Services Task Force Recommendation Statements at https://www.aafp.org/afp/2019/1115/od1.html and https://www.aafp.org/afp/2019/1115/od2.html.

This PPIP quiz is based on the recommendations of the USPSTF. More information is available in the USPSTF Recommendation Statement and supporting documents on the USPSTF website (https://www.uspreventiveservicestaskforce.org). The practice recommendations in this activity are available at https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/prevention-of-human-immunodeficiency-virus-hiv-infection-pre-exposure-prophylaxis and https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/human-immunodeficiency-virus-hiv-infection-screening1.

This series is coordinated by Kenny Lin, MD, MPH, deputy editor.

A collection of Putting Prevention into Practice published in *AFP* is available at https://www.aafp.org/afp/ppip.

CME **This clinical content** conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 607.

Author disclosure: No relevant financial affiliations.

3. According to the USPSTF, which one of the following statements about PrEP is correct?

- ☐ A. Tenofovir disoproxil fumarate is the only medication approved by the U.S. Food and Drug Administration for use as PrEP.
- ☐ B. It is important to start PrEP in high-risk people immediately, even before results of HIV testing are known.
- ☐ C. PrEP is contraindicated in adolescents.
- ☐ D. A person in a mutually monogamous relationship with a partner who has recently tested negative for HIV is at high risk and is a candidate for PrEP.
- ☐ E. The USPSTF found convincing evidence that PrEP is of substantial benefit for decreasing the risk of HIV infection in people at high risk.

Answers

1. The correct answers are A, B, and C. The USPSTF recommends that all adolescents and adults 15 to 65 years of age be screened for HIV infection. The USPSTF recommends that physicians screen for HIV infection in all pregnant women, including those who present in labor, at delivery, or whose HIV status is unknown. The USPSTF recommends screening patients who are at increased risk of HIV infection regardless of age; people who request testing for STIs, including HIV, are considered by the USPSTF to be at increased risk.[1]

2. The correct answer is D. The USPSTF considers the following to be some of the factors that can put a person at high risk of HIV infection and make them a candidate for PrEP: having a sex partner who is living with HIV or having anal or vaginal intercourse without a condom with a partner whose HIV status is unknown and who is in a high-risk category.[2] PrEP should be considered as an option to reduce the risk of HIV acquisition in people who use condoms inconsistently, and physicians should continue to encourage and support consistent condom use. Heterosexually active people who have had syphilis or gonorrhea within the past six months should be considered for PrEP. People who inject drugs and share drug-injection equipment should also be considered for PrEP. People who engage in transactional sex (e.g., sex for money, drugs, or housing), including commercial sex workers or persons trafficked for sex work, should also be considered for PrEP. Although a recent systematic review estimated that approximately 14% of transgender women are living with HIV, being a transgender person is not an indication for PrEP.[3] Transgender people who are sexually active or who inject illicit drugs may be at increased risk of HIV acquisition if they engage in any of the behaviors described.

3. The correct answer is E. In addition to once-daily oral treatment with combined tenofovir disoproxil fumarate and emtricitabine (Truvada), the U.S. Food and Drug Administration recently approved combined tenofovir alafenamide and emtricitabine (Descovy) for PrEP in selected people at risk of sexual acquisition of HIV infection. Combined tenofovir alafenamide and emtricitabine is not approved for PrEP in individuals who have receptive vaginal sex because its effectiveness has not been evaluated in this population. Before prescribing PrEP, physicians should exclude persons with acute or chronic HIV infection by taking a medical history and testing for HIV infection. Using only the two-drug antiretroviral regimen in PrEP is not an effective treatment for HIV infection, and its use in people living with HIV can lead to the emergence of drug-resistant HIV infection. Combined tenofovir disoproxil fumarate and emtricitabine is approved by the U.S. Food and Drug Administration for use as PrEP in adolescents who weigh at least 35 kg (77 lb). Men who have sex with men and heterosexually active people are not considered to be at high risk if they are in a mutually monogamous relationship with a partner who has recently tested negative for HIV. The USPSTF found convincing evidence that PrEP is of substantial benefit in decreasing the risk of HIV infection in people at high risk of HIV acquisition.

The views expressed in this work are those of the authors and do not reflect the official policy or position of the Department of Health and Human Services or the Johns Hopkins Bloomberg School of Public Health.

References

1. Owens DK, Davidson KW, Krist AH, et al. Screening for HIV infection: US Preventive Services Task Force recommendation statement. *JAMA*. 2019;321(23):2326-2336.
2. Owens DK, Davidson KW, Krist AH, et al. Preexposure prophylaxis for the prevention of HIV infection: US Preventive Services Task Force recommendation statement. *JAMA*. 2019;321(22):2203-2213.
3. Becasen JS, Denard CL, Mullins MM, et al. Estimating the prevalence of HIV and sexual behaviors among the US transgender population: a systemic review and meta-analysis, 2006-2017. *Am J Public Health*. 2019; 109:e1-e8. ■