

PREDICTORS OF LOW MEDICATION POSSESSION RATIO (MPR) IN INDIVIDUALS RECEIVING PREP IN THE EPIC-NSW STUDY IN NEW SOUTH WALES (NSW), AUSTRALIA

Fengyi Jin¹, Janaki Amin^{1,2}, Rebecca Guy¹, Stefanie Vaccher¹, Christine Selvey³, Iryna Zablotska⁴, Jo Holden³, Karen Price⁵, Barbara Yeung¹, Gesalit Levitt¹, Erin Ogilvie¹, Anna McNulty⁶, David Smith⁷, David A Cooper¹, Andrew E Grulich¹ on behalf of the Expanded PrEP Implementation in Communities New South Wales (EPIC-NSW) research group

¹The Kirby Institute, UNSW Sydney, NSW, ²Department of Health Systems and Populations, Macquarie University, NSW, ³Ministry of Health, NSW Government, NSW, ⁴Westmead Clinical School, Sydney University, NSW;

⁵AIDS Council New South Wales, NSW;

⁶Sydney Sexual Health Centre, Sydney, NSW;

⁷North Coast HIV/Sexual Health Services, Lismore, NSW, Australia

Background:

Medication adherence is a critical determinant of the efficacy of daily FTC/TDF as HIV PrEP. We report one-year MPR as a proxy measure of adherence, and predictors for low MPR in an implementation trial in NSW.

Methods:

Adherence to PrEP was evaluated among high-risk individuals enrolled in EPIC-NSW between March and October 2016 (n=3,700) and who were followed-up for a minimum of 12 months. One-year MPR was determined by reviewing drug dispensing logs, calculated as the total number of pills dispensed from the date of first dispensing to the end of the first year of follow-up, divided by 365. We examined predictors of low MPR (<80%).

Results:

Participants were almost all men (99.4%) and identified as gay (95.5%). Median age was 36 years (interquartile range (IQR) 30-45). Most (55.6%) were Australian-born, lived in suburbs with a high concentration of gay men (gay Sydney, 38.2%) or elsewhere in Sydney (47.7%). The proportion of participants who were dispensed PrEP declined from 90.1% at 3 months to 75.8% at 12 months. For each scheduled quarterly visit, an additional 9% of participants failed to attend, but attended and were dispensed PrEP at a later time. Overall, the median one-year MPR was 97.8% (IQR: 74.0%-100.0%); low MPR was recorded in 30.1% of participants. Younger men were significantly more likely to have low MPR than their older counterparts (46.5% aged under 25 and 23.1% aged above 45, p-trend<0.001). Participants who lived outside Sydney (35.9%) and other metropolitan areas of Sydney (30.3%) were more likely to have low MPR than those who lived in gay Sydney (28.0%, p=0.007).

Conclusion:

Median MPR was high in EPIC-NSW. Low MPR was more common in the young and those who lived outside gay-Sydney. Dispensing at post-scheduled visits implies that approximately 10% of the EPIC-NSW cohort were not taking PrEP daily.

Disclosure of Interest Statement: The EPIC-NSW study is funded by the NSW Ministry of Health. Gilead Sciences provided part of the study supply of TDF/FTC.

The views expressed in this publication do not necessarily represent the position of these organisations. The Kirby Institute is affiliated with the Faculty of Medicine, UNSW Sydney, and funded by the Australian Government Department of Health.