1031 - USING A MOBILE APP AND DRIED BLOT SPOTS TO ASSESS ADHERENCE TO EVENT-DRIVEN PREP

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Background

- Both daily and event-driven pre-exposure prophylaxis (PrEP) are effective against HIV acquisition
- Information about adherence to event-driven PrEP (edPrEP) is scarce
- Most information about adherence to event-driven PrEP is based on 3-monthly questionnaires (i.e. prone to recall bias)

Aim

To study event-driven PrEP using daily data from a mobile diary application.

Conclusions

- Most condomless anal sex (CAS) acts were covered by edPrEP
- Adherence to PrEP was especially high during CAS acts with casual partners
  - Participants seemed to estimate their HIV risk
  - edPrEP use when at risk

Methods

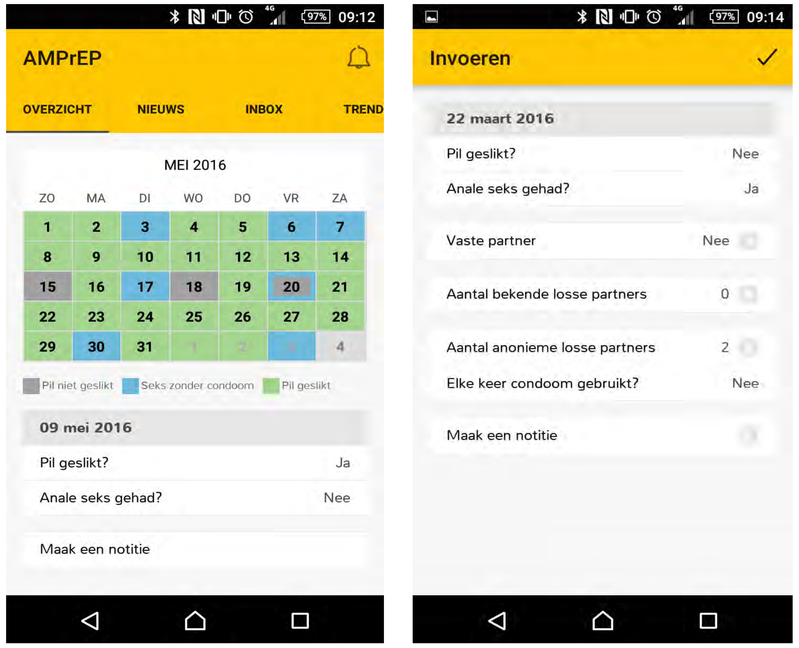


Figure 1: Screenshots of the AMPrEP mobile diary application

- Participants:
  HIV-negative men who have sex with men and transgender women participating in the AMPrEP cohort study

- Procedures:
  - Participants could choose and switch between regimens every 3 months
  - Participants used a mobile application to record their sexual behaviour (e.g. anal sex with or without condom) and pill use (yes/no) on a daily basis

- Definition adherence:

  - According to the guidelines (perfect adherence):

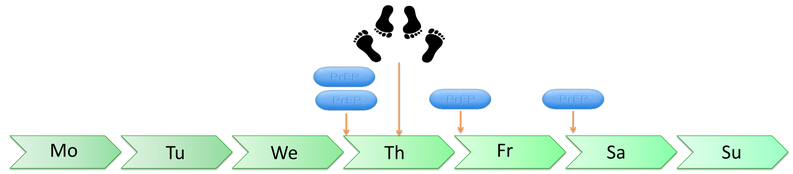


Figure 2: Example of adherence to edPrEP according to the guidelines

  - Good adherence (at least one tablet before a CAS act and one tablet within 48 hours of first PrEP use):

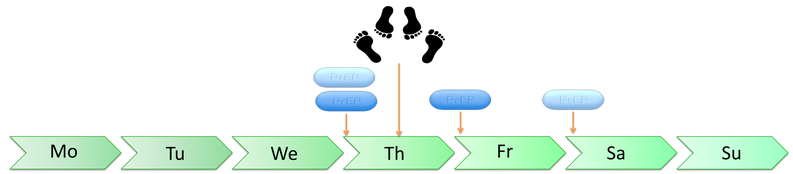


Figure 3: Example of good adherence to edPrEP

Results

- Time period:
  September 2015 - February 2019

- CAS acts covered in total:
  - 139 of the 376 AMPrEP participants (37%) used event-driven PrEP for at least 1 period of 3 months
  - 6,583 CAS acts were reported in the mobile application during these periods of edPrEP use
  - 5,518/6,583 (84%) CAS acts were covered by good edPrEP adherence

- CAS acts covered by good adherence to edPrEP per partner type over time:
  Adherence to PrEP significantly fluctuated over time for CAS acts with steady partners ($p<0.001$) and unknown casual partners ($p<0.001$)

CAS acts covered by good adherence to edPrEP per partner type:

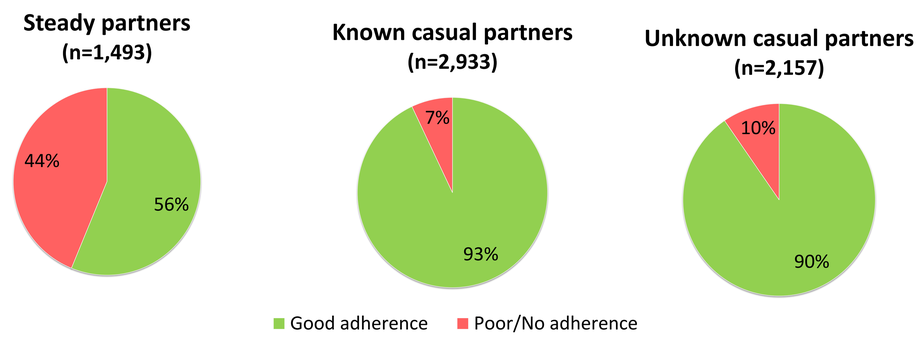


Figure 4: Adherence to edPrEP per partnertype

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