What's new in PrEP for 2022?

Updates on the PrEP Science and Policy Landscape

Jessica Bloome, MD, MPH
Deputy Director, CBA program, SFDPH
UCSF Division of HIV, ID, & Global Medicine





Disclosures

I have no disclosures.

Agenda

- 1. What is PrEP?
- 2. CDC PrEP guidelines update
- 3. PrEP medications
- 4. PrEP implementation
- 5. Resources for PrEP delivery



What is PrEP?

- PrEP is biomedical HIV prevention: using medications to prevent HIV transmission
- There are now 3 FDA-approved medications for HIV prevention: 2 fixeddose combination pills and one intramuscular injection
- 1. Tenofovir disoproxil fumarate/emtricitabine 300/200mg (TDF/FTC)
 - Truvada[®]
 - Generic TDF/FTC
- 2. Tenofovir alafenamide fumarate/emtricitabine 25/200mg (TAF/FTC)
 - Descovy[®]
- 3. Cabotegravir long acting (CAB-LA)
 - Apretude®

PrEP Effectiveness

- PrEP is now estimated to be 99% effective in preventing sexual transmission of HIV
 - With optimal or consistent use (taken at least 4 times per week)
 - Effectiveness estimate remains 74-84% for prevention of transmission from injection drug use

• U.S. Preventive Task Force "A" grade for PrEP



"The USPSTF recommends that clinicians offer preexposure prophylaxis (PrEP) with effective antiretroviral therapy to persons who are at high risk of HIV acquisition."

CDC 2021 PrEP Guideline Updates

- PrEP indications
- HIV testing and safety monitoring
- PrEP medications
- PrEP prescribing options

US Public Health Service

PREEXPOSURE PROPHYLAXIS FOR THE PREVENTION OF HIV INFECTION IN THE UNITED STATES – 2021 UPDATE

A CLINICAL PRACTICE GUIDELINE



Preexposure Prophylaxis for the Prevention of HIV Infection in the United States – 2021 Update Clinical Practice Guideline

www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf

2021 update: <u>all</u> sexually active adults and adolescents should be informed about PrEP

Clinicians should continue to assess for:

- Substantial risk of HIV acquisition
- Documented negative HIV test within one week before prescribing PrEP
- No signs or symptoms of acute HIV infection
- No contraindicated medications
- Estimated creatinine clearance ≥30 ml/min for oral PrEP medications

Identifying people at "substantial risk of acquiring HIV infection," 2017 guidance

Men Who Have Sex with Men	Heterosexual Women and Men	Persons Who Inject Drugs
HIV-positive sexual partner	HIV-positive sexual partner	HIV-positive injecting partner
Recent bacterial STI ⁺	Recent bacterial STI [‡]	Sharing injection equipment
High number of sex partners	High number of sex partners	
History of inconsistent or no condom use	History of inconsistent or no condom use	
Commercial sex work	Commercial sex work	
	In high HIV prevalence area or network	

Identifying people at "substantial risk of acquiring HIV infection," 2021 update

Sexually-Active Adults and Adolescents¹

Anal or vaginal sex in past 6 months AND any of the following:

- HIV-positive sexual partner (especially if partner has an unknown or detectable viral load)
- Bacterial STI in past 6 months³
- History of inconsistent or no condom use with sexual partner(s)

"Patients who request PrEP should be offered it, even when no specific risk behaviors are elicited."

Identifying people at "substantial risk of acquiring HIV infection," 2021 update

Persons Who Inject Drugs¹

HIV-positive injecting partner OR

Sharing injection equipment

"Because most PWID are also sexually active, they should be assessed for sexual risk."

PrEP Medications



Oral medications

- Daily, continuing, oral doses of F/TDF (Truvada®), ≤90-day supply OR
- For men and transgender women at risk for sexual acquisition of HIV; daily, continuing, oral doses of F/TAF (Descovy®), ≤90-day supply



Injectable medication

- 600 mg cabotegravir administered as one 3 ml intramuscular injection in the gluteal muscle
 - o Initial dose
 - Second dose 4 weeks after first dose (month 1 follow-up visit)
 - o Every 8 weeks thereafter (month 3,5,7, follow-up visits etc)

HIV Testing and Safety Monitoring

- HIV testing at PrEP initiation should include HIV RNA assay (viral load) for specific situations:
 - People with acute HIV symptoms
 - People with a possible HIV exposure in past 4 weeks
 - Initiation and follow up for cabotegravir-LA
 - Restarting PrEP taking oral PrEP in past 3 months or cabotegravir-LA in past 12 months
- Follow up interval for kidney function testing lengthened from 3 months to annually for individuals taking oral tenofovir-containing medication
 - 6 months for >50 years old or baseline kidney disease
- Annual cholesterol testing for people on TAF/FTC

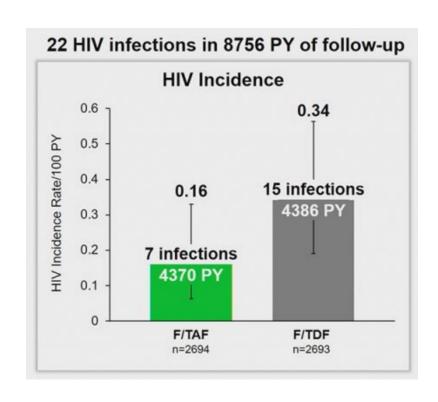
PrEP Prescribing Options

- Nondaily PrEP (aka on-demand or 2-1-1 PrEP)
 - Can only be used for MSM with TDF/FTC medication
 - May be considered for people who have sex less frequently, or can anticipate or delay sex at least 2 hours prior
 - Importance of counseling
- Same-day PrEP starts
 - HIV testing with laboratory-based HIV Ag/AB or HIV RNA test is preferred, POC fingerstick Ag/Ab acceptable
 - Oral fluid testing should NOT be used
- PrEP via telehealth
 - Obtain HIV testing from a laboratory or home specimen collection kit
 - Prescribe 90-day fills to facilitate adherence

PrEP medications

- Comparing oral TAF/FTC and TDF/FTC
- On-demand PrEP
- Long-acting injectable PrEP: CAB-LA
- PrEP medications and hormone therapy

TAF/FTC (Descovy) vs. TDF/FTC (Truvada) for PrEP



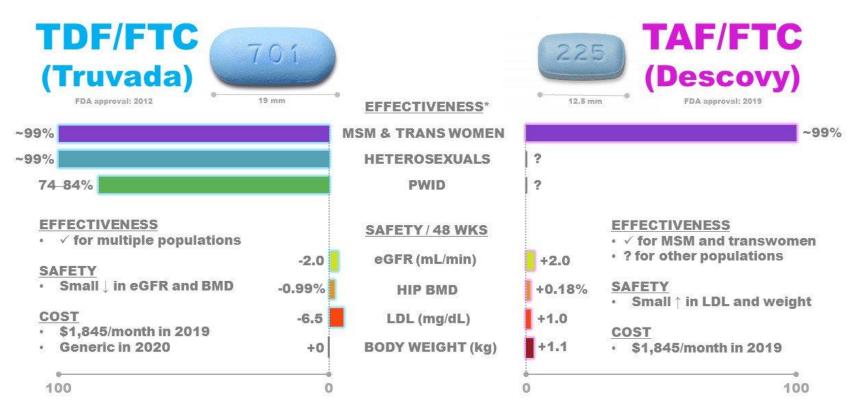
DISCOVER trial

Double-blind randomized trial with active control group

- Enrolled 5,387 HIV-negative MSM and transgender women (TGW) engaging in condomless anal sex
 - Mean age was 36, 9% Black, 1% TGW
- Participants randomized to TAF/FTC (Descovy) + placebo or TDF/FTC (Truvada) + placebo
- TAF/FTC demonstrated to be non-inferior to TDF/FTC in preventing sexual transmission of HIV
- → FDA approval of TAF/FTC in October 2019 for sexual transmission of HIV
- → Including people with chronic kidney disease with creatinine clearance >30 mL/min
- → Excluding for receptive vaginal sex

TDF/FTC (Truvada) vs. TAF/FTC (Descovy)

Which medication should I prescribe for daily PrEP?



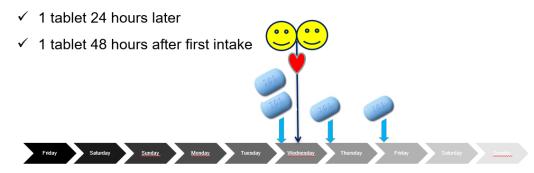
^{*}No data available for trans men. Sources: fda.gov/media/129607/download; fda.gov/media/129609/download; cdc.gov/hiv/risk/estimates/preventionstrategies.html Created by: @JuliaLMarcus

On-demand (211) PrEP



IPERGAY: Sex-Driven iPrEP

√ 2 tablets 2-24 hours before sex



4 pills of TDF/FTC taken over 3 days to cover one sexual intercourse



IPERGAY

Randomized control trial (RCT) of event-driven PrEP with TDF/FTC vs. placebo, 2012-2014

- Enrolled 400 MSM in France and Montreal
- 14 new HIV infections in control arm (incidence (6.6/100 person years) vs. 2 infections in treatment arm (0.91/100 person years) over median 9 months
- → Placebo arm stopped early by DMB in 2014
- 86% relative risk (RR) reduction (p=0.002); open label extension showed 97% RR reduction

Molina et al. NEJM; 2015.

On-demand (211) PrEP

- TDF/FTC for on-demand PrEP is not currently FDA-approved in the U.S., but is approved for use in Europe, Australia and Canada
- CDC 2021 and International Antiviral Society (IAS-USA) 2018 guidelines recommend ondemand PrEP as an alternative to daily PrEP for MSM who have infrequent sexual exposures
- Demonstration studies in France (Prevenir) and Amsterdam (AmPrEP) show comparable HIV incidence rates in cohorts using on-demand PrEP or daily PrEP
- Programs around the U.S. are offering on-demand PrEP to expand options for patients





Global HIV Incidence: 0.09/100 PY (95% CI: 0.01-0.33) (2 cases)

Mean Follow-up of 8.7 months and 2208 Person-Years Rate of study discontinuation: 8.9/100 PY

Treatment	Follow-Up <u>Pts</u> -years	HIV Incidence per 100 Pts- <u>years</u> (95% CI)	P-value	
TDF/FTC (Daily)	1072.9	0.0 (0.0 – 0.3)	0.132	
TDF/FTC (On Demand)	1132.7	0.2 (0.0 – 0.6)	0.132	

FDA NEWS RELEASE

FDA Approves First Injectable Treatment for HIV Pre-Exposure Prevention

Drug Given Every Two Months Rather Than Daily Pill is Important Tool in Effort to End the HIV Epidemic

For Immediate Release: December 20, 2021

Long-acting injectable cabotegravir (CAB-LA) has recently been demonstrated to be safe and effective in preventing sexual transmission of HIV



≦03 HPTN 083

Active **Products**

Long-acting injectable cabotegravir (CAB LA), oral cabotegravir (CAB), oral FTC/TDF



Populations

4,570 cisgender men and transgender women who have sex with men



Locations

Argentina, Brazil, Peru, South Africa, Thailand, U.S., Vietnam



Start Date

December 2016



Study Design

Non-Inferiority of CAB LA to FTC/TDF

A non-inferiority study tests whether one drug works about the same as, but not worse than, another drug

Study Steps STEP 1

5 weeks of 2 daily oral pills - 1 active and 1 placebo





STEP 2

Injections every 8 weeks and daily pills for up to 3 years



STEP 3

Daily oral pills for 48 weeks



Study Results The study showed **superiority** of CAB LA over oral FTC/TDF, meaning CAB LA worked better to prevent HIV infection in the population than oral FTC/TDF.

There was a **66%** reduction in HIV infections in study participants provided CAB compared to FTC/TDF.



Long-acting injectable cabotegravir (CAB LA), oral cabotegravir (CAB), oral FTC/TDF



TDF/FTC

3,200 (projected) cisgender women



Botswana, Eswatini, Kenya, Malawi, South Africa, Uganda, Zimbabwe



November 2017



Superiority of CAB LA to FTC/TDF

A superiority study tests whether one drug works better than another drug

STEP 1

5 weeks of 2 daily oral pills - 1 active and 1 placebo







STEP 2

Injections every 8 weeks and daily pills for up to 3 years



STEP 3

Daily oral pills for 48 weeks

The study showed **superiority** of CAB LA over oral FTC/TDF, meaning CAB LA worked better to prevent HIV infection in the population than oral FTC/TDF.

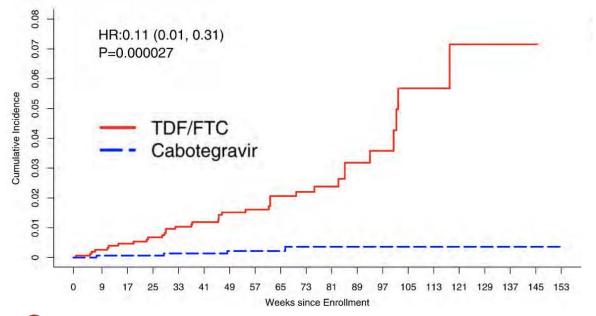
There was a 89% reduction in HIV infections in study participants provided CAB compared to FTC/TDF.



Women in the CAB group had an 89% lower risk of HIV infection, compared to the TDF/FTC group

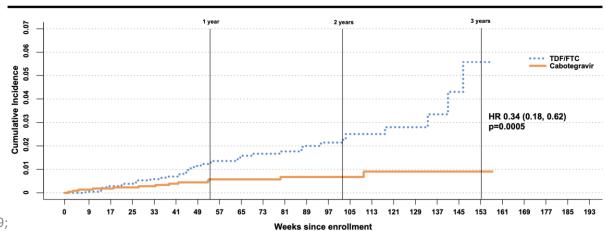
Participants in the CAB group had a 66% reduction in HIV infections, compared to the TDF/FTC group

Cumulative HIV incidence – ITT



E083

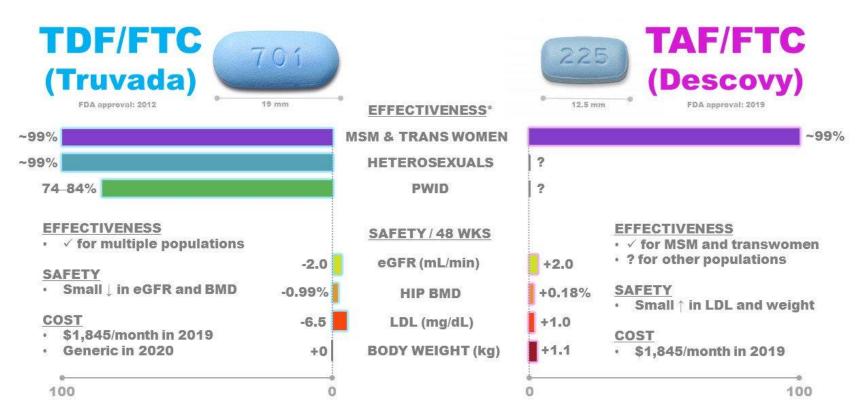
HIV Incidence - ITT



Delany-Moretlwe S et al. HIV4P 2021, LB1479; Landovitz RJ et al. AIDS 2020, #OAXLB01

Cabotegravir-LA vs. TDF/FTC + TAF/FTC

Which medication should I prescribe for daily PrEP?







Effectiveness

MSM, trans women, heterosexuals: >99% effective

PWID – not studied

Safety

Kidney function not affected, does not need to be monitored

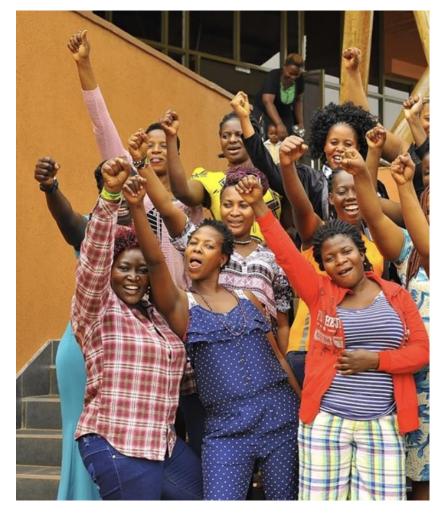
Injection site reactions common, usually mild, first 2-3 visits

Cost:

~\$3,700 per dose (every 8 weeks)

Cabotegravir-LA PrEP

- CAB-LA injections every 8 weeks superior to oral TDF/FTC in preventing HIV infection in two large RCT studies
- Difference appears to be driven by higher adherence to CAB-LA
- Demonstration projects evaluating implementation models for different populations are ongoing



https://www.hptn.org/research/studies/hptn084

PrEP & Gender Affirming Hormones

ImPrEPT sub-study

- Large cohort study of PrEP adherence, with sub-study evaluating bi-directional effects of PrEP and gender affirming hormone therapy
- 172 participants enrolled in the sub-study, 49 TGW and 39 TGM completed the study
- Tenofovir levels and serum sex hormones measured at baseline and week 12
- Desired hormone effects and satisfaction measured at baselines and week 24
- Individuals taking and not taking hormone therapy had similar tenofovir levels at baseline and week 12
- Serum estradiol levels not affected by TDF/FTC; serum testosterone levels slightly lower in those taking TDF/FTC, but not clinically significant
- No change in the perceived effects of hormone therapy among those taking TDF/FTC for PrEP

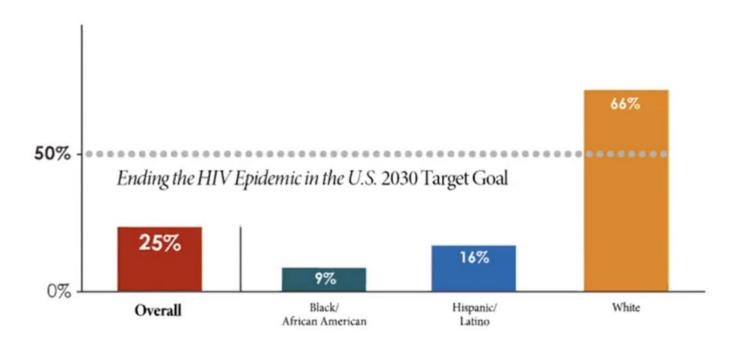
PrEP Implementation

- PrEP disparities & lessons from contraception
- CAB-LA implementation
- PrEP persistence
- Truvada lawsuits and misinformation

PrEP Disparities

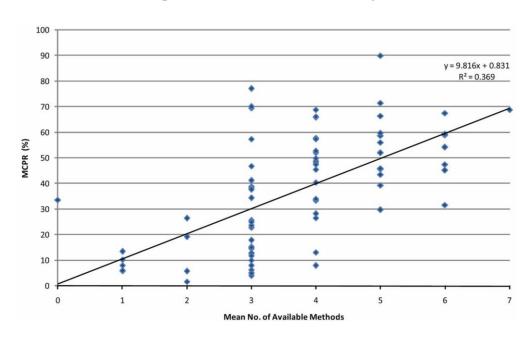
WHILE 25% OF PEOPLE ELIGIBLE FOR PREP WERE PRESCRIBED IT IN 2020, COVERAGE IS NOT EQUAL

PREP COVERAGE IN THE U.S. BY RACE/ETHNICITY, 2020



Lessons from Contraception

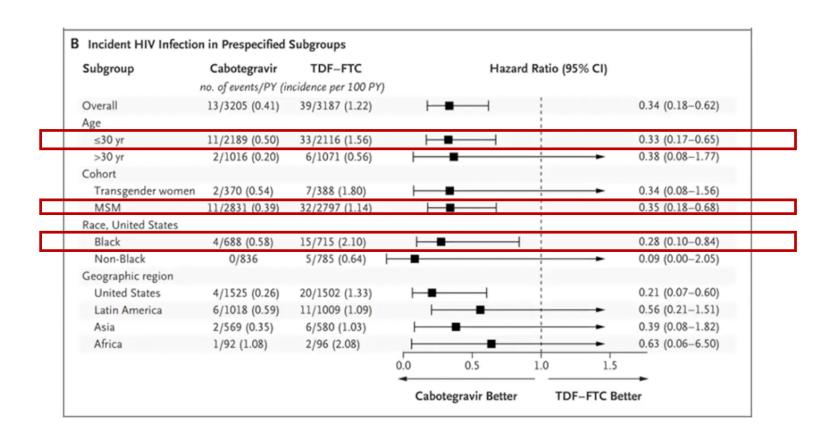
Relationship Between MCPR for 113 Surveyed Countries and Number of Available Methods, According to the 50% Accessibility Rule, 2009.



- More options associated with greater use
- Different populations may have different preferences for prevention technologies
- Each additional option associated with 4-8% increase in uptake

Abbreviation: MCPR, modern contraceptive prevalence rate.

HPTN 083 Cabotegravir-LA vs. TDF/FTC Subgroup Analysis



Lessons from Contraception





Cabotegravir-LA Implementation

Clinical

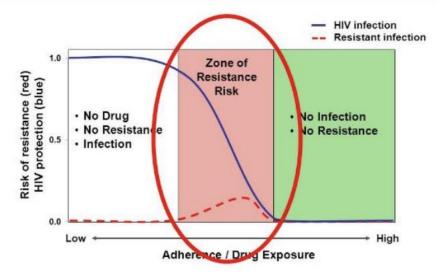
- Visits every 2 months
- Requirement for HIV RNA testing
- "Long tail" and risk of developing resistance if HIV exposure occurs after stopping

Program

- Storage, space and staff for injections
- Unique counseling and navigation needs

Cost

- CAB-LA >\$25K/year
- Insurance coverage will likely vary

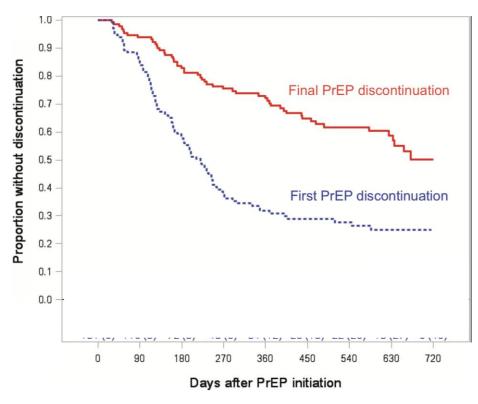




PrEP Persistence

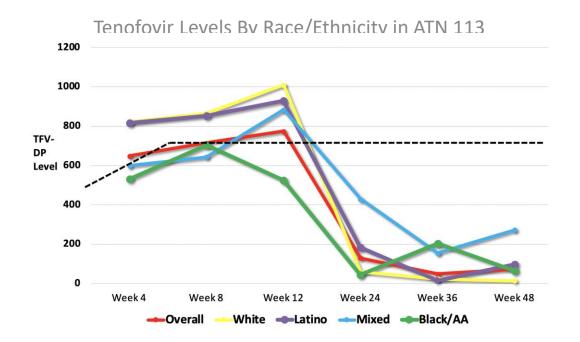
- High rates of retention seen in early demonstration projects have not been borne out in routine clinical care
 - 37-62% discontinuation rates within 6 months reported
- Higher rates of discontinuation among adolescents and African-American patients, concerning for exacerbating disparities

Pre-exposure Prophylaxis Uptake and Discontinuation Among Young Black Men Who Have Sex With Men in Atlanta, Georgia



Adolescents and PrEP Persistence

- ATN 110 (MSM ages 18-22)
- ATN 113 (MSM ages15-17)
- →Open label demonstration studies
- → PrEP was well tolerated, acceptable, minimal AE
- Drop off in adherence over time and with longer visit intervals



Strategies to Support PrEP Persistence

What

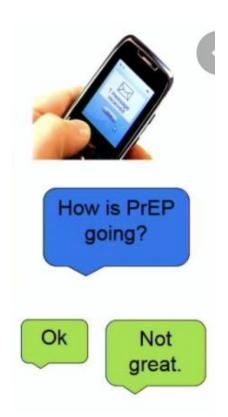
- Same-day or rapid PrEP starts
- Injectable long-acting medication
- Offering on-demand PrEP

How

- Navigation and panel management
- Mobile health engagement
- Structured adherence counseling
- Drug monitoring and feedback

Where

- Telehealth
- Express-lane style visits
- Pharmacy-based PrEP



Tele-PrEP Programs

Account setup:

HIPAA privacy:

Service fee:

Type(s) of contact:

TELE-PREP: MISTR, NURX, PLUSHCARE The following telemedicine companies provide PrEP prescriptions. These resources may be good options for people: whose clinician doesn't provide PrEP, who don't want to ask their doctor for PrEP, who live too far from a PrEP provider, who want to get their PrEP delivered to their home, who already have insurance, or who move from state to state. Plush Care NUCX mistr heymistr.com nurx.co/prep prep.plushcare.com **Providing PrEP since:** 2018 2016 2015 Confidential:

voice, email, chat

\$99

N (for patients)

voice, eml, text, chat

\$25 - \$129

voice, video, app

\$99 - \$200







Virtual PrEP Program

Virtual PrEP Program for Adolescents and Young Adults

In partnership with



Pharmacy Based PrEP









Visit, Test and Pickup PrEP all in One Location.



Truvada Lawsuits



- 2020 personal-injury lawsuits against Gilead have have continued to receive attention on social media
- Concerns that this has led to increased medical mistrust around PrEP
- No new adverse effects (AE) of TDF/FTC (Truvada) reported – but heightened awareness/concern around known AE, and some inaccurate rumors

PrEP and Kidney Function

- Kidney toxicity is rare (<1%) among people who use TDF/FTC for PrEP
 - Higher risk with age >50 or pre-disposing conditions like diabetes,
 hypertension, with recommendation for more frequent monitoring
- People with kidney disease that is not severe (CrCl >30 ml/min) are still eligible to use TAF/FTC
- People with kidney disease also have the option to use CAB-LA

PrEP and Bone Health

- There is no evidence that TDF/FTC increases fracture risk
- CDC does not recommend routine monitoring of bone mineral density
 - →Individuals with a history of osteoporosis or fragility fractures may consult with a specialist to determine the most appropriate PrEP medication and monitoring

PrEP Resources

- Clinical guidance
- Navigation resources
- Paying for PrEP

PrEP Resources: Clinical Guidance

National PrEP Line: <u>free</u> clinician consultations

Call for a Phone Consultation

(855) 448-7737 or (855) HIV-PrEP Monday – Friday, 9 a.m. – 8 p.m. ET

PrEP: Pre-Exposure Prophylaxis



Clinically supported advice on PrEP for healthcare providers

Up-to-date clinical consultation for PrEP decision-making, from determining when PrEP is an appropriate part of a prevention program to understanding laboratory protocols and follow-up tests.



nccc.ucsf.edu

PrEP Resources: Navigation







HIV-prevention and payment assistance resources in English and Spanish.

Search for PrEP providers in your area.

For patients and providers.

In collaboration with NPIN/PrEPLocator.







Frontline Provider Manual

Comprehensive manual to support frontline staff engaged in navigation services for PrEP access and adherence.

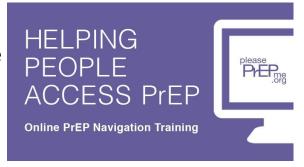
A living document. Frequently updated with changes in healthcare landscape.

pleaseprepme.org/PrEPNavigatorManual

Frontline Provider Training

A free, self-directed, online training based on current data and clinical best practices designed to support and empower frontline staff in providing inclusive, affirming PrEP services.

pleaseprepme.org/PrEPNavTraining



Paying for PrEP

Patient medication costs

- Insurance patients should <u>not</u> have copays for oral PrEP with USPSTF Grade A recommendation
- Uninsured federal Ready, Set, PrEP program; manufacturer assistance programs
- Generic PrEP is now available

Patient visit and associated costs

Insurance – should <u>not</u> have copays with USPSTF Grade A

PrEP program costs

- Billing insurance
- 340-B programs

Generic PrEP is here

- Generic TDF/FTC available since 2020
- Prices now down to \$30 per month supply



Results 1 - 11 of 11									Page 1 of	
etails	Price Chg	New Pkg	Product Name ▼	Active Ingredient	Manufacturer/ Distributor	Rpkg	Generic	Pkg Size	Unit Dose	WAC Pkg Price
			EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AMNEAL PHARMACEUTICALS INC	N	Υ	30s ea	N	1411.74
			EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AMNEAL PHARMACEUTICALS INC	N	Υ	30s ea	N	1411.74
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AMNEAL PHARMACEUTICALS INC	N	Υ	30s ea	N	40.00
			EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AMNEAL PHARMACEUTICALS INC	N	Υ	30s ea	N	1411.74
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AUROBINDO PHARMA USA, INC.	N	Υ	30s ea	N	105.65
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	AVKARE, INC.	N	Υ	30s ea	N	861.36
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	CIPLA USA, INC.	N	Υ	30s ea	N	75.00
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	MACLEODS PHARMA USA, INC.	N	Υ	30s ea	N	30.00
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	MYLAN PHARMACEUTICALS, INC.	N	Υ	30s ea	N	72.77
			EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	TEVA PHARMACEUTICALS USA	N	Υ	30s ea	N	30.00
	\$	*	EMTRICITABINE-TENOFOVIR DISOPROXIL FUMARATE	emtricitabine/tenofovir disoproxil fumarate	ZYDUS PHARMACEUTICALS (USA) INC.	N	Υ	30s ea	N	140.00

Paying for PrEP

Check out our Financing PrEP webinar recording.

getSFcba.org/resources/financing-hiv-prep-webinar

Financing HIV PrEP Webinar February 23, 2022 12:00PM - 1:00PM PST



Overview:

PrEP is 99% effective in preventing HIV transmission but medical costs may be a barrier for many clients. This webinar will explain how to finance PrEP through Medicaid/Medi-Cal, Medicare, and third party insurance. Presenters will provide an overview of 340B and how to assist patients with PrEP navigation and adherence through assistance programs and funding streams.

Target Audience:

- . Health Departments and CBOs in the Western Region
- PrEP Prescribers
- PrEP Navigators

Learning Objectives:

- •Explain how agencies can use 340B to serve more eligible patients
- Describe 3 steps to implement third party insurance billing
- List 3 funding streams and assistance programs to get patients on PrEP

Presenters:

- Denise Smith, RN, PHN, BSN, MPA, Capacity Building Assistance Specialist, San Francisco DPH
- Patrick Salazar, HIV/STD Program Coordinator, Kern County Health Services Department

Register Now

https://bit.ly/financingHIVPrEP





Continuing Education (CE) Credits:

Qualifying participants will receive 1 hour of CE credit for attending the webinar. CE credits are free; to claim them, participants must complete an evaluation survey.

CE credits are available for RNs, LMFTs, LCSWs, LPCCs, and LEPs.

The SF Department of Public Health, Center for Learning and Innovation is approved by the California Association of Marriage and Family Therapists to sponsor continuing education for LMFTs, LCSWs, LPCcs, LEPs, and by the California Registered Nursing Board to sponsor continuing education for RNs.



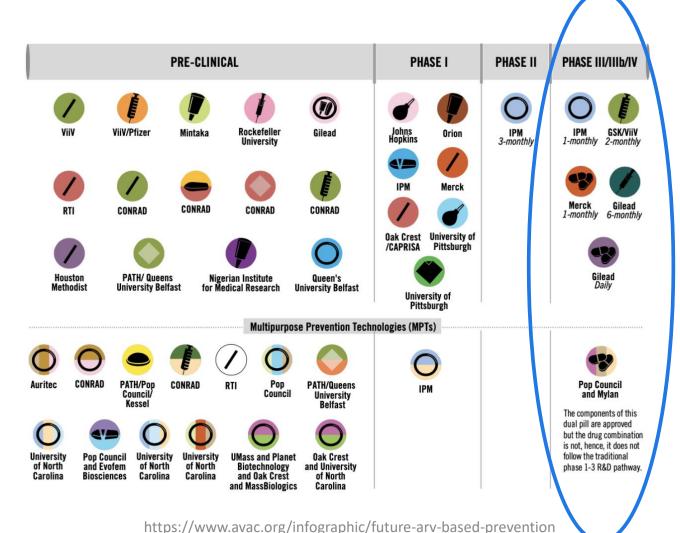




This webinar is sponsored by the SF Dept of Public Health with support from the Centers for Disease Control Brough a CBA for High Impact HIV Prevetion Program Integration grant. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC. If you require disability accommodations or have any questions or comparing, please contact Predath Ripid by 4 ability 4 depth and

What's in the pipeline for PrEP?

- Subdermal implants
- Vaginal rings, gels, inserts, films
- Rectal gels, inserts, enemas
- More options for injectable and oral medications – including long-acting pills
- Multipurpose prevention technologies (MPTs): contraceptive + PrEP





Questions?