

Long-acting Cabotegravir (LA-CAB) for HIV Prevention

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Case

- A 27-year-old cisgender man presents in follow-up.
- He injects methamphetamine daily, often sharing injection equipment with others.
- He has insertive/receptive sex with cisgender men and does not use condoms.
- 2 months ago, he was diagnosed with early latent syphilis and was treated with long-acting benzathine penicillin.
- He is prescribed oral TDF/FTC for PrEP but struggles to take it, often missing weeks of pills at a time.
- Today, he is asymptomatic, and a routine HIV antibody/antigen test and HIV RNA assay are negative.

Would you recommend LA-CAB for PrEP for him?

- A. Yes
- B. No
- C. I'm not sure.

Most people who could benefit from PrEP are not taking it.

GROUP	ESTIMATED NUMBER ELIGIBLE FOR PrEP	ESTIMATED PROPORTION OF ELIGIBLE POPULATION USING PrEP
Men who have sex with men (MSM)	814,000	35%
Heterosexual people	258,000	2.1% (women only)
People who inject drugs (PWID)	73,000	3%

Which barriers will long-acting injectable PrEP overcome?

Patient	Provider	Structural/environmental
Limited knowledge of PrEP	Knowledge of PrEP	Homophobia
Low HIV risk perception	Willingness to prescribe PrEP	Transphobia
Limited knowledge of partners' risks	"Purview paradox"	Sexism
Medical mistrust	Competing priorities	Racism
Financial concerns	Failure to elicit HIV risk information	Lack of health care access
Competing priorities	Billing/reimbursement concerns	Insurance climate
Confidentiality concerns		HIV-related stigma
Adherence		

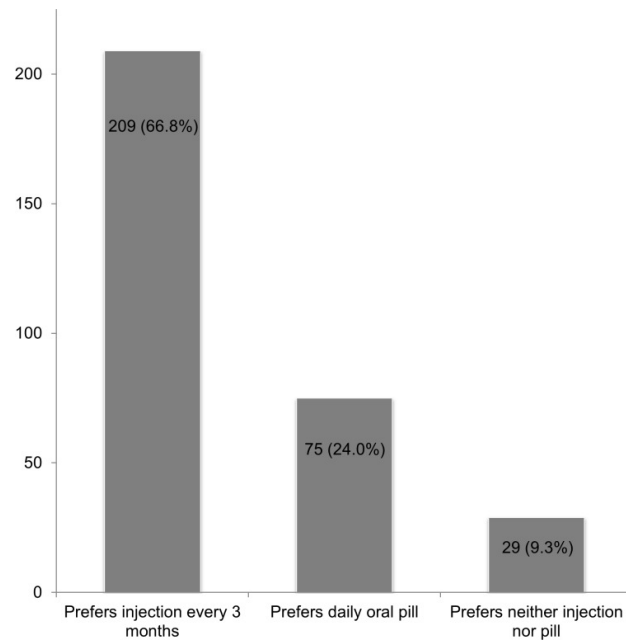
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Perceptions of long-acting injectable PrEP among MSM

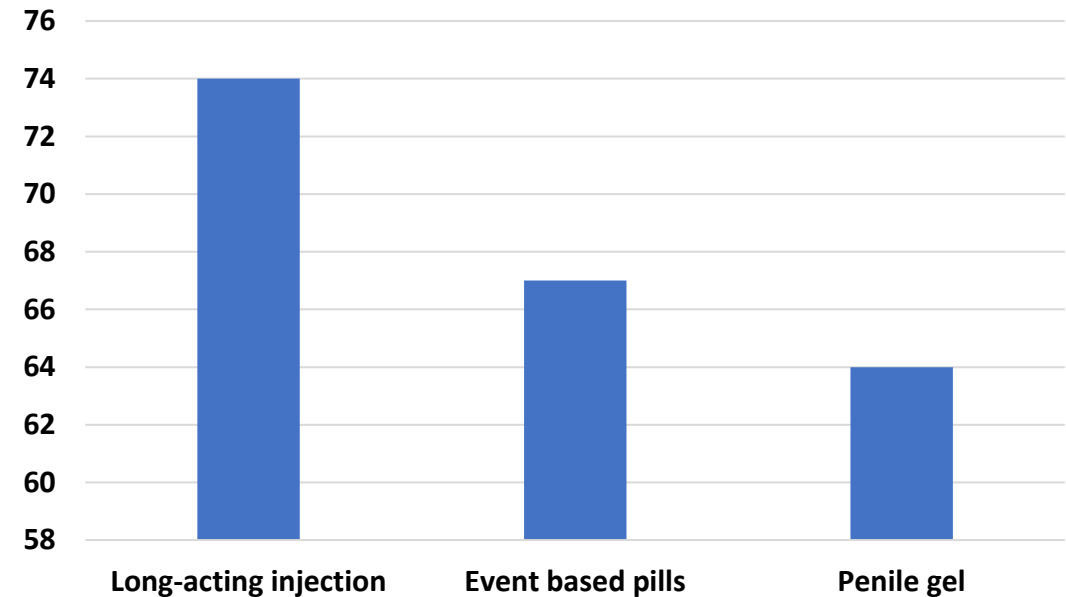
314 MSM in Washington, DC

- Median age 30, 41% non-Hispanic Black



M-cubed study

Proportion of MSM reporting likelihood of using PrEP formulations

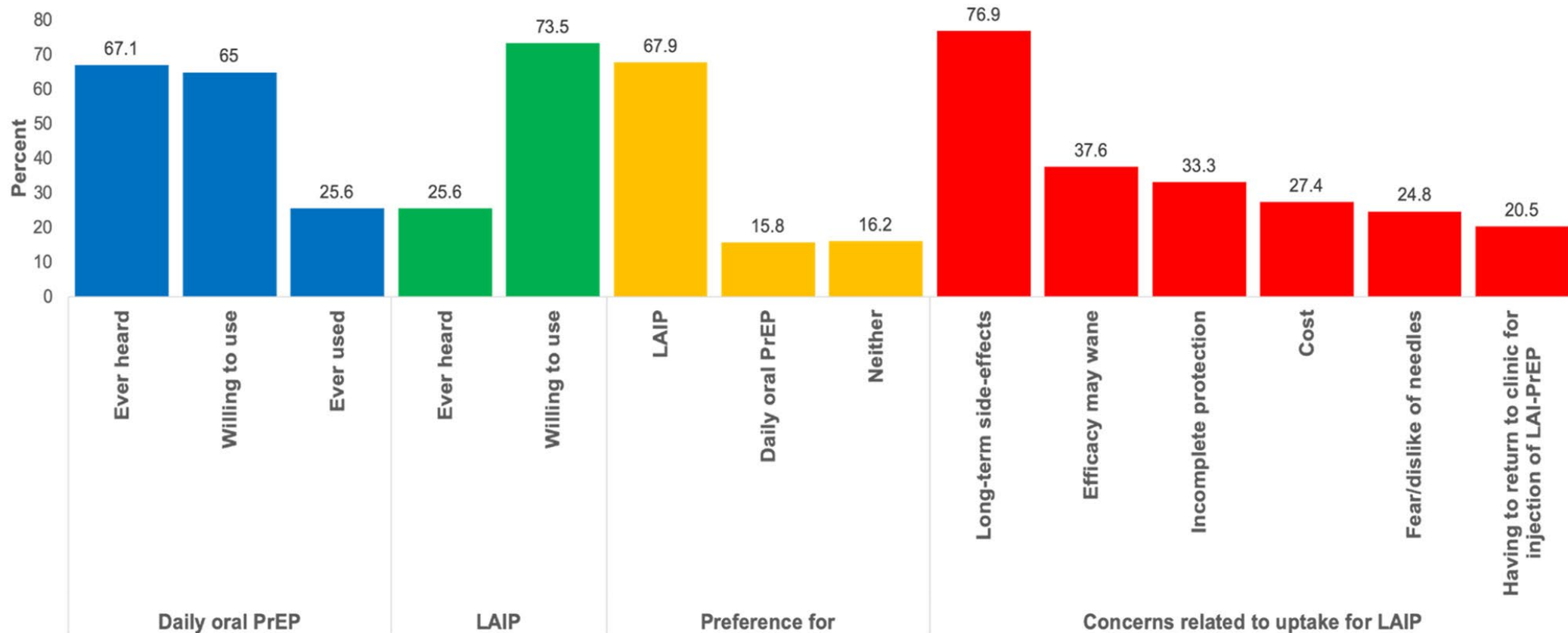


Perceptions of long-acting injectable PrEP among women

- 30 subjects in the Women's Interagency HIV Study
- Median age = 51 years
- 77% Black/African-American
- 60% no education beyond high school
- 57% knew of PrEP
- When asked to choose a formulation:
 - 55% preferred long-acting injectable PrEP
 - 10% preferred oral PrEP
 - 33% no PrEP

Perceptions of long-acting injectable PrEP among people who inject drugs

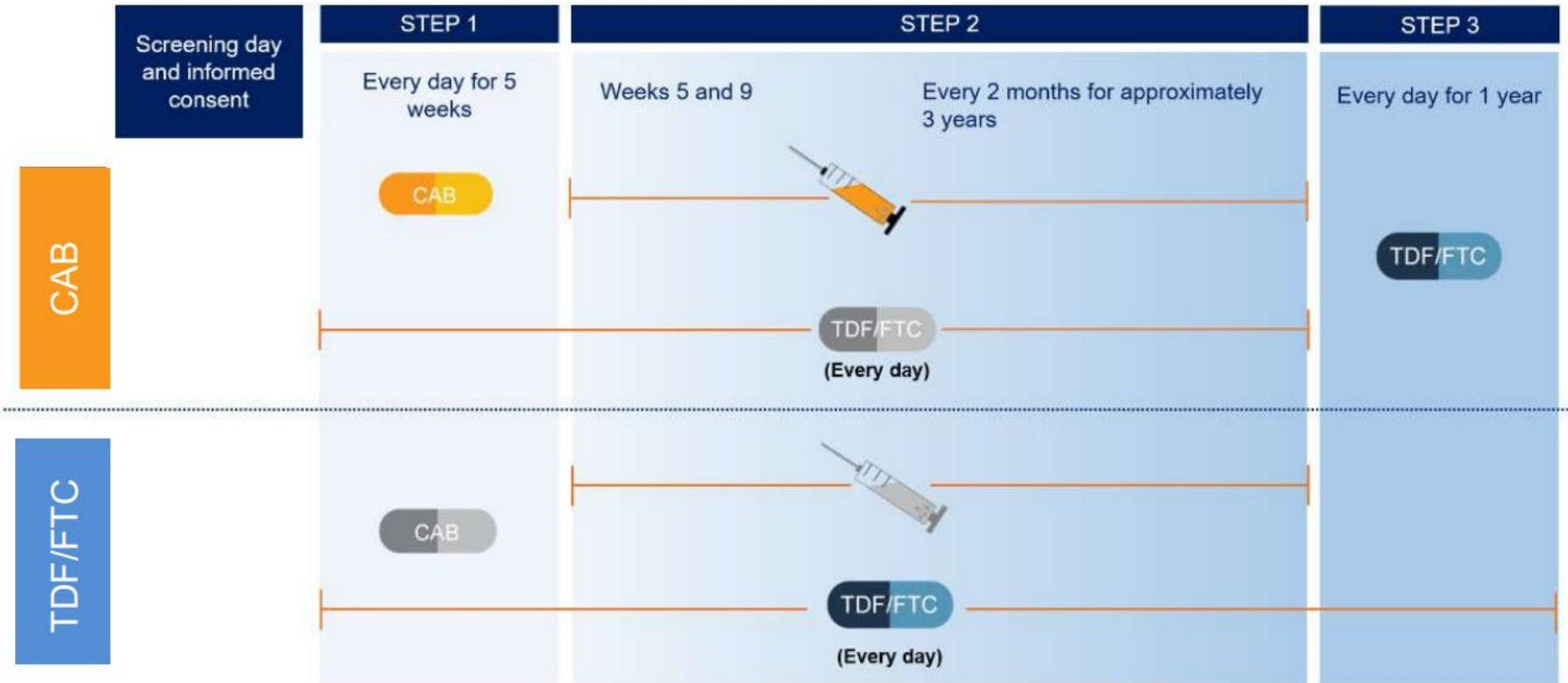
Perceptions among 234 people with opioid use disorder in CT








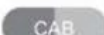
Conclusion from perception studies

- Many people report being more likely to use long-acting injectable PrEP than other forms of PrEP.
- Enthusiasm is limited in some populations with low oral PrEP use.
- Prior use of oral PrEP predicts willingness to use long-acting injectable PrEP.
- Perceptions may be different once there are available therapies.

HPTN 083 Study Design

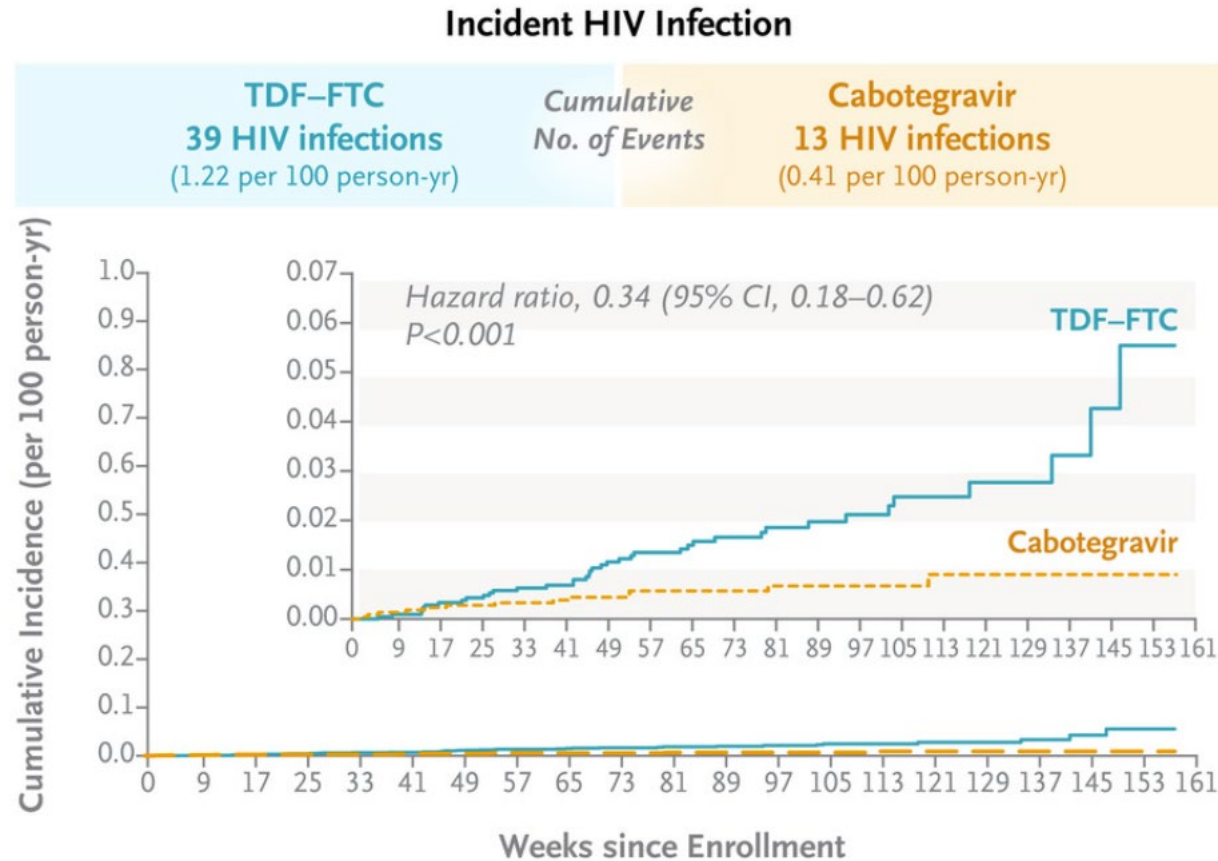


 TDF/FTC pill
  Cabotegravir (CAB) injection
  Placebo for TDF/FTC pill
  Placebo for cabotegravir (CAB) injection (20% Intralipid solution)

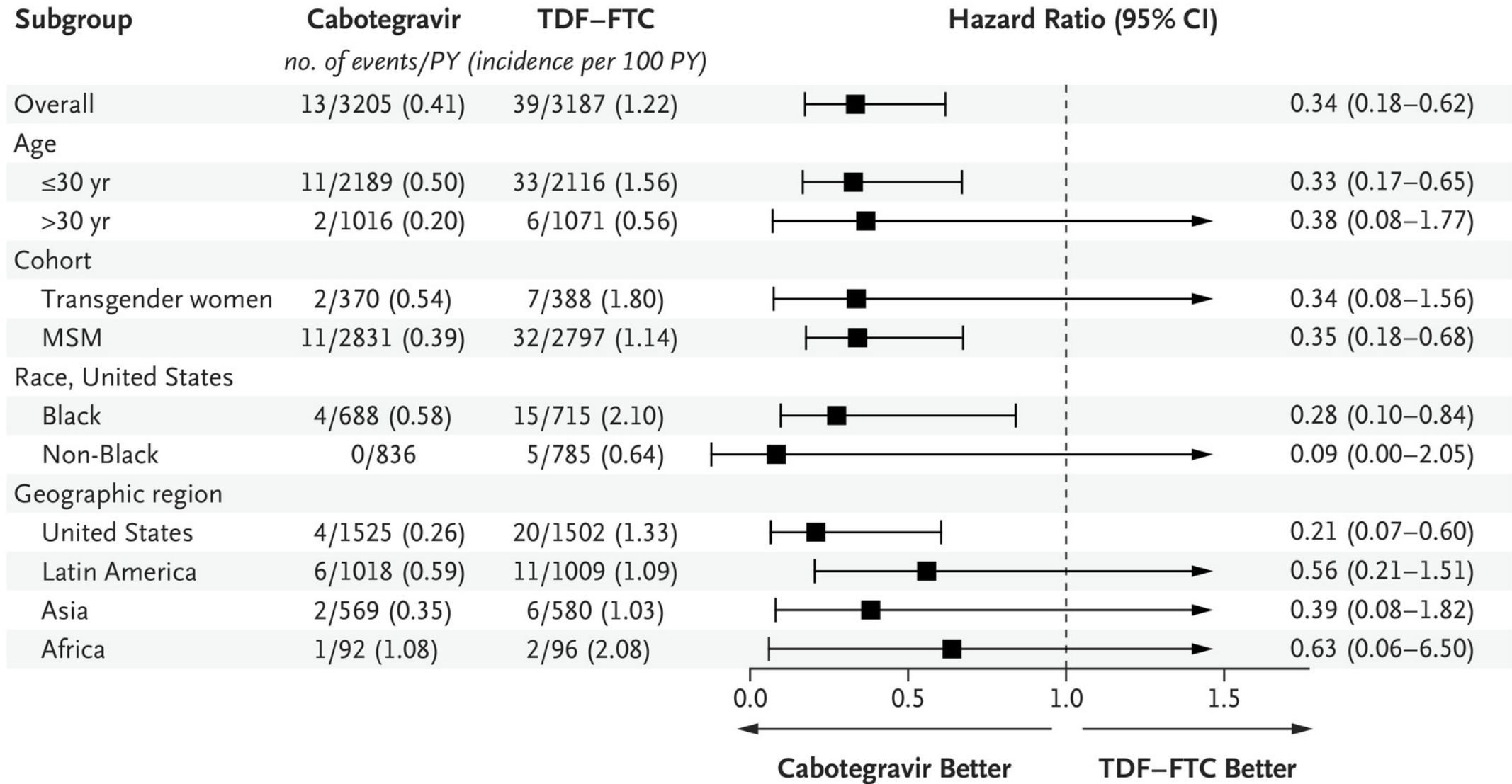
 Cabotegravir (CAB) pill
  Placebo for cabotegravir (CAB) pill



CAB is superior to TDF/FTC for PrEP among MSM and transgender women.



B Incident HIV Infection in Prespecified Subgroups



HPTN 084



- Enrolled 3,223 cisgender women in Botswana, Eswatini, Kenya, Malawi, South Africa, Uganda, Zimbabwe
- Design similar to HPTN 083
- Average age 26 years, 55% \geq 2 sexual partners in the past month, 34% with partners who have HIV or are of unknown HIV status
- Pregnant and breastfeeding women excluded
- DSMB recommended blinded phase be stopped in 11/2020
 - 38 HIV infections in the study
 - 4 in LA CAB arm (incidence 0.21%)
 - 34 in TDF/FTC arm (incidence 1.79%)

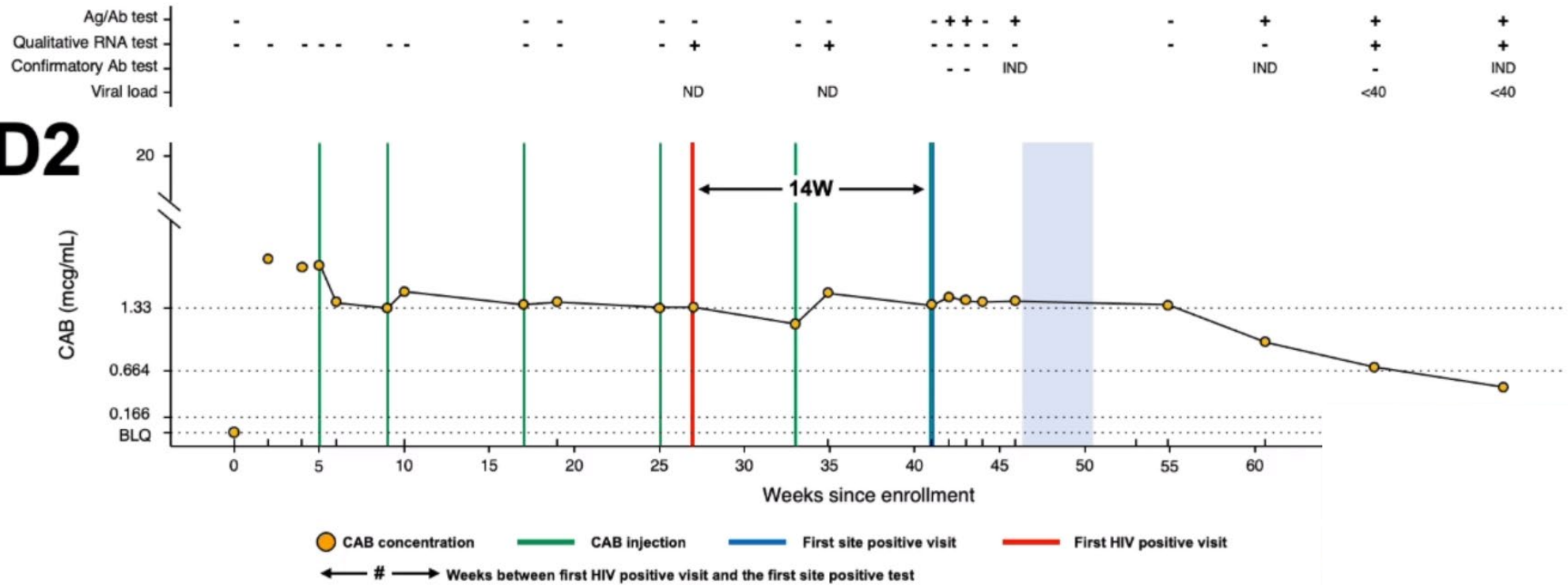
Antiretroviral resistance in HPTN 083

Context of infection	Integrase inhibitor mutations
Prior to CAB injection	Q148R in 2 of 3 subjects
Infection despite on-time CAB	R263K in 1 of 4 subjects Q148R in 1 of 4 subjects
Tail phase	None in 5 subjects



In rare cases of HIV acquisition despite cabotegravir, seroconversion was delayed.

D2



The shaded area represents time on ART.

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

[^] men who have sex with men

[~] persons assigned male sex at birth whose gender identification is female

Additional considerations for LA-CAB

- A 4-week lead-in phase with CAB 30 mg PO daily is optional.
- LA-CAB should only be administered in the gluteus.
- Monitoring of creatinine, lipids, and liver enzymes is not required.
- Hepatitis B serologies are not required, though they may be helpful for some patients.
- After stopping LA-CAB, see the patient quarterly for 12 months, with quarterly HIV testing.

Acquiring LA-CAB – what we know so far

Specialty Pharmacy

1. A prescription is sent to the specialty pharmacy.
2. The specialty pharmacy assesses coverage.
3. The specialty pharmacy ships the drug to the clinic.

Buy and Bill

1. The clinic purchases the drug from a specialty distributor.
2. The clinic stores the medication.
3. After administration, the clinic submits reimbursement claims.

Questions about CAB for PrEP

- Why is it superior to TDF/FTC?
- Will it reduce HIV risk from injection drug use?
- What will it cost?
- Will it be covered by health insurance at no cost to patients (as other PrEP is supposed to be)?

Programmatic implications of LA-CAB

- Rapid HIV testing if same-day administration
- Every-two-month visits
- Fewer opportunities for telehealth
- HIV RNA assays as part of laboratory monitoring
- Benefits navigation

What are your biggest concerns about LA-CAB for PrEP?

- A. Ensuring patients return for injections
- B. Cost/access
- C. Logistics prescribing/administering
- D. Breakthrough HIV infections
- E. Side effects
- F. Something else

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.)

