Providing HIV PrEP in Sexual Health Clinic Settings

This is a PDF version of the following document:
Module 2: HIV PrEP In-Depth Topics
Lesson 5: Providing HIV PrEP in Sexual Health Clinic Settings

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Background

Despite its proven effectiveness for HIV prevention, uptake of HIV preexposure prophylaxis (PrEP) in the United States has been suboptimal—only an estimated 36% of individuals with an indication for HIV PrEP received an HIV PrEP prescription in 2022.[1] Making HIV PrEP available to individuals at risk of HIV acquisition in venues where they seek care is one strategy to increase HIV PrEP uptake and delivery. Populations attending sexual health clinics that provide services for screening and treatment of sexually transmitted infection (STI) may have ongoing risk for HIV acquisition and would, therefore, benefit from HIV PrEP. Similar to the administration of vaccines to prevent human papillomavirus (HPV)infection, doxycycline postexposure prophylaxis (DoxyPEP) to prevent bacterial STIs, or use of condoms for other STIs, provision of HIV PrEP in the sexual health clinic setting has become an important component of comprehensive sexual health and preventive care.

Rationale for Providing HIV PrEP in Sexual Health Clinics

STIs Increase the Risk of Acquiring and Transmitting HIV

Many STIs that are commonly diagnosed and treated in sexual health clinics are associated both with a higher risk for HIV acquisition (via genital inflammation or ulceration) and transmission (via increased HIV shedding) (Figure 1).[2,3,4,5,6] This risk is independent of reported sexual behavior.[7,8] Mechanisms by which STI pathogens may facilitate increased HIV risk include physical disruption of normal mucocutaneous barriers and induction of an inflammatory milieu with upregulation of activated T lymphocytes and other immune cells susceptible to HIV uptake. These immunologic changes that confer increased HIV susceptibility can occur even in the absence of genital lesions.[9] Men who have sex with men (MSM) who are diagnosed with bacterial STIs, especially in the rectum, are at particularly high risk of acquiring HIV.[4,5] Further, among MSM newly diagnosed with HIV, a history of an STI in the prior 2 years is common.[5] Similarly, population-based studies in the United States indicate that women diagnosed with an STI have an approximately 3-fold higher risk of acquiring HIV when compared to women without a diagnosis of an STI, and the risk of acquiring HIV is particularly high following a diagnosis of syphilis.[2,3] Although women with an STI have an increased risk of HIV acquisition, the majority of women diagnosed with HIV have not been previously diagnosed with an STI.[2,10]

STI Risk by Pathogen

The following summarizes the relative risk of acquiring HIV with common STIs in persons who are not receiving HIV PrEP (Figure 2).

- **Herpes simplex virus (HSV)**: Based on several meta-analyses, prevalent HSV-2 infection increases risk of HIV acquisition 2- to 3-fold.[6,9] New HSV-2 infection is associated with an even higher risk of HIV infection: 5- to 7-fold overall, or up to 16-fold in some men.[9]
- **Syphilis**: Evidence abounds across populations that syphilis is a strong predictor of HIV acquisition.[2,5,10,11] On study showed that 1 in 20 HIV-negative MSM who were diagnosed with syphilis acquired HIV within 1 year.[12] Women diagnosed with syphilis have an 8- to 20-fold increased risk of subsequently acquiring HIV.[2,10]
- **Gonorrhea and Chlamydia**: Among women, a diagnosis of gonorrhea or chlamydia is associated with a 2- to 6-fold increased risk of subsequent HIV acquisition compared to women who have never been diagnosed with an STI. Among MSM, gonorrhea and chlamydia—particularly rectal gonorrhea and chlamydia—increased the risk of HIV acquisition independent of reported sexual behavior.[2,5,7,8,13,14]
- **Bacterial vaginosis**: Among a general population of South African women involved in a cervical cancer screening study, bacterial vaginosis was associated with a 2-fold higher odds of HIV seroconversion within 6-36 months.[15]
- **Trichomoniasis**: A meta-analysis of studies conducted on both women and men in sub-Saharan Africa found that infection with *Trichomonas vaginalis* increased the likelihood of HIV acquisition by 50%.[16]
- **Human Papillomavirus (HPV)**: A meta-analytic systematic review of 14 studies including men and women showed that HIV incidence was nearly 2-fold higher in those with HPV infection.[17]

Sexual Health Clinics are an Ideal Setting for HIV PrEP

Sexual health clinics are an ideal setting to provide HIV PrEP as they frequently serve populations at risk for HIV and STIs, and they are often staffed by health professionals with expertise in talking factually and without judgment about sex, STIs, and HIV prevention.[18,19] The following outlines the rationale for providing HIV PrEP at sexual health clinics.

- **Clinics Often Have Strong Regional Support**: State and local health departments have supported

dedicated sexual health clinics since the early 20th century. Though funding and resources have wavered over recent years, sexual health clinics remain a valuable part of safety net STI care, particularly for people who may not regularly access health care services, including those who are uninsured and those who seek confidential services.[20,21,22]

- **Strong Interest in HIV PrEP at Clinics**: Persons attending sexual health clinics report high interest in taking HIV PrEP.[23,24] Thus, visits to a sexual health clinic represent a valuable opportunity to screen for HIV, and, if negative, offer HIV PrEP to those who interested and meet criteria for use. Persons who test positive for HIV can then receive linkage to HIV care services for immediate initiation of antiretroviral therapy. In addition to screening for HIV PrEP in the clinic setting, staff conducting STI partner services are often associated with sexual health clinics and could leverage client interviews to identify additional candidates for HIV PrEP.[25]
- **Enhanced Uptake using Integrated Model**: Integrating HIV PrEP on-site at a sexual health clinic may further increase HIV PrEP uptake. Mathematical models show potentially greater effectiveness of HIV prevention through delivery of HIV PrEP to MSM at sexual health clinics than through the community alone.[26] External referrals for HIV PrEP can lead to a longer time before HIV PrEP initiation and higher loss-to-follow-up rates.[27]

Evidence for Providing HIV PrEP in Sexual Health Clinics

Multiple sexual health clinics have successfully developed programs to implement HIV PrEP services into the overall role of the clinic. The following summary outlines several examples (in alphabetical order) of successful HIV PrEP integration in sexual health clinics.

- **Fulton County—Public Health**: The Fulton County health department launched an HIV PrEP clinic in 2015 within the greater Atlanta area. Within the first 2 years after implementation, 399 people were screened for HIV PrEP, and 216 (54%) of eligible patients received an HIV PrEP prescription.[28]
- **Multi-Site—Public Health**: In a demonstration project in sexual health clinics in San Francisco and Miami and a community health center in Washington DC, MSM at risk for HIV acquisition were provided free oral TDF-FTC and were followed for more than 2 years.[29] At 48 weeks after initiating HIV PrEP, 437 (78.5%) of 557 individuals were successfully retained in care and were taking HIV PrEP.[29] Overall adherence was excellent based on self-reporting and pill counts, and dried blood spot tenofovir diphosphate levels showed levels in the protective range throughout 48 weeks in more than 80% of the participants (Figure 3).[29]
- **Seattle & King County—Public Health**: The Public Health – Seattle & King County Sexual Health Clinic has provided HIV PrEP since 2014 and utilizes a demedicalized care model. A total of 1,387 patients attended an initial HIV PrEP visit at the sexual health clinic between 2014 and 2019.[30] Of 6,887 HIV PrEP visits during this time, 57% were with a clinician, 43% were with a disease intervention specialist, and 0.4% were with a nurse.[30]
- **Washington DC—Family Planning and Women's Sexual Health**: At a family planning and women's sexual health clinic in Washington DC, universal HIV prevention and same-day HIV PrEP initiations were integrated after a week-long staff and provider training.[31] Within 3 months after HIV PrEP implementation, the proportion of patients screened for HIV PrEP eligibility increased from 0 to 65%.[31] Women who chose to initiate HIV PrEP were offered same-day prescriptions, while those interested but not yet ready to begin HIV PrEP were referred to local HIV PrEP clinics or provided future appointments to revisit initiation.[31]

Identifying HIV PrEP Candidates in Sexual Health Clinics

Defining HIV PrEP Eligibility

Sexual Health Clinics should determine which HIV PrEP criteria they will use for recommending HIV PrEP. The Centers for Disease Control and Prevention (CDC) guidelines may be adapted directly, or clinics may establish their own criteria for offering HIV PrEP based on their local HIV and STI epidemiology.[32] Defining HIV PrEP "eligibility" criteria allows SHC providers and staff to triage clients for HIV PrEP and prioritize those at highest risk of acquiring HIV.

Determining HIV PrEP Eligibility with Screening Tools

Once clinics establish criteria for offering HIV PrEP, they may wish to establish at least one method of administering an HIV PrEP screening questionnaire/tool. This tool would combine criteria drawn from locally developed HIV PrEP guidelines with questions regarding clients' interest in taking HIV PrEP. The following summarizes several examples of methods to administer an HIV PrEP screening questionnaire/tool:

- **In-Clinic, in-Person Interviews**: HIV PrEP screening tool administered by a nurse, medical assistant, or a prescribing medical provider.
- **In-Clinic, Self-Administered**: HIV PrEP screening tool is completed by the patient, either on paper or electronically (i.e., a computer-assisted self-interview).[33]
- **Prompts from Electronic Health Record (EHR) Systems**: Many clinics already have electronic systems (CASI or EHR) that collect the same information from patients that would be on an HIV PrEP screening tool (e.g., diagnosis of syphilis in the past 12 months). The EHR can alert the clinician when a person meets these criteria.
- **Screening by Partner Services/DIS Interviews**: Disease Intervention Specialists (DIS), who routinely contact persons diagnosed with an STI, complete the HIV PrEP screening tool with them during the partner services process (Figure 4).[25,34,35]

Identifying and Addressing Barriers in Sexual Health Clinics

There are many factors to consider when integrating HIV PrEP services into sexual health clinics.[36] The following table summarizes key factors that might serve as barriers or facilitators to successfully implementing HIV PrEP at sexual health clinics, and should be considered prior to implementation.

Table 1.

Common Barriers and Facilitators for Providing HIV PrEP Services in Sexual Health Clinics

Barriers	Facilitato
"Provider purview paradox"—a sexual health clinic is not a primary care or HIV specialist clinic	Already seeing high-incidence populations relationships, etc.)
Limited staffing and budget	Care model at a sexual health clinic is alre sexual health
Patient volume is high and too little time per encounter for extensive counseling	Sexual health clinic practitioners are alrea history and using information to engage in to contraception counseling)
Unfamiliarity with antiretrovirals if sexual health clinic does not offer HIV PEP	Often sexual health clinics already have w intervention specialists who do partner se

Financial Considerations for PrEP Integration into SHC

Depending on the number of staff and their existing duties, integration of HIV PrEP within the SHC may strain clinic resources if the volume of HIV PrEP patients is large. Before implementing HIV PrEP, clinics may need to consider the cost of hiring and training additional staff, such as HIV PrEP navigators. Task shifting (e.g., assigning a disease intervention specialist to handle new HIV PrEP starts) may be one strategy to minimize additional costs by utilizing existing staff. Eligible sexual health clinics may register and enroll in drug pricing programs under section 340B of the Public Health Service Act (340B Eligibility). Entities that are 340B-eligible may utilize program funds to purchase medication used for HIV PrEP at a discounted price. Cost savings from 340B pricing have the potential to translate into additional program income that can be utilized for other areas, such as expanding staffing. In addition, jurisdictions that receive Ending the HIV Epidemic funding may consider how activities related to HIV PrEP implementation could fit into Ending the HIV Epidemic program budgets.

Optimizing Implementation of HIV PrEP in Sexual Health Clinics

Develop HIV PrEP Uptake and Recruitment Strategies

The following summarizes several suggested strategies for clinics to employ as part of an overall effort to enhance interest and uptake in HIV PrEP in the SHC setting.

- **Education/Advertisement in Clinic**: Clinics can place patient-facing HIV PrEP posters in the waiting room or lobby and in examination rooms to increase visibility of HIV PrEP. Staff can wear pins or buttons that invite questions about HIV PrEP.
    - Centers for Disease Control and Prevention (CDC): The CDC website Let's Stop HIV Together has excellent HIV PrEP-related posters and brochures appropriate for clinic waiting rooms and lobbies that can be downloaded as PDFs or ordered as printed materials through the CDC.
    - Health Resources and Services Administration (HRSA): The HRSA website Ready, Set, PrEP has an array of posters, videos, fact sheets, and social media graphics. All materials, except for the videos, include PDF download options.
- **Involvement of All Clinic Staff**: All clinic personnel should be aware if HIV PrEP is offered in their clinic and informed about local resources for HIV PrEP. Other staff who may interact more directly with patients (administrative leadership, registration staff, disease intervention specialists, health educators, peer navigators, medical assistants, etc.) should be trained on basic HIV PrEP knowledge and encouraged to broach HIV PrEP discussions with patients.
- **Prompt from Electronic Health Record (EHR):** Clinics may wish to implement a dedicated HIV risk assessment tool within the EHR and/or update the EHR note templates to ask about HIV PrEP if a client is coming in for STI (especially syphilis or gonorrhea) treatment or evaluation.

Staffing for HIV PrEP Service Delivery

Sexual health clinics may wish to create a multidisciplinary HIV PrEP team to determine how to implement HIV PrEP in their clinics. The HIV PrEP teams could include an “HIV PrEP champion” to facilitate the roll-out of the HIV PrEP staffing model. When delineating staff roles, it is important to consider which clinic staff will be responsible for:

- Identifying patients who are candidates for HIV PrEP
- Assisting patients with navigating medication financial assistance
- Prescribing HIV PrEP
- Scheduling follow-up visits
- Conducting outreach between visits
- Seeing patients at quarterly visits and doing phlebotomy
- Reviewing all laboratory monitoring studies
- Contacting individuals who have dropped out of HIV PrEP care and monitoring
- Managing or creating internal guidance for challenging clinical HIV PrEP scenarios

Note: This approach and the roles assigned to staff will vary for implementation of oral HIV PrEP with tenofovir DF-emtricitabine (TDF-FTC) and tenofovir alafenamide-emtricitabine (TAF-FTC), and injectable HIV PrEP with long-acting injectable cabotegravir (CAB-LA). The use of CAB-LA requires specific pre-implementation planning, including identifying appropriate candidates for injectable HIV PrEP, outlining clinic protocols, identifying who will obtain pre-authorizations or approvals for the medication, and who will administer injections.

Staffing Models for Prescribing HIV PrEP

There are many different staffing models for clinics that provide HIV PrEP. All clinic staff should receive training (online curriculum, in-person training from a local expert, etc.) on HIV PrEP efficacy, real-world

effectiveness, and eligibility criteria. This may be updated at regular intervals (every 6 to 12 months) to ensure all staff interacting with prospective or current HIV PrEP users are comfortable discussing HIV PrEP. Some of the key staff in an HIV PrEP Clinic may include:

- **HIV PrEP Navigators**: Many successful sexual health clinic-based HIV PrEP programs have trained existing staff, such as disease intervention specialists (DIS), to become dedicated HIV PrEP navigators, whereas others may flex staff from other "navigator-type" positions.[37,38] Depending on the patient volume in a clinic, navigators could "task shift" to work in various roles as needed. The role of the HIV PrEP navigators includes but is not limited to:
    - Assisting patients with financial coverage for HIV PrEP: navigating private insurance, pharmaceutical, or state-sponsored patient assistance programs
    - Coordinating with patients and promoting retention in care (e.g., scheduling visits, doing visit reminders and check-ins with patients and/or follow-up after missed appointments)
    - Conducting routine follow-up (see patients at quarterly visits, doing phlebotomy if possible)
- **Clinician Medication Prescribers**: Clinicians, including physicians and advanced practice providers, can engage with patients for the initial visit related to HIV PrEP, which may include counseling them on the basics of HIV PrEP, answering clinical questions, ordering laboratory studies, and writing the initial HIV PrEP prescription. For routine follow-up visits, clinicians do not need to see patients at each visit. Other staff, such as HIV PrEP navigators, can conduct quarterly check-ins with patients and decrease follow-up visits with clinicians to 6- or 12-month intervals, or as indicated if other clinical issues arise (e.g., adverse effect of medication, etc.). Clinicians evaluating individuals for HIV PrEP initiation and follow-up should receive appropriate training focused on HIV PrEP prescribing, monitoring, and clinical management.
- **Nursing Team**: Nurses can also play a role in reviewing HIV PrEP eligibility with persons who are seeking routine STI screening visits, as well as persons visiting the clinic for evaluation as a contact to a partner who was diagnosed with an STI. Patients who would benefit from HIV PrEP and express interest in starting HIV PrEP can then receive a referral either within the clinic or externally. Several clinics in Canada and Australia have successfully implemented such models.[39,40,41]
- **Evaluator/Analyst**: Training a primary database manager, analyst, or epidemiologist who is familiar with the operations of the clinic in key HIV PrEP metrics will support quality improvement and accountability to program goals, such as offering HIV PrEP to those most at risk of acquiring HIV and prioritizing them for retention. Suggested data and metrics for the evaluator to monitor are described below in the section: Establish and Analyze Clinic HIV PrEP Metrics.

Streamline HIV PrEP Rapid Starts

There is evidence to support rapid HIV PrEP starts in the sexual health clinic setting.[30,42] The concept of rapid HIV PrEP, often also referred to as same-day HIV PrEP, is that a person who is evaluated for HIV PrEP in the clinic receives an HIV PrEP prescription on the same day as the evaluation if a rapid HIV test is negative. In addition, laboratory studies are performed that day with clinician follow-up of results. In contrast, standard HIV PrEP typically involves deferring starting HIV PrEP until the results from the initial laboratory results have returned. To see more detailed information regarding same-day (rapid) HIV PrEP initiation, see the *HIV PrEP In-Depth Topics* lesson on Same Day (Rapid Start) for Oral HIV PrEP. Before implementing rapid HIV PrEP starts, clinics should address all the following:

- Develop rapid HIV testing capacity to facilitate rapid HIV PrEP starts.
- Establish which clinic providers can prescribe HIV PrEP and develop a protocol for standing orders or ability for DIS, HIV PrEP navigators, or nurses to send an HIV PrEP prescription under a prescriber's name.
- If logistically feasible, consider integrating walk-in/drop-in appointments, which may increase uptake.[42,43,44]
- Identify a staff person who is familiar with HIV PrEP financial assistance to be available to enroll uninsured HIV PrEP candidates in same-day insurance coverage
- Determine the feasibility of providing a free 30-day supply of generic oral HIV PrEP

- Meet the medical requirements for same-day (rapid) start for oral HIV PrEP.

HIV PrEP Follow-Up and Ongoing Care

- Follow-up visits and laboratory monitoring for persons receiving HIV PrEP through sexual health clinics are similar to those in other settings.[32,45] The clinical follow-up and recommended monitoring for laboratory studies are summarized and discussed in detail in the *HIV PrEP Fundamentals* module lesson on Follow-Up Care and Monitoring on HIV PrEP. In addition, summary tables for follow-up laboratory studies are available in the Laboratory Monitoring Guide on this website.
- After HIV PrEP initiation, the early check-in (from 1 week to 1 month), historically a component of early HIV PrEP programs, is no longer universally observed. Quarterly follow-up visits can be with an HIV PrEP navigator, health educator, nurse, or other sexual health clinic staff person.
- Clinicians may briefly evaluate individuals at the initial visit and thereafter at intervals determined by clinical staff. For instance, one strategy could be routine quarterly visits with an HIV PrEP support staff (e.g., HIV PrEP navigator) and an annual visit with clinicians. If HIV PrEP navigators or other staff feel comfortable managing routine HIV PrEP cases, they may only need to consult with an available clinician as needed for more complex issues (e.g., changes in serum creatinine, management of positive STI screening tests, and monitoring annual HCV antibody testing).
- Encrypted or otherwise secure text message reminder programs may facilitate early HIV PrEP adherence support. If possible, utilizing an interactive (or two-way) messaging platform is preferred and often more beneficial to patients than generic one-way reminders. Many electronic medical record programs include a secure messaging feature to allow protected health information to be exchanged between clinic staff and patients. Less frequent messages may be more acceptable to patients than daily automated messages.[46,47,48]
- Clinics may also consider options for facilitating self-collection of samples from home or sending orders to external laboratories that may be more geographically convenient for patients needing quarterly HIV PrEP monitoring.[49,50,51]

Establish and Analyze Clinic HIV PrEP Metrics

Suggested Metrics for Monitoring

Sexual health clinics that implement HIV PrEP should consider routinely monitoring metrics to promote and increase the number of persons who receive HIV PrEP, and to identify areas for improvement. The following list provides 7 suggested metrics to follow.

1. Number and percentage of patients who attend the sexual health clinic who are already receiving HIV PrEP
2. Number and percentage of patients who would benefit from HIV PrEP (as defined by local sexual health clinic guidelines)
3. Number and percentage of patients who are offered HIV PrEP by sexual health clinic staff (among those who are eligible)
4. Number and percentage of patients who receive an HIV PrEP prescription (among those who were offered; a measure of uptake)
5. Number and percentage of patients who filled their first HIV PrEP prescription
6. Number and percentage of patients who had a visit within 4 months of starting HIV PrEP
7. Number and percentage of patients still on HIV PrEP after 6 months (a commonly used measure of HIV PrEP persistence)

Logistical Considerations for Clinics Monitoring PrEP Metrics

There are three key considerations for clinics that will be routinely monitoring HIV PrEP metrics:

1. Consider supporting personnel (e.g., epidemiologist/analyst) to provide data quality control/quality assurance and to have primary responsibility for analyzing HIV PrEP data.
2. Consider establishing a frequency (e.g., monthly) for developing reports on primary metrics.
3. Consider engaging with the EHR system administrators and staff early to ensure the data are available and accessible. Collecting data on some of these metrics may require changes to data collection systems, including EHRs.

Doxycycline PEP

Individuals seen in sexual health clinics who are interested in or receiving HIV PrEP may be excellent candidates for taking doxycycline postexposure prophylaxis (doxyPEP) to prevent bacterials STIs, including chlamydia, syphilis, and gonorrhea. Several randomized trials have shown that doxy PEP taken within 72 hours after sex in men who have sex with men and other populations that have anal sex, reduces rates of syphilis and chlamydia by an estimated 70% and gonorrhea by about 50%.[52,53,54,55] One clinical trial using doxyPEP for women in Africa did not show benefit in reducing STIs in this patient population.[56] The use of doxyPEP has been shown to increase the expression of tetracycline resistant genes in the human gut microbiome, although the overall impact of the ecology of the gut microbiome appears to be minimal.[57] The use of doxyPEP is also associated with increases in tetracycline resistance in *Neisseria gonorrhoeae*, *Staphylococcus aureus*, and group A streptococcus.[58]

CDC Recommendations for Doxy PEP

In 2024, the CDC published Clinical Guidelines on the Use of Doxycycline Post-exposure Prophylaxis for Bacterial STI Prevention.[59] These guidelines recommend doxyPEP as an option for men who have sex with men and other populations having anal sex.[59] Because of lack of data showing a clear benefit of doxyPEP in women, the CDC guidelines do not recommend doxyPEP use in women.[59] The following summarizes key clinical aspects of counseling individuals who are taking doxyPEP.

- Take 200 mg of doxycycline (typically two 100 mg tablets or capsules), ideally within 24 hours after sex has occurred and not longer than 72 hours after having sex.
- With more than one sex event during a 72-hour period, it is important that all exposures are covered by a 200 mg dose of doxyPEP taken within 72 hours of the sex contact, but the individual should not take more than 200 mg of doxycycline within a 24-hour period.

- Advise persons taking doxyPEP on methods to minimize the risk of doxycycline pill esophagitis, including taking the dose with a full glass of water and avoiding lying down for 1 hour after doxycycline ingestion.

- Advise person taking doxyPEP on methods to prevent a doxycycline photosensitivity reaction, including use of sunscreen protection when outside.

- Advise spacing doxycycline by 2 hours before or after using dairy products, antacids, and supplements that contain calcium, iron, magnesium, or sodium bicarbonate.

- Counsel on the potential adverse impact of doxyPEP on the gut microbiome and the impact on increasing risk of developing antimicrobial resistance with common skin bacteria.

- Counsel that STIs can occur when taking doxyPEP and it is important to have evaluation for any new genitourinary symptoms.

Summary Points

- Sexually transmitted infections increase the risk of transmission and acquisition of HIV. This risk is highest with syphilis.
- Integrating HIV PrEP into sexual health clinics can increase HIV PrEP uptake and coverage among populations at risk for HIV acquisition who are already seeking sexual health care.
- Successful models of HIV PrEP integration into sexual health clinics exist across several geographic areas that utilize a variety of referral, direct care, and follow-up strategies.
- After determining HIV PrEP criteria based on local epidemiology, sexual health clinics should determine the best strategies for identifying patients who would benefit from HIV PrEP.
- Important planning considerations for HIV PrEP implementation in sexual health clinics include training staff and providers on the indications for HIV PrEP, securing funding for additional staff, obtaining on-site oral HIV PrEP medication for rapid initiation of HIV PrEP, determining which team members will initiate HIV PrEP, and providing follow-up and retention services.
- Many sexual health clinics have utilized flexible staffing models, including task-shifting, to maximize HIV PrEP services. Sexual health clinics that provide HIV PrEP services should establish a plan for evaluating HIV PrEP metrics and quality improvement.
- Sexual health clinics providing HIV PrEP should also consider offering doxyPEP, when indicated.

Citations

1. Centers for Disease Control and Prevention. Core indicators for monitoring the Ending the HIV Epidemic initiative (preliminary data): National HIV Surveillance System data reported through September 2023; and preexposure prophylaxis (PrEP) data reported through June 2023. HIV Surveillance Data Tables 2023;4(No. 4). Published December 2023.
[CDC] -

2. Peterman TA, Newman DR, Maddox L, Schmitt K, Shiver S. Risk for HIV following a diagnosis of syphilis, gonorrhoea or chlamydia: 328,456 women in Florida, 2000-2011. Int J STD AIDS. 2015;26:113-9.
[PubMed Abstract] -

3. Peterman TA, Newman DR, Maddox L, Schmitt K, Shiver S. High risk for HIV following syphilis diagnosis among men in Florida, 2000-2011. Public Health Rep. 2014;129:164-9.
[PubMed Abstract] -

4. Kelley CF, Vaughan AS, Luisi N, et al. The Effect of High Rates of Bacterial Sexually Transmitted Infections on HIV Incidence in a Cohort of Black and White Men Who Have Sex with Men in Atlanta, Georgia. AIDS Res Hum Retroviruses. 2015;31:587-92.
[PubMed Abstract] -

5. Katz DA, Dombrowski JC, Bell TR, Kerani RP, Golden MR. HIV Incidence Among Men Who Have Sex With Men After Diagnosis With Sexually Transmitted Infections. Sex Transm Dis. 2016;43:249-54.
[PubMed Abstract] -

6. Fleming DT, Wasserheit JN. From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. Sex Transm Infect. 1999;75:3-17.
[PubMed Abstract] -

7. Barbee LA, Khosropour CM, Dombrowksi JC, Golden MR. New Human Immunodeficiency Virus Diagnosis Independently Associated With Rectal Gonorrhea and Chlamydia in Men Who Have Sex With Men. Sex Transm Dis. 2017;44:385-9.
[PubMed Abstract] -

8. Jones J, Weiss K, Mermin J, et al. Proportion of Incident Human Immunodeficiency Virus Cases Among Men Who Have Sex With Men Attributable to Gonorrhea and Chlamydia: A Modeling Analysis. Sex Transm Dis. 2019;46:357-63.
[PubMed Abstract] -

9. Johnston C, Corey L. Current Concepts for Genital Herpes Simplex Virus Infection: Diagnostics and Pathogenesis of Genital Tract Shedding. Clin Microbiol Rev. 2016;29:149-61.
[PubMed Abstract] -

10. Newman DR, Rahman MM, Brantley A, Peterman TA. Rates of New Human Immunodeficiency Virus (HIV) Diagnoses After Reported Sexually Transmitted Infection in Women in Louisiana, 2000-2015: Implications for HIV Prevention. Clin Infect Dis. 2020;70:1115-20.
[PubMed Abstract] -

11. Buchacz K, Klausner JD, Kerndt PR, et al. HIV incidence among men diagnosed with early syphilis in Atlanta, San Francisco, and Los Angeles, 2004 to 2005. J Acquir Immune Defic Syndr. 2008;47:234-40.
[PubMed Abstract] -

12. Pathela P, Braunstein SL, Blank S, Shepard C, Schillinger JA. The high risk of an HIV diagnosis following a diagnosis of syphilis: a population-level analysis of New York City men. Clin Infect Dis. 2015;61:281-7.
[PubMed Abstract] -

13. Pathela P, Braunstein SL, Blank S, Schillinger JA. HIV incidence among men with and those without sexually transmitted rectal infections: estimates from matching against an HIV case registry. Clin Infect Dis. 2013;57:1203-9.
[PubMed Abstract] -

14. Bernstein KT, Marcus JL, Nieri G, Philip SS, Klausner JD. Rectal gonorrhea and chlamydia reinfection is associated with increased risk of HIV seroconversion. J Acquir Immune Defic Syndr. 2010;53:537-43.
[PubMed Abstract] -

15. Myer L, Denny L, Telerant R, Souza Md, Wright TC Jr, Kuhn L. Bacterial vaginosis and susceptibility to HIV infection in South African women: a nested case-control study. J Infect Dis. 2005;192:1372-80.
[PubMed Abstract] -

16. Masha SC, Cools P, Sanders EJ, Vaneechoutte M, Crucitti T. *Trichomonas vaginalis* and HIV infection acquisition: a systematic review and meta-analysis. Sex Transm Infect. 2019;95:36-42.
[PubMed Abstract] -

17. Looker KJ, Rönn MM, Brock PM, et al. Evidence of synergistic relationships between HIV and Human Papillomavirus (HPV): systematic reviews and meta-analyses of longitudinal studies of HPV acquisition and clearance by HIV status, and of HIV acquisition by HPV status. J Int AIDS Soc. 2018;21:e25110.
[PubMed Abstract] -

18. Hoover KW, Ham DC, Peters PJ, Smith DK, Bernstein KT. Human Immunodeficiency Virus Prevention With Preexposure Prophylaxis in Sexually Transmitted Disease Clinics. Sex Transm Dis. 2016;43:277-82.
[PubMed Abstract] -

19. Seth P, Wang G, Sizemore E, Hogben M. HIV Testing and HIV Service Delivery to Populations at High Risk Attending Sexually Transmitted Disease Clinics in the United States, 2011-2013. Am J Public Health. 2015;105:2374-81.
[PubMed Abstract] -

20. Institute of Medicine (US) Committee on Prevention and Control of Sexually Transmitted Diseases, Thomas R. Eng, William T. Butler, editors. The Hidden Epidemic: Confronting Sexually Transmitted Diseases, Washington (DC): National Academies Press (US); 1997.
[PubMed Abstract] -

21. Hoover KW, Parsell BW, Leichliter JS, et al. Continuing Need for Sexually Transmitted Disease Clinics After the Affordable Care Act. Am J Public Health. 2015;105 Suppl 5:S690-5.
[PubMed Abstract] -

22. Rietmeijer CA. From Safety Net Providers to Centers of Excellence: The Future of Publicly Funded Sexually Transmitted Infection Clinics in the United States. Sex Transm Dis. 2019;46:137-8.
[PubMed Abstract] -

23. Liu A, Cohen S, Follansbee S, et al. Early experiences implementing pre-exposure prophylaxis (PrEP) for HIV prevention in San Francisco. PLoS Med. 2014;11:e1001613.
[PubMed Abstract] -

24. Cohen SE, Vittinghoff E, Bacon O, et al. High interest in preexposure prophylaxis among men who have sex with men at risk for HIV infection: baseline data from the US PrEP demonstration project. J Acquir Immune Defic Syndr. 2015;68:439-48.
[PubMed Abstract] -

25. Katz DA, Dombrowski JC, Barry M, Spellman D, Bell TR, Golden MR. STD Partner Services to Monitor and Promote HIV Pre-exposure Prophylaxis Use Among Men Who Have Sex With Men. J Acquir Immune Defic Syndr. 2019;80:533-41.
[PubMed Abstract] -

26. Kasaie P, Berry SA, Shah MS, et al. Impact of Providing Preexposure Prophylaxis for Human Immunodeficiency Virus at Clinics for Sexually Transmitted Infections in Baltimore City: An Agent-based Model. Sex Transm Dis. 2018;45:791-7.
[PubMed Abstract] -

27. Bhatia R, Modali L, Lowther M, et al. Outcomes of Preexposure Prophylaxis Referrals From Public STI Clinics and Implications for the Preexposure Prophylaxis Continuum. Sex Transm Dis. 2018;45:50-5.
[PubMed Abstract] -

28. Rolle CP, Onwubiko U, Jo J, Sheth AN, Kelley CF, Holland DP. PrEP Implementation and Persistence in a County Health Department Setting in Atlanta, GA. AIDS Behav. 2019;23:296-303.
[PubMed Abstract] -

29. Liu AY, Cohen SE, Vittinghoff E, et al. Preexposure Prophylaxis for HIV Infection Integrated With Municipal- and Community-Based Sexual Health Services. JAMA Intern Med. 2016;176:75-84.
[PubMed Abstract] -

30. Ramchandani MS, Berzkalns A, Cannon CA, et al. A Demedicalized Model to Provide PrEP in a Sexual Health Clinic. J Acquir Immune Defic Syndr. 2022;90:530-7.
[PubMed Abstract] -

31. Brant AR, Dhillon P, Hull S, et al. Integrating HIV Pre-Exposure Prophylaxis into Family Planning Care: A RE-AIM Framework Evaluation. AIDS Patient Care STDS. 2020;34:259-66.
[PubMed Abstract] -

32. Centers for Disease Control and Prevention: US Public Health Service: Preexposure prophylaxis for the prevention of HIV infection in the United States—2021 Update: a clinical practice guideline. December 2021:1-108.
[CDC] -

33. Storholm ED, Siconolfi D, Huang W, et al. Project SLIP: Implementation of a PrEP Screening and Linkage Intervention in Primary Care. AIDS Behav. 2021;25:2348-57.
[PubMed Abstract] -

34. Digre P, Avoundjian T, Johnson K, et al. Barriers, Facilitators, and Cost of Integrating HIV-Related Activities Into Sexually Transmitted Disease Partner Services in Jackson, Mississippi. Sex Transm Dis. 2021;48:145-51.
[PubMed Abstract] -

35. Katz DA, Dombrowski JC, Kerani RP, et al. Integrating HIV Testing as an Outcome of STD Partner Services for Men Who Have Sex with Men. AIDS Patient Care STDS. 2016;30:208-14.
[PubMed Abstract] -

36. Mayer KH, Chan PA, R Patel R, Flash CA, Krakower DS. Evolving Models and Ongoing Challenges for HIV Preexposure Prophylaxis Implementation in the United States. J Acquir Immune Defic Syndr. 2018;77:119-27.
[PubMed Abstract] -

37. Pathela P, Jamison K, Blank S, Daskalakis D, Hedberg T, Borges C. The HIV Pre-exposure Prophylaxis (PrEP) Cascade at NYC Sexual Health Clinics: Navigation Is the Key to Uptake. J Acquir Immune Defic Syndr. 2020;83:357-64.
[PubMed Abstract] -

38. Spinelli MA, Scott HM, Vittinghoff E, et al. Brief Report: A Panel Management and Patient Navigation Intervention Is Associated With Earlier PrEP Initiation in a Safety-Net Primary Care Health System. J Acquir Immune Defic Syndr. 2018;79:347-51.
[PubMed Abstract] -

39. O'Byrne P, MacPherson P, Orser L, Jacob JD, Holmes D. PrEP-RN: Clinical Considerations and Protocols for Nurse-Led PrEP. J Assoc Nurses AIDS Care. 2019;30:301-11.
[PubMed Abstract] -

40. O'Byrne P, Vandyk A, Orser L, Haines M. Nurse-led PrEP-RN clinic: a prospective cohort study exploring task-Shifting HIV prevention to public health nurses. BMJ Open. 2021;11:e040817.
[PubMed Abstract] -

41. Schmidt HA, McIver R, Houghton R, et al. Nurse-led pre-exposure prophylaxis: a non-traditional model to provide HIV prevention in a resource-constrained, pragmatic clinical trial. Sex Health. 2018;15:595-7.
[PubMed Abstract] -

42. Kamis KF, Marx GE, Scott KA, et al. Same-Day HIV Pre-Exposure Prophylaxis (PrEP) Initiation During Drop-in Sexually Transmitted Diseases Clinic Appointments Is a Highly Acceptable, Feasible, and Safe Model that Engages Individuals at Risk for HIV into PrEP Care. Open Forum Infect Dis. 2019;6:ofz310.
[PubMed Abstract] -

43. Flash CA, Adegboyega OO, Yu X, et al. Correlates of Linkage to HIV Preexposure Prophylaxis Among HIV-Testing Clients. J Acquir Immune Defic Syndr. 2018;77:365-72.
[PubMed Abstract] -

44. Underhill K, Morrow KM, Colleran CM, et al. Access to healthcare, HIV/STI testing, and preferred pre-exposure prophylaxis providers among men who have sex with men and men who engage in street-based sex work in the US. PLoS One. 2014;9:e112425.
[PubMed Abstract] -

45. Knapper C, Birley H, Couzens Z, Jones AT, Parker I. How to do it: setting up a PrEP service in an integrated sexual reproductive health service setting. Sex Transm Infect. 2018;94:327-30.
[PubMed Abstract] -

46. Liu AY, Vittinghoff E, von Felten P, et al. Randomized Controlled Trial of a Mobile Health Intervention to Promote Retention and Adherence to Preexposure Prophylaxis Among Young People at Risk for Human Immunodeficiency Virus: The EPIC Study. Clin Infect Dis. 2019;68:2010-17.
[PubMed Abstract] -

47. Moore DJ, Jain S, Dubé MP, et al. Randomized Controlled Trial of Daily Text Messages to Support Adherence to Preexposure Prophylaxis in Individuals at Risk for Human Immunodeficiency Virus: The TAPIR Study. Clin Infect Dis. 2018;66:1566-72.

[PubMed Abstract] -

48. Shrestha R, Altice FL, DiDomizio E, Sibilio B, Ranjit YS, Copenhaver MM. Feasibility and Acceptability of an mHealth-Based Approach as an HIV Prevention Strategy Among People Who Use Drugs on Pre-Exposure Prophylaxis. Patient Prefer Adherence. 2020;14:107-18.
[PubMed Abstract] -

49. Biello KB, Horvitz C, Mullin S, et al. HIV self-testing and STI self-collection via mobile apps: experiences from two pilot randomized controlled trials of young men who have sex with men. Mhealth. 2021;7:26.
[PubMed Abstract] -

50. Cannon CA, Ramchandani MS, Golden MR. Feasibility of a novel self-collection method for blood samples and its acceptability for future home-based PrEP monitoring. BMC Infect Dis. 2022;22:459.
[PubMed Abstract] -

51. Sharma A, Gandhi M, Sallabank G, Merrill L, Stephenson R. Study Evaluating Self-Collected Specimen Return for HIV, Bacterial STI, and Potential Pre-Exposure Prophylaxis Adherence Testing Among Sexual Minority Men in the United States. Am J Mens Health. 2022;16:15579883221115591.
[PubMed Abstract] -

52. Luetkemeyer AF, Donnell D, Cohen SE, et al. Doxycycline to prevent bacterial sexually transmitted infections in the USA: final results from the DoxyPEP multicentre, open-label, randomised controlled trial and open-label extension. Lancet Infect Dis. 2025;25:873-83.
[PubMed Abstract] -

53. Luetkemeyer AF, Donnell D, Dombrowski JC, et al. Postexposure Doxycycline to Prevent Bacterial Sexually Transmitted Infections. N Engl J Med. 2023;388:1296-1306.
[PubMed Abstract] -

54. Molina JM, Bercot B, Assoumou L, et al. Doxycycline prophylaxis and meningococcal group B vaccine to prevent bacterial sexually transmitted infections in France (ANRS 174 DOXYVAC): a multicentre, open-label, randomised trial with a 2 × 2 factorial design. Lancet Infect Dis. 2024;24:1093-1104.
[PubMed Abstract] -

55. Molina JM, Charreau I, Chidiac C, et al. Post-exposure prophylaxis with doxycycline to prevent sexually transmitted infections in men who have sex with men: an open-label randomised substudy of the ANRS IPERGAY trial. Lancet Infect Dis. 2018;18:308-17.
[PubMed Abstract] -

56. Stewart J, Oware K, Donnell D, et al. Doxycycline Prophylaxis to Prevent Sexually Transmitted Infections in Women. N Engl J Med. 2023;389:2331-40.
[PubMed Abstract] -

57. Chu VT, Glascock A, Donnell D, et al. Impact of doxycycline post-exposure prophylaxis for sexually transmitted infections on the gut microbiome and antimicrobial resistome. Nat Med. 2025;31:207-217.
[PubMed Abstract] -

58. Soge OO, Thibault CS, Cannon CA, et al. Potential Impact of Doxycycline Post-Exposure Prophylaxis on Tetracycline Resistance in Neisseria gonorrhoeae and Colonization With Tetracycline-Resistant Staphylococcus aureus and Group A Streptococcus. Clin Infect Dis. 2025;80:1188-96.
[PubMed Abstract] -

59. Bachmann LH, Barbee LA, Chan P, et al. CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention, United States, 2024.

MMWR Recomm Rep. 2024;73:1-8.
[PubMed Abstract] -

References

- Chan PA, Glynn TR, Oldenburg CE, et al. Implementation of Preexposure Prophylaxis for Human Immunodeficiency Virus Prevention Among Men Who Have Sex With Men at a New England Sexually Transmitted Diseases Clinic. Sex Transm Dis. 2016;43:717-23.
[PubMed Abstract] -

- Dombrowski JC, Golden MR, Barbee LA, Khosropour CM. Patient Disengagement From an HIV Preexposure Prophylaxis Program in a Sexually Transmitted Disease Clinic. Sex Transm Dis. 2018;45:e62-e64.
[PubMed Abstract] -

- Harris NS, Johnson AS, Huang YA, et al. Vital Signs: Status of Human Immunodeficiency Virus Testing, Viral Suppression, and HIV Preexposure Prophylaxis - United States, 2013-2018. MMWR Morb Mortal Wkly Rep. 2019;68:1117-23.
[PubMed Abstract] -

- Hojilla JC, Vlahov D, Crouch PC, Dawson-Rose C, Freeborn K, Carrico A. HIV Pre-exposure Prophylaxis (PrEP) Uptake and Retention Among Men Who Have Sex with Men in a Community-Based Sexual Health Clinic. AIDS Behav. 2018;22:1096-9.
[PubMed Abstract] -

- Meyerowitz EA, Liang R, Bishop D, Mullis CE. Put a little doxy-PEP in your step: Using doxycycline to prevent chlamydia, syphilis, and gonorrhea infections. PLoS Pathog. 2024;20:e1012575.
[PubMed Abstract] -

- Montaño MA, Dombrowski JC, Dasgupta S, et al. Changes in Sexual Behavior and STI Diagnoses Among MSM Initiating PrEP in a Clinic Setting. AIDS Behav. 2019;23:548-55.
[PubMed Abstract] -

- Napierala Mavedzenge S, Weiss HA. Association of *Mycoplasma genitalium* and HIV infection: a systematic review and meta-analysis. AIDS. 2009;23:611-20.
[PubMed Abstract] -

- Pathela P, Jamison K, Braunstein SL, Schillinger JA, Varma JK, Blank S. Incidence and Predictors of HIV Infection Among Men Who Have Sex with Men Attending Public Sexually Transmitted Disease Clinics, New York City, 2007-2012. AIDS Behav. 2017;21:1444-51.
[PubMed Abstract] -

- Sharma M, Chris A, Chan A, et al. Decentralizing the delivery of HIV pre-exposure prophylaxis (PrEP) through family physicians and sexual health clinic nurses: a dissemination and implementation study protocol. BMC Health Serv Res. 2018;18:513.
[PubMed Abstract] -

- Tordoff DM, Barbee LA, Khosropour CM, Hughes JP, Golden MR. Derivation and Validation of an HIV Risk Prediction Score Among Gay, Bisexual, and Other Men Who Have Sex With Men to Inform PrEP Initiation in an STD Clinic Setting. J Acquir Immune Defic Syndr. 2020;85:263-71.
[PubMed Abstract] -

- Zucker J, Carnevale C, Richards P, et al. Predictors of Disengagement in Care for Individuals Receiving

Pre-exposure Prophylaxis (PrEP). J Acquir Immune Defic Syndr. 2019;81:e104-e108. [PubMed Abstract] -

Figures

Figure 1 (Image Series) - Increased Risk of HIV Acquisition in Persons with STIs (Image Series) -
Figure 1 (Image Series) - Increased Risk of HIV Acquisition in Persons with STIs
Image 1A: HIV Incidence (per 100,000 persons) among MSM Following Diagnosis of STIs

Abbreviations: GC = gonorrhea; CT = *Chlamydia trachomatis*; MSM = men who have sex with men; STI = sexually transmitted infection
These data are shown for men who have sex with men diagnosed with an STI in Washington State. The overall HIV incidence (1.6 per 100 person-years) among MSM diagnosed with an STI was four times greater than the estimated HIV incidence among all MSM in the state (0.4 per 100 person-years).

Source: Katz DA, Dombrowski JC, Bell TR, Kerani RP, Golden MR. HIV Incidence Among Men Who Have Sex With Men After Diagnosis With Sexually Transmitted Infections. Sex Transm Dis. 2016;43:249-54.

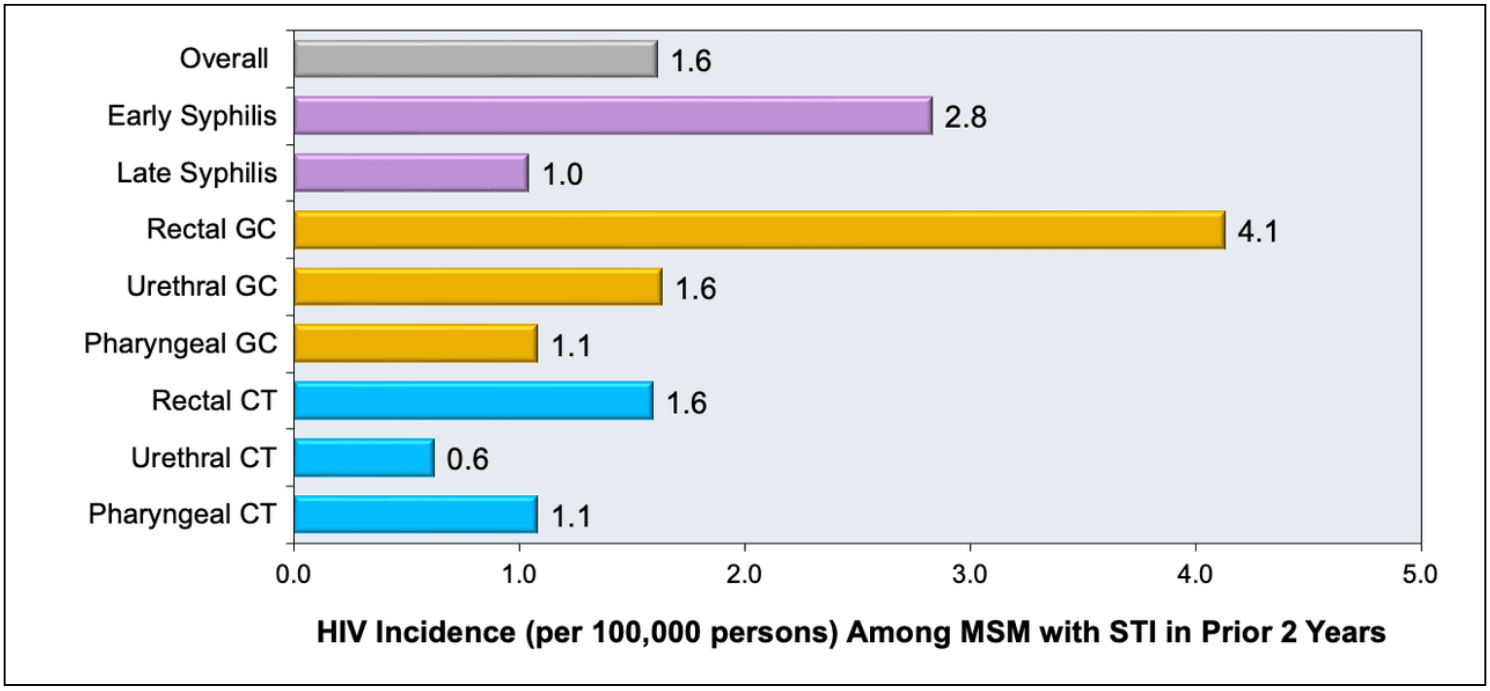

Figure 1 (Image Series) - Increased Risk of HIV Acquisition in Persons with STIs
Image 1B: History of STI in Prior 2 Years Among MSM with New HIV Diagnosis

Abbreviations: STI = sexually transmitted infection; GC = gonorrhea; CT = *Chlamydia trachomatis*; MSM = men who have sex with men
This graph shows that among 736 MSM men who have sex with men who were newly diagnosed with HIV, approximately 14% had an STI in the prior 2 years.

Source: Katz DA, Dombrowski JC, Bell TR, Kerani RP, Golden MR. HIV Incidence Among Men Who Have Sex With Men After Diagnosis With Sexually Transmitted Infections. Sex Transm Dis. 2016;43:249-54.

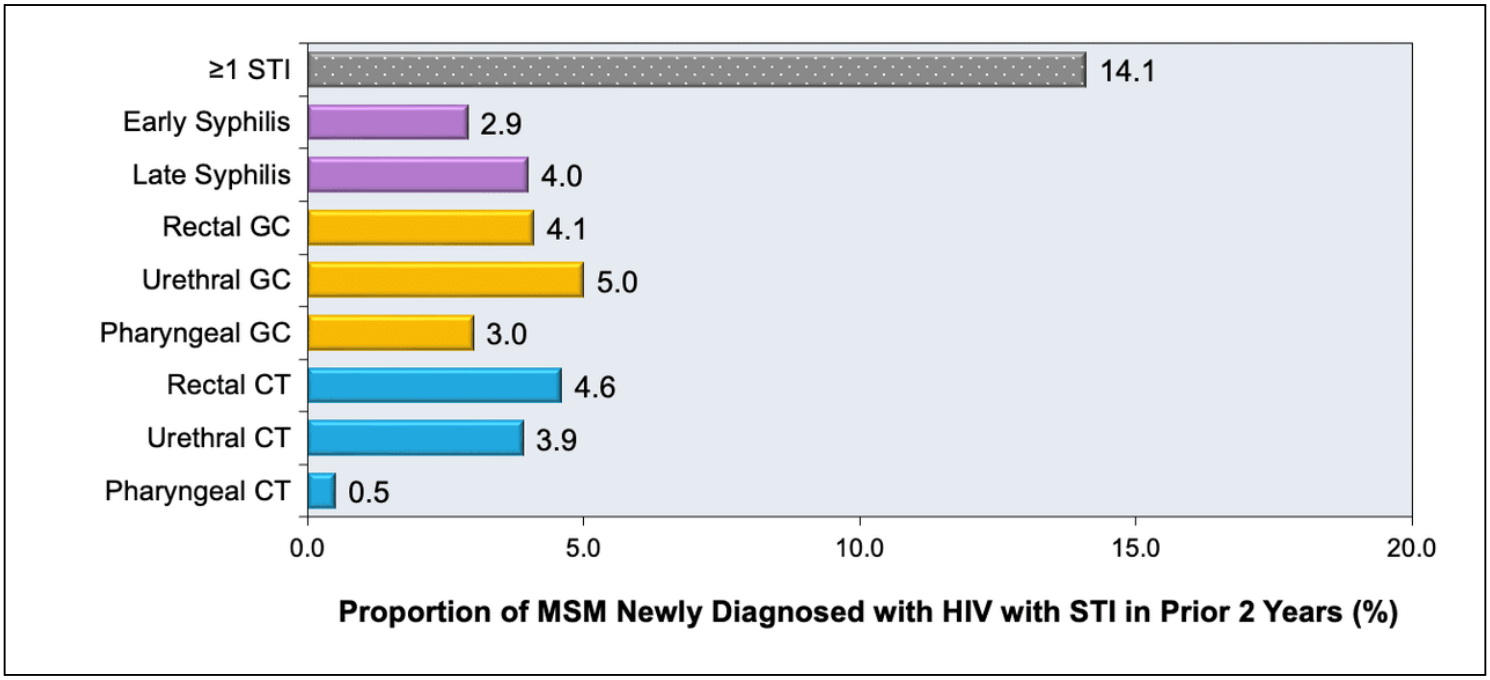

Figure 1 (Image Series) - Increased Risk of HIV Acquisition in Persons with STIs
Image 1C: HIV Risk After a Diagnosis of Syphilis, Gonorrhea, or Chlamydia in Women

Abbreviations: STI = sexually transmitted infection
These data are from 2000-2009 and are showing the risk of HIV with or without an STI

Source: Peterman TA, Newman DR, Maddox L, Schmitt K, Shiver S. Risk for HIV following a diagnosis of syphilis, gonorrhoea or chlamydia: 328,456 women in Florida, 2000-2011. Int J STD AIDS. 2015;26:113-9.

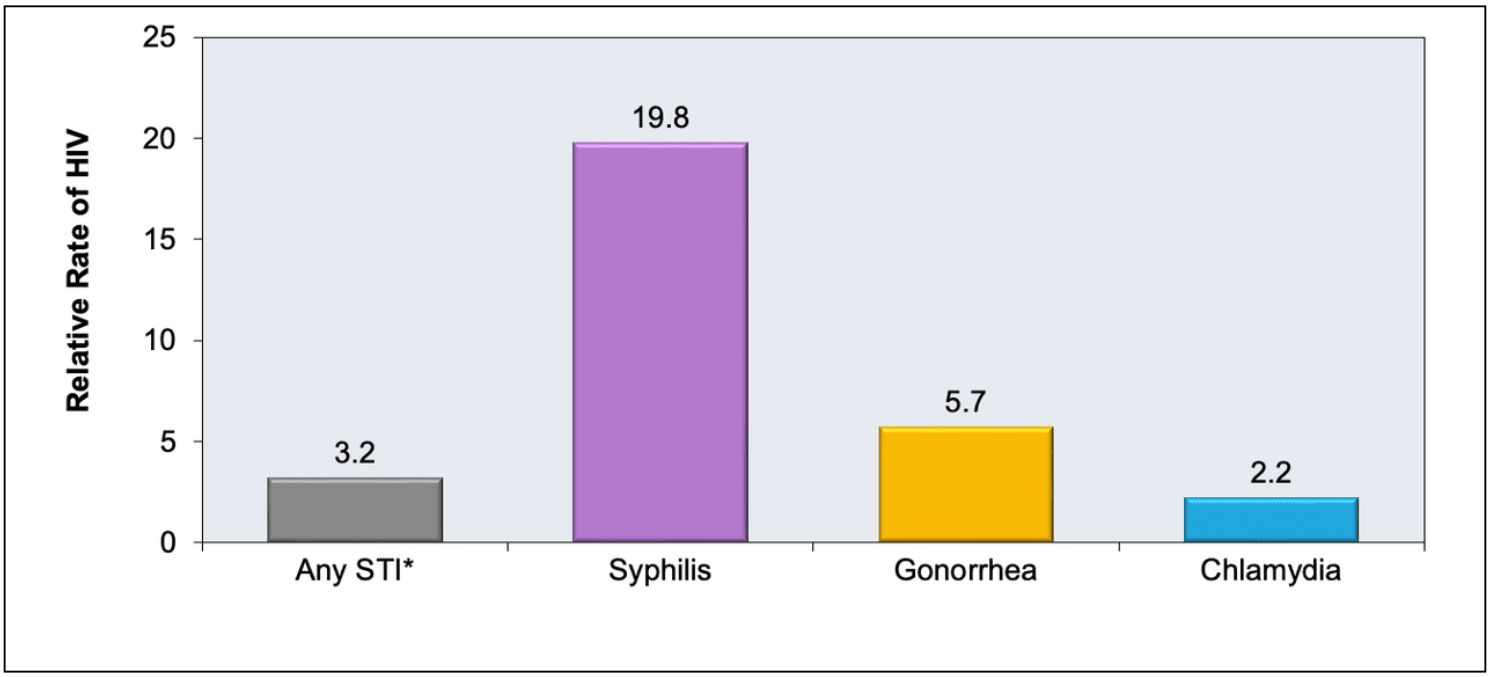

Figure 2 Impact of Sexually Transmitted Infections and Risk of HIV Acquisition

Source: Image illustration by Chason Cannon, MD, MPH; Peter Harrison, MPH; and David H. Spach, MD

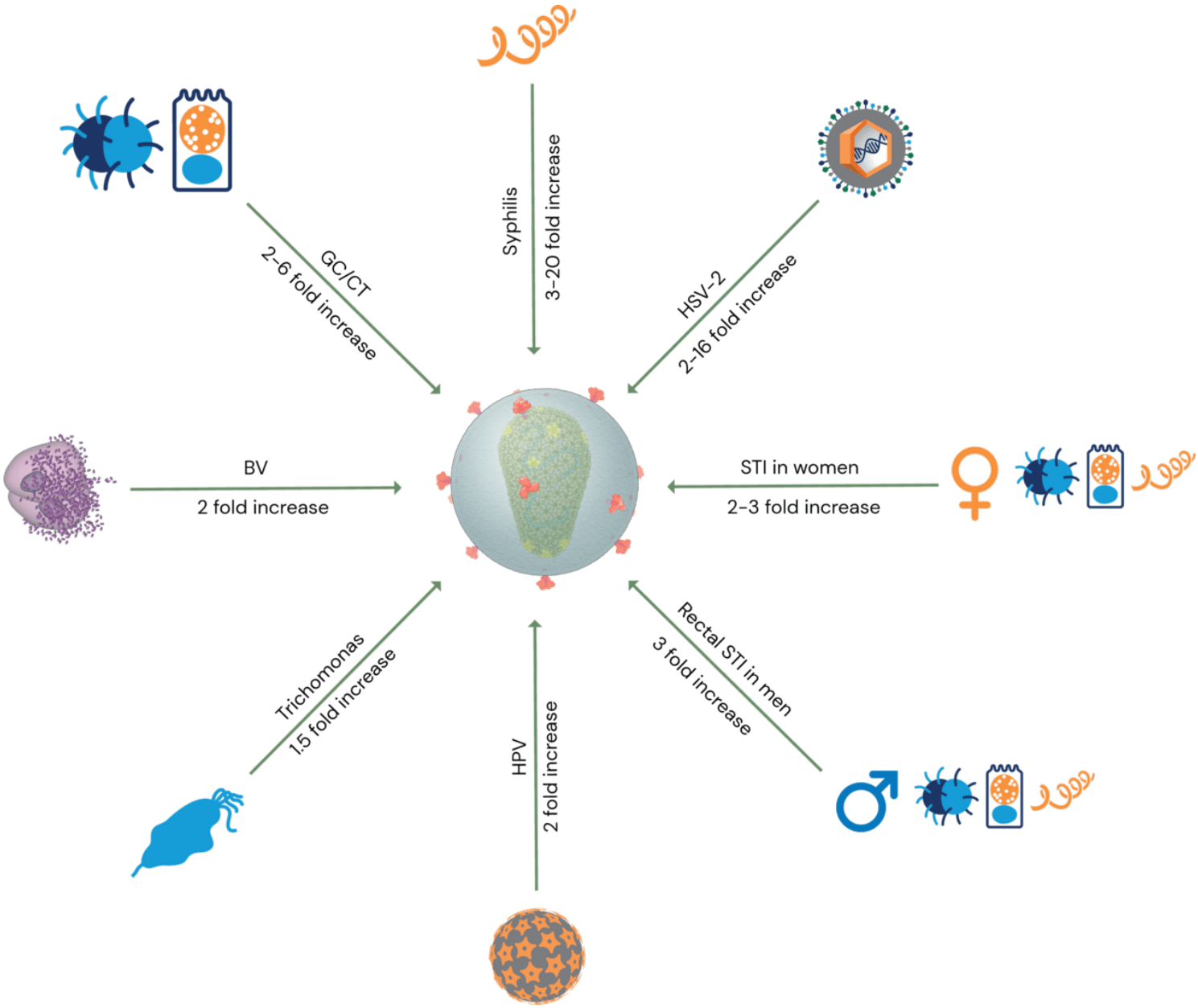

Figure 3 Protective Tenofovir Levels in Persons Receiving HIV PrEP in Sexual Health Clinics and Community Health Centers

*Concentrations determined based on tenofovir diphosphate levels on dried blood spot samples
Abbeviations: TFV-DP = tenofovir disphosphaate;

Source: Liu AY, Cohen SE, Vittinghoff E, et al. Preexposure Prophylaxis for HIV Infection Integrated With Municipal- and Community-Based Sexual Health Services. JAMA Intern Med. 2016;176:75-84.

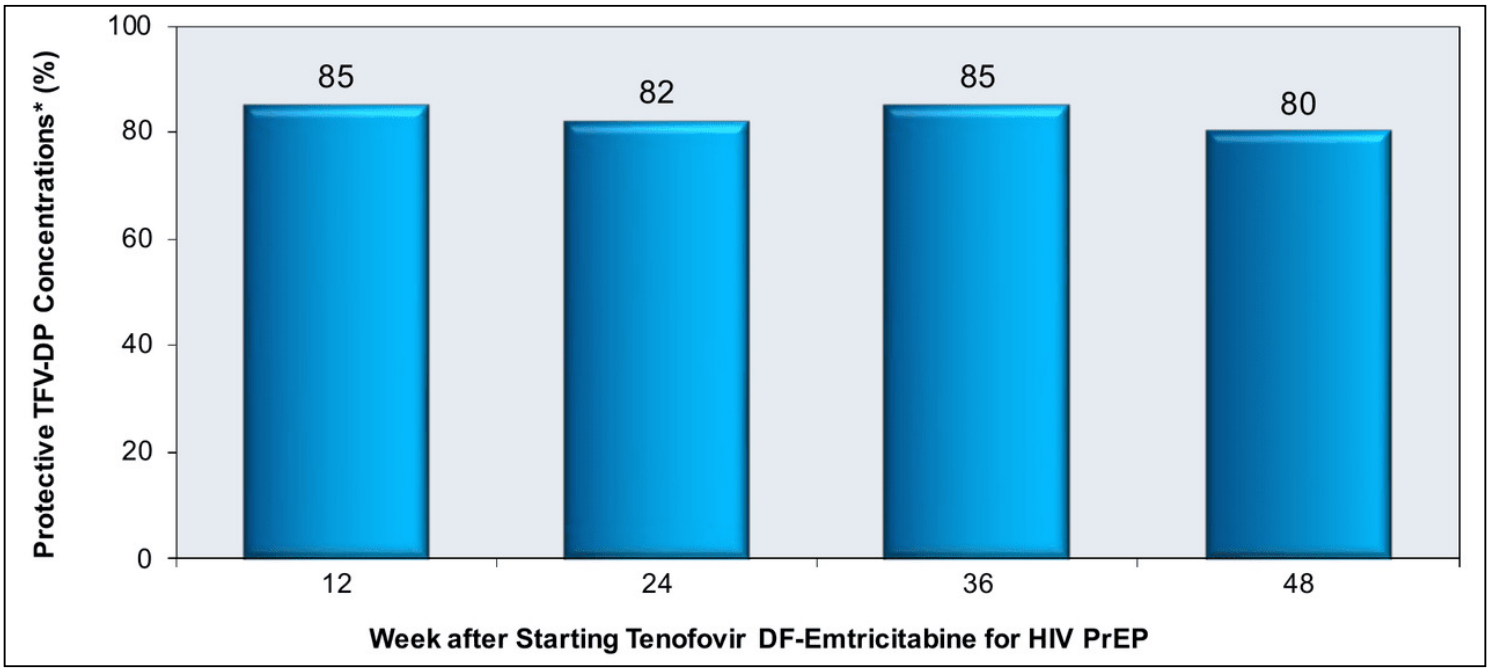

Figure 4 HIV PrEP Referrals and Use Among HIV-Negative MSM Diagnosed with Bacterial STDs in King County, Washington; August 2014-August 2017, High-Risk MSM

This figure shows HIV PrEP interviews and referrals from disease intervention specialists providing partner services to MSM diagnosed with a bacterial STI in King County, Washington, from August 2014 through August 2017.

Source: Katz DA, Dombrowski JC, Barry M, Spellman D, Bell TR, Golden MR. STD Partner Services to Monitor and Promote HIV Pre-exposure Prophylaxis Use Among Men Who Have Sex With Men. J Acquir Immune Defic Syndr. 2019;80:533-41.

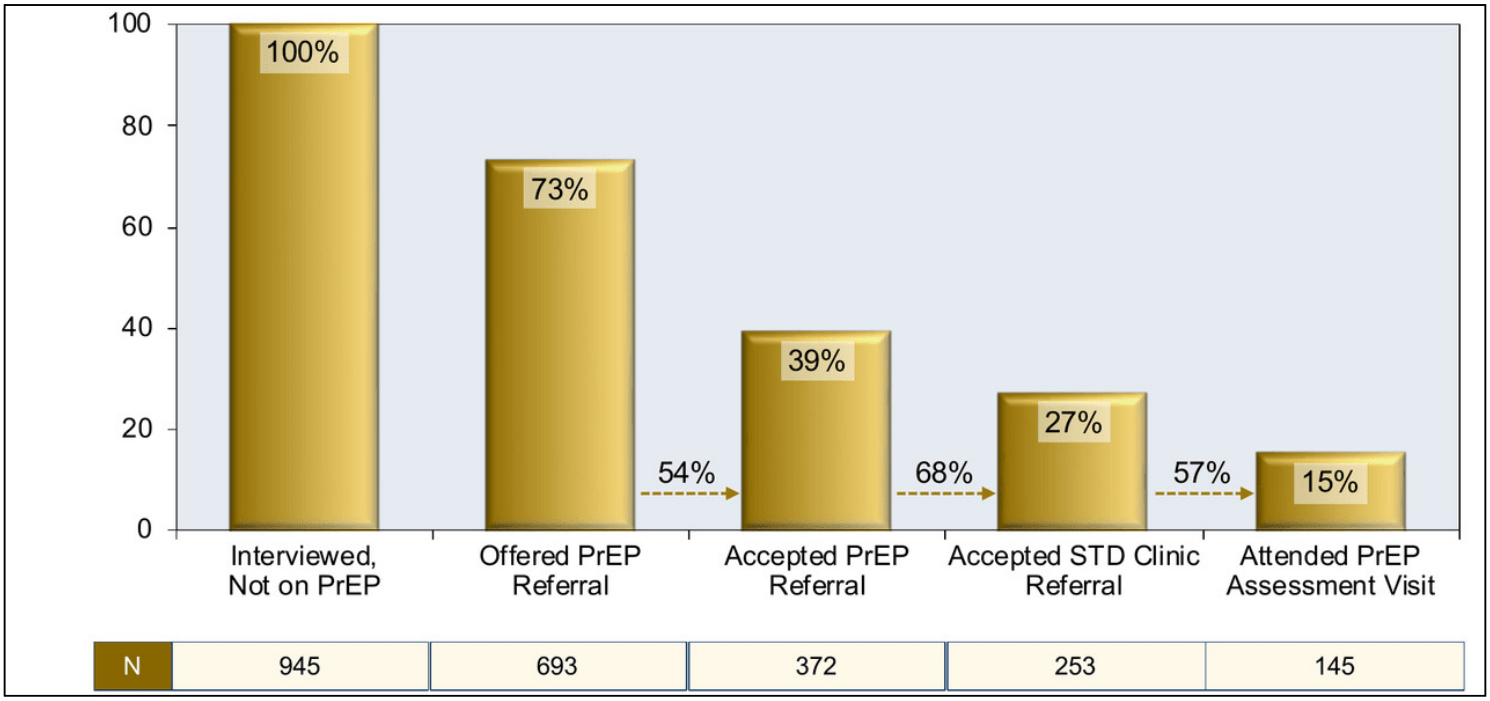

Table 1.

Common Barriers and Facilitators for Providing HIV PrEP Services in Sexual Health Clinics

Barriers	Facilitato
“Provider purview paradox”—a sexual health clinic is not a primary care or HIV specialist clinic	Already seeing high-incidence populations relationships, etc.)
Limited staffing and budget	Care model at a sexual health clinic is alre sexual health
Patient volume is high and too little time per encounter for extensive counseling	Sexual health clinic practitioners are alrea history and using information to engage in to contraception counseling)
Unfamiliarity with antiretrovirals if sexual health clinic does not offer HIV PEP	Often sexual health clinics already have w intervention specialists who do partner se