

PrEP in The Clinic

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Financial Relationships With Ineligible Companies (Formerly Described as Commercial Interests by the ACCME) Within the Last 2 Years:

Dr Scott has no relevant financial relationships with ineligible companies to disclose. (Updated 11/16/21)

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Learning Objectives

After attending this presentation, learners will be able to:

- Describe patients who are potential PrEP candidates.
- Describe the PrEP regimens available for different populations.
- Monitor patients on PrEP and support PrEP adherence

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USPSTF Guidelines

Recommendation Summary

Population	Recommendation	Grade
Persons at high risk of HIV acquisition	The USPSTF recommends that clinicians offer preexposure prophylaxis (PrEP) with effective antiretroviral therapy to persons who are at high risk of HIV acquisition. See the Clinical Considerations section for information about identification of persons at high risk and selection of effective antiretroviral therapy.	A

Clinician Summary

Expand All

Population	Persons at high risk of HIV acquisition
Recommendation	Offer preexposure prophylaxis (PrEP). Grade: A

View the Clinician Summary in PDF

Slide 4JAMA 2019 Jun 11;321(22):2214-2230

The 3 Keys to Starting and Tracking Patients

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graph TD; Labs[Labs] --> PrEP[PrEP Prescription]; Clinical[Clinical Evaluation] --> PrEP; Financing[Financing] --> PrEP;
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Starting with first visit, and every 3 months after

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PrEP Access

- How much does the care (visits, labs, meds) cost the patient?
 - TDF/FTC is now generic and should be 100% covered by insurance as USPSTF Grade A Recommendation
 - Assistance programs: Gilead, PAN, PAF
- Does the client need help signing up for insurance?

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PrEP Navigation

- Generally defined as providing support for insurance, healthcare, and medication access. Can range from passive referrals to active case management.
- A pilot study of 61 people showed no difference in active (strengths-based case management) (40%) vs passive referral (29%) in PrEP initiation at 12 weeks
 - Doblecki-Lewis J Int Assoc Provid AIDS Care 2019
- Single arm study of 187 MSM and TGW showed a 5-session PrEP navigation linked 90% to PrEP.
 - Reback J Comm Health 2019
- Navigation was associated faster PrEP initiation in a clinical setting
 - Spinelli JAIDS 2019

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Current CDC Guidelines

MSM

- HIV-positive sex partner
- Recent bacterial STI
- High number of sexual partners
- History of inconsistent or no condom
- Commercial sex worker

Heterosexual women and men

- HIV-positive sex partner
- Recent bacterial STI
- High number of sexual partners
- History of inconsistent or no condom use
- Commercial sex worker

PWID

- HIV-positive injecting partner
- Sharing injection equipment
- NOT in drug treatment
- Risk of sexual acquisition (see above)

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* Based on previous six months' practices.

CDC. PrEP Clinical Practice Guidelines 2017

Revised CDC Guidelines - Draft

Adults & Adolescents

- Anal or vaginal sex in the past 6 mo AND
 - HIV-positive partner
 - Bacterial STI in past 6 mon
 - History of inconsistent or no condom

People Who Inject Drugs

- HIV-positive injecting partner, OR
- Sharing of injection equipment

- Universal PrEP Education: Recommendation to inform all sexually active adults and adolescents about PrEP
- Offer PrEP to anyone asking for PrEP

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Draft Revision to CDC PrEP Clinical Practice Guidelines: Webinar 5/2021
Available: <https://www.cdc.gov/hiv/programresources/planning.html>

Sexual History Discussions

- Open ended questions about sexual behaviors and other concerns. Try to take "risk" out of the conversation
- The 5 **P**s of a sexual history
 - P**artners (#, gender) over given time
 - P**actices (oral, anal, vaginal)
 - P**rotection (condoms, when, how often; status discussions)
 - P**ast STI history (pathogen, location, frequency)
 - P**regnancy (desire for it, prevention methods)

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Language Matters

Taking "risk" out of the conversation

Risk-based

"PrEP is a tool that can be used to reduce anxiety about HIV and take control of your sexual health."

vs

Sexual Health based

"PrEP is for people at high risk for HIV who want to decrease their risk of becoming infected."

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Risk-reduction counseling

- **AWARE Study** - No effect among 5012 STI clinic patients randomized to brief individualized patient-centered counseling vs information only
 - Higher STIs among MSM who received counseling (aRR, 1.41; 1.05-1.90)
- **EXPLORE** - No effect among 4,295 MSM who received ten 1:1 counseling and quarterly maintenance counseling.

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Metsch JAMA. 2013;310(16):1701-1710; Koblin 2004 Jul 3;9364(9428):41-50

Ipergay Results



HIV Incidence (mITT Analysis)

Treatment	Follow-Up Pts-years	HIV Incidence per 100 Pts-years (95% CI)
Placebo (double-blind)	212	6.60 (3.60-11.1)
TDF/FTC (double-blind)	219	0.91 (0.11-3.30)
TDF/FTC (open-label)	515	0.19 (0.01-1.08)

Median Follow-up in Open-Label Phase 18.4 months (IQR:17.5-19.1)

97% relative reduction vs. placebo

Median # pills/month: 18 (IQR 11-25)

anRS

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Molina et al. Lancet HIV 2017;4:e402-10

ANRS Prévenir: Study Design

- Multicenter, open-label, prospective cohort study mainly in MSM (98.5%) from Paris

Beginning of Study
May 3, 2017

Current Analysis
Sept 20, 2020

HIV-negative adults at high risk of HIV infection with inconsistent condom use; eGFR \geq 50 mL/min; HBsAg negative in on-demand arm (N = 3059)*

Daily FTC/TDF PrEP [†] (n = 1544)
On-Demand FTC/TDF PrEP [†] (2-1-1: 2 doses before sex, 1 dose QD for 2 days after sex) (n = 1515)

*Participants enrolled on arm of their choice with ability to switch. [†]Plus condoms, gel, risk reduction and adherence counseling, questionnaire on sexual behavior. Follow-up every 3 mos with STI and/or HIV testing, plasma creatinine measurement.

Primary endpoint: \geq 15% reduction in new HIV diagnoses among MSM in Paris vs rate reported by National Surveillance network in 2016

Secondary endpoints: HIV incidence, PrEP adherence, sexual behavior, safety

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Molina CRO 2021. ANRS 148.

Slide credit: clinicaloptions.com

ANRS Prévenir: HIV Incidence

mITT Analysis	Daily PrEP (2583.25 PYFU)	On-Demand PrEP (2553.68 PYFU)	IRR (95% CI)
HIV incidence/100 PY (95% CI)	0.12 (0.02-0.34)	0.12 (0.02-0.34)	0.99 (0.13-7.38)

- Global HIV incidence: 0.11/100 PY (95% CI: 0.04-0.23)
 - PrEP stopped in all 6 cases of HIV infection
- Mean follow-up: 22.1 mos (5633 PYFU)
- Overall HIV infections averted: n = 361**
 - Assuming incidence of 6.6/100 PY as reported for placebo arm in ANRS IPERGAY study
- Rate of study discontinuation: 14.4/100 PY

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Molina CRO 2021. ANRS 148.

Slide credit: clinicaloptions.com

Recommendations for 2-1-1 TDF/FTC PrEP

- CDC continues to recommend daily TDF/FTC PrEP only, but will be updated in new recommendations
 - only licensed indication by FDA
- IAS-USA guidelines recommend 2-1-1 TDF/FTC PrEP as alternative to daily PrEP for MSM
 - Does not avoid adverse events
- Daily TDF/FTC PrEP is the only recommended option for cis-women and PWID

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Clinical Considerations for 2-1-1 PrEP

	2-1-1 PrEP	Daily PrEP
Who can use it?	Only studied in MSM	Anyone
Chronic HBV	Can trigger a flare	Can be safely used
Planning	Need to plan sex at least 2hrs in advance	No planning needed
"Forgiveness"	Not forgiving of missed doses	Forgiving of missed doses during the week

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Condom Effectiveness

- Heterosexuals (Giannou et al, Expert Rev Pharmacoecon Outcomes Res 2016)
- Meta-analysis of 25 studies, >10,000 couples
 - **Overall effectiveness: 71-77%**

- MSM (Smith et al, JAIDS 2015;68:337-344)
- Data from 2 large cohorts
 - **70% effective**

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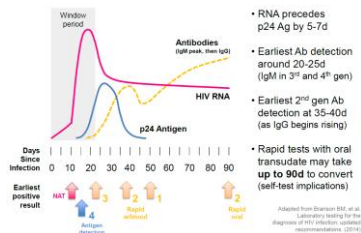
Baseline Lab testing - HIV

- Laboratory-based HIV screening
 - 4th gen HIV Ag/Ab assay (within 7 days)
 - HIV Viral Load (consider, especially if concern for acute HIV)
- Rapid HIV testing (blood-based)
 - Allows same-day/Rapid PrEP starts
 - Would consider including acute HIV assessment with laboratory-based HIV Ag/Ab, or HIV viral load (pooled or individual)

*If concerned for acute HIV, postpone PrEP until RNA result received/window for exposure closed OR start ART.

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Timeline following HIV Infection



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- RNA precedes p24 Ag by 5-7d
 - Earliest Ab detection around 20-25d (IgM in 3rd and 4th gen)
 - Earliest 2nd gen Ab detection at 35-40d (as IgG begins rising)
 - Rapid tests with oral transudate may take up to 90d to convert (self-test implications)
- Adapted from Branson ET, et al. Laboratory testing for the diagnosis of HIV infection: updated recommendations. (2015)

Baseline Lab testing

Kidney Function Testing (Cr or Metabolic Panel)

STI testing

- GC/CT- pharyngeal, urethral, vaginal, rectal
- syphilis serology

Hepatitis screening

- HAV Ab
- HBV (sAg, cAb, sAb)
- HCV Ab

Pregnancy test (for people able to become pregnant)

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Prescribing PrEP

Confirm

- HIV negative
- CrCl ≥ 30 ml/min (or GFR if available)
- No signs/symptoms of acute HIV

TDF/FTC 1 tab daily with 2 refills

- For all populations

TAF/FTC 1 tab daily with 2 refills

- For MSM

TDF/FTC 1 tab as directed with 2 refills

- For MSM (full 90 day supply to cover 3 month period)

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Follow-up Lab testing - HIV

- Laboratory-based HIV screening
 - 4th gen HIV Ag/Ab assay (every 3 months)
 - HIV Viral Load if concerns for acute HIV
- Rapid HIV testing (blood-based)
 - Allows same day results
 - Would consider including acute HIV assessment with laboratory-based HIV Ag/Ab

*If concerned for acute HIV, PrEP management is a little more complicated...

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Follow-up Lab testing

Kidney Function Testing every 3-6 months (Cr or Metabolic Panel)

STI testing

- GC/CT- pharyngeal, urethral, vaginal, rectal
- syphilis serology

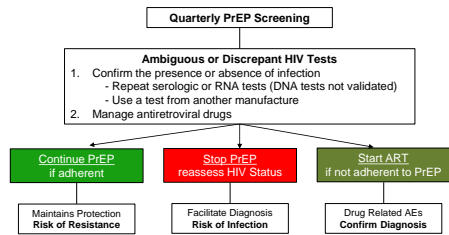
Hepatitis screening

- Annual HCV screening for MSM and PWID

Pregnancy test (for people able to become pregnant)

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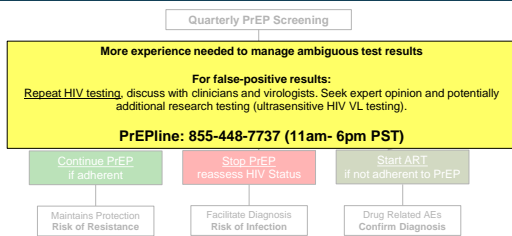
How to manage ambiguous HIV Test Results



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Smith et al CDFD 2018; Stekler ID et al CDFD 2018; Saag M et al JAMA 2015

How to manage ambiguous HIV Test Results



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Smith et al CDFD 2018; Stekler ID et al CDFD 2018; Saag M et al JAMA 2015

PrEP Discontinuations

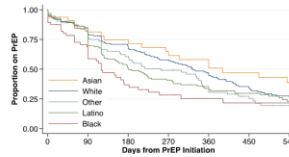
- Average duration on PrEP in many populations is relatively brief in US:
 - MSM: 38% - 57% at 6 months; 43% - 63% at 1 year
 - Women: 37.5% at 6 mos
- HIV infections high if stop PrEP
 - Many anecdotal cases of infections when stop PrEP
 - 18 seroconversions in people who had stopped PrEP in SF STD clinic
 - 3.9/100 py in people stopping PrEP in Montreal
 - 0.95 infections/100 py in people stopping vs. 0.25 in people remaining on PrEP in Los Angeles

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Blackstock, AIDS Care 2017;29:866-9; Chan, JIAS 2016;19: 20903;Greenwald, CROI 2016, Abstract #1038;Hojilla, AIDS and Behav; 2018;22:1096-9; Liu, JAMA Intern Med 2016;176:75-84; Montgomery PLOS One 2016;11:e0157742; Russe, CID 2018;67:283-7; Shower, CROI 2018, Abstract #1009

PrEP Discontinuations In SFDPH Clinics

- Median Duration on PrEP 8.2 months in SFDPH Primary Care Clinics
- More discontinuations among Black vs White patients.
- Low HIV/STI testing by clinicians
- PrEP Navigation not associated with fewer discontinuations.



Scott AIDS 2019; Spinelli OFID 2019; Saberi JMIR Form Res 2018

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PrEP Implementation

- Task-shifting
 - Non-prescribers for PrEP education and adherence counseling, and financial navigation support.
 - Standing order protocols for staff to order initial or follow-up labs.
 - Clinician evaluation is minimal for most patients (can be done via telemedicine)

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PrEP Implementation

- Streamlining delivery
 - Standing orders for HIV/STI.
 - Support patient self-collection of swabs (at home or in clinic bathrooms)
 - Consider if self-swab instructions/diagrams are appropriate for posting in your clinical spaces
 - Less frequent clinician visits with quarterly "lab-only" visits for stable patients

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Expanded use of Telemedicine

- The COVID-19 pandemic has highlighted the advantages and challenges of telemedicine in care retention.
 - Limited data available on PrEP uptake and persistence (two pilot studies showed promise; an RCT is ongoing).
 - Several companies provide telemedicine-based PrEP (Plushcare, Nurx, etc)
- Video and phone communication to match patient needs. Texting for adherence support and testing reminders

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Home testing options

- Home self-collection of swabs and urine for STI testing
- HIV and syphilis testing may still require laboratory visit
 - Some labs offer dried blood spots or capillary tubes
- Consider costs associated with home testing options
 - Ex: California SB 306 requires health plans to cover at-home test kits for HIV and STIs (announced 10/2021)

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Summary

- All our patients should receive PrEP education
- Minimize “risk” discussions with patients and no evidence that risk reduction counseling works for HIV-negative patients
- Offer the PrEP options which may be appropriate
- Streamlining evaluation, testing, and expanding telemedicine are strategies to support PrEP implementation

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Question-and-Answer Session