



Evaluating Adherence in HIV Pre-Exposure Prophylaxis (PrEP): A Retrospective Analysis

Brunoro R, Mengato D, Barbaño F, Cattelan AM, Venturini F

1 Hospital Pharmacy - University Hospital of Padua
2 Infectious and Tropical Diseases Unit - University Hospital of Padua

Background and Importance

HIV Pre-Exposure Prophylaxis (PrEP) is an established preventive therapy, made reimbursable in Italy since August 2023 [1]. In this context, the prescription form was digitized with the goal of improving its clinical management and monitoring therapeutic adherence. This tool assists clinicians by streamlining the prescription process and enabling quick therapies' monitoring for individuals at risk of HIV. However, understanding gaps between prescribed therapy and patient adherence is crucial for improving outcomes

Aim and Objectives

This analysis aimed to evaluate patient adherence to PrEP, assess how well patients followed the prescribed regimen and to identify factors related to suboptimal adherence

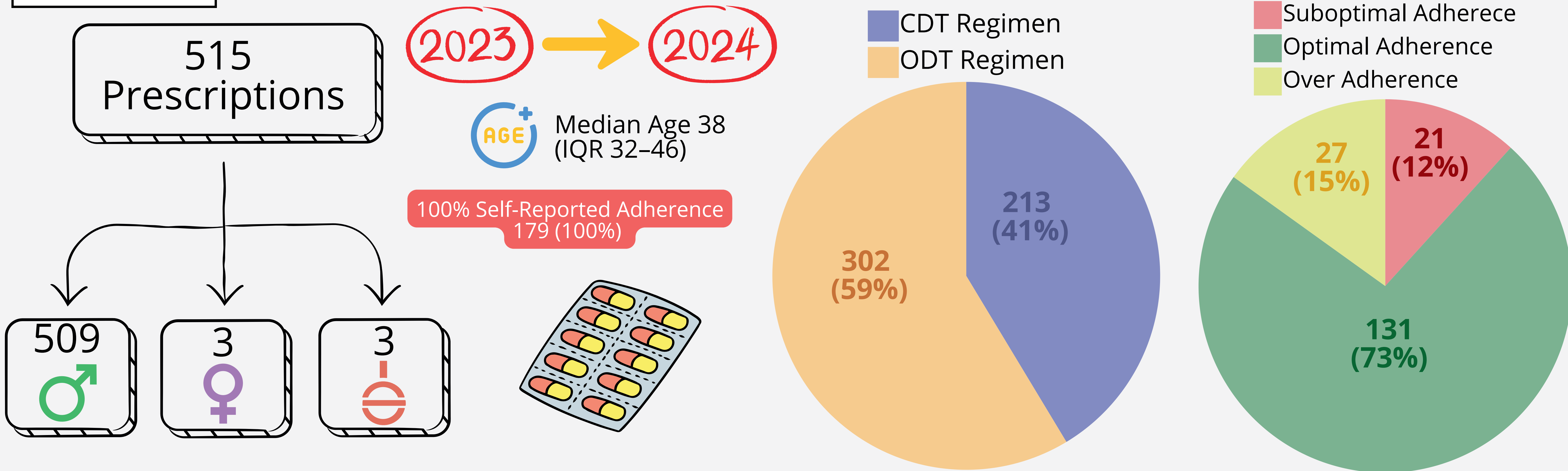
Materials and Methods

Data extracted from digital form and pharmaceutical flows were crossed to create a dataset of individuals with at least one PrEP refill between July 2023 and September 2024. Only patients receiving Continuous Dosing Therapy (CDT) were included in the analysis, and those who chose On-Demand therapeutic regimen (ODT), interrupted or switched it, were excluded. Adherence was assessed by calculating the proportion of days covered (PDC)[2], with a threshold of $\geq 80\%$ considered adherent. PDC data was compared with self-reported adherence from patients during therapeutic planning.

Displaying: Instrument status only | Lock status only | All status types

Record ID	Prima Prescrizione		Follow-up 3 Mesi	Follow-up 6 Mesi	Prescrizioni Successive		
	Anagrafica	Prima Prescrizione	Follow-up 3 Mesi	Follow-up 6 Mesi	Prescrizioni successive	Follow-up 3 Mesi Prescrizioni successive	Follow-up 6 Mesi Prescrizioni Successive
10-1 NCDV1968	●	●	○	○	○	○	○
10-2 MSVN1984	●	●	○	○	○	○	○
10-3 POLI1978	●	●	○	○	○	○	○
10-4 ENCB1991	●	●	○	○	○	○	○

Results



A total of 515 users were collected, consisting of 509 males (98.8%), 3 females, and 3 with unspecified gender, with a median age of 38 years (IQR 32-46). Of these, 213 (41.4%) opted for CDT regimen, while 302 (58.6%) chose ODT regimen. The final analyzed sample comprised 179 users (34.7%) who maintained the CDT, with 100% self-reported adherence. However, our analysis revealed that 21 users had a PDC $\leq 80\%$, indicating suboptimal adherence, 131 users had a PDC $\geq 80\%$, reflecting adequate adherence. Additionally, 27 users had a PDC $\geq 120\%$, suggesting potential overuse, which warrants further investigation.

Conclusion and Relevance

The digital prescription tool proves to be an effective system for monitoring and evaluating adherence. Despite high self-reported adherence, discrepancies between reported and actual adherence were observed, underscoring the need for continuous and objective monitoring. These findings highlight the importance of collaboration between infectious-disease specialists and pharmacists to enhance clinical support. Future efforts should prioritize identifying and addressing adherence barriers while strengthening patient support to ensure sustained efficacy in HIV prevention.

References

- <https://www.aifa.gov.it/en/-/aifa-approva-rimborsabilita-farmaci-per-la-prep>
- McCormick CD, Sullivan PS, Qato DM, Crawford SY, Schumock GT, Lee TA. Adherence and persistence of HIV pre-exposure prophylaxis use in the United States. *Pharmacoepidemiol Drug Saf.* 2024; 33(1):e5729. doi:10.1002/pds.5729