GGD Amsterdam

National Institute for Public Health and the Environment
Ministry of Health, Welfare and Sport

More HIV Diagnoses During Event-Driven PrEP compared to Daily PrEP in the Netherlands

A Longitudinal Analysis of the Dutch National PrEP Program

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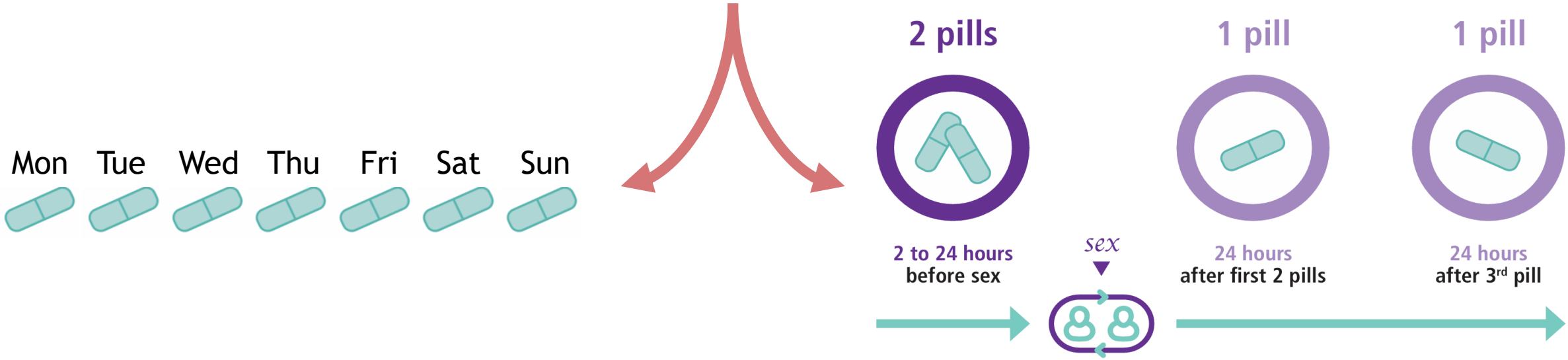
Disclosure of speaker's interests

(Potential) conflict of interest	None

Background

Oral PrEP is recommended by WHO as part of comprehensive HIV prevention

Different dosing strategies offer flexibility, choice and convenience



Source: World Health Organization 2019

Background

- High efficacy of daily and event-driven PrEP[1-3]
- Similar effectiveness in study settings[4-7]
- Real-world differences between regimens post-implementation are scarce

1. Fonner, AIDS 2016, 2. Molina, N Engl J Med 2015, 3. McComarck, 2015, 4. Molina, Lancet HIV 2022, 5. Molina, CROI 2026, 6. Vuylsteke, AIDS Soc 2019, 7. Van den Elshout, PLoS Med 2024

Research aims

MAIN AIM

Compare HIV incidence between daily and event-driven PrEP use

SECONDARY AIMS

Compare between regimens:

- PrEP discontinuation rates
- Bacterial STI incidence rates

PrEP in the Netherlands

- **Both oral PrEP regimens** are implemented **since 2019**
- Available through national PrEP program, GPs & commercial providers
- 3-monthly **PrEP monitoring**, extended to 6-monthly in 2024
- **Costs** for PrEP user: €15-€60 for 30 tablets

Source: STI year report National Institute for Public Health and the Environment (RIVM) 2025

Methods



Surveillance data from the Dutch national PrEP program

- Routinely collected clinical data of 23 Centers for Sexual Health
- ≥1 follow-up consultation
- August 1, 2019 – December 31, 2025



PrEP regimen reported in past three months, time-varying

What did we compare?

1. How often was HIV diagnosed?
   (Cumulative) HIV incidence per 100 person-years by PrEP regimen

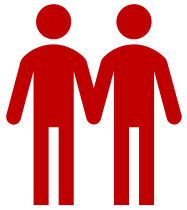
2. Did HIV risk differ between regimens?
   Cox regression, adjusted for age, chemsex and STI history

3. Did PrEP discontinuation and bacterial STI differ by regimen?
   Loss-to-follow-up rate by PrEP regimen
   Discontinuation rate by PrEP regimen
   Gonorrhoea, chlamydia, syphilis incidence rate by PrEP regimen

Results

Total 16,469 PrEP users

50.6% started daily, 49.4% event-driven



Median age
33 (IQR 27-44)

96.2% MSM



46% 1st or 2nd generation migration background

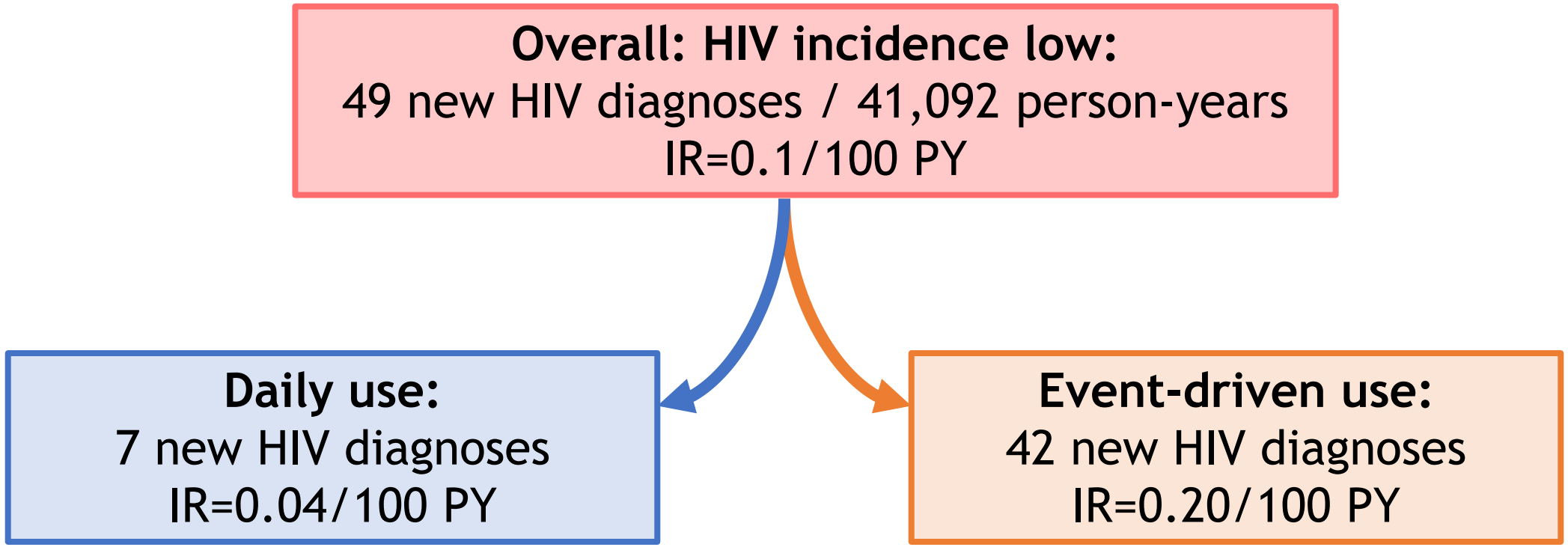


63% tertiary education

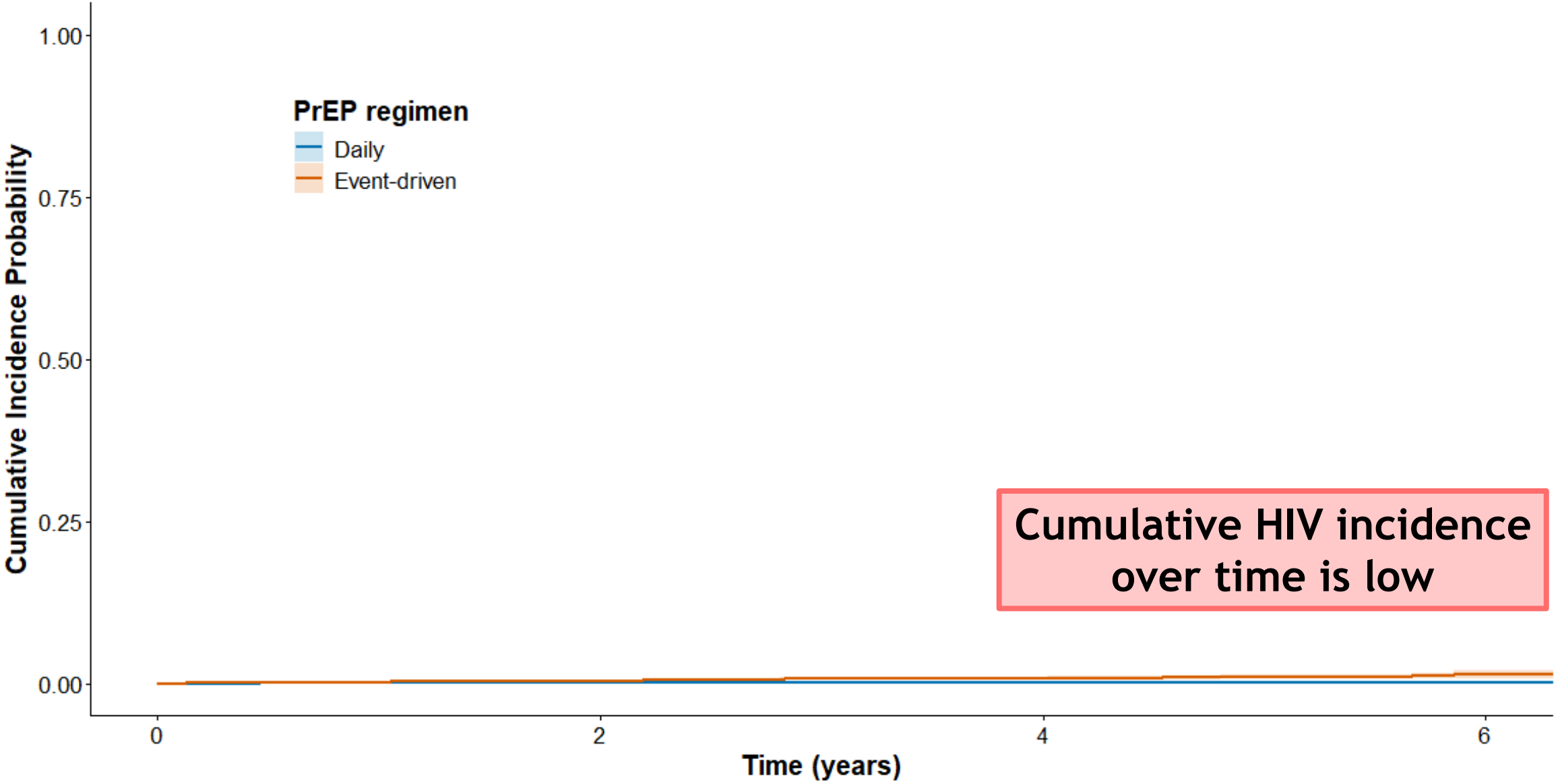


Median
sex partners
6 (IQR 3-12)

HIV incidence

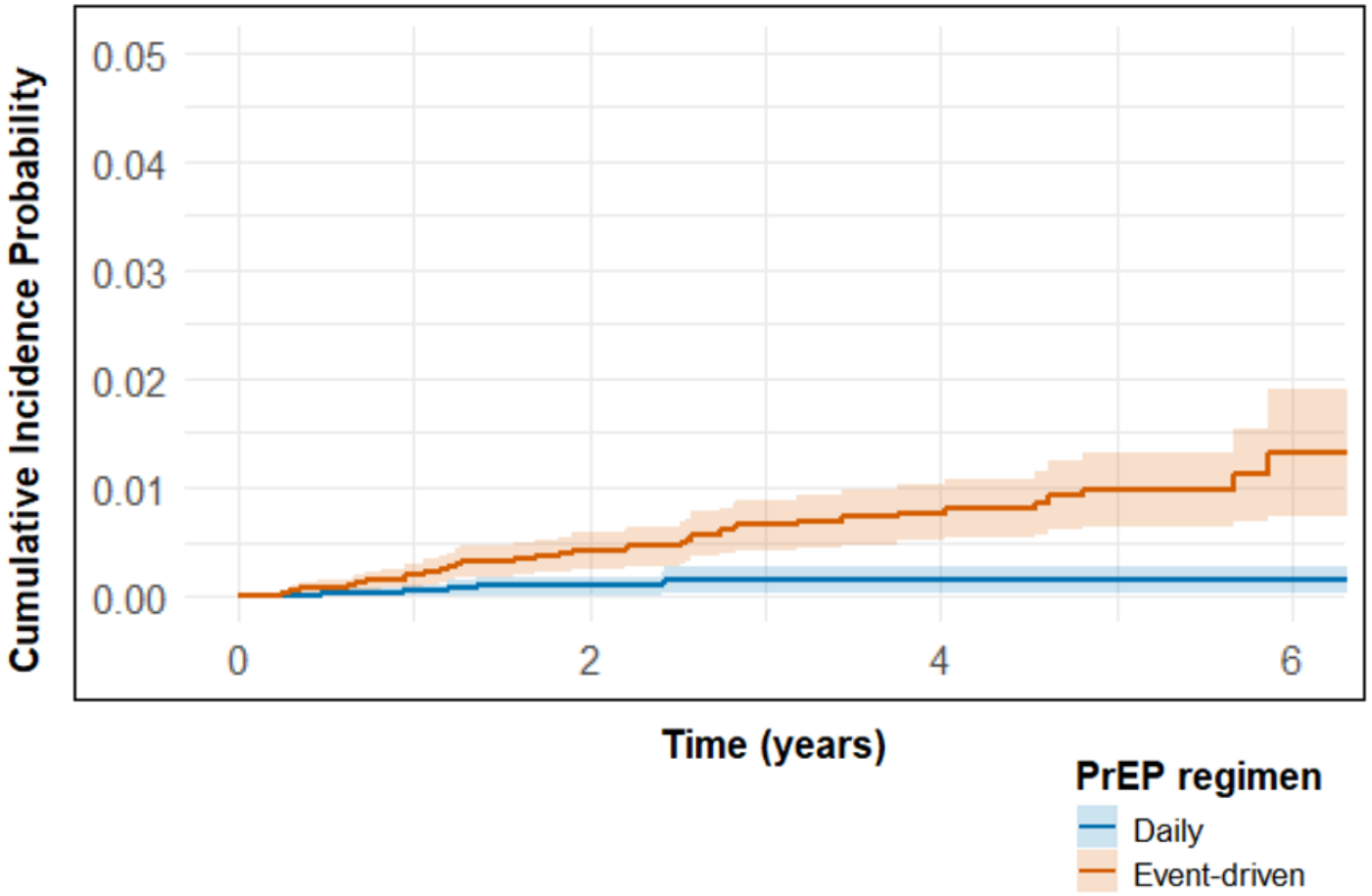


Cumulative HIV incidence by PrEP regimen



Cumulative HIV incidence over time is low

Results



Unadjusted HR:
5.6 (95%CI 2.5-12.5)

Adjusted HR:
6.1 (95%CI 2.7-13.7)

Results

Compared to daily users, event-driven PrEP users:

- Were more often loss-to-follow up (*IRR=2.3, 95%CI=2.1-2.5)*
- More often discontinued PrEP (*IRR=1.5, 95%CI=1.3-1.8)*
- Lower bacterial STI incidence rates

Bacterial STI	Incidence Rate Ratio	95% Confidence Interval
Gonorrhoea	0.7	0.7-0.8
Chlamydia	0.7	0.7-0.7
Syphilis	0.7	0.7-0.8

Strengths & Limitations

Limitations:

- Observational study; no causality between PrEP regimen & HIV incidence
- No data on PrEP adherence

Strengths:

- Large real-world cohort providing over six year observation period
- Few studies directly compared HIV incidence by PrEP regimen

Should we Stop Event-Driven PrEP?

Please do not.

- **HIV incidence** among all PrEP users **remained very low**
- **Choice** is important

But our findings suggest:

- **Adherence** to event-driven PrEP might be more challenging
- Need to **better understand** whether, when and why doses are missed

PrEP counseling should be enhanced and repeated to help people choose regimen that works best for them

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Thank you!

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