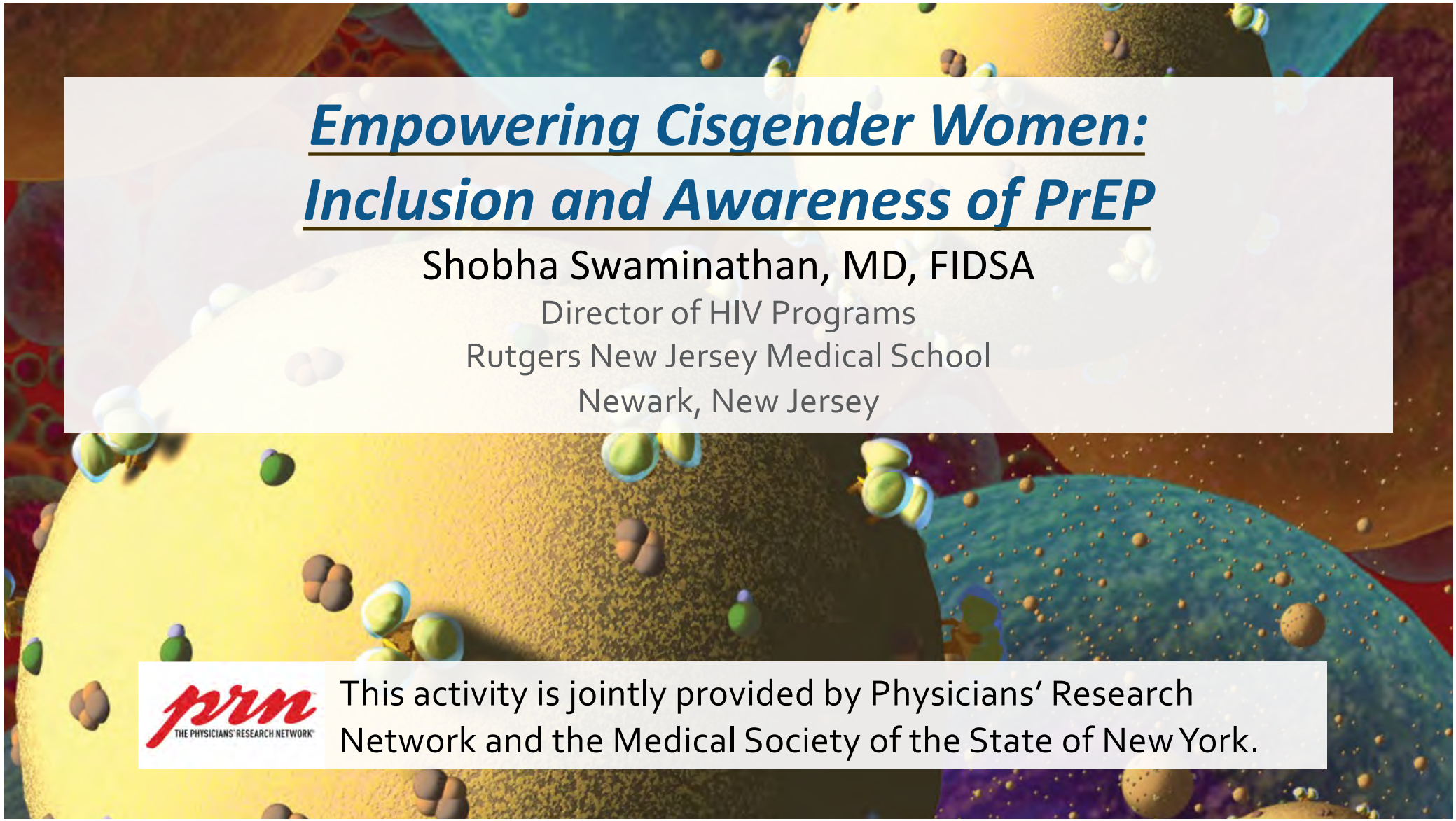

Empowering Cisgender Women: Inclusion and Awareness of PrEP

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This activity is jointly provided by Physicians' Research Network and the Medical Society of the State of New York.

Overview

1. Understand PrEP eligibility and benefits in cisgender women (CGW)
2. Be able to navigate the PrEP prescription process
3. Know how to monitor adherence strategies
4. Be aware of the pipeline for new PrEP options

Background

CDC 2021 Guidelines

Discuss PrEP with ***all*** sexually active patients

Prescribe PrEP to ***anyone who asks for it***

US Preventive Services Task Force- August 2023

Population	Recommendation	Grade
Adolescents and adults at increased risk of HIV	The USPSTF recommends that clinicians prescribe preexposure prophylaxis using effective antiretroviral therapy to persons who are at increased risk of HIV acquisition to decrease the risk of acquiring HIV.	A

https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/prevention-of-human-immunodeficiency-virus-hiv-infection-pre-exposure-prophylaxis

New HIV Infections in the US, 2021

Estimated 32,100 new infections

6,200 (24%) among persons assigned female at birth

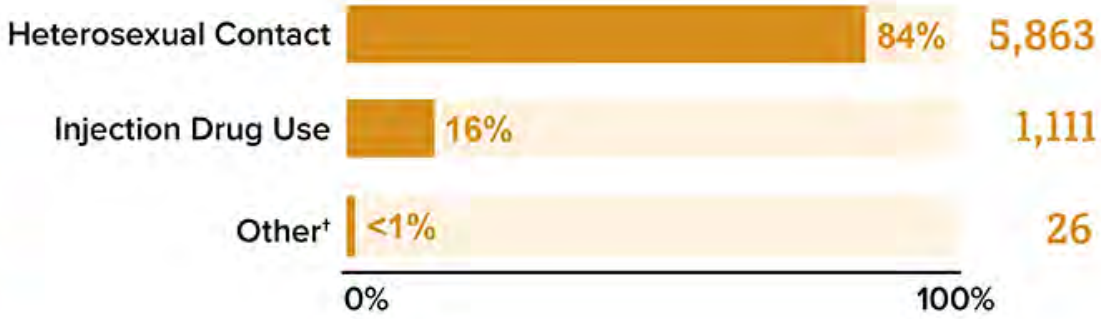
- Black cis-gender women-54%

Transgender women (2%) and transgender men (<1%)

https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics/

New HIV Infections Among Women by Transmission Category - 2019

Most new HIV diagnoses among women were attributed to heterosexual contact.

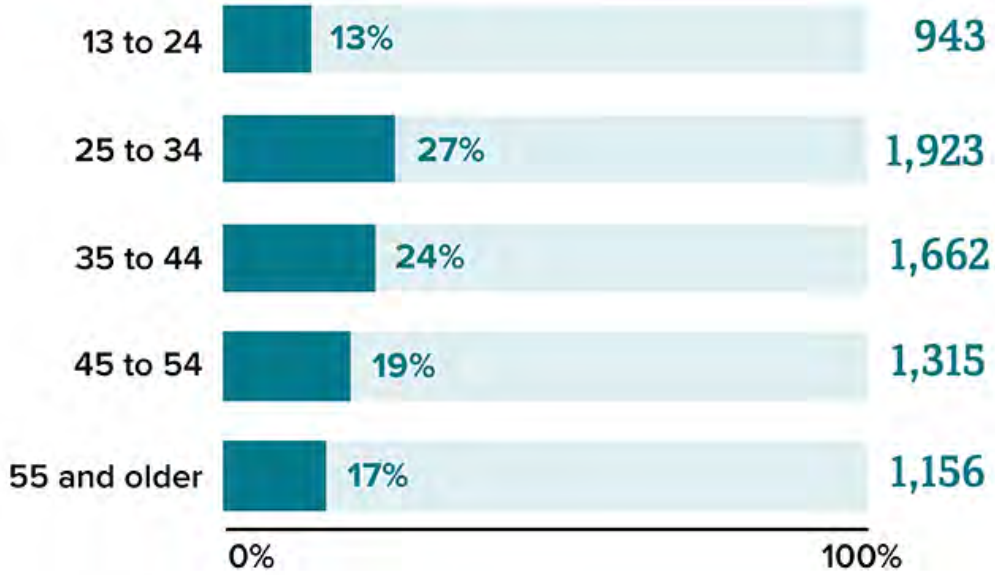


* Based on sex assigned at birth and includes transgender people. For more information about transgender people, visit CDC's HIV and Transgender People web content.
† Includes perinatal exposure, blood transfusion, hemophilia, and risk factors not reported or not identified.

Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2019 . *HIV Surveillance Report* 2021;32.

New HIV Diagnoses Among Women by Age in the US and Dependent Areas, 2019

Women aged 25 to 34 had the highest number of new HIV diagnoses.



Total may not equal 100% due to rounding.

* Based on sex assigned at birth and includes transgender people. For more information about transgender people, visit CDC's HIV and Transgender People web content.

Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2019. *HIV Surveillance Report* 2021;32.

HIV Prevalence Rate Ratios by Race/Ethnicity, 2021

The rate of **Black males** living with an HIV diagnosis is 5.6 times that of **White males**.

The rate of **Hispanic/Latino males** living with an HIV diagnosis is 2.8 times that of **White males**.

The rate of **Black females** living with an HIV diagnosis is 16.6 times that of **White females**.

The rate of **Hispanic/Latina females** living with an HIV diagnosis is 4.4 times that of **White females**.

https://aidsvu.org/local-data/united-states/#hiv-prevalence

New HIV Diagnosis Locally

New York City

- 19% born female
- Late HIV diagnosis
  - 20.5% in males
  - 24.6% in female

Essex County, NJ

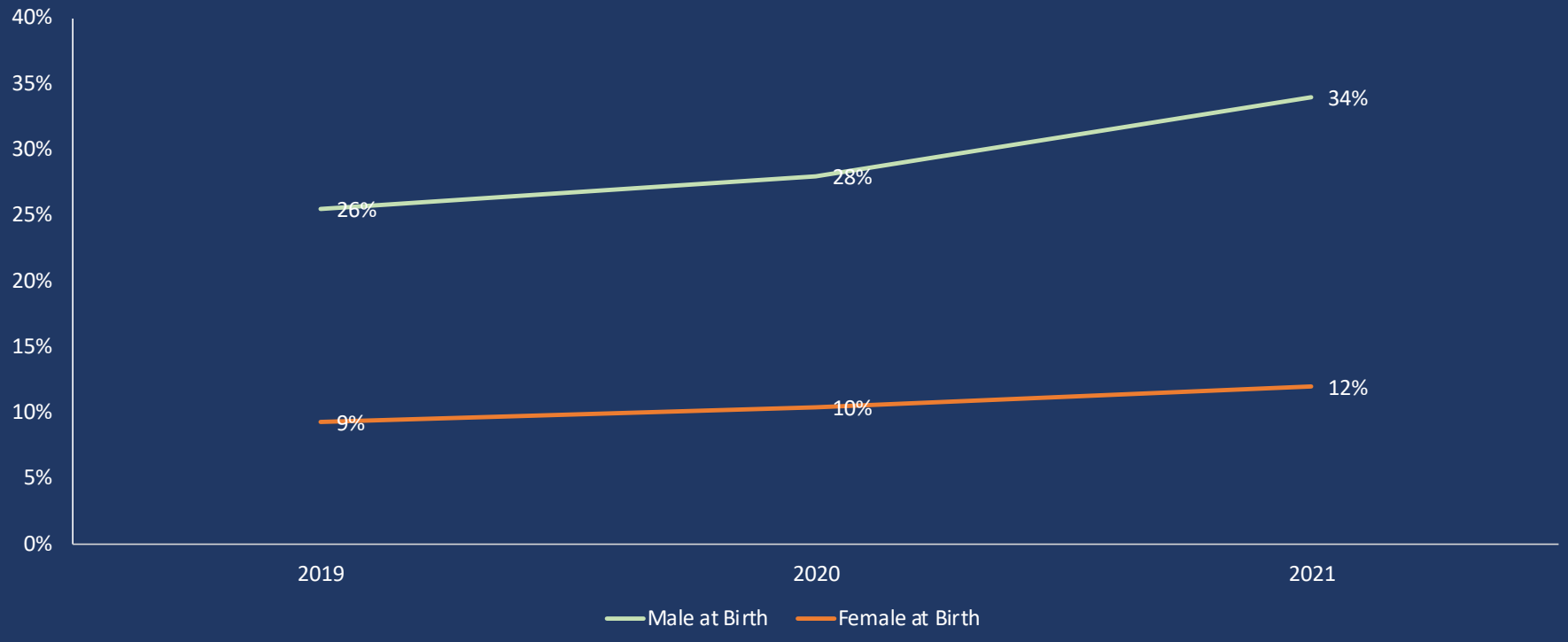
- 31% new infections among those born female
- 38% of PWH are born female

HIV and Women: PrEP Coverage

- EHE Goal
  - Increase the estimated percentage of people with indications for PrEP classified as having been prescribed PrEP to atleast 50% by 2024 and remain at 50% by 2030

https://www.cdc.gov/hiv/group/gender/women/prep-coverage.html

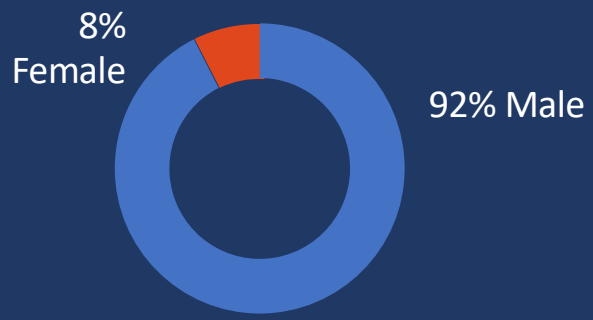
No of Persons with PrEP Indications and PrEP Coverage



https://www.cdc.gov/hiv/library/reports/hiv-surveillance/vol-26-no-2/content/national-profile.html#7

PrEP Coverage by Sex

- 2022 PrEP Users: 92% male, **8% female**
- Yet, **18% of new HIV diagnoses** in 2020 were among women



Males: 11 PrEP users per new HIV diagnosis
Females: 4 PrEP users per new HIV diagnosis

cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2018-updated-vol-32.pdf.
cdc.gov/hiv/group/gender/women/prep-coverage.html. Guest. IAC 2020. Abstr OAC0804.

PrEP to Need Ratio

PrEP-to-Need Ratio (PNR) is the ratio of the number of PrEP users in 2022 to the number of people newly diagnosed with HIV in 2021
A lower PNR indicates more unmet need

	PNR	PNR Males	PNR Females
US	12.06	13.63	5.09
NY State	22.42	25.73	7.93
NY County	56.43	60.00	20.43
NJ	8.05	9.75	2.12
Hudson County	10.08	11.07	3.26
Essex County	3.80	5.06	1.04

https://aidsvu.org/local-data/united-states/northeast/new-jersey/essex-county/

2021 Jan;48(1):32-36. doi: 10.1097/OLQ.0000000000001265

Women are Less Likely to be Tested for HIV or Offered PrEP at Time of STI Diagnosis

Retrospective chart review to assess missed opportunities for HIV testing, completeness of STI screening, and HIV prevention discussion among individuals diagnosed with an STI, 1/2019 – 8/2019 (N=815 with 856 positive STI patient encounters)

HIV Testing

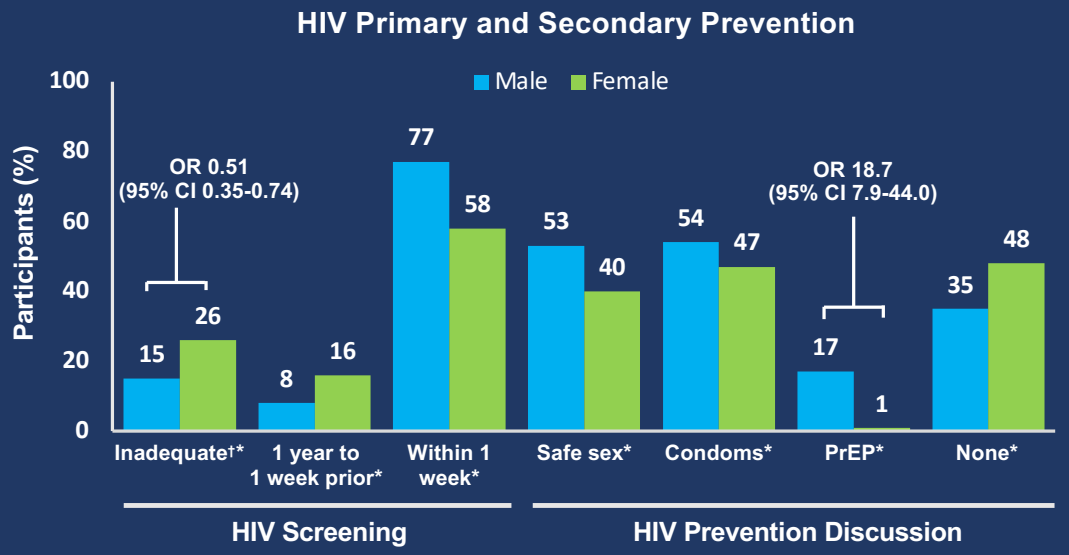
- Only 65% of patient encounters had concurrent HIV screening

STI Screening

- Multisite testing was rarely performed (7.5%)
  - Men were more likely to have multi-site testing than women (20.3% vs 0.36%, OR 69.9, 95% CI 17.0-285.7)

Discussion of HIV Prevention

- Documentation of PrEP discussion was rare (4.7% of patient encounters) compared with safe sex (44.6%) and condoms (49.8%)



Missed opportunities for HIV prevention are common and gender disparities persist. Provider education and training should be addressed to improve comprehensive HIV prevention care in women.

Yumori et al; Sex Transm Dis. 2021 Jan;48(1):32-36. doi: 10.1097/OLQ.0000000000001265

Current Options

Currently Available PrEP Options

Tenofovir disoproxil fumarate/emtricitabine (TDF/FTC)

Cabotegravir (CAB)

What's NOT Approved

On-demand PrEP

Emtricitabine/tenofovir alafenamide fumarate (TAF/FTC)

HPTN 084: CAB Q2M vs Daily Oral FTC/TDF

- International, randomized, double-blind phase

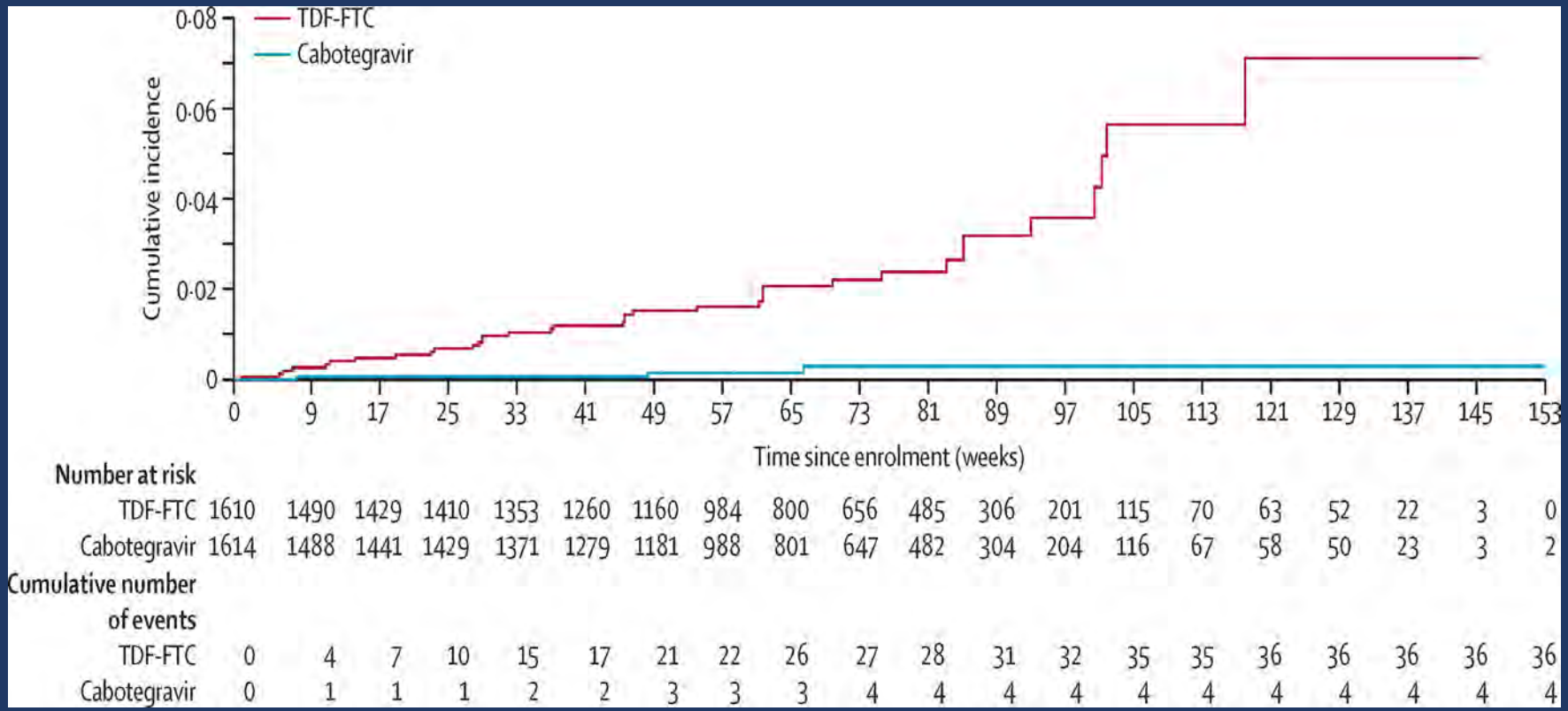
HPTN 084

- N = 3224 cisgender women
- Cabotegravir 600 mg IM Q 8 weeks vs TDF/FTC
- 89% reduction in HIV infection
- HR for CAB vs FTC/TDF:
  0.12 (95% CI: 0.05-0.31)

- LA IM CAB met criteria for **superiority** vs daily oral FTC/TDF

Delany-Moretlwe. Lancet. 2022;399:1779.

HPTN 084



Number at risk																				
TDF-FTC	1610	1490	1429	1410	1353	1260	1160	984	800	656	485	306	201	115	70	63	52	22	3	0
Cabotegravir	1614	1488	1441	1429	1371	1279	1181	988	801	647	482	304	204	116	67	58	50	23	3	2
Cumulative number of events																				
TDF-FTC	0	4	7	10	15	17	21	22	26	27	28	31	32	35	35	36	36	36	36	36
Cabotegravir	0	1	1	1	2	2	3	3	3	4	4	4	4	4	4	4	4	4	4	4

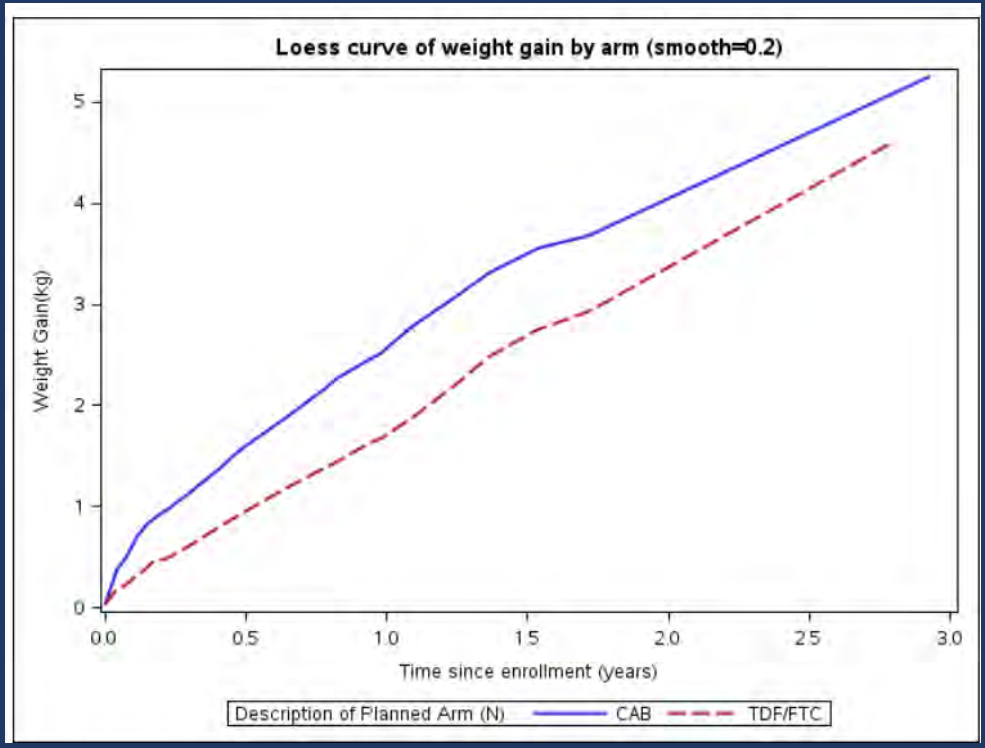
The Lancet 2022 3991779-1789DOI: (10.1016/S0140-6736(22)00538-4)

HPTN 084: Injection-Site Reactions

- Any injection-site reaction:
  38% with CAB, 10.8% with FTC/TDF
- Grade ≥2 injection-site reactions:
  12.6% with CAB, 1.6% with FTC/TDF
- **No discontinuations due to injection-site reactions**

Delany-Moretlwe. Lancet. 2022;399:1779.

HPTN 084 Weight Gain



- Initial mean: +0.4 kg (95% CI: 0.27-0.51) with CAB vs FTC/TDF (*P* <.0001)
- Overall mean: +2.4 kg/yr (95% CI: 1.9-3.0) with CAB vs +2.1 kg/yr (95% CI: 1.9-2.4) with FTC/TDF (*P* = .0.41)

HIV Monitoring on PrEP

- 2021 CDC guidelines recommend HIV-1 RNA assays for monitoring patients on both oral and LA injectable PrEP
- In HPTN 083, HIV detection with antigen/antibody testing was delayed compared with qualitative HIV-1 RNA testing
- CAB delays: median of 62 days for baseline infections; 98 days for incident infections
- FTC/TDF delays: median of 34 days for baseline infections; 31 days for incident infections
- 5 patients in HPTN 083 received LA CAB after HIV infection and developed INSTI resistance

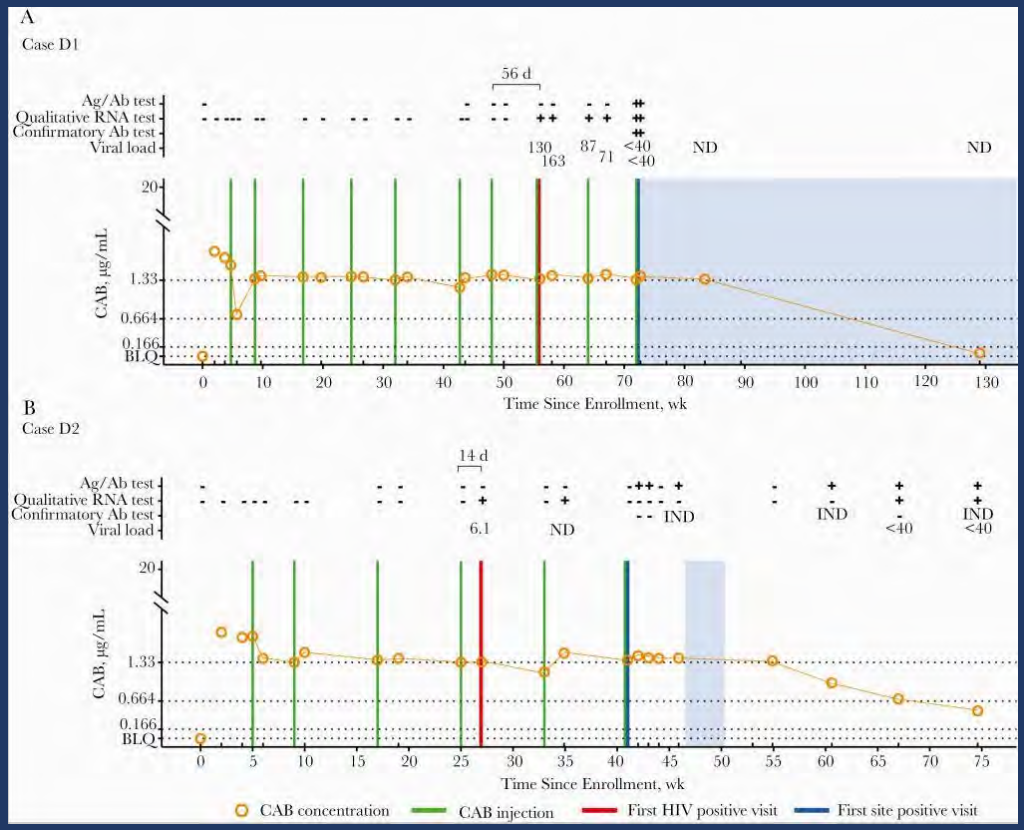
cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf; Marzinke. CROI 2021. Abstr 153; Marzinke. J Infect Dis. 2021;224:1581; Delany-Moretlwe. Lancet. 2022;399:1779.

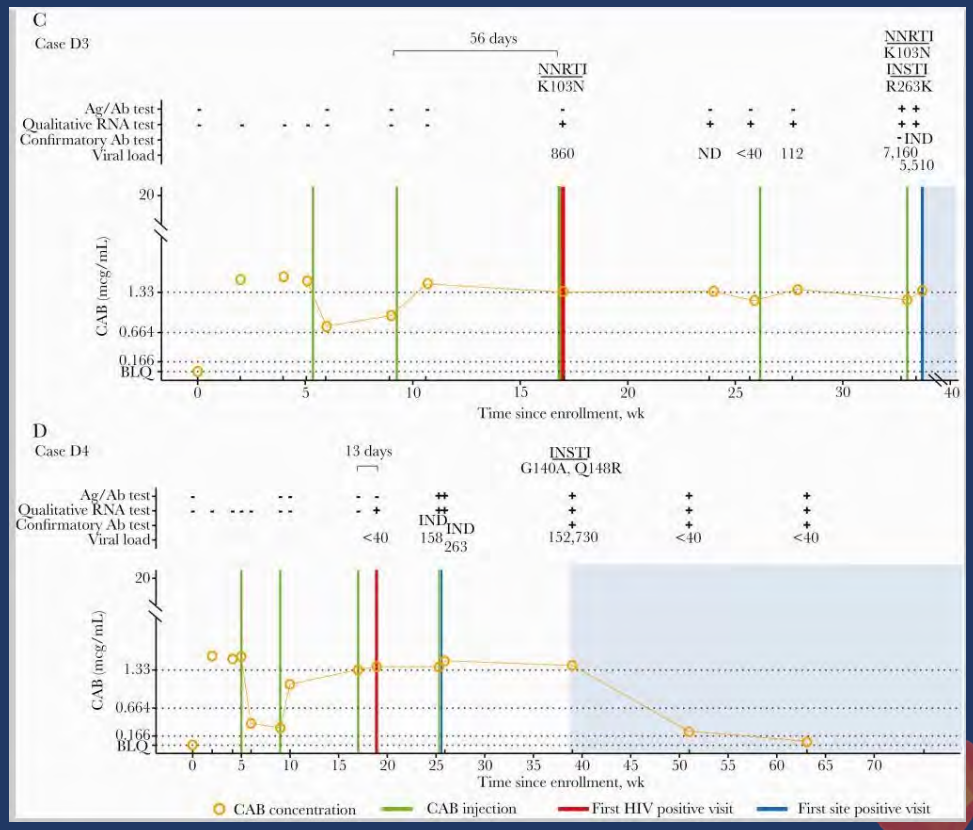
Incident HIV Infections in HPTN 084

- 3,224 CGW
- 4 incident infections on LA CAB
- 1 with on-time injections
- In HPTN 084, no patients developed INSTI resistance while receiving LA CAB

Delany-Moretlwe. Lancet. 2022;399:1779.

HPTN 083 Delayed Diagnosis Case Summaries

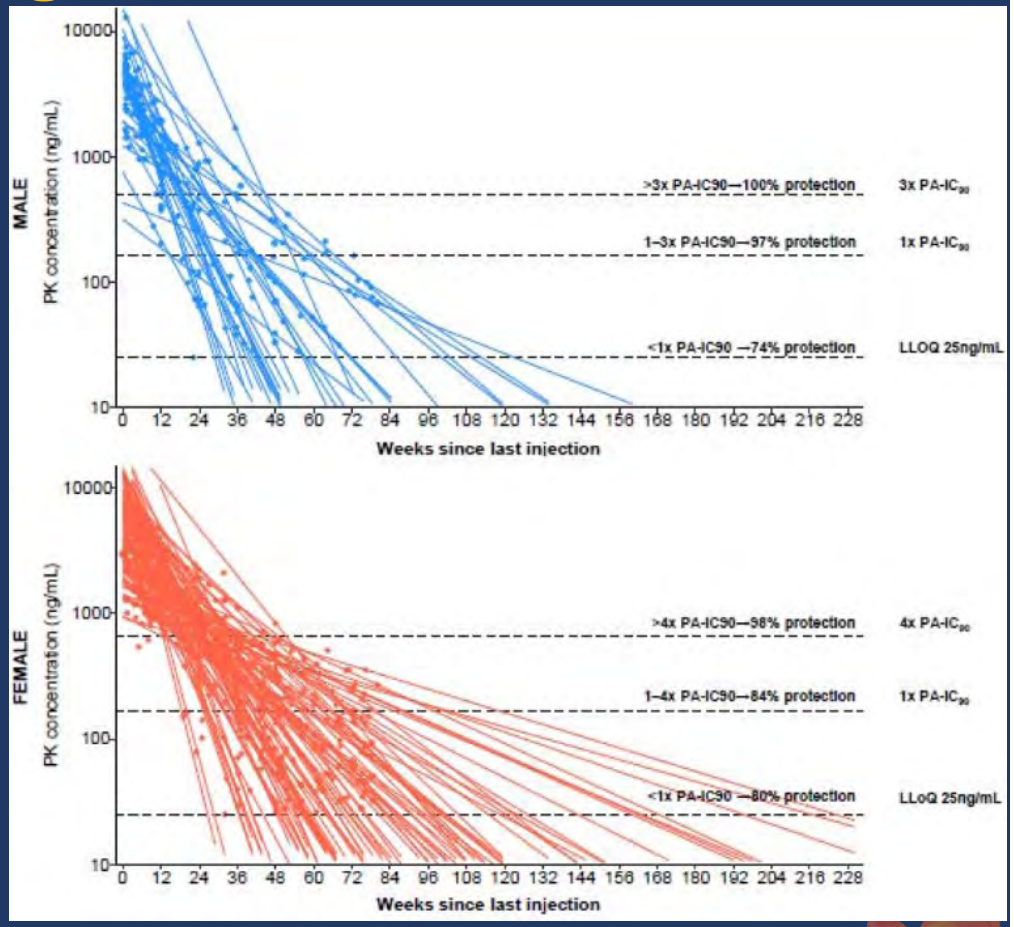




1. Marzinke. CROI 2021. Abstr 153; Marzinke. J Infect Dis. 2021;224:1581; Delany-Moretlwe. Lancet. 2022;399:1779. 4. cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf.

Discontinuing or Restarting PrEP

- Re-educate patients about the “tail” and the risks during declining CAB levels
- Assess ongoing risk/indications
- If PrEP is indicated, prescribe daily oral F/TDF beginning within 8 weeks after last injection
- Continue follow-up visits quarterly for 12 months
- Conduct HIV-1 RNA tests at each quarterly follow-up visit after discontinuing CAB injections



CDC PrEP guidelines. 2021; Landovitz et al, Lancet HIV 2020 Jul; 7(7):3e472-e481

Who should get PrEP and How to Improve Adherence

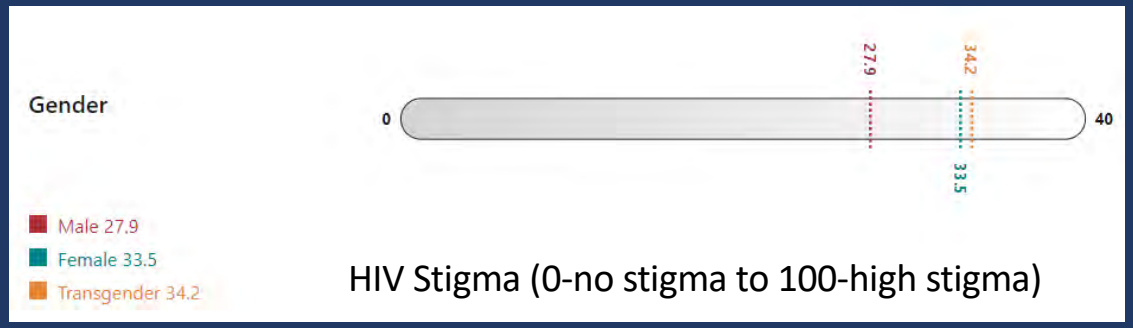
Indications Among CGW

If	And have any one of the following		
Anal or vaginal sex in past 6 months	Have a sexual partner with HIV (especially if the partner has an unknown or detectable viral load),	Have not consistently used a condom	Diagnosed with bacterial STI
Inject drugs	Have ever injected drugs (especially if you have injected drugs in the past 6 months)	Have an injection partner with HIV	Share needles, syringes, or other equipment to inject drugs (for example, cookers)
Have been prescribed PEP (postexposure prophylaxis)	May continue to be exposed to HIV in the future or have used PEP more than once		

https://www.cdc.gov/stophivtogether/library/topics/prevention/brochures/cdc-lsht-prevention-brochure-prep-is-for-women-patient.pdf

Challenges for CGW

- Low awareness of PrEP (CGW and providers)
- Commercials rarely show CGW
- Competing priorities
- Fewer options
- Stigma
- Potential preference for barrier protection to also protect unwanted pregnancies and/or STI



HIV Stigma (0-no stigma to 100-high stigma)

https://aidsvu.org/local-data/united-states/#prep

Reframing it as Sexual Health

- Incorporate PrEP into routine office visits
- Reframing “risk” (stigmatizing language) to need or reasons
- Offer PrEP at clinics women access
  - OB/GYN offices
  - Family Planning Clinics
  - Primary Care Clinics
  - Health Departments
- Consider GOALS framework using 5Ps
  - Partners, Practices, Protection From STI, Past History of STI, Prevention of Pregnancy

GOALS Framework for the Sexual History

Component	Suggested Script Rationale	Goal Accomplished
Give a preamble that emphasizes sexual health	• I'd like to talk with you for a couple of minutes about your sexuality and sexual health. • I talk to all of my patients about sexual health, because it's such an important part of overall health. Some of my patients have questions or concerns about their sexual health, so I want to make sure I understand what your questions or concerns might be and provide whatever information or other help you might need	Focuses on sexual health, not risk. • Normalizes sexuality as part of health and healthcare. • Opens the door for the patient's questions. • Clearly states a desire to understand and help.

https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf

GOALS Framework for the Sexual History

Component	Suggested Script Rationale	Goal Accomplished
Offer opt-out HIV/STI testing and information	First, I like to test all my patients for HIV and other sexually transmitted infections. Do you have any concerns about that?	• Doesn't commit to specific tests; but does normalize testing. • Sets up the idea that you will recommend some testing regardless of what the patient tells you. • Opens the door for the patient to talk about HIV or STIs as a concern
Ask an open-ended question	Pick one (or use an open-ended question that you prefer): • Tell me about your sex life. • What would you say are your biggest sexual health questions or concerns? • How is your current sex life similar or different from what you think of as your ideal sex life?	•Puts the focus on the patient. • Lets you hear what the patient thinks is most important first. • Lets you hear the language the patient uses to talk about their body, partners, and sex.

https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf

GOALS Framework for the Sexual History

Component	Suggested Script Rationale	Goal Accomplished
Listen to relevant information and fill in the blanks	•Besides [partner(s) already disclosed], tell me about any other sexual partners. • How do you protect yourself against HIV and STIs? • How do you prevent pregnancy (unless you are trying to have a child)? • What would help you take (even) better care of your sexual health?	• Makes no assumption about monogamy or about gender of partners. • Avoids setting up a script for overreporting condom use. • Can be asked of patients regardless of gender. • Increases motivation by asking the patient to identify strategies/ interventions.
Suggest a course of action	•So, as I said before, I'd like to test you for [describe tests indicated by sexual history conversation]. • I'd also like to give you information about PrEP/contraception/other referrals. I think it might be able to help you [focus on benefit].	•Allows you to tailor STI testing to the patient so they don't feel targeted. • Shows that you keep your word. • Allows you to couch education or referral in terms of relevant benefits, tailored to the specific patient.

https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf

Adherence Strategies

- Peer navigators
- Power of sisterhood
- PrEP education at CGW centric locations
  - Gyn offices
  - College campuses
  - Salons
- Social media platforms
- Tailor education content to CGW

Arnold et al, Journal of Rachial and Ethnic Health Disparities; Nov 2022

Selecting the Preferred Agent

Oral PrEP

- Pros
  - Generic available
  - Widely available
  - Minimal adverse effects
  - Can be used during pregnancy
  - Preferred option with HBV infection
- Cons
  - Frequent dosing
  - Minimal discretion
  - On-demand oral PrEP and FTC/TAF not options for cisgender women
- Time to protection
  - 21 days for vaginal sex
  - 7 days for receptive anal sex

Injectable PrEP

- Pros
  - Less frequent dosing
  - Allows for privacy/discretion
- Cons
  - Injections
  - Requires every 8 week visit at provider
  - Not approved for HBV infection
  - Limited data in pregnancy
  - Implementation challenges
- Time to protection
  - Limited data; based on animal models the following is estimated
    - 95% of people will achieve protective blood levels of CAB-LA 7 days after their first injection
    - Fifty percent of people will achieve protective blood levels 1 day after the first injection

Lessons Learned from LA Injectable ART for PrEP: Clinic Infrastructure

Space and storage

- Adequate refrigeration and storage facilities
- Designate private space for injections

PrEP coverage

- Establish billing protocols for procurement
- Medical vs. Pharmacy benefits

Personnel to accommodate administration capacity

- Consider designated staff
- Ensure adequate training

Establish workflows and protocols

- Clinic flow
- Use of order sets and stand protocols

Ensure tolerability of injections

- Promote patient–provider communication and decision-making

Support enrolled patients to ensure tracking and retention

- Flexible scheduling with multiple locations

Collins. Open Forum Infect Dis. 2022;9:ofac455. Mantsios. BMC Health Serv Res. 2021;21:255.
hivguidelines.org/prep-for-prevention/prep/#tab_2.

PrEP Assistancs Programs

- Ready, Set, PrEP (oral PrEP)
  - https://readysetprep.hiv.gov/
  - Uninsured
  - HIV negative result
  - Needs a Rx
  - Live in the US
- Copay assistance programs
- Medication assistance programs
  - State variability
  - Medication Access Prgorams

Monitoring During PrEP in Cisgender Women

Laboratory Testing Timing	Oral PrEP	Injectable PrEP
HIV Ag/Ab and HIV-1 RNA testing	Every 3 mo	Every 1 mo with first 2 injections, then every 2 mo
Serum creatinine	▪ **Every 6 mo** if age ≥50 yr or eCrCl <90 mL/min ▪ **Every 12 mo** if age <50 yr and eCrCl ≥90 mL/min ▪ Persons with CrCl <60 mL/min should not take FTC/TDF for PrEP	Not required
STI testing	Every 6 Mo	Every 6 Mo
Pregnancy testing	Not specified	Not specified

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

Slide credit: clinicaloptions.com

PrEP in Pregnancy

- Pregnancy may be a period of increased HIV risk
- F/TDF preferred
- F/TDF permitted in pregnant AND breast-feeding mothers
- Limited data on CAB LA in pregnant and breast-feeding mothers (Clinical trial ongoing)

Future Options

Future Options for PrEP

- Intravaginal ring
- Implant
- Multimodal prevention strategies
- Other long-acting injections
- Antibody infusions
- Patch

https://www.hiv.gov/hiv-basics/hiv-prevention/potential-future-options/long-acting-prep

Vaginal Rings

Vaginal rings are small, flexible plastic rings that are inserted into the vagina to release different drugs. Vaginal rings have been used to safely and effectively address reproductive health needs, such as contraception and hormone management, for decades

Vaginal rings provide the opportunity for:	• LOCALIZED, SUSTAINED ACTION
	  • Steady drug release
	  • Low systemic exposure

Implementation in low-resource settings	• Relatively low manufacturing cost • Stored at room temperature; no cold chain needed
Possibility of multipurpose technologies	• Rings could be developed to treat or prevent multiple conditions at once (achieve sexual and reproductive health goals, including contraception, hormone management, and HIV prevention)

https://www.contraceptionjournal.org/article/S0010-7824(21)00410-8/fulltext

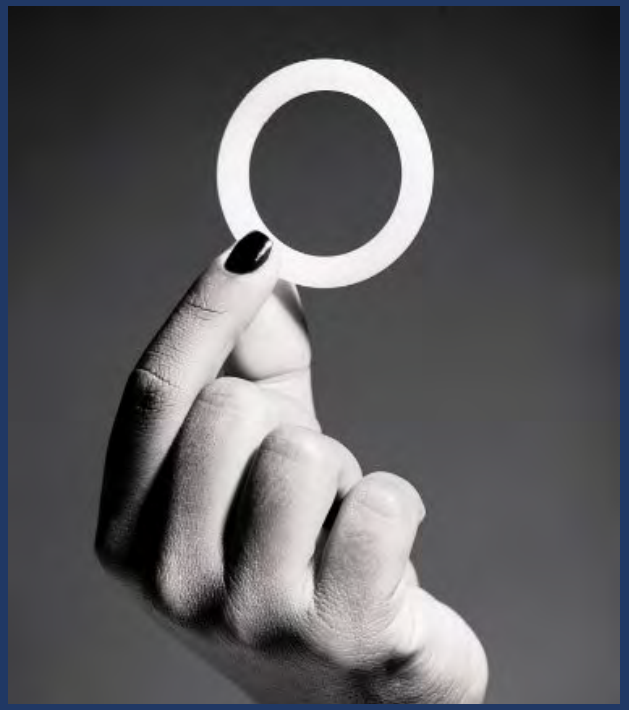
Intravaginal Ring

- Dapivirine vaginal ring
- NNRTI
- Female-controlled method
- Slowly released over one month
- Each ring contains about 25 mg of drug
- Approved by WHO and many countries in Africa
- Not FDA-approved

Baeten. NEJM. 2016;375:2121. ; Nel. NEJM. 2016;375:2133.
www.ipmglobal.org/sites/default/files/attachments/publication/ipm_ring_backgrounder_mar_2021.pdf

Efficacy and Safety Data

- Ring Study
  - Phase 3
  - 1959 CGW in SA and Uganda
  - 31% reduction in HIV incidence
- ASPIRE Study
  - 2629 CGW in Malawi, South Africa, Uganda, and Zimbabwe
  - 27-37% reduction in HIV incidence
- No difference between Dapivirine and Placebo
  - Serious AEs
  - Number of pregnancies
  - Number of STIs
  - Common side effects included urinary tract infections, vaginal discharge, itching, and pelvic and lower abdominal pain. Resolved with no interruption of ring use



REACH Study (Reversing the Epidemic in Africa with Choices in HIV Prevention) MTN-034

- Monthly dapivirine vaginal ring and Truvada as daily oral PrEP in adolescent girls and young women in SSA
- 98% used the two products
- 67% chose the ring vs 31% chose oral PrEP in the choice period
- 88.5% found ring acceptable compared to 64% for oral PrEP

Lancet HIV; 2023 Oct 25:S2352-3018(23)00227-8. doi: 10.1016/S2352-3018(23)00227-8

Multi-Purpose Technology (MPT)

- Provider administered
  - Implants
  - IUD
- User controlled
  - Daily oral tablets
  - Vaginal rings
  - Patch
  - Films, Gel and Insert

The Safety, Pharmacokinetics, and Pharmacodynamics of 90-day Intravaginal Rings (IVRs) Releasing Tenofovir (TFV) With and Without Levonorgestrel (LNG)

Randomized, placebo-controlled trial of 27 women in Western Kenya

Grade	TFV + LNG N=11	TFV Alone N=11	Placebo N=5
Grade1	23 (7)	27 (1)	8 (0)
Grade 2	24 (1)	18 (0)	8 (0)
Grade 3	0	1 (0)	0
Grade 4	0	1 (0)	0
Grade 5	0	0	0
Total	47 (8)	47 (1)	16 (0)

Pharmacokinetic characteristics, markers of protection against HIV-1 and pregnancy along with safety data suggest the potential for clinical efficacy of these IVRs.

- All were related to menstrual bleeding changes, all resolved spontaneously without sequalae
  - 8 were in the TFV/LNG group
  - 1 Grade 2 in TFV/LNG group was due to prolonged menstrual bleeding

Mugo, N, et al. HIV R4P 2021. Virtual. OA06.02

Dual Prevention Pill (DPP)

Prevent pregnancy and HIV

Combining TDF/FTC-based oral PrEP with oral contraceptives (OC)

Another DPP combining F/TAF with OC is also in development.

HPTN
HIV Prevention
Trials Network

Combined Oral
Contraceptive Pills

Oral PrEP

Dual Prevention Pill
(contraceptives + PrEP)

Dual prevention pill (DPP)

Streamlined regulatory pathway: no efficacy trials required, only bioequivalence

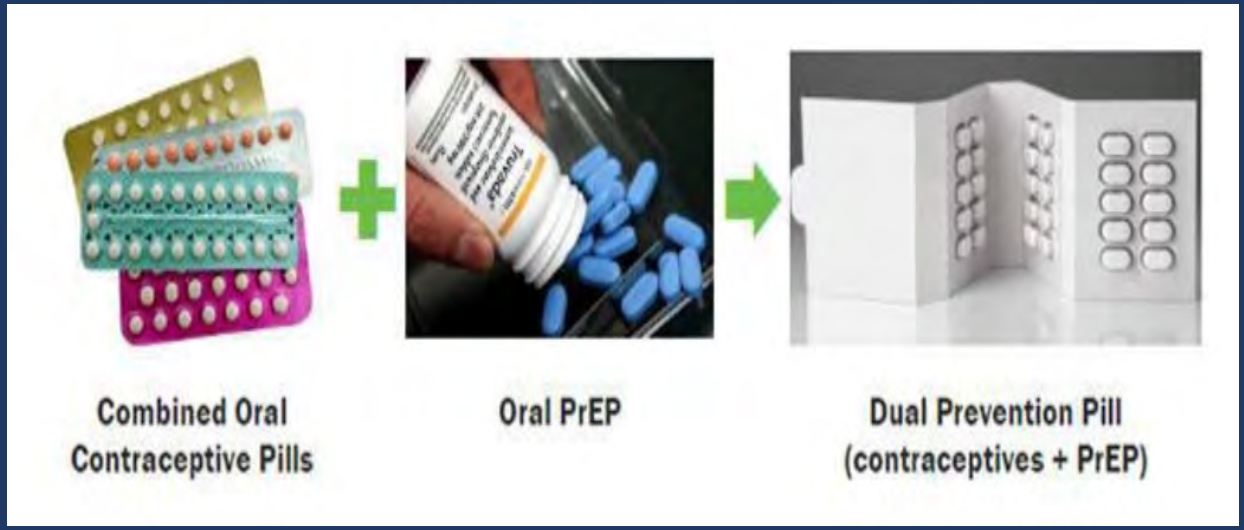
WHO/CDC guidelines recommend PrEP and combined oral contraceptives prescribed together

Promise of the DPP
Findings from formative acceptability studies

HPTN
HIV Prevention
Trials Network

HPTN 104

- Primary Objective
  - Adherence to a dual prevention pill (TDF/FTC + a combined oral contraceptive) versus a two-pill regimen
- Secondary Objective
  - Preference
  - Persistence
  - Tolerability
  - Acceptability
- Streamlined regulatory
  - No efficacy trials needed
  - bioequivalence



https://www.hptn.org/sites/default/files/inline-files/WED_05_Lisa%20Haddad-min.pdf; Accessed 11/7/2023

Oral Options for PrEP

Islatravir

- NRTTI (Nucleoside Reverse Transcriptase Translocation Inhibitor)
- Once a month pill
- Dose-dependent drop in CD4 in some participants receiving islatravir in clinical studies
- No longer currently being pursued for HIV Prevention

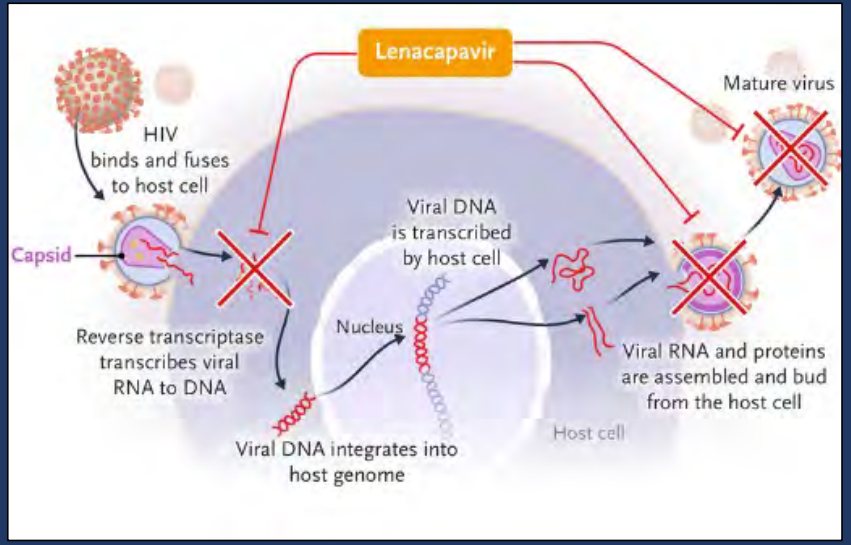
F/TAF (tenofovir and alafenamide and emtricitabine,)

- Ongoing study in SSA
- PURPOSE-1
- Comparing daily oral F/TAF vs. Lenacapavir

https://clinicalinfo.hiv.gov/en/drugs/islatravir/patient#:~:text=On%20December%2013%2C%202021%2C%20the%20FDA%20placed%20clinical%20holds%20on,participants%20receiving%20islatravir%20in%20trials.

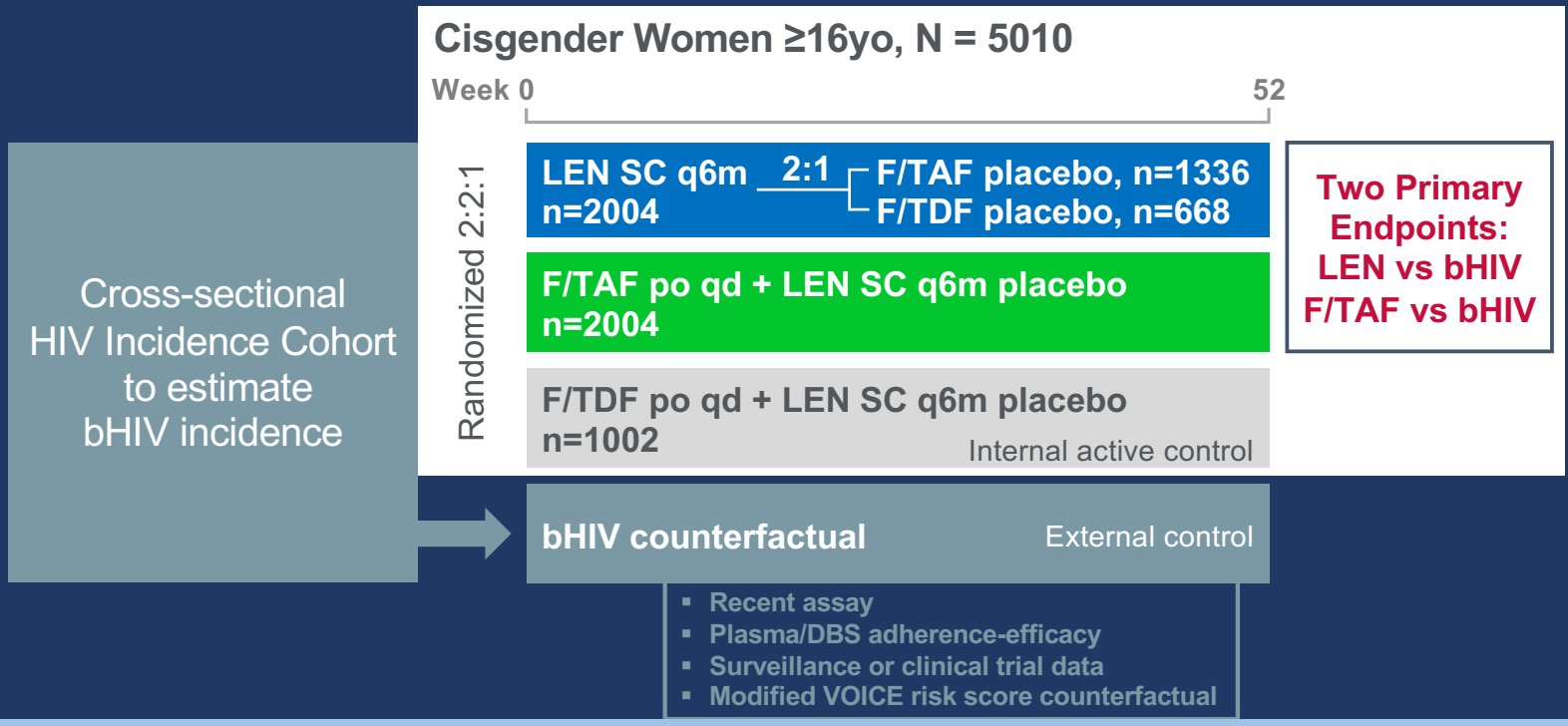
Lenacapavir

- Capsid inhibitor
  - Inhibits disassembly of the shell
  - Interferes with transport of viral complexes across nuclear pore
  - In late stages, distorts the capsid lattice resulting in abnormalities in virus structure and inhibition of virus maturation
- Subcutaneous injection
- Every 6 months
- Ongoing phase 3 studies
  - Cis-gender women
  - MSM
  - TGW
  - Gender non-binary persons



Dick A, Cocklin S.. Molecules. 2020;25(7).; Bester SM, Wei G, Zhao H, et al. Science. 2020;370(6514):360-364; Engelman AN.Viruses. 2021;13(1); Rossi E, Meuser ME, Cunanan CJ, Cocklin S. Life (Basel). 2021;11(2); Segal-Maurer S et al, NEJM 2022; 386:1793-1803

LEN for Pre-Exposure Prophylaxis (PrEP): PURPOSE-1



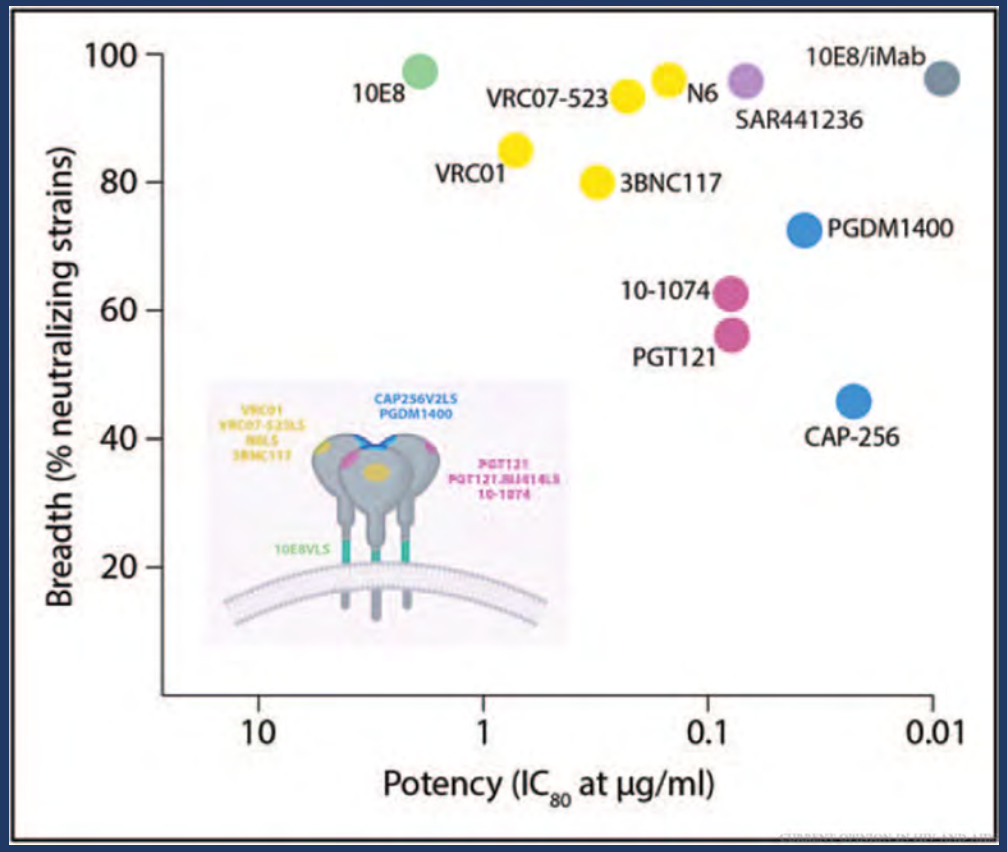
Cisgender adolescent girls and young women ages 16-25 in South Africa and Uganda
Completed full enrolment in September 2023 with more than 5,300 participants enrolled

bHIV, background HIV incidence; LEN, lenacapavir; PBO, placebo; PY, Person-Years; SC, subcutaneous;; DBS, dried blood spot.
Data on file, Gilead Sciences ; https://www.gilead.com/news-and-press/press-room/press-releases/2023/10/gilead-sciences-announces-new-clinical-trial-in-europe-to-assess-lenacapavir-for-hiv-prevention-as-part-of-landmark-purpose-program#:~:text=PURPOSE%201%20(NCT04994509)%20is%20evaluating,more%20than%205%2C300%20participants%20enrolled

HPTN 102/PURPOSE 3

- Study of Lenacapavir and Emtricitabine/Tenofovir Disoproxil Fumarate (F/TDF) in Prevention of HIV in Cisgender Women in the United States
- Primary Objective
  - Characterize PK
  - Safety in CGW in US
  - Acceptability

Broadly Neutralizing Antibodies for the Treatment and Prevention of HIV-1 Infection

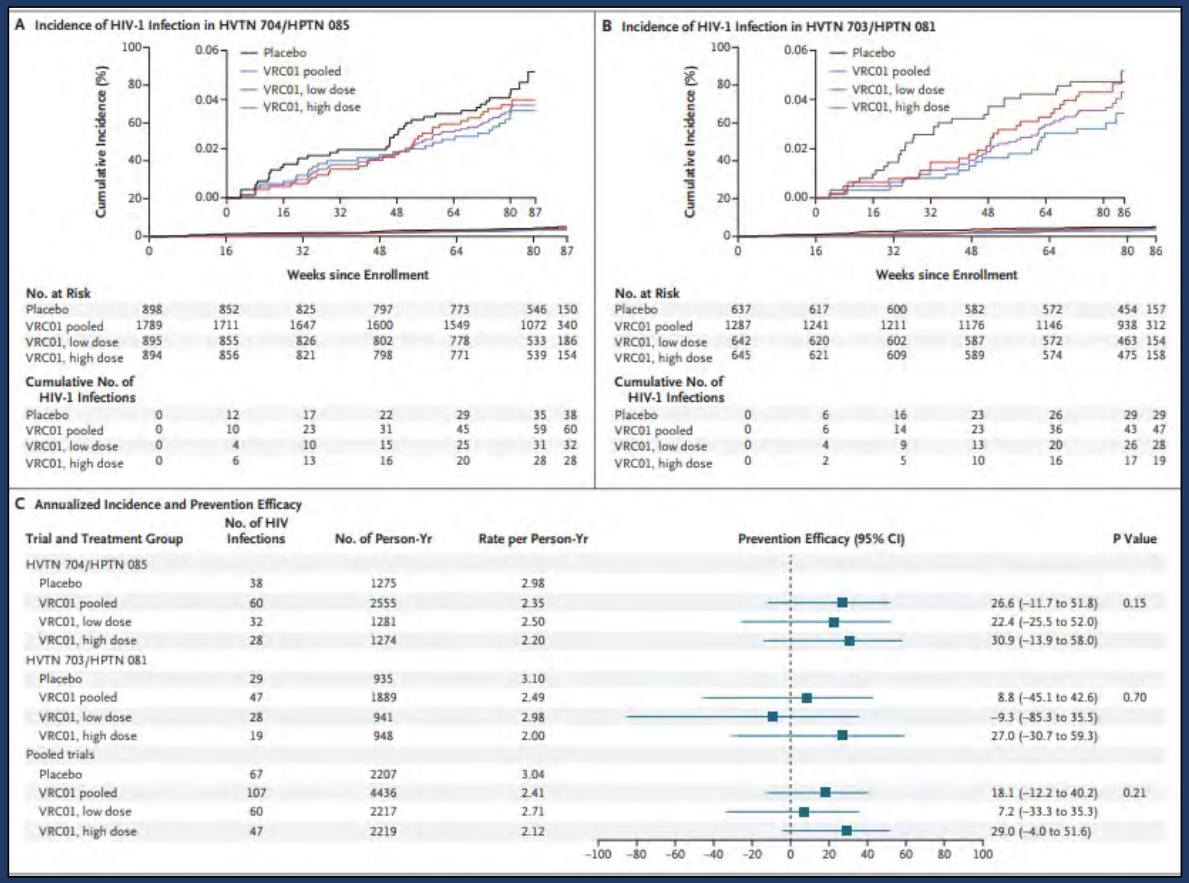


Plotting of HIV-1 bNAbs in clinical development by breadth and potency. Colors indicate binding site:

- CD4bs (yellow)
- V1/V2 loop (blue)
- V3 glycan (pink)
- MPER (green)
- trispecific (lilac)
- bispecific (gray)
- *Inset: schematic representation of an HIV-1 gp120/gp41 trimer with the four main antibody binding sites and their representative bNAbs in clinical development.*

Awan, Seemal F.; Happe, Myra; Hofstetter, Amelia R.; Gama, Lucio; Current Opinion in HIV and AIDS17(4):247-257, July 2022.; doi: 10.1097/COH.0000000000000742

Broadly Neutralizing Antibodies



- Two large studies HPTN081 (N=1924) and HPTN085 (N=2699)
- VRC01
- Well tolerated
- Demonstrated feasibility
- Suggests efficacy for susceptible isolates
- Raises options for combining antibodies and modifying to make them long acting

Corey et al, NEJM 2021;384:1003-14

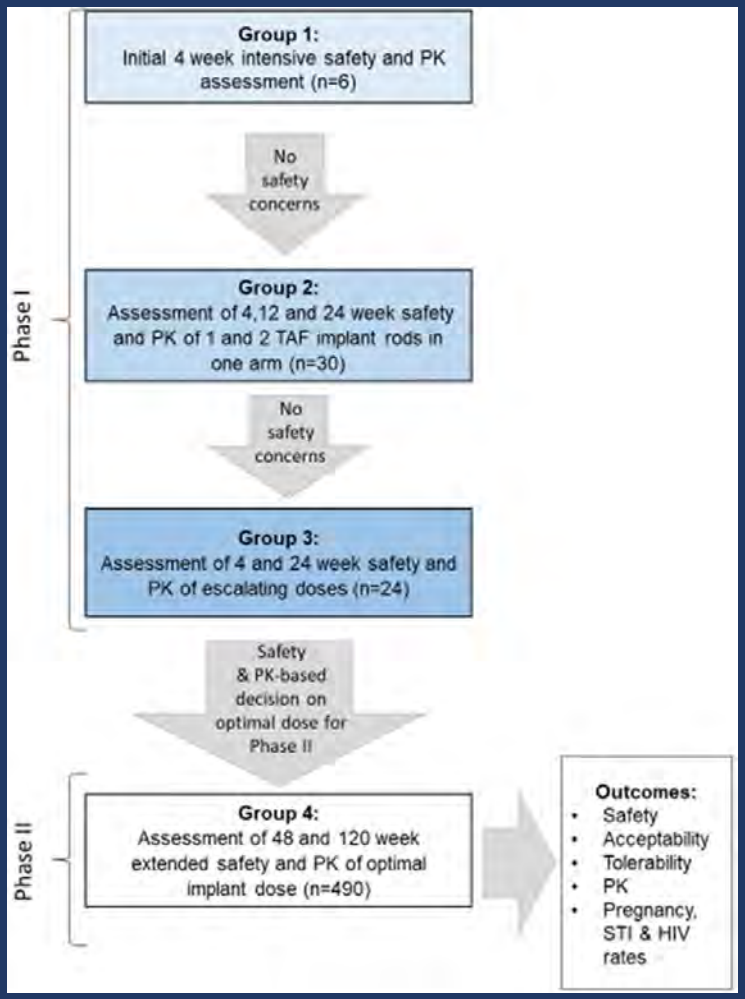
Novel Delivery Systems

Implants

Microneedle patches

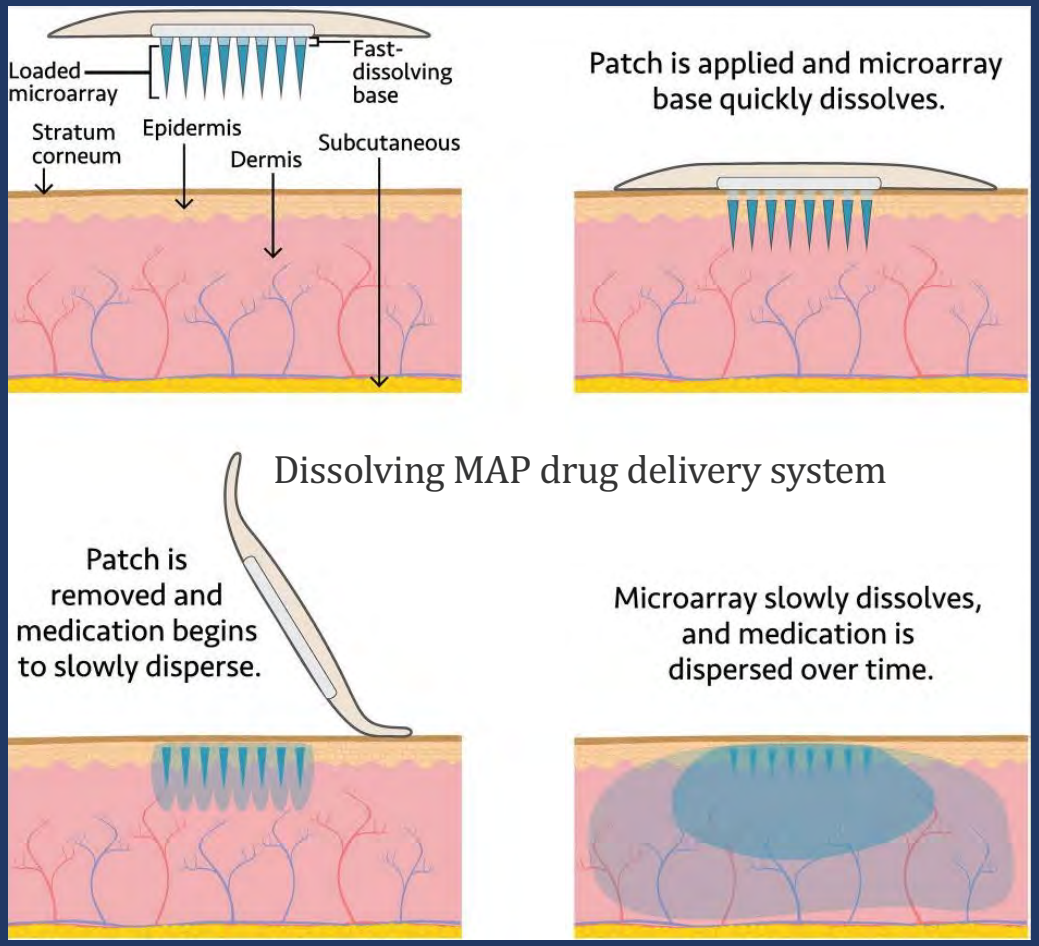
CAPRISA 018

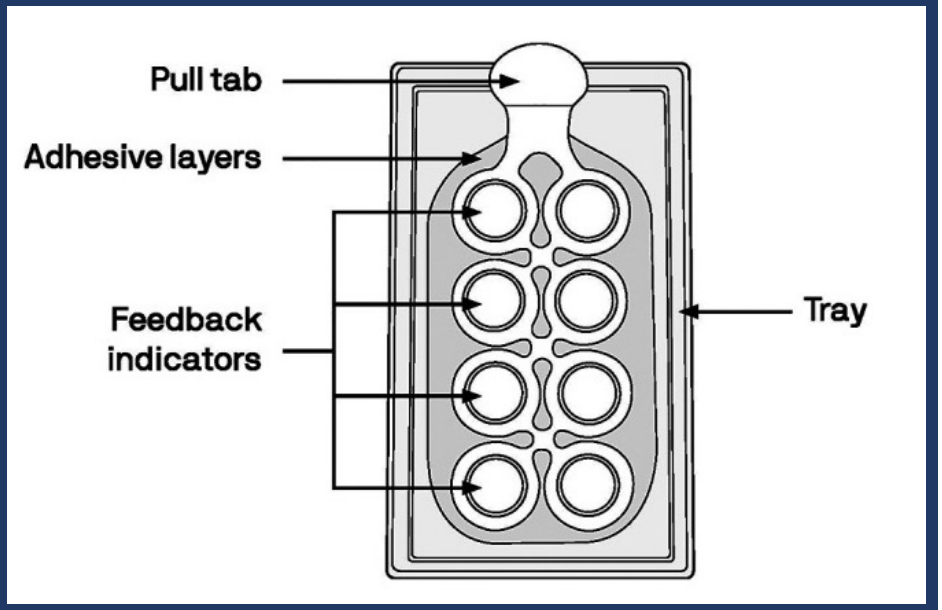
- A phase I/II clinical trial
- Assess the safety, acceptability, tolerability and pharmacokinetics of a sustained-release tenofovir alafenamide subdermal implant for HIV prevention in CGW in SSA
- 54 healthy, low risk, HIV-negative women
- 110 mg implants releasing a daily dose of
  - 0.25 mg (1 implant)
  - 0.5 mg (2 implants)
  - 0.75 mg (3 implants)
  - 1 mg (4 implants)
- Comparator drugs include TAF 25 mg oral tablets and the placebo implant



Tanuja Narayansamy Gengiah et al. BMJ Open 2022;12:e052880

Microarray Patch for HIV Prevention





MPT for delivery of both an ARV and a hormonal contraceptive

Gchigua et al: Front Reprod Health. 2023; 5: 1125159.

Summary

- Offer PrEP and assess for all sexually active persons
- Individualize options based on patients needs/preferences
- Remember the revised HIV testing for those on PrEP
- Newer options are emerging…….


Thank You for Your Attendance!
Please visit us at:
www.prn.org

- Backup

HPTN-084: Q2M IM CAB for PrEP in African Cisgender Adolescent Girls and Young Women

N = 55

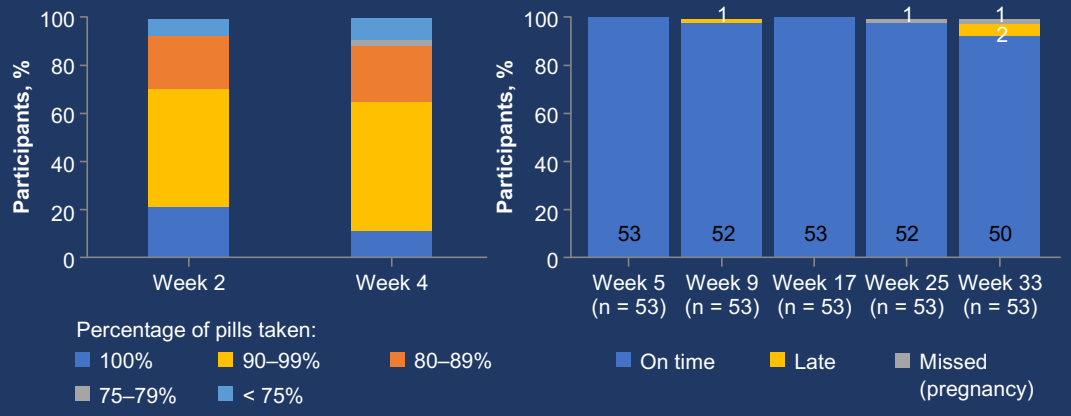
African cisgender adolescent girls and young women aged ≤ 18 years

Outcomes

Primary: Safety, tolerability and acceptability of Q2M IM CAB

Secondary: Adherence to, and timeliness of, injections; sexual risk behaviors

Adherence to Oral CAB (left) and Q2M IM CAB (right)



Acceptability of Q2M IM CAB After Three Injections

What do you like about an injectable method?	Respondents, %
Protects against HIV	54.7
Easier to use than other methods	41.5
Longer-term protection than other methods	22.6
Can be used discreetly	18.9
Administered by HCP	9.4
Doesn't interrupt sex	9.4
Nothing	7.5

What concerns do you have about an injectable method?	Respondents, %
None	35.8
May be painful	28.3
May cause harmful side effects	18.9
Irreversible	13.2
May not protect against HIV	11.3
Cannot be used discreetly	5.7
May not be affordable	1.9

No drug-related SAEs reported; no discontinuations due to AEs; no incident HIV diagnoses; no events of weight gain/hepatoxicity/hypersensitivity/rash/seizures/pancreatitis

In this population enrolled in an injectable PrEP study, Q2M IM CAB was generally well tolerated with high acceptability; most participants (92%) chose to continue Q2M IM CAB over F/TDF when offered the choice

HCP, healthcare professional; HPTN, HIV Prevention Trials Network; Q2M, every 2 months

Hosek S, et al. CROI 2023, Oral 162

PrEP ring: Use by trans and nonbinary people

The PrEP ring has been studied only among people assigned female at birth.

- Participants in ring trials were not asked their gender identity.
- All participants in ring clinical trials underwent pelvic exams during participation.
- People assigned male at birth or people with neovaginas were not included as ring users during ring clinical trials.
- Although data were collected on medications taken by ring users during the trials, there was insufficient evidence around gender-affirming hormone use.

It is likely that the PrEP ring can be used by people assigned female at birth who would like to prevent HIV during receptive vaginal sex, regardless of their gender identity or use of gender-affirming hormones.