

PrEP user profiles, dynamics of PrEP use and follow-up: a retrospective cohort analysis

at a Belgian HIV centre (2017-2020)

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BACKGROUND & OBJECTIVE

- The impact of PrEP on the HIV epidemic depends on the effective use of PrEP among people at substantial HIV risk.
- Belgium is one of the first European countries offering both daily and on-demand PrEP since 2017
- Developing effective PrEP interventions requires understanding of who is using PrEP, how PrEP is taken and retention in care.

Objective: to examine PrEP user profiles, dynamics of PrEP use and follow-up over time.

METHODS

STUDY DESIGN

- A retrospective cohort analysis of routine data of PrEP clients registering at the HIV centre in Antwerp, Belgium between June 2017 and March 2020.

DATA ANALYSIS

- PrEP user profiles:* bi- and multivariable logistic regression to compare early PrEP users (06/2017-05/2018) with late PrEP users (06/2018-02/2020)
- Dynamics of PrEP use:* calculating the probabilities of switching between daily and on-demand PrEP, and discontinuation, using a naïve estimator.
- Dynamics of PrEP follow-up:* descriptive analysis

CONCLUSION

- PrEP users in Antwerp are at high risk for HIV, but **late PrEP users** reported somewhat **lower risk than early adopters**.
- The **majority** of PrEP clients **remained in care** and PrEP users had the **highest probability to remain on the same PrEP dosing regimen at subsequent visits**. However, alongside, a **diverse pattern of switches** between PrEP regimens and **discontinuations of PrEP use or care** was observed.
- To optimize the impact of PrEP on the HIV epidemic, we believe **PrEP services should be offered in a tailored manner**, counselling PrEP users according to their behaviours and needs.

RESULTS

PREP USER PROFILES

- Among 1090 PrEP users with completed baseline questionnaire
- At enrollment, early PrEP users (n=431) were more likely to report one or more STIs in the last 12 months, having combined sex with drugs, a higher number of sexual partners and a history of paid sex and PrEP use in the past, as compared with late PrEP users (n=659).

DYNAMICS OF PREP USE

- Among 907 PrEP users with at least 2 consecutive PrEP visits
- Those taking PrEP daily had a 76% probability to stay on daily PrEP at the next visit, while for on-demand this was 73%.
- Those using on-demand had a 13% probability of becoming lost-to-follow-up, whereas those lost-to-follow-up had 35% to re-start with on-demand.

DYNAMICS OF FOLLOW-UP

- Among 1566 PrEP clients registered at the HIV centre
- After 6 months since initial visit, retention in care was 75.4%
- Median time between PrEP visits was 91 days (IQR 56-117 days) among PrEP clients with consecutive visits

Table 1. Bi- and multivariable logistic regression comparing early PrEP users (06/2017-05/2018) with late PrEP users (06/2018-02/2020)

	Bivariable analysis		Multivariable analysis	
	OR (95%CI)	p-value	aOR (95%CI)	p-value
Sexual behaviour				
Log2(Number of sexual partners last 3 months)*	1.30 (1.18-1.43)	<0.001	1.20 (1.08-1.35)	0.001
Paid sex last 3 months				
No	Ref			
Yes	2.93 (1.50-5.98)	0.002	2.72 (1.23-6.41)	0.017
PrEP use in the past				
No	ref		ref	
Yes	2.09 (1.38-3.19)	0.001	1.93 (1.19-3.16)	0.008
MSM specific eligibility criteria for PrEP				
One or more STIs in last 12 months				
No	ref		ref	
Yes	1.74 (1.33-2.26)	<0.001	1.52 (1.13-2.05)	0.006
Use of drugs during sex				
No	ref		ref	
Yes	1.72 (1.32-2.24)	<0.001	1.49 (1.03-2.17)	0.036

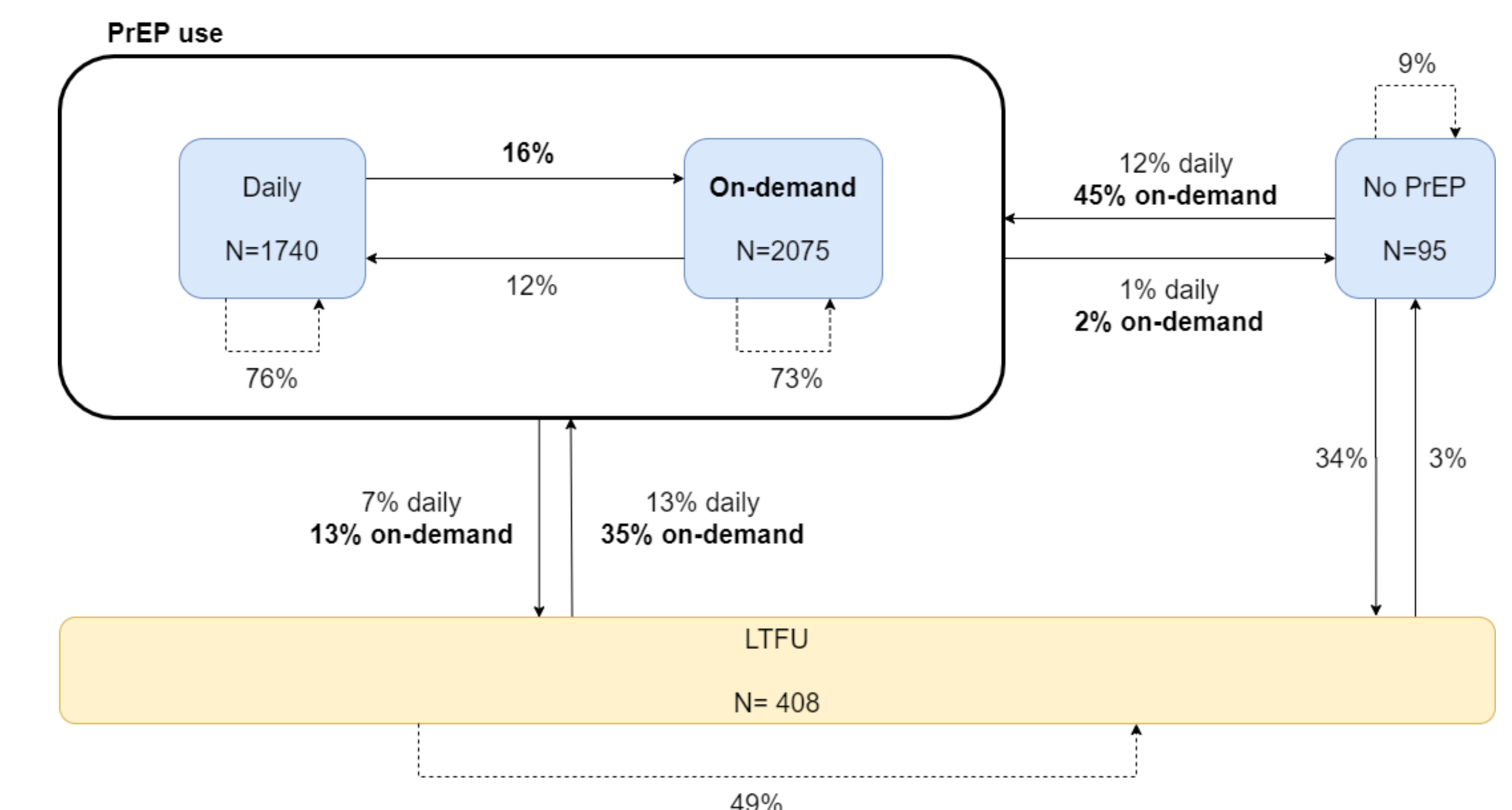


Figure 1. Schematic representation of probabilities to transition between no PrEP, PrEP use categories and lost-to-follow-up

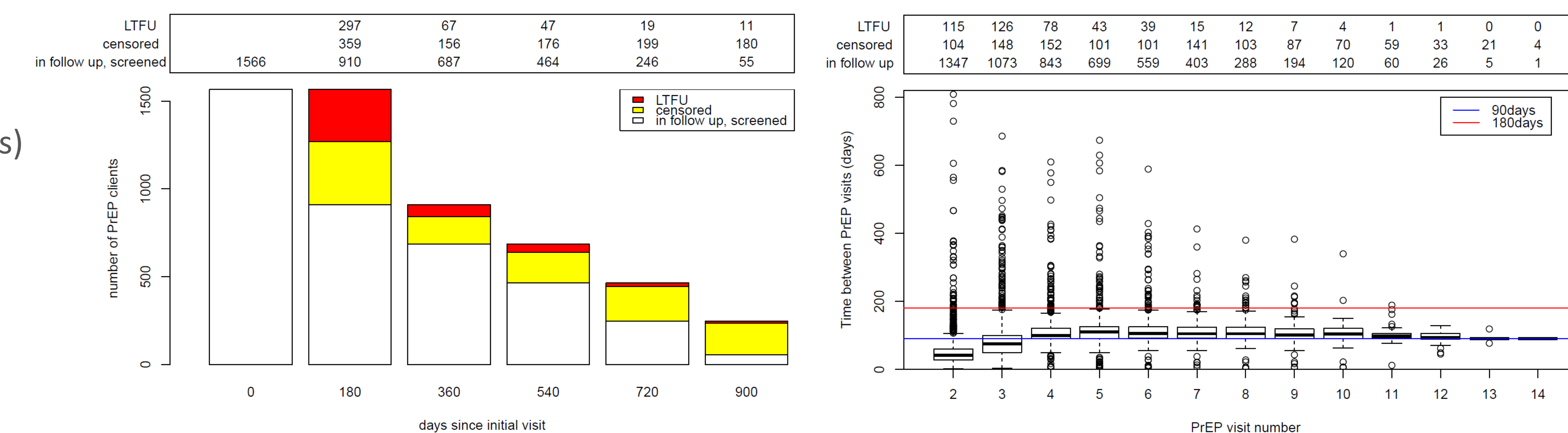


Figure 2. PrEP client status per days since initial visit

Figure 3. Time between PrEP visits per PrEP client