

Large differences in discontinuation of PBS-subsidised PrEP in Australia: evaluation using national prescription data.

Authors:

Nicholas Medland¹, Rebecca Guy¹, Benjamin Bavinton¹, Phillip Keen¹, Andrew Grulich¹, Jeanne Ellard², Fengyi Jin¹, Heath Paynter², Hamish McManus¹

1 The Kirby Institute, UNSW Sydney

2 Australian Federation of AIDS Organisations

Background:

Findings from the EPIC-NSW PrEP cohort show that the strongest predictors of PrEP failure are non-adherence, particularly stopping PrEP. We used Australian government prescription data to determine the rate and predictors of discontinuation in the two years since Pharmaceutical Benefits Scheme (PBS) listing.

Methods:

From linked de-identified records of all dispensed PBS-subsidised PrEP between April 2018 and March 2020, we used date and quantity dispensed to determine days covered by PrEP, assuming daily dosing. We determined if over the last 90 days patients were: on PrEP (any days covered) or potentially discontinued (no days covered). Patient demographics, PBS concessional entitlement, year of initiation, PrEP caseload (number of patients prescribed PrEP by each prescriber) and estimated prevalence of gay-identified men in patient and prescriber postcode were used to compare rates of potential discontinuation and predictors of time from initiation to discontinuation.

Results:

Over two years, 35 965 patients were dispensed PBS-subsidised PrEP (median age 35yrs, 523 women (1.4%)). Over the last 90 days, 25 282 were on PrEP, including 3 169 initiations. Of the 10 683 who had potentially discontinued, the median time from initiation to discontinuation was 274 days (IQR:169-414) and 4 311 (40.4%) were dispensed PrEP only once.

Large differences in the rate of potential discontinuation were observed among subgroups: gender (73.5%:women, 33.8%:men, HR=3.87(p<.001)), age (43.1%:<30yrs, 28.8%:40+yrs, HR=1.49(p<.001)), PBS entitlement (37.7%:concessional, 33.9%:ordinary HR=1.14(p<.001)), year of initiation (36.2%:year two, 33.7%:year one, HR=1.89(p<.001)), PrEP caseload of the patient's prescriber (60.9%:caseload=1, 27.7%:caseload>100, HR=2.05(p<.001)), prevalence of gay men in patient postcode (41.8%:lowest, 25.8%:highest), HR=1.65(p<.001)), and in prescriber postcode (51.8%:lowest, 25.7%:highest, HR=1.90(p<.001)). All of these factors, with the exception of concessional entitlement, were independently associated with discontinuation.

Conclusion:

The large differences in discontinuation among subgroups require urgent investigation. This information can inform strategies to protect individuals and achieve elimination of HIV transmission.

Disclosure of Interest Statement: *Nicholas Medland has received institutional research funding from Gilead Sciences. No pharmaceutical grants were received in the development of this study.*