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PERSISTENCE WITH HIV PREEXPOSURE PROPHYLAXIS IN THE UNITED STATES, 2012-2016

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Background:

Daily oral preexposure prophylaxis (PrEP) with Truvada is highly effective in preventing HIV infection with adherence to daily dosing and persistence with PrEP during periods of HIV risk. We estimated persistence and associated factors among a cohort of PrEP users with commercial health insurance.

Methods:

Using data from the IBM® MarketScan® Research Databases, we created a cohort of PrEP users aged 18-64 years who initiated PrEP between 1/1/2012 and 12/31/2016. We restricted our analysis to persons continuously enrolled in their health plans for at least 6 months prior to and 6 months after their initial PrEP prescription. We monitored each person's medication fill persistence, defined as time from the initial PrEP prescription fill until there was a gap in prescription fills >30 days. Patients were considered nonpersistent if they did not refill within 30 days after exhausting PrEP medications from previous fills. We used Kaplan-Meier time-to-event methods to estimate the proportion of PrEP users who persisted with PrEP at 6 and 12 months after initiation. We censored patients if they disenrolled from insurance or were diagnosed with HIV prior to nonpersistence. We conducted Cox proportional hazards models for nonpersistence adjusting for sex, age, urbanicity, and region.

Results:

In our cohort of 7,250 commercially insured PrEP users, 98.2% were male, and 10.6% were aged 18-24 years. During the study period, after initiation 74.8% of PrEP users persisted for 6 months, and 55.7% for 12 months. The median persistence was 14.5 months (95% CI=13.9-15.0), but was significantly shorter for female PrEP users (6.9 months; 95% CI=4.7-11.6) and for users aged 18-24 years (8.6 months; 95% CI=7.4-9.3). After adjusting for other factors, we found that PrEP users who were female, young, and resided in rural area were less likely to be persistent users. The Kaplan-Meier curves of PrEP persistence stratified by age group demonstrated that PrEP persistence increased with age. Only 36.6% of the users aged 18-24 years persisted for 12 months, compared to 65.3% aged 55-64 years. (Figure)

Conclusion:

More than half of commercially insured persons who initiated PrEP persisted with it for 12 months. However, women and young users persisted with PrEP for shorter times than men or older adults. We were not able to assess reasons for PrEP nonpersistence. A better understanding of patient factors for nonpersistence is important to support PrEP use for persons who might benefit from it during periods of risk.