

Extended AMPrEP (AMsterdam PrEP Demonstration Project)

Evidence-Based for the Pre-Exposure Prophylaxis Chapter



POPULATION

- HIV-negative men who have sex with men (MSM) and transgender persons

KEY INTERVENTION EFFECTS

- Improved PrEP adherence

BRIEF DESCRIPTION

AMPrEP is a mobile app that includes:

- The capacity to record daily whether participants use PrEP, have sexual intercourse, use condoms, as well as the type of anal sex partner
- A basic reminder to take PrEP
- Automated messages at random intervals with additional motivating text when participants take more than 90% of their doses
- Messages when participants do not complete information and whenever there are indications PrEP is not taken

Participants in the intervention arm also have access to these advanced features on the app:

- Access to features such as graphs depicting trends in pill use and number of weekly and monthly sex partners based on a data provided by the individual
- Feedback through bar charts that indicate the proportion of days in the past month in which PrEP is used and the proportion of sex acts covered by PrEP, condoms, or both
- A more advanced alarm function with the option to set more than one daily reminder and a private tab for taking daily notes

DURATION: 24 months

SETTING: Sexually transmitted infection (STI) outpatient clinic (Amsterdam, the Netherlands)

STUDY YEARS: 2015 – 2018

STUDY DESIGN: Randomized controlled trial

DELIVERERS: Mobile app

DELIVERY METHODS: Plan development, Text reminders, Visual feedback

STUDY SAMPLE

The baseline study sample of 166 participants (n = 83 intervention arm, n = 83 control arm) was characterized by the following:

- 99% male persons, 15 transgender women
- 88% White persons, 12% non-White persons
- Median age = 39 years

STRUCTURAL COMPONENTS

There are no structural components reported for this study.

KEY INTERVENTION EFFECTS (see **Primary Study** for all outcomes)

- Twelve months after PrEP initiation, intervention participants had a higher median tenofovir diphosphate (TFV-DP) 1391 (25th-75th percentile: 1158–1782) fmol/punch compared to control participants who had 1265 (1010–1544) fmol/punch ($p = 0.0255$).*
- A higher percentage of intervention participants had excellent adherence (equivalent to 7 doses/week) compared to control participants (48% vs. 31%, Odds Ratio [OR] = 2.0, 95% Confidence Interval [CI]: 1.1 – 3.8).

*The median TFV-DP concentration outcome was significant at 12 months but not significant at 24 months

CONSIDERATIONS

- There was no difference between study arms in the proportion of participants with poor PrEP adherence (defined as TFV-DP <700 fmol/punch).

ADVERSE EVENTS

- The authors did not report on adverse events.

FUNDING

AMPrEP

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PRIMARY STUDY

van den Elshout, M. A. M., Hoornenborg, E., Achterbergh, R. C. A., Coyer, L., Anderson, P. L., Davidovich, U., de Vries, H. J. C., Prins, M., Schim van der Loeff, M. F., & Amsterdam PrEP Project Team in the HIV Transmission Elimination Amsterdam Initiative (H-TEAM). (2021). [Improving adherence to daily preexposure prophylaxis among MSM in Amsterdam by providing feedback via a mobile application](#). *AIDS*, 35(11), 1823-1834. doi: 10.1097/QAD.0000000000002949

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