Long-Acting Injectable PrEP is Here: Implementation and Capacity Building Opportunities

September 27, 2022



NASTAD's PrEP Team



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- Telehealth regulations
- Health plan coverage



Tim HornDirector, Health Care Access

- 340B program income
- Generic drug market



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- EHE systems coordination



Will Lee
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- PrEP policy research



Kendrell Taylor
Senior Manager,
Prevention

- PrEP implementation
- Take Me Home
- Self-testing



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- PrEP Navigation



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- PrEP program implementation
- TelePrEP learning collaborative

Ralph Moreno

- TelePrEP learning

collaborative

- 340B

Consultant, TelePrEP Access



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Associate Director, Policy & Legislative Affairs

- Federal and state policy
- Regulatory framework



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- PrEP implementation
- TelePrEP learning collaborative



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Consultant, TelePrEP Access

- TelePrEP learning collaborative



Webinar Outline

Q+A

LAI for PrEP Overview Implementation Opportunities Cost and Coverage Considerations Capacity Building Opportunities **Current LAI Resources**

Today's Speakers



Rupa Patel, MD, MPH
Research Associate Professor (Voluntary)
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Washington University School of Medicine



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Director of HIV Prevention
New York City Department of
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LAI Overview and Implementation Opportunities

Long Acting Injectable Pre-Exposure Prophylaxis for HIV Prevention (LAI PrEP)

Rupa R. Patel, MD MPH
Research Associate Professor of Medicine (Voluntary)
Washington University in St. Louis



Disclosures

Research Funding: Gilead Sciences, Inc., ViiV Healthcare

Outline

- Review current PrEP options and practice guidelines
 - Advances in PrEP: Injectable option
- Implementation Workflows
 - Successes and Challenges



PrEP Prescribing Options in 2022



- FDA approved
 - Daily oral PrEP with TDF/FTC (Truvada and generic)
 - ~99% effective for sexual transmission
 - ~74% for IDU transmission
 - All populations
 - CrCl > 60 mL/min



- Cannot prescribe for cisgender women
- CrCl > 30 mL/min
- Injectable Cabotegravir (Apretude)
- Not FDA approved: On demand, event driven, 2-1-1 PrEP with TDF/FTC



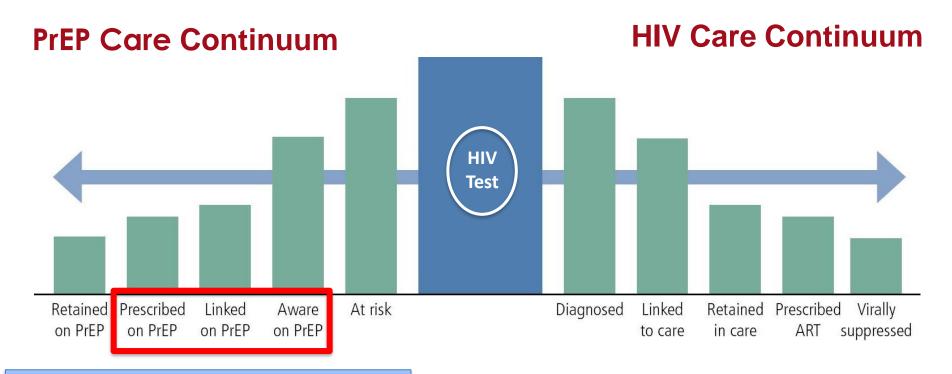


Prescribing National Resources

- CDC PrEP/PEP Hotline
 - **–** 855-448-7737
 - http://www.cdc.gov/hiv/living/treatment/hotline.html
- UCSF Clinical Consultation Center (CCC)
 PrEPline
 - 855-448-7737 (11 a.m. 6 p.m. EST)
 - http://nccc.ucsf.edu/clinical-resources/pep-resources/prep/

Status Neutral Continuum

What tools are needed to support implementing LAI PrEP



Community Education
Provider & Peer Navigator Education
Tools for PrEP Retention

Buchbinder S and Liu A, Topics in Antiviral Medicine 2018

Nunn AC, et al. Defining the HIV pre-exposure prophylaxis care continuum. AIDS 2017

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 Page 1 of 108

Table 1a: Summary of Clinician Guidance for Daily Oral PrEP Use Sexually-Active Adults and Adolescents¹ Persons Who Inject Drug² Anal or vaginal sex in past 6 months AND any of the following: HIV-positive injecting partner Identifying HIV-positive sexual partner (especially if partner has an unknown or detectable viral load) OR substantial Bacterial STI in past 6 months³ Sharing injection equipment risk of acquiring HIV • History of inconsistent or no condom use with sexual partner(s) infection Clinically eligible **ALL OF THE FOLLOWING CONDITIONS ARE MET:** Documented negative HIV Ag/Ab test result within 1 week before initially prescribing PrEP No signs/symptoms of acute HIV infection Estimated creatinine clearance ≥30 ml/min⁴ No contraindicated medications Dosage • Daily, continuing, oral doses of F/TDF (Truvada®), ≤90-day supply For men and transgender women at risk for sexual acquisition of HIV; daily, continuing, oral doses of F/TAF (Descovy®), ≤90day supply Follow-up care Follow-up visits at least every 3 months to provide the following: • HIV Ag/Ab test and HIV-1 RNA assay, medication adherence and behavioral risk reduction support Bacterial STI screening for MSM and transgender women who have sex with men³ – oral, rectal, urine, blood Access to clean needles/syringes and drug treatment services for PWID Follow-up visits every 6 months to provide the following: • Assess renal function for patients aged ≥50 years or who have an eCrCl <90 ml/min at PrEP initiation • Bacterial STI screening for all sexually-active patients³ – [vaginal, oral, rectal, urine- as indicated], blood Follow-up visits every 12 months to provide the following: • Assess renal function for all patients Chlamydia screening for heterosexually active women and men – vaginal, urine • For patients on F/TAF, assess weight, triglyceride and cholesterol levels

¹ adolescents weighing at least 35 kg (77 lb)

² Because most PWID are also sexually active, they should be assessed for sexual risk and provided the option of CAB for PrEP when indicated

³ Sexually transmitted infection (STI): Gonorrhea, chlamydia, and syphilis for MSM and transgender women who have sex with men including those who inject drugs; Gonorrhea and syphilis for heterosexual women and men including persons who inject drugs

⁴ estimated creatine clearance (eCrCl) by Cockcroft Gault formula ≥60 ml/min for F/TDF use, ≥30 ml/min for F/TAF use

Table 1b: Summary of Clinician Guidance for Cabotegravir Injection PrEP Use			
	Sexually-Active Adults	Persons Who Inject Drugs ¹	
Identifying substantial risk of acquiring HIV infection	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 months ² • History of inconsistent or no condom use with sexual partner(s)	HIV-positive injecting partner OR Sharing injection equipment	
Clinically eligible	ALL OF THE FOLLOWING CONDITIONS ARE MET: Documented negative HIV Ag/Ab test result within 1 week before initial cabotegravir injection No signs/symptoms of acute HIV infection No contraindicated medications or conditions		
Dosage	600 mg cabotegravir administered as one 3 ml intramuscular injection in the gluteal muscle Initial dose		

Follow-up care At follo

At follow-up visit 1 month after first injection

• HIV Ag/Ab test and HIV-1 RNA assay

At follow-up visits every 2 months (beginning with the third injection – month 3) provide the following:

- HIV Ag/Ab test and HIV-1 RNA assay
- Access to clean needles/syringes and drug treatment services for PWID

At follow-up visits every 4 months (beginning with the third injection- month 3) provide the following:

• Bacterial STI screening² for MSM and transgender women who have sex with men² – oral, rectal, urine, blood

At follow-up visits every 6 months (beginning with the fifth injection – month 7) provide the following:

• Bacterial STI screening1 for all heterosexually-active women and men – [vaginal, rectal, urine - as indicated], blood

At follow-up visits at least every 12 months (after the first injection) provide the following:

Second dose 4 weeks after first dose (month 1 follow-up visit)
 Every 8 weeks thereafter (month 3,5,7, follow-up visits etc)

- Assess desire to continue injections for PrEP
- Chlamydia screening for heterosexually active women and men vaginal, urine

At follow-up visits when discontinuing cabotegravir injections provide the following:

Injection window is +/- 7 days

¹ Because most PWID are also sexually active, they should be assessed for sexual risk and provided the option of CAB for PrEP when indicated

² Sexually transmitted infection (STI): Gonorrhea, chlamydia, and syphilis for MSM and transgender women who have sex with men including those who inject drugs; Gonorrhea and syphilis for heterosexual women and men including persons who inject drugs

 Table 7
 Timing of CAB PrEP-associated Laboratory Tests

Test	Initiation Visit	1 month visit	Q2 months	Q4 months	Q6 months	Q12 months	When Stopping CAB
HIV*	X	X	X	X	X	X	X
Syphilis	X			MSM^/TGW~ only	Heterosexually active women and men only	X	MSM/TGW only
Gonorrhea	X			MSM/TGW only	Heterosexually active women and men only	X	MSM/TGW only
Chlamydia	X			MSM/TGW only	MSM/TGW only	Heterosexually active women and men only	MSM/TGW only

^{*} HIV-1 RNA assay

X all PrEP patients

2.6 Recommended Dosing Schedule for Missed Injections

Adherence to the injection dosing schedule is strongly recommended. Individuals who miss a scheduled injection visit should be clinically reassessed to ensure resumption of APRETUDE remains appropriate [see Dosage and Administration (2.2), Warnings and Precautions (5.1, 5.2)]. Refer to Table 3 for dosing recommendations after missed injections.

Planned Missed Injections

If an individual plans to miss a scheduled every-2-month continuation injection visit by more than 7 days, take daily oral cabotegravir for a duration of up to 2 months to replace 1 missed scheduled every-2-month injection. The recommended oral daily dose is one 30-mg tablet of oral cabotegravir. The first dose of oral PrEP should be taken approximately 2 months after the last injection dose of APRETUDE. Restart injection with APRETUDE on the day oral dosing completes or within 3 days; thereafter, as recommended in Table 3. For oral PrEP durations greater than 2 months, an alternative oral regimen is recommended.

Unplanned Missed Injections

If a scheduled injection visit is missed or delayed by more than 7 days and oral dosing has not been taken in the interim, clinically reassess the individual to determine if resumption of

4

injection dosing remains appropriate [see Warnings and Precautions (5.1)]. If the injection dosing schedule will be continued, see Table 3 for dosing recommendations.

Table 3. Injection Dosing Recomm	nendations after Missed Injections
Time since Last Injection	Recommendation
If second injection is missed and	
time since first injection is:	
Less than or equal to 2 months	Administer 600-mg (3-mL) gluteal intramuscular injection
	of APRETUDE as soon as possible, then continue to
	follow the every-2-month injection dosing schedule.
Greater than 2 months	Restart with 600-mg (3-mL) gluteal intramuscular
	injection of APRETUDE, followed by a second 600-mg
	(3-mL) initiation injection dose 1 month later. Then
	continue to follow the every-2-month injection dosing
	schedule thereafter.
If third or subsequent injection	
is missed and time since prior	
injection is:	
Less than or equal to 3 months	Administer 600-mg (3-mL) intramuscular injection of
	APRETUDE as soon as possible, then continue with the
	every-2-month injection dosing schedule.
Greater than 3 months	Restart with 600-mg (3-mL) gluteal intramuscular
	injection of APRETUDE, followed by the second 600-mg
	(3-mL) initiation injection dose 1 month later. Then
	continue with the every-2-month injection dosing schedule
	thereafter.

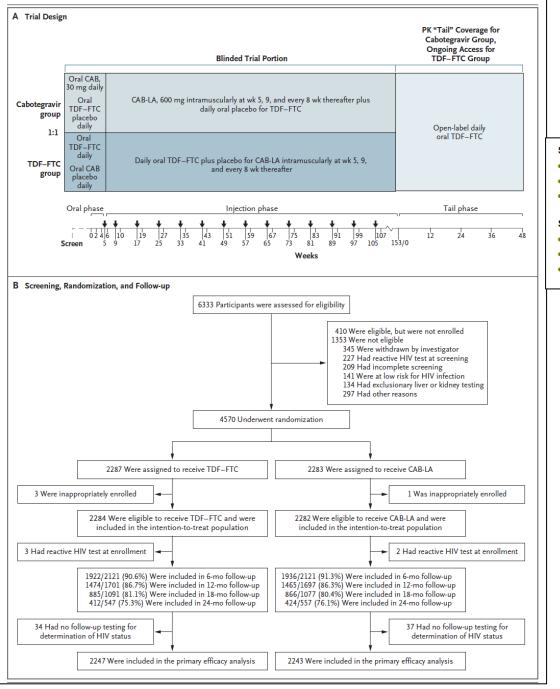
The Science Behind LAI PrEP: HPTN 083 and HPTN 084

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Cabotegravir for HIV Prevention in Cisgender Men and Transgender Women

R.J. Landovitz, D. Donnell, M.E. Clement, B. Hanscom, L. Cottle, L. Coelho, R. Cabello, S. Chariyalertsak, E.F. Dunne, I. Frank, J.A. Gallardo-Cartagena, A.H. Gaur, P. Gonzales, H.V. Tran, J.C. Hinojosa, E.G. Kallas, C.F. Kelley, M.H. Losso, J.V. Madruga, K. Middelkoop, N. Phanuphak, B. Santos, O. Sued, J. Valencia Huamaní, E.T. Overton, S. Swaminathan, C. del Rio, R.M. Gulick, P. Richardson, P. Sullivan, E. Piwowar-Manning, M. Marzinke, C. Hendrix, M. Li, Z. Wang, J. Marrazzo, E. Daar, A. Asmelash, T.T. Brown, P. Anderson, S.H. Eshleman, M. Bryan, C. Blanchette, J. Lucas, C. Psaros, S. Safren, J. Sugarman, H. Scott, J.J. Eron, S.D. Fields, N.D. Sista, K. Gomez-Feliciano, A. Jennings, R.M. Kofron, T.H. Holtz, K. Shin, J.F. Rooney, K.Y. Smith, W. Spreen, D. Margolis, A. Rinehart, A. Adeyeye, M.S. Cohen, M. McCauley, and B. Grinsztejn, for the HPTN 083 Study Team*



Selected inclusion criteria:

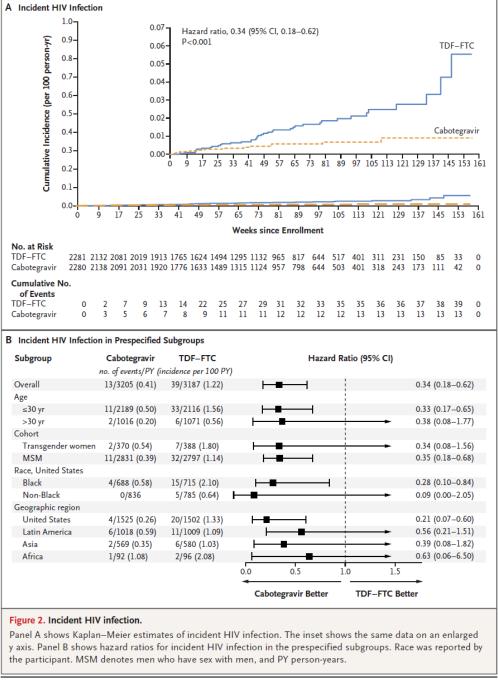
- HIV-1 negative at screening and enrollment¹
- Age ≥18²
- At high risk of sexually acquiring HIV-1 infection²

Selected exclusion criteria:

- Active or recent (90 days prior to enrollment) illicit intravenous drug use²
- Current or chronic history of liver disease³
- Surgically placed or injected buttock implants or fillers²

Landovitz RJ et al. Cabotegravir for HIV Prevention in Cisgender Men and Transgender Women. N Engl J Med 2021;385:595-608.

Characteristic	Overall Trial Population [†]		
	Overall (%) N=4566	APRETUDE (%) n=2282	TDF/FTC (%) n=2284
Gender and sexuality			
Men who have sex with men	87	88	87
Transgender women who have sex with men	13	12	13
Preferred not to answer	0.1	0.1	<0.1
Age			
Median age, years (IQR)	26 (22-32)	26 (22-32)	26 (22-32)
18-29	68	69	66
30-39	23	22	24
≥40	10	9	10
Characteristic		US Sites Only	
	Overall (%) N=1698	APRETUDE (%) n=849	TDF/FTC (%) n=849
Race			
Black	50	49	51
Non-Black	50	52	49
Ethnicity			
Latinx	18	18	18

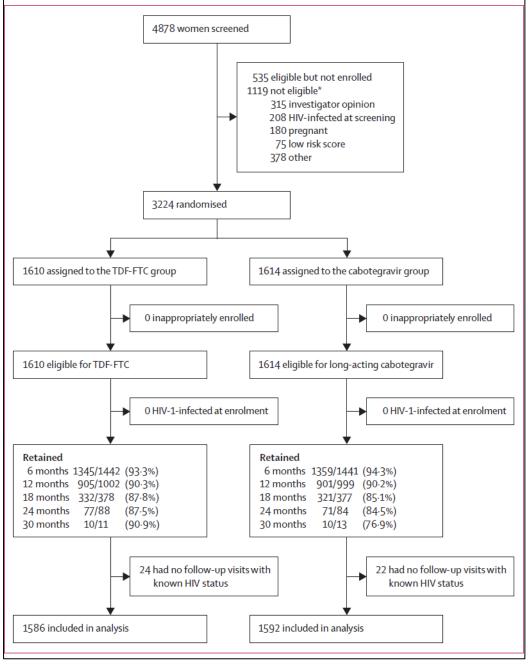


High efficacy within subgroup analyses

Landovitz RJ et al. Cabotegravir for HIV Prevention in Cisgender Men and Transgender Women. N Engl J Med 2021;385:595-608.

Cabotegravir for the prevention of HIV-1 in women: results from HPTN 084, a phase 3, randomised clinical trial

Sinead Delany-Moretlwe, James P Hughes, Peter Bock, Samuel Gurrion Ouma, Portia Hunidzarira, Dishiki Kalonji, Noel Kayange, Joseph Makhema, Patricia Mandima, Carrie Mathew, Elizabeth Spooner, Juliet Mpendo, Pamela Mukwekwerere, Nyaradzo Mgodi, Patricia Nahirya Ntege, Gonasagrie Nair, Clemensia Nakabiito, Harriet Nuwagaba-Biribonwoha, Ravindre Panchia, Nishanta Singh, Bekezela Siziba, Jennifer Farrior, Scott Rose, Peter L Anderson, Susan H Eshleman, Mark A Marzinke, Craig W Hendrix, Stephanie Beigel-Orme, Sybil Hosek, Elizabeth Tolley, Nirupama Sista, Adeola Adeyeye, James F Rooney, Alex Rinehart, William R Spreen, Kimberly Smith, Brett Hanscom, Myron S Cohen, Mina C Hosseinipour, on behalf of the HPTN 084 study group



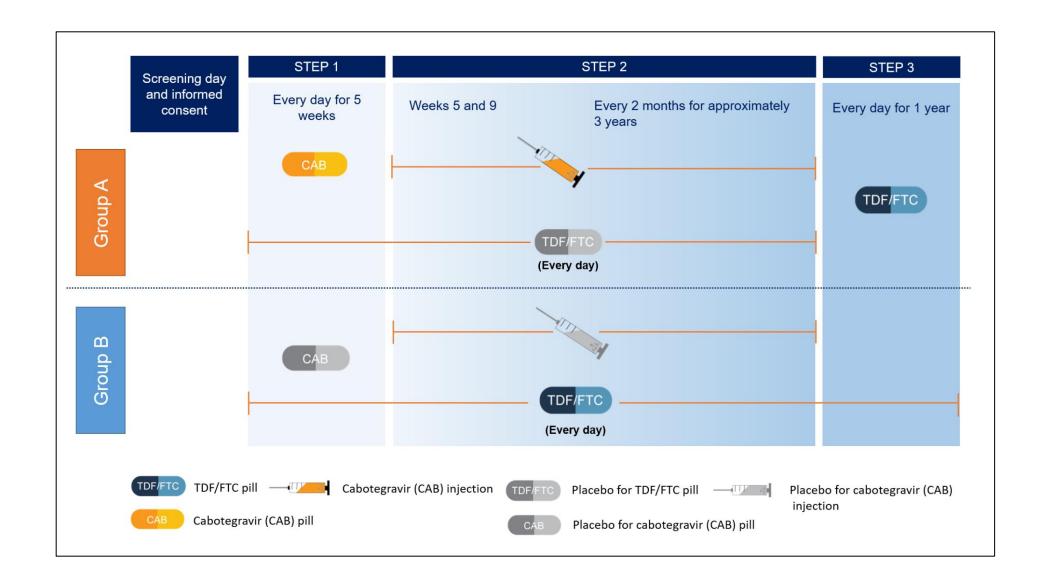
Selected inclusion criteria²:

- Cisgender women, 18-45 years old
- HIV-1 negative at screening and enrollment
- At high risk of sexually acquiring HIV-1 infection
- Negative pregnancy test (if of reproductive potential)
- Use of long-acting contraception (if not sterile or with history of hysterectomy)

Selected exclusion criteria²:

- History of liver disease
- Pregnant or currently breastfeeding

Delaney-Moretlwe S. et al. Cabotegravir for the prevention of HIV-1 in women: results from HPTN 084, a phase 3, randomised clinical trial Lancet 2022; 399:1779-89



	Cabotegravir group (n=1614)	TDF-FTC group (n=1610)
Country		
Botswana	46 (2.9%)	45 (2.8%)
Eswatini	80 (5.0%)	80 (5%)
Kenya	31 (1.9%)	35 (2.2%)
Malawi	113 (7%)	111 (6.9%)
South Africa	653 (40.5%)	655 (40.7%)
Uganda	300 (18.6%)	296 (18.4%)
Zimbabwe	391 (24-2%)	388 (24·1%)
Age, years	25 (22–30)	25 (22–20)
Aged <25 years	814 (50.4%)	816 (50.7%)
Race or ethnicity (self-	reported)	
Black African	1569 (97-2%)	1554 (96.5%)
Asian	2 (0.1%)	3 (0.2%)
Mixed race	2 (0.1%)	8 (0.5%)
White	0	1 (0.1%)
Other	41 (2.5%)	44 (2.7%)
Marital status		
Married, civil union, or legal partnership	169 (10.5%)	174 (10·8%)
Living with primary partner	106 (6.6%)	118 (7.3%)
Not living with primary partner	869 (53-8%)	860 (53.4%)
Single, divorced, or widowed	465 (28-8%)	454 (28·2%)
Other	5 (0.3%)	4 (0.2%)
Education		
No schooling	20 (1.2%)	12 (0.7%)
Primary school	251 (15.6%)	255 (15.8%)
Secondary school	1154 (71.5%)	1182 (73.4%)
Technical training	48 (3.0%)	41 (2.5%)
Tertiary education	141 (8.7%)	120 (7.5%)
Employed	451 (27.9%)	427 (26.5%)
		(Continues in previous column)

	Cabotegravir group (n=1614)	TDF-FTC group (n=1610)
(Continued from previo	ous column)	
Self-reported gender id	entity*	
Female	1612 (99-9%)	1607 (99.8%)
Male	0	3 (0.2%)
Transgender male	2 (0.1%)	0
Sexual activity in past n	nonth†	
≥2 sex partners	878/1609 (54-5%)	877/1600 (54.8%)
Transactional sex	658/1609 (40-9%)	655/1600 (40.9%)
Partner HIV-positive or unknown	542/1609 (33:7%)	558/1600 (34-9%)
Anal sex	90/1609 (5.6%)	95/1600 (5.9%)
Modified VOICE risk score‡	6 (5–7)	6 (5–7)
Body-mass index ≥30 kg/m²	465 (28-8%)	430 (26.8%)
Sexually transmitted in	fections	
Chlamydia trachomatis§	324/1602 (20·2%)	280/1587 (17-6%)
Neisseria gonorrhoeae§	112/1602 (7.0%)	98/1587 (6.2%)
Trichomonas vaginalis¶	141/1578 (8.9%)	129/1555 (8-3%)
Positive syphilis serology	41/1611 (2.5%)	62/1608 (3.9%)

Data are mean (SD), n (%), or median (IQR). TDF-FTC=tenofovir disoproxil fumarate plus emtricitabine. VOICE=Vaginal and Oral Interventions to Control the Epidemic. 11 * All participants were assigned female sex at birth. †15 missing (five in the cabotegravir group and ten in the TDF-FTC group) computer-assisted self-interview responses. ‡Modified risk score excludes variables for curable sexually transmitted infections and HSV-2 serostatus. 11 §35 results not done or invalid (12 in the cabotegravir group and 23 in the TDF-FTC group). ¶91 results invalid or not done (36 in the cabotegravir group and 55 in the TDF-FTC group). lFive results missing or not done (three in the cabotegravir group and two in the TDF-FTC group); defined positive if both non-treponemal and treponemal test were reactive.

Table 1: Baseline characteristics of the intent-to-treat population

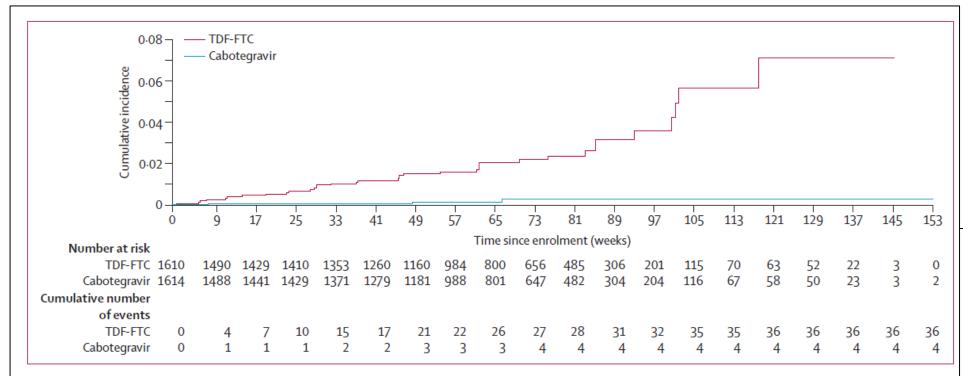


Figure 3: Cumulative HIV incidence by study group

Kaplan-Meier estimates of HIV infection are shown. Four HIV infections were observed in the cabotegravir group (HIV incidence 0.20 per 100 person-years [95% CI 0.06-0.52]) and 36 in the TDF-FTC group (1.85 per 100 person-years [1.3-2.57]). Participants in the cabotegravir group had an 88% lower risk of HIV infection than those in the TDF-FTC group (hazard ratio 0.12 [0.05-0.31]; p<0.0001). TDF-FTC=tenofovir disoproxil fumarate plus emtricitabine.



Long acting injectable cabotegravir: updated efficacy and safety results from HPTN 084

S Delany-Moretiwe, JP Hughes, P Bock, S Dadabhai, D Gadama, P Hunidzarira, S Innes, D Kalonji, J Makhema, P Mandima, C Mathew, J Mpendo, P Mukwekwerere, N Mgodi, P Nahirya Ntege, C Nakabiito, H Nuwagaba-Biribonwoha, R Panchia, F Angira, N Singh, B Siziba, E Spooner, J Farrior, S Rose, R Berhanu, Y Agyei, SH Eshleman, M Marzinke, E Piwowar-Manning, S Beigel-Orme, S Hosek, A Adeyeye, J Rooney, A Rinehart, B Hanscom, M Cohen, M Hosseinipour on behalf of the HPTN 084 study team



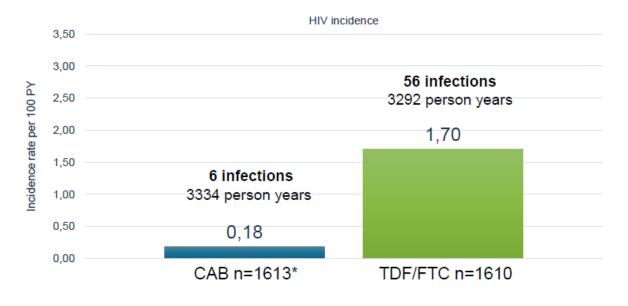
AIDS 2022, Montreal, abstract #OALBX0108

HIV incidence: CAB vs TDF/FTC



Combined blinded and unblinded period, through Dec 2021

HR 0.11; 95% CI 0.05 - 0.24



084

*Excludes 1 baseline infection from the blinded period

5

What's in the PrEP pipeline and implementing LAI PrEP today can help implement tomorrow's longacting PrEP options

Pharmacokinetics and Tolerability of Cabotegravir and Rilpivirine Long-Acting Intramuscular Injections to the Vastus Lateralis (Lateral Thigh) Muscles of Healthy Adult Participants

<u>Kelong Han</u>,¹ Jafar Sadik Shaik,¹ Herta Crauwels,² Claudia Leemereise,³ Gilda Bontempo,⁴ Beta Win,⁵ Ciara Seal,¹ Rebecca DeMoor,¹ Ojesh Upadhyay,¹ Vasiliki Chounta,⁶ William R. Spreen,⁴ Susan L. Ford⁷

¹GlaxoSmithKline, Collegeville, PA, United States; ²Janssen Research & Development, Beerse, Belgium; ³GlaxoSmithKline, Amersfoort, the Netherlands; ⁴ViiV Healthcare, Research Triangle Park, NC, United States; ⁵GlaxoSmithKline, Stevenage, United Kingdom; ⁶ViiV Healthcare, Brentford, United Kingdom; ⁷GlaxoSmithKline, Research Triangle Park, NC, United States

Evidence for strategies to promote self injection, partner injection, task shifting for injection administration, overcome gluteal fillers/body contouring, and provide varying body injection sites

A Study Evaluating the Safety, Tolerability, and Pharmacokinetics of a High-Concentration (CAB 400 mg/mL) Cabotegravir Long-Acting Injectable Formulation Following Subcutaneous and Intramuscular Administration in Healthy Adult Participants

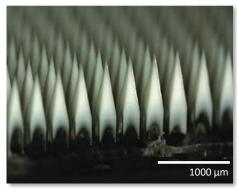
Paul Benn,¹ Kelong Han,² Jörg Sievers,¹ Jafar Sadik Shaik,² Michael Warwick-Sanders,³ Beta Win,³ David Dorey,⁴ Mark Baker,⁵ Claudia Leemereise,⁶ Kjersten Offenbecker,² Cindy Garris,⁷ Darin B. Brimhall,⁸ Craig Boyle,⁹ Christian Schwabe,¹⁰ Dale Taylor,¹¹ Michael A. Hassman,¹² Allen Wolstenholme,² Steve Knowles,¹³ William R. Spreen,⁷ Max Lataillade¹⁴

¹ViiV Healthcare, Brentford, United Kingdom; ²GlaxoSmithKline, Collegeville, PA, United States; ³GlaxoSmithKline, Brentford, United Kingdom; ⁴GlaxoSmithKline, Mississauga, ON, Canada; ⁵ViiV Healthcare, Nyon, Switzerland; ⁶GlaxoSmithKline, Amersfoort, the Netherlands; ⁷ViiV Healthcare, Research Triangle Park, NC, United States; ⁸PPD, Inc., Las Vegas, NV, United States; ⁹PPD, Inc., Austin, TX, United States; ¹⁰New Zealand Clinical Research, Auckland, New Zealand; 1¹PPD, Inc., Orlando, FL, United States; ¹²Hassman Research Institute, Berlin, NJ, United States; ¹³Halozyme Therapeutics, Inc., San Diego, CA, United States; ¹⁴ViiV Healthcare, Branford, CT, United States

Evidence for strategies to promote self injection, partner injection, task shifting for injection administration, overcome gluteal fillers/body contouring, and provide varying body injection sites

Investigational Cabotegravir Formulations

Microarray patch (long-acting for HIV PrEP)



Light microscopic image (x25)



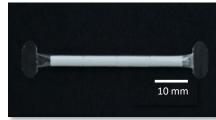


Cabotegravir LA (reformulation)

- Double-strength concentration (400 mg/mL)
- Phase 1 study of safety/ tolerability
 - Subcutaneous (abdominal)
 - Intramuscular (gluteus medius and vastus lateralis)

Cabotegravir Implant (non-biodegradable, retrievable)





In collaboration with
Northwestern University (NIH grant)

 Sustained long-acting protection from HIV (SLAP HIV) program

NIAID is funding research on 4 types of long-acting HIV prevention.

INTRAVAGINAL RING (IVR)



Polymer ring inserted into the vagina releases antiretroviral drug over time.

IMPLANT



Device implanted in the body releases antiretroviral drug over time.

INJECTABLE



Long-acting antiretroviral drug is injected into the body.

ANTIBODY



Antibody is infused or injected into the body.

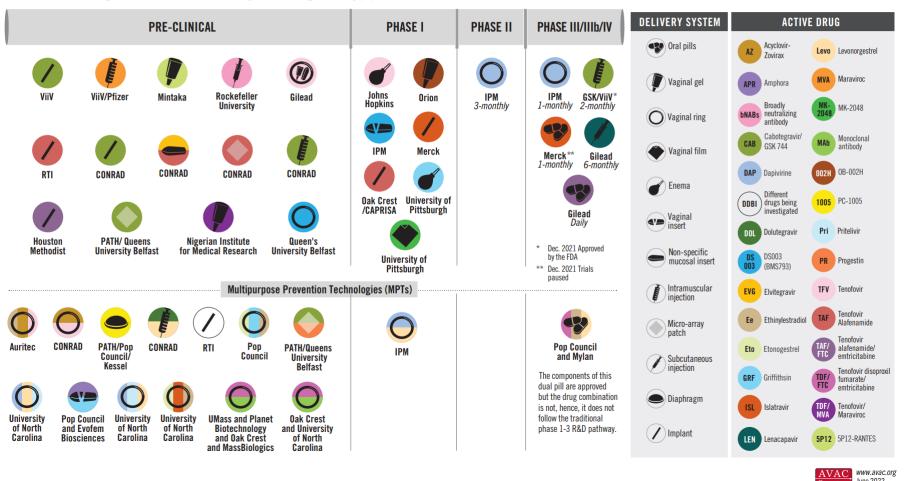
NIH National Institute of Allergy and Infectious Diseases: Long-Acting Forms of HIV Prevention

AVAC

Global Advocacy for HIV Prevention

The Future of ARV-Based Prevention and More (June 2022)

The pipeline of non-vaccine HIV prevention products includes oral pills, vaginal rings, vaginal and rectal gels, vaginal films, long-acting injectable antiretrovirals and more. Also pictured are the range of multipurpose prevention technologies in development that aim to reduce the risk of HIV and STIs and/or provide effective contraception for women. (Visit www.avac.org/hvad for vaccine and broadly neutralizing antibody pipelines.)



What are MPTs?

Multipurpose prevention technologies (MPTs) are products designed to simultaneously address more than one sexual and reproductive health (SRH) concern. Male and female condoms—

Database; Treatment Action Group (TAG) 2020 Pipeline Report.

which protect against pregnancy as well as HIV and other sexually transmitted infections (STIs)—are great examples of MPTs that already exist. Many others are in development.

AT A GLANCE: THE MPT R&D PIPELINE Status of products in development Phase II Phase III Phase IIIb/IV Vaginal ring •• Vaginal insert •• Rectal insert Vaginal gel •• Rectal gel Enema Vaginal film Oral pill Long-acting injectable Micro-array patch • Implant • HIV + other STIs + Contraception HIV+ Contraception + other STIs other STIs Contraception 10 11 4 3 Adapted from: The Initiative for MPTs (IMPT) Product Development

MAY 2021 1 AVAC.ORG

Efficacy Trial				2019	2020		2021			2022		2023		2024	
) [/aginal Ring Dapivirine Ring Monthly)				Jul 202 Europe Medicines A issues a jo opinio	an Agency ositive						e for women at substa er of additional regula		***************************************	
>	Oral PrEP	DISCOVER			t 2019: FDA approv o have no HIV risk f			nts							
	F/TAF (Daily pill)	PURPOSE 1						Trial	of six-monthly in	jectable lenacapav	ir planned in 5,	010 AGYW in South Af	ica, Uganda alongside da	ily oral F/TAF.	
	Islatravir	IMPOWER-22	Randomized controlled trial of monthly islatravir; ongoing in 4,500 women in the US On hold. Related islatravir studies showed lower lymphocyte and CD4+ T cell counts in some participants.								ants.				
	(Monthly pill)	IMPOWER-24					Randon	ized contr	olled trial of mo	nthly islatravir in r	men and trange	nder women who have	sex with men across the	world	
	Long-Acting Injectable	HPTN 083		lled trial of injectable c , Brazil, Peru, South Ai			ing in 4,500 MSM a	nd transge		ec 2021: FDA app	proves CAB-LA	for PrEP in the US. M	ultiple		
~	Cabotegravir (Every two months)	HPTN 084	Randomized control	lled trial of injectable	cabotegravir every	two months; on	ngoing in 3,200 wo	men in Bo	/-			er regulatory bodies. mbabwe			
	Lenacapavir (Every six	PURPOSE 1						Trial d	of six-monthly in	iectable lenacapav	ir planned in 5,0	010 AGYW in South Afr	ica, Uganda alongside dal	ly oral F/TAF.	
	months)	PURPOSE 2							of six-monthly in gender non-bina		vir in 3,000 cisg	ender MSM, transgend	ler women, transgender n	nen,	
<u>.</u>	Preventive HI ALVAC/gp120 w/MF59	V Vaccine HVTN 702		illed trial of ALVAC/gp ed for non-efficacy; fu	120 prime-boost wi		y for non-efficacy. ant, six doses over	18 months	s; 5,400 men ar	nd women in South	Africa;				
	Ad26/gp140 boost	Imbokodo (HVTN 705/ HPX2008)	Randomized contro	lled trial of Ad26 prin	ne with gp140 boos	t; four doses ov	er 12 months; fully	enrolled 2				cantly reduce the risk of ca, Zambia, Zimbabw			
	Ad26/clade C gp140 & mosaid gp140 boost	Mosaico (HVTN 706/ HPX3002)			ontrolled trial of Ad2 Poland, Spain, US	26 prime with c	lade C and mosaic	gp140 boo	ost; ongoing in 3	3,800 MSM and tr	ansgender peop	ole in Argentina, Brazi	, Italy,		
•	Oral PrEP and vaccine	PrEPVacc				Randomi	zed controlled trial	of DNA-M	/A-env or DNA-e	nv with F/TAF or F/	TDF; planned in	1668 participants in	Mozambique, South Africa	n, Tanzania, Uganda	
//		AMP (HVTN 704/ HPTN 085)	Randomized contro	olled trial of the VRCO	1 antibody infused 6	every two monti	Jan 2021: VRC0	l did not sig	nificantly reduce t	he overall	razil, Peru, Swi	zerland, US			
11							rick of HIV acquie	tion but it r	educed risk from	HIV etraine					

Implementing LAI PrEP: Workflow Challenges and Considerations

Lessons Learned from Injectable Antiretroviral HIV Treatment

- Fatigue among clinics from implementing two antiretroviral injection modalities at the same time: staffing for injection administration, documentation, follow up for missed injections, etc.
- Implementation challenges exist at the levels of:
 - 1) client/patient: retention/missed appointments
 - 2) provider/support staff: time/staffing for injections and follow up; fidelity to the clinical protocol
 - 3) organizational/structural: resources/staffing for billing/paperwork/medication acquisition, injection appointment slots, missed appointment follow up, and injection administration and record keeping
- Notable challenges are medication acquisition in the setting of insurance turnover: "Buy and Bill" and injection acquisition for the uninsured (medications shipped from an outside pharmacy)

Implementing LAI PrEP: Workflow Challenges

- Implementation challenges exist at the levels of:
 - 1) client/patient/community: messaging, decision making, and retention/missed appointments
 - 2) provider/support staff: *PrEP decision making; time/staffing for injections and follow up; fidelity to the clinical protocol*
 - 3) organizational/structural: resources/staffing for billing/paperwork/medication acquisition, injection appointment slots, missed appointment follow up, and injection administration and record keeping; keeping up with patient insurance turnover and medication acquisition; receiving medications from an outside pharmacy for the uninsured



Implementing LAI PrEP: Workflow Considerations

- Creating LAI PrEP implementation workgroups:
 - Workgroups and related sub-workgroups should address clinical protocol creation, issues in billing (medical vs pharmacy benefit), staff injection education, injection record keeping (timing medication acquisition with each PrEP client appointment), medication stock and pharmacy relationships, and addressing missed client injection appointments
- "LAI PrEP Clinic" days and PrEP injection administration staff
 - Staff required for injection administration, injection pick up from the pharmacy with timing related to client appointments, injection administration documentation, and follow up for missed appointments (window period for each injection is +/- 7 days)
 - Due to the injection window period, there needs to be flexibility to schedule new appointments within 7 days for the same client



PrEP Implementation Limitations at the Policy Level

- Policies needed to foster national PrEP scale up for LAI PrEP (legislation/billing) and allow us to reach those who are not able to come into a clinic routinely
 - Fosters non-traditional medicine (in-person provider in a clinic) -----1) provider, 2) virtual/in-person, 3) location
 - Task shifting and onsite/offsite supervision requirements
 - Non-provider injections (self/partner/non-licensed professional)
 - Telehealth
 - Locations: street medicine, pharmacies, other
 - Fosters stable PrEP care coverage (office visit, labs, medications): coverage that accounts for insurance churning; national financing programs
 - USPSTF ratings for ALL PrEP options and ALL services
 - Other policies

Conclusions

- HPTN 083 and HPTN 084 demonstrated the efficacy data for injectable cabotegravir for PrEP compared to daily oral TDF/FTC
- Implementation challenges exist at the client/patient, provider/support staff, and organizational level
- <u>Today's implementation efforts and policy changes</u> will accelerate the use of new PrEP products in the pipeline

Acknowledgements

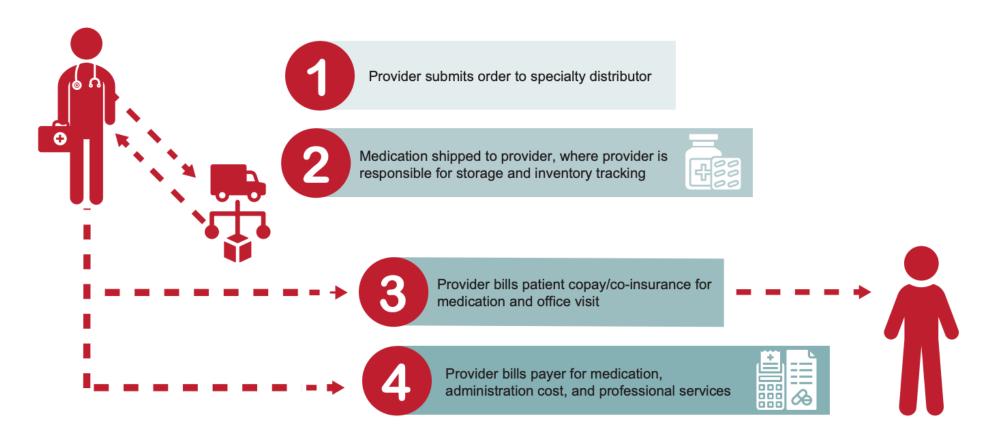
- PrEP Users
- Health support staff
- Providers

Long-Acting Cabotegravir for PrEP: Access and Coverage Considerations

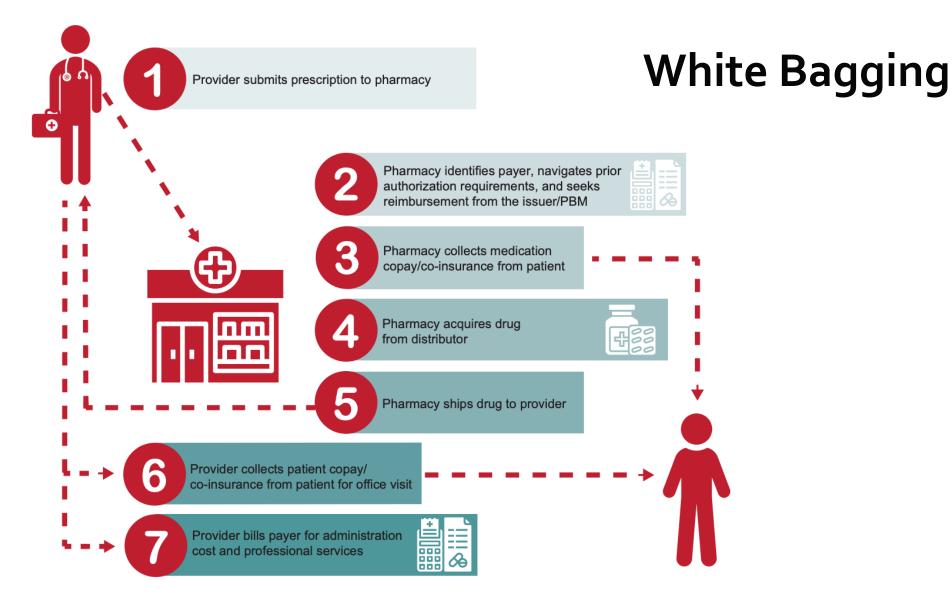
Access and Coverage Overview

- Apretude wholesale acquisition cost is \$3,700 per 3 mL kit
 - Oral cabotegravir (Vocabria) for optional oral lead-in available free of charge
- Apretude is not available through retail community pharmacies, but rather through specialty distributors or specialty pharmacies
 - Can be procured by health care providers through "buy-and-bill", "white bagging", or "clear bagging" mechanisms
- As a provider-administered drug, insurers are most likely to cover Apretude as a medical benefit
 - Insurers may also cover it as a pharmacy benefit, or as both a medical and pharmacy benefit

Buy-and-Bill



Source: ACE TA CENTER. Long-Acting Injectable (LAI) Antiretroviral Therapy (ART): Coverage and Cost-Sharing Considerations for Ryan White HIV/AIDS Program (RWHAP) Clients. https://targethiv.org/ace/LAI-ART



Source: ACE TA CENTER. Long-Acting Injectable (LAI) Antiretroviral Therapy (ART): Coverage and Cost-Sharing Considerations for Ryan White HIV/AIDS Program (RWHAP) Clients. https://targethiv.org/ace/LAI-ART

Coverage Considerations: Commercial Insurance

- Most commercial plans expected to cover Apretude as a medical benefit (vs. pharmacy benefit)
- May not appear on plan's traditional prescription drug formulary
- Apretude may be subject to utilization management (e.g., prior authorization)
- If covered as medical benefit, 20% cost share (coinsurance) may apply; if covered as pharmacy benefit, specialty drug tiering may apply; separate office visit/administration cost sharing may also apply
 - Some plans <u>may</u> apply USPSTF Grade A recommendation to PrEP (no cost sharing); updated USPSTF recommendation pending
 - ViiVConnect copay assistance program available (up to \$7,850 per year)

Coverage Considerations: Medicaid

- Most Medicaid programs are expected to cover Apretude
- Coverage requirements, payment methods, and possible utilization management (e.g., prior authorization) vary state-to-state
- Cost sharing is typically nominal
 - ViiVConnect copay assistance program cannot be used for Medicaid cost sharing

Coverage Considerations: Medicare

- Apretude is expected to be covered under Part B as a provider-administered drug
- Beneficiary may be responsible for up to 20% of the medication cost after the deductible requirement has been met
 - Supplemental insurance coverage, Medicaid dual-eligibility, or enrollment in the Qualified Medicare Beneficiary (QMB) program may defray cost-sharing requirements
 - ViiVConnect copay assistance program cannot be used
- Some Medicare Advantage plans that include prescription drug coverage (Part D) may opt to cover it as a pharmacy benefit

Apretude Billing and Coding Reference

Code Category	Code Number	Description
NDC	49702-0244-23	Apretude 600 mg/3 mL kit
ICD-10	Z01.812, Z11.3, Z11.4, Z20.2, Z20.5, Z20.6, Z51.81, Z72.52, Z79.899	Multiple ICD-10 codes for HIV exposure and PrEP
ICD-10	B20	Human immunodeficiency virus (HIV) disease
СРТ	96372	Therapeutic, prophylactic, or diagnostic injection (SQ or IM)
CPT Modifier	33	Commercial insurance only; in support of USPSTF Grade A recommendation for PrEP (no cost sharing); may not accept
HCPCS	J0739	Injection, cabotegravir, 1 mg

Coverage Considerations: Low Income/Uninsured

Apretude may be available at no cost via ViiVConnect for individuals meeting the following criteria:

- Reside in one of the 50 states, the District of Columbia, or Puerto Rico
- Have a household income <500% of the Federal Poverty Level (e.g.,: And income that does not exceed \$91,550 either in a household of two in 2022).
- Not eligible for Medicaid (or Mi Salud, Puerto Rico's government-funded health plan)

- Have no prescription drug coverage, or
- Have a Medicare Part B, Medicare Part D, or Medicare Advantage Plan, and have spent at least \$600 or more on outof-pocket prescription expenses during the current calendar year, or
- Have a private insurance plan limited to generic-only coverage, outpatient use only, or therapeutic class exclusion (non-coverage) of a drug



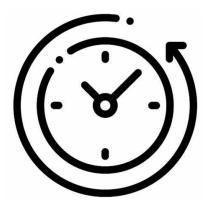
Building Capacity for Injectable PrEP in New York City

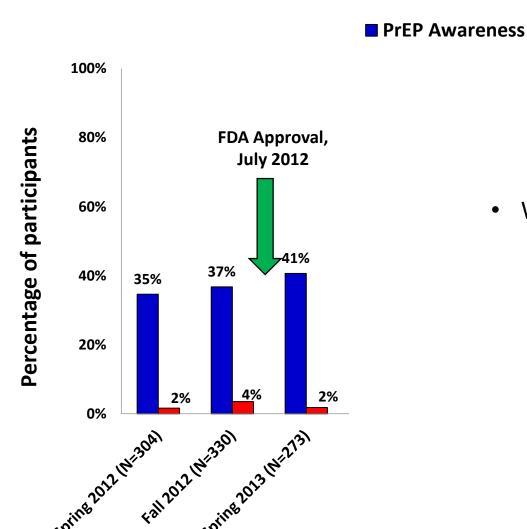
Benjamin Tsoi, MD, MPH
Director of HIV Prevention, HIV Prevention Program

Bureau of Hepatitis, HIV, and Sexually Transmitted Infections, New York City Health Department Envisioning a New York City without transmission or illness related to viral hepatitis, HIV, and sexually transmitted infections.

Learning from Implementation of Oral PrEP

• FDA approved TDF/FTC for PrEP in 2012





■ PrEP Use (past 6 mos.)

- When PrEP was initially approved in 2012,
 - Small proportion of gay men in New York City knew about it
 - Few providers were ready and willing to prescribe it

Survey Cycle

^{*}Sample includes sexually active MSM aged 18-40 years and who do not report HIV-positive status

Learning from Implementation of Oral PrEP

- FDA approved TDF/FTC for PrEP in 2012
- In 2012, demand exceeded supply
 - Many providers were reluctant to accept referrals for patients outside their network/practice
 - Many consumers were frustrated by lack of options and providers to offer PrEP



Purview Paradox

HIV Providers:
PCP are in the
best position to
prescribe PrEP





Primary Care Providers:

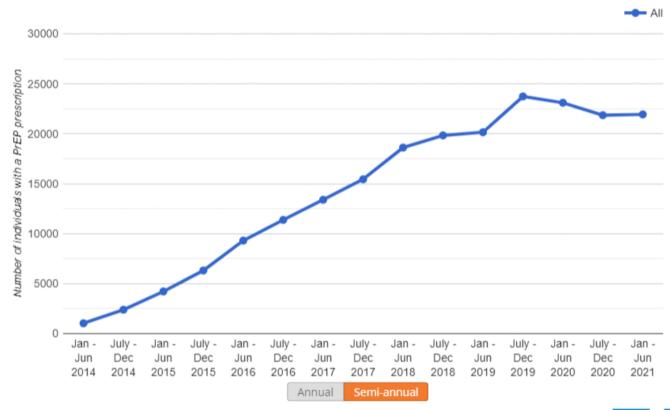
PrEP meds are too

complicated

Where Are We Now? PrEP prescriptions increasing (until COVID-19)

PrEP use

Jan 2014 - Jun 2021, New York City

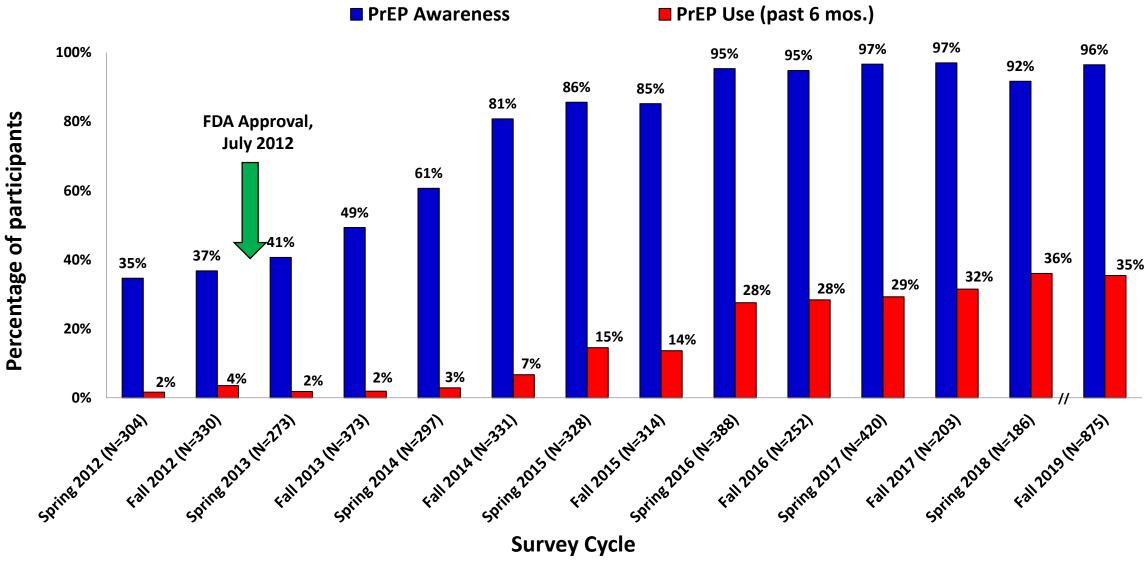


Data source: Source Healthcare Analytics (Symphony) and the NYS Medicaid Data Warehouse (MDW)







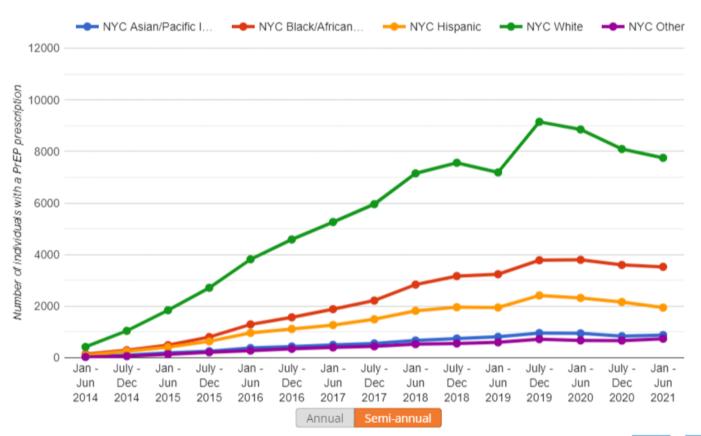


^{*}Sample includes sexually active MSM aged 18-40 years and who do not report HIV-positive status

Where Are We Now? PrEP prescriptions increasing, but there are disparities in use

PrEP use by Race

Jan 2014 - Jun 2021, New York City



More PrEP use among persons who are White than for persons who are Black or Latino

Data source: Source Healthcare Analytics (Symphony) and the NYS Medicaid Data Warehouse (MDW)

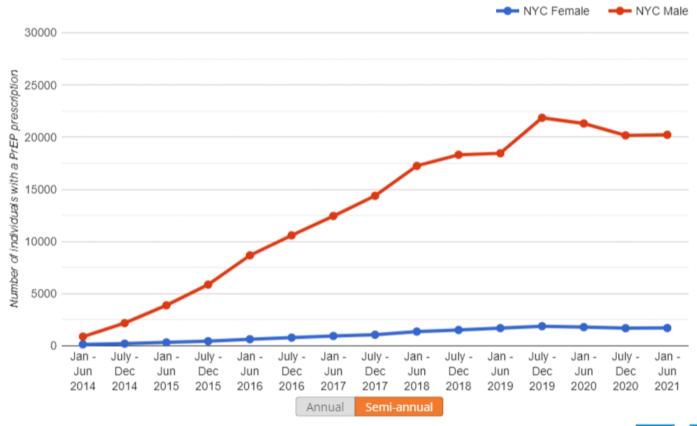






Where Are We Now? PrEP prescriptions increasing, but there are disparities in use

PrEP use by Sex
Jan 2014 – Jun 2021, New York City



More PrEP use among males than among females

Data source: Source Healthcare Analytics (Symphony) and the NYS Medicaid Data Warehouse (MDW)







Persons with Indications for PrEP

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

Persons with Indications for PrEP

HIV-positive sexual partner HIV-positive sexual partner HIV-positive injecting pa	
Recent bacterial STI† High number of sex partners risk of acquiring HIV infection Recent bacterial STI† High number of sex partners History of inconsistent or no condom use Commercial sex work Recent bacterial STI‡ High number of sex partners History of inconsistent or no condom use Commercial sex work In high HIV prevalence area or network	

Messaging about PrEP Resulted in Stigma



PrEP Stigma Predicts PrEP Uptake and Adherence



PrEP Stigma Predicts PrEP Uptake and Adherence: Results from the RADAR Cohort Study (0988)

Brian Mustanski, PhD; Michael E. Newcomb, PhD; Daniel T. Ryan, MS

Northwestern University Feinberg School of Medicine and Northwestern Institute for Sexual and Gender Minority Health & Wellbeing brian@northwestern.edu

- Young people who hold stigmatizing attitudes regarding the use of Truvada as PrEP are less likely to take the HIV prevention pill
- · If they are on it, they are less likely to adhere to daily regimen

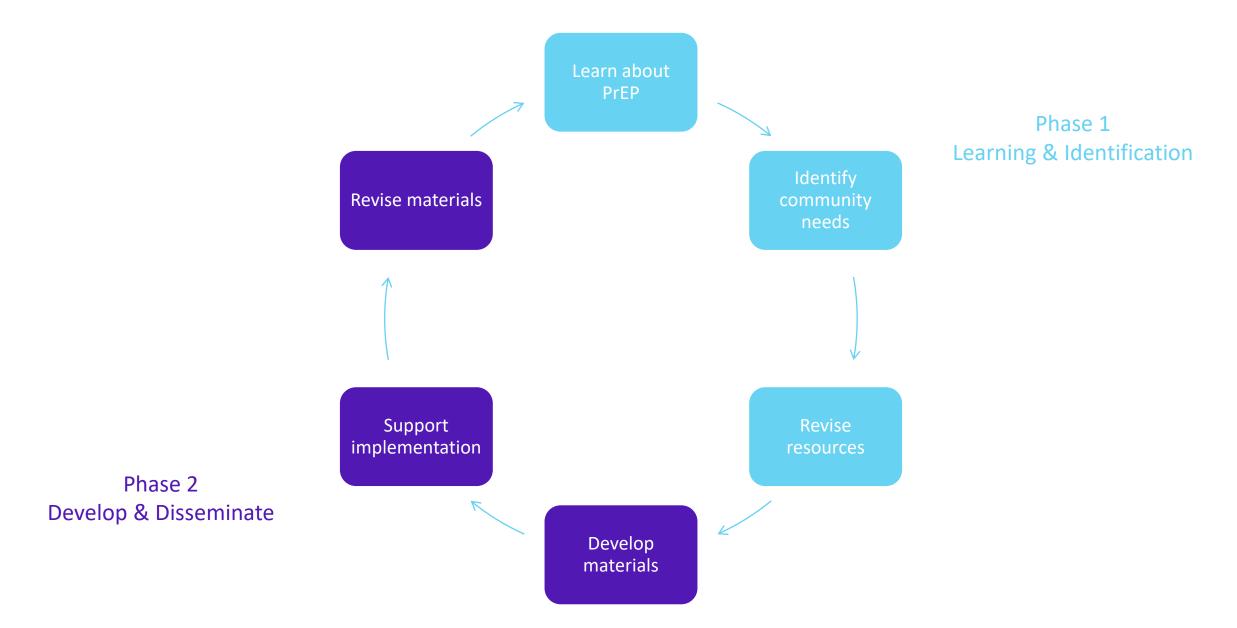
Conference on Retroviruses and Opportunistic Infections 2019

Injectable PrEP Implementation Considerations

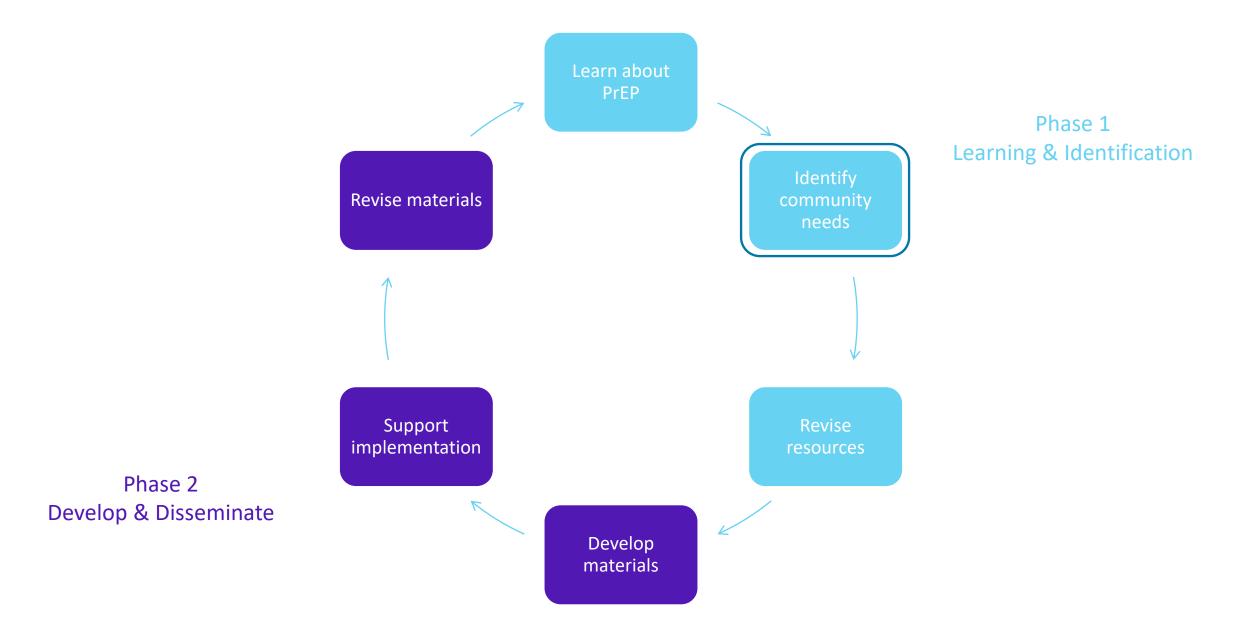
- Promote and support prescribers (Supply) to meet the needs of consumers
 - Increase number of providers who can prescribe PrEP
- Increase PrEP awareness and usage among persons who are Black and Latino, and among women
- Support consumers in
 - Understanding PrEP options
 - In deciding which option best suits their needs
- Promote and offer PrEP as a prevention option in a sex-positive and affirming manner



Injectable PrEP Workplan



Injectable PrEP Workplan



Injectable PrEP

Community

Needs

Assessment



<u>This Photo</u> by Unknown Author is licensed under <u>CC BY-NC</u>

- NYC Health Department conducted online needs assessment among staff of partner clinical and non-clinical agencies of community engagement initiative, New York Knows
- Needs assessment was conducted between March 1/th to Apr //th 2022
 - Sent to app

89 online surveys were completed

43% of respondents worked at health center or clinic38% of respondents worked at CBO

Needs Assessment Summary

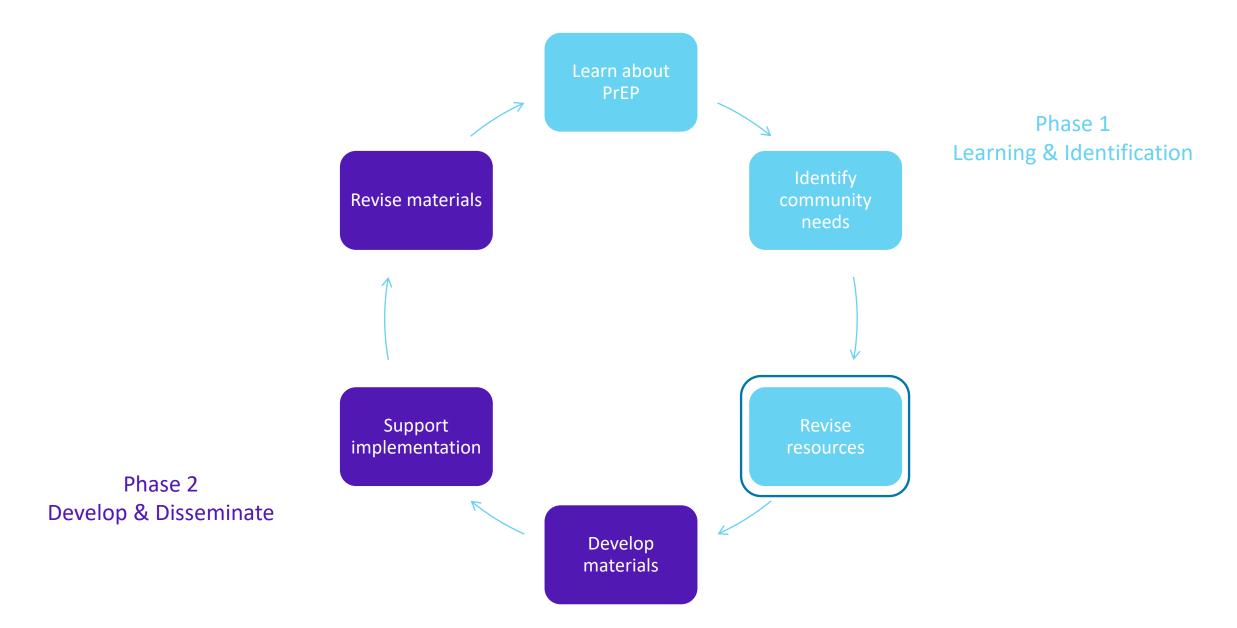
- More than a third of respondents said that they have begun discussing implementing injectable PrEP at their agency
- Most respondents are either slightly prepared or not prepared at all to discuss injectable PrEP with their patients
- To make injectable PrEP available at their agency, respondents would need
 - Client education materials
 - Provider education materials, and
 - SOPs for agency staff to implement in the next 3 months

Need Assessment Summary (cont.)

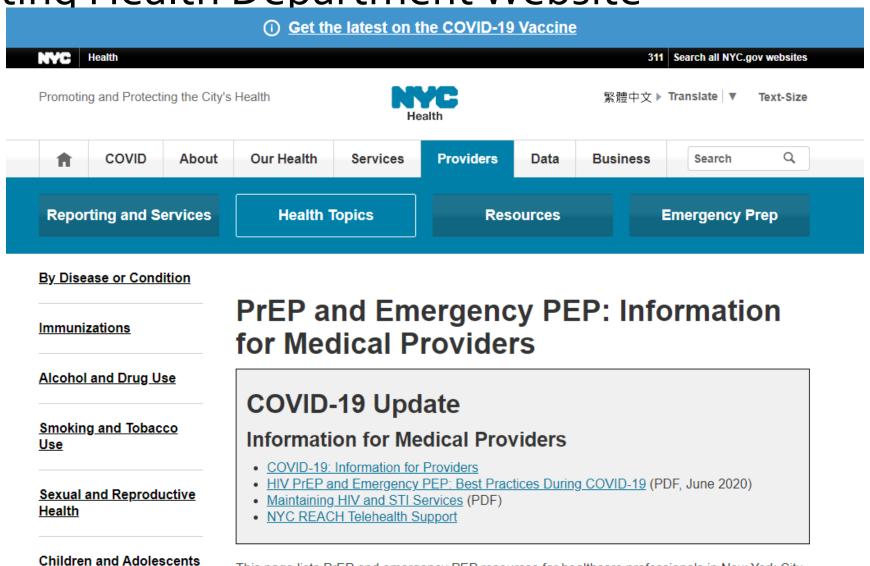
- Top three topics that respondents wanted to learn more about were:
 - Cost and insurance coverage
 - Eligibility requirements
 - Side effects
- Out of those that see clients, more than half reported clients interested in injectable PrEP
 - Of respondents that reported that their clients were disinterested in injectable PrEP the top three reasons were side effects, cost concerns and not knowing enough about CAB-LA

Need Assessment Summary (cont.)

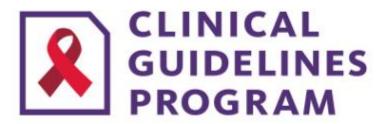
- Most reported challenges to implementing injectable PrEP were:
 - Insurance and prior authorization process
 - Billing and reimbursement
 - CAB-LA tail
 - Time period after injections have stopped, and slowly diminishing amount of cabotegravir remains in body of someone who received CAB-LA injections
 - Need for other preventive measure against HIV infection



Updating Health Department Website



This page lists PrEP and emergency PEP resources for healthcare professionals in New York City. Please refer to the main <u>PrEP</u> and <u>PEP</u> webpage for general information and resources.



Updated May 20, 2022









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HIV Testing and Acute HIV

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Perinatal HIV Care

Hepatitis Care

STIS

Substance Use



PREP TO PREVENT HIV AND PROMOTE SEXUAL HEALTH

The Medical Care Criteria Committee (MCCC) produced the PrEP to Prevent HIV and Promote Sexual Health Guideline

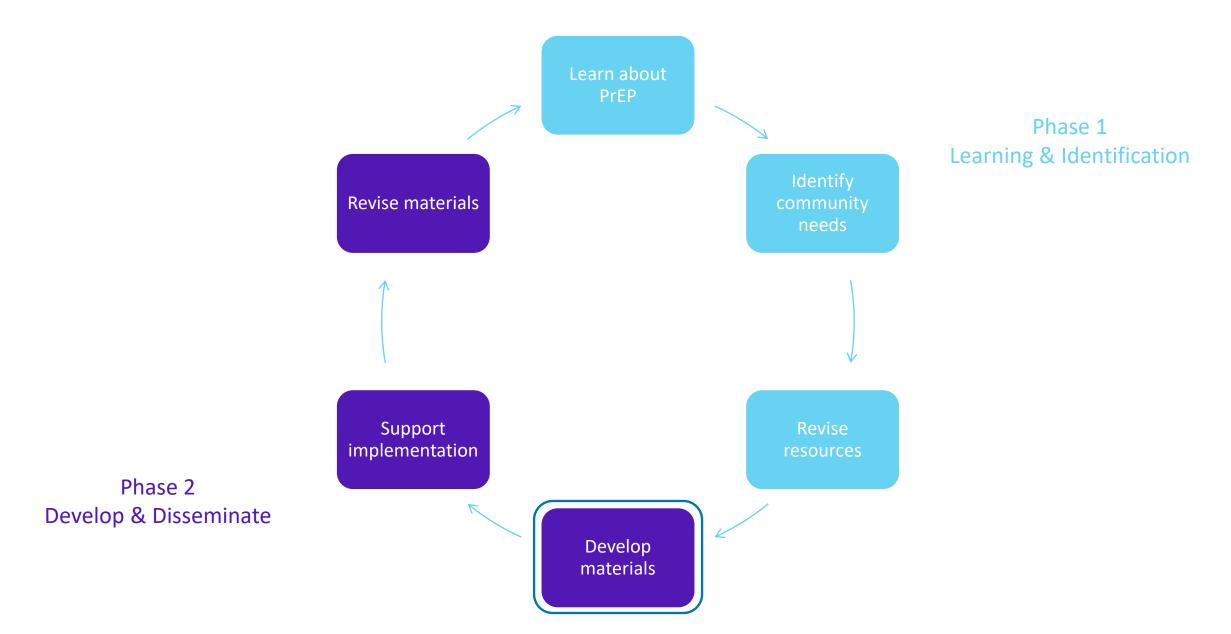
- The NYSDOH Clinical Education Initiative (CEI) provides CME on HIV, HCV, and STD care → Learn More
- Subscribe to our mailing list to be notified when new or updated guidelines are published → Sign up now

https://www.hivguidelines.org/

PrEP to Prevent HIV and Promote Sexual Health

PrEP Implementation

Resources for Care Providers



Sending Updated PrEP Guidance to NYC Prescribers



Updated CDC Guidelines on PrEP to Prevent HIV

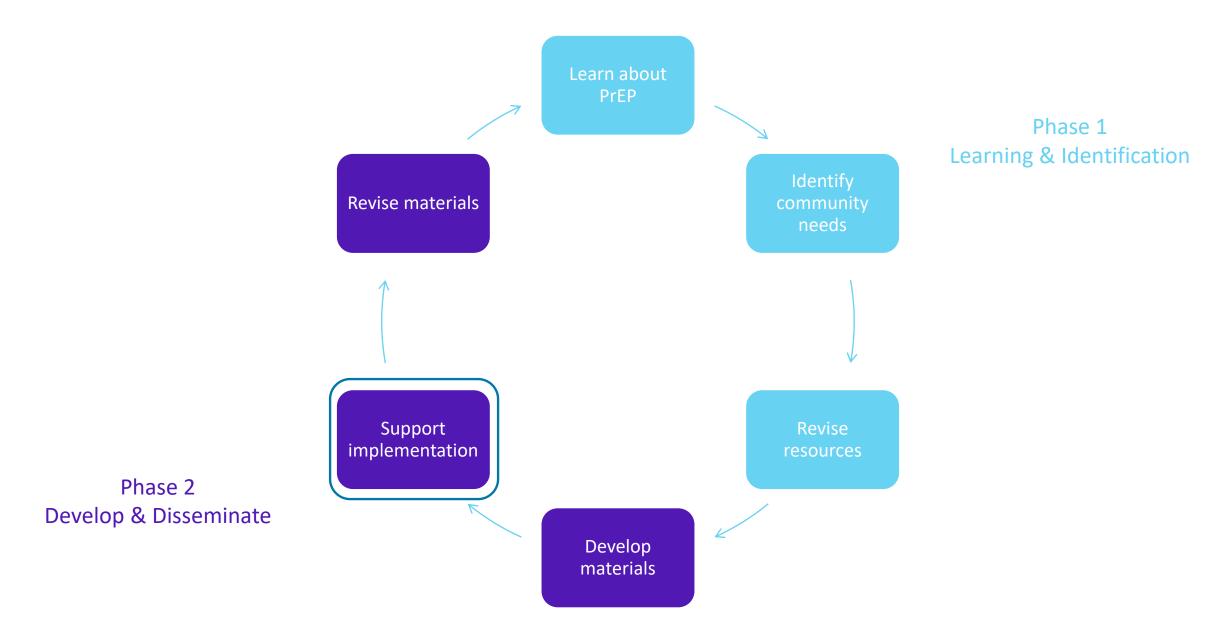
August 2, 2022

Dear Colleague,

The U.S. Centers for Disease Control and Prevention (CDC) has updated its <u>guidelines</u> on the use of pre-exposure prophylaxis (PrEP) to prevent HIV. In this letter, we provide a summary of the major changes.

Injectable PrEP Is Now an Alternative to Daily Pills

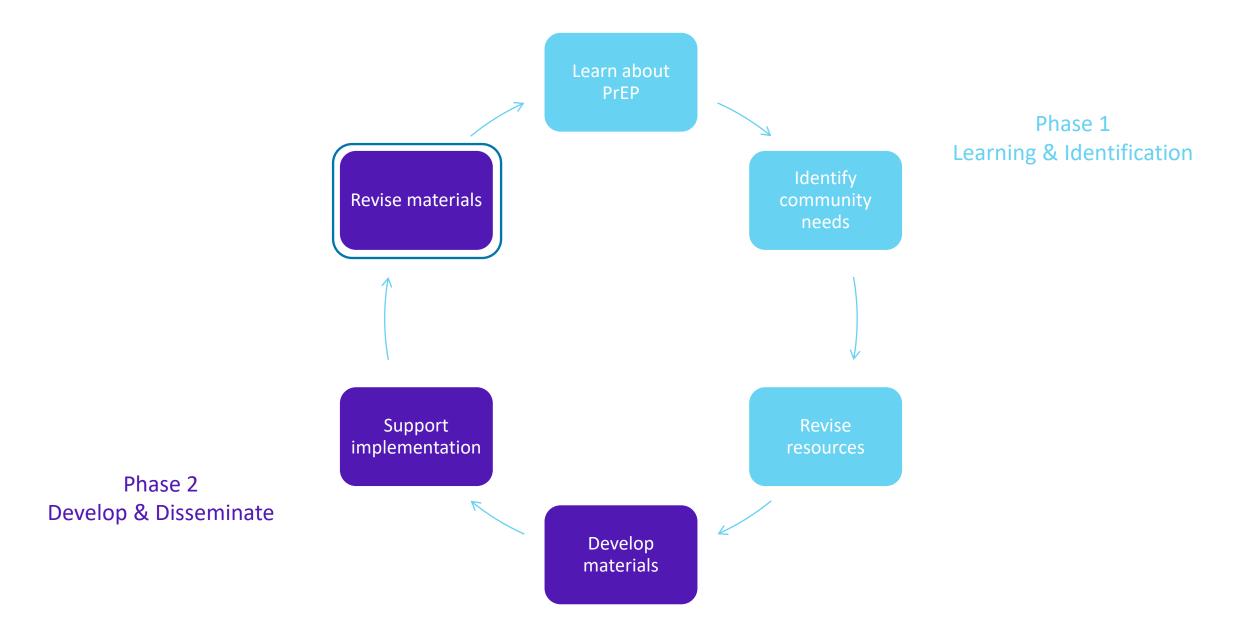
In December 2021, the U.S. Food and Drug Administration (FDA) <u>approved</u> long-acting cabotegravir (CAB-LA, or Apretude) as PrEP for use by adults and adolescents who weigh at least



Building Supply Side for Injectable PrEP

- Injectable PrEP requires more logistical support beyond writing prescriptions
- Create base of providers who can provide injectable PrEP (Supply)
 - Partnered with University of Rochester (CDC CBA provider)
 - Created a learning collaborative of agencies that can prescribe and offer injectable PrEP
 - Asked for commitment to implement injectable PrEP during the course of learning collaborative
 - Assemble implementation team
 - Prescriber
 - Someone who supports clients with education and navigation
 - Facility administrator
 - Pharmacist





Next Steps

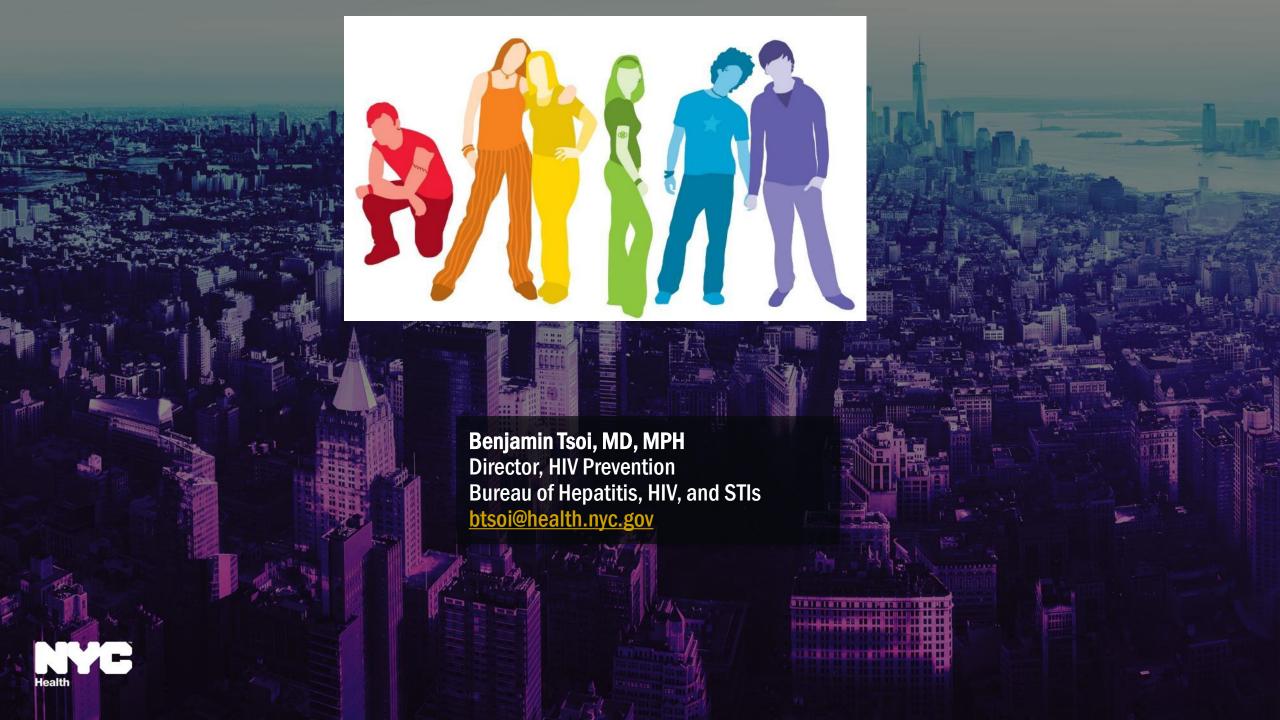
- From learning collaborative, we hope to gain information to inform
 - Creation of implementation checklist and support materials to help prescribers
 - Creation of patient education and social marketing materials
 - Promote sexual health model for PrEP use
 - Promote awareness of options and choice for clients
 - Support for community-based organizations that conduct outreach and navigation services to PrEP prescribers in community

- Acknowledgements

 Support for injectable PrEP was made possible only by the hard work of staff in the Bureau of Hepatitis, HIV, and STIs and our partners
- New York City Health Department
 - Alyson Clarke
 - Doienne Saab
 - Maria Ma
 - Patrick Padgen
 - Paul Kobrak
 - Sarah Braunstein
 - Stephanie Hubbard
 - Yanoh Jalloh
 - Yusyin Hsin

- University of Rochester
 - Daniela DiMarco
 - Juhua Wu
 - Mary Adams
 - Michael Wilson



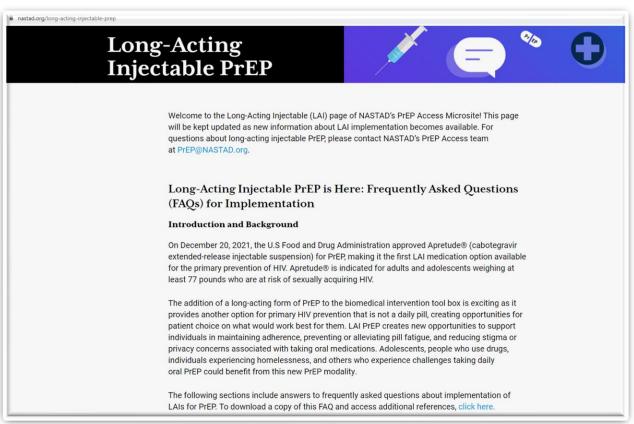


Current NASTAD LAI Resources

Long-Acting Injectable PrEP is Here: Frequently Asked Questions (FAQs) for Implementation

Resource reviews:

- Cost and coverage considerations
- Oral lead-in coverage
- Patient access
- Payment assistance available
- Stocking and storing Apretude®
- USPSTF and Apretude® Coverage
- Lab requirements and more



Visit www.nastad.org/long-acting-injectable-prep

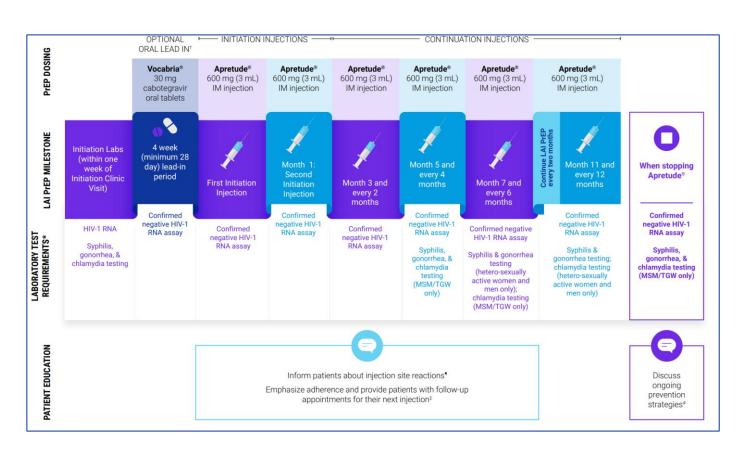
Additional Provider Education Resources

Soon to be updated:

Infographic: Long-Acting Injectable Cabotegravir Dosing

 Infographic walks through the required labs, initiation and dosing schedule for Apretude®.

What else would-be helpful resources for you?



PrEP Access Resources

PrEP Generics Entering the US Market: FAQs-

Billing Coding Guide for HIV Prevention: PrEP, Screening, and Linkage Services-

Infographic: Verifying PrEP as a Preventive Service-

NASTAD PrEP Coverage Brief: PrEP Services Covered with No Cost-Sharing

NASTAD's PrEP Access Microsite

HIV BLUPrint (Hunter Alliance for Research & Translation (HART) & Aaron Diamond AIDS Research Center (ADARC)

PrEPCoverageCheck.org

Diversifying PrEP Financing: Strategies to Leverage Funding across the PrEP Care Continuum

Questions?



Contact Information

PrEP@NASTAD.org



For more PrEP Access Updates, join NASTAD's PrEP Access Listserv!