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Preference for injectable over oral HIV pre-exposure prophylaxis in public-sector primary-care clinics in Swaziland

Mark J. SIEDNER^{1,2,3,4}, Anita HETTEMA⁵, Allison HUGHEY⁵, Catherine E. OLDENBURG⁶, Stefan KOHLER⁷, Kate BÄRNIGHAUSEN⁷, Shannon McMAHON^{7,8}, Chuan JIA⁷, Charlotte LEJEUNE⁵, Sindy MATSE⁹, Till BÄRNIGHAUSEN⁷

¹Massachusetts General Hospital, Boston, MA ²Harvard Medical School, Boston, MA ³Mbarara University of Science and Technology, Mbarara, Uganda ⁴Africa Health Research Institute, KwaZulu-Natal, South Africa ⁵Clinton Health Access Initiative, Mbabane, Swaziland ⁶University of California San Francisco, San Francisco, CA ⁷University of Heidelberg, Heidelberg, Germany ⁸Johns Hopkins Bloomberg School of Public Health, Baltimore, MD ⁹Swaziland Ministry of Health, Mbababane, Swaziland

Summary:

Long-acting injectable (LAI) HIV pre-exposure prophylaxis (PrEP) may mitigate adherence challenges reported by young women in Southern Africa. We assessed preferences for PrEP in public-sector, primary care clinics in Swaziland. Among surveyed respondents, 75% (95%CI 65–83%) stated preference for LAI over oral PrEP; with no differences by sex, age, or sexual behavior (all $P>0.05$). Notably, over 70% (95%CI 58–82%) with current use of oral PrEP also stated preference for LAI PrEP.

Over 25% of new HIV infections in Southern Africa occur in women aged 15–24, who account for only 10% of the population, yet have HIV incidence rates as high 8/100 person-years.^[1] Consequently, effective interventions to prevent HIV infection in this demographic will have a considerable public health impact, and are a prerequisite to realizing global HIV prevention goals.^[2]

Despite a diversifying toolbox of interventions, effective strategies to prevent HIV in young women in Southern Africa are lacking. Whereas oral formulations of pre-exposure prophylaxis (PrEP) are efficacious in men who have sex with men,^[3, 4] injecting drug users,^[5] and members of stable, discordant partnerships,^[6, 7] similar evaluations among young women in Southern Africa have failed to demonstrate benefit in clinical trials.^[8, 9] Women in these studies have described stigma and hindering social norms, which discouraged them from taking pills openly, and challenges adhering to therapy.^[10–12] Thus, interventions that empower women to avoid daily, home-based dosing could perceptibly help women overcome barriers to PrEP use.

Conflicts of Interest:

All authors report no conflicts of interest.

The advent of LAI PrEP has been proposed as a strategy to avert many of these barriers, in part due to the precedent of LAI contraception in this population.^[13] HPTN 084 () is assessing the efficacy of LAI cabotegravir every two months versus daily oral PrEP in a randomized, double-blinded clinical trial. However, there are few data about preferences for LAI PrEP, particularly in comparison to oral PrEP, among young women in Southern Africa. Acceptability data will be crucial ahead of implementation studies for LAI PrEP.

The Swaziland Ministry of Health, with support from Clinton Health Access Initiative, Swaziland, is conducting a PrEP demonstration project in six public-sector, primary-care clinics in Swaziland. PrEP is conceptually introduced to patients during daily general health education sessions. During the ensuing clinic visit, either a healthcare worker (HCW) or patient may initiate engagement for PrEP use. Data for this study were collected at exit interviews among those who engaged with a HCW, using a sampling approach described previously.^[14] In addition to questions about sociodemographics, sexual behavior, and PrEP history, we elicited preferences for injectable versus oral PrEP with the following question:

Currently PrEP is only available in a tablet form, taking 1 tablet a day to reduce the risk of HIV infection. Scientists are working to make a different kind of HIV prevention medicine that would involve getting an injection in the muscle every 2 months. If in the future an injectable PrEP would become available, would you have a preference for either oral or injectable PrEP^[15]?

Responses to this question included: a) I would prefer injectable PrEP every 2 months; b) I would prefer oral PrEP taken daily; c) I would have no preference for either injectable or oral PrEP; or d) I am not interested in either injectable PrEP or daily oral PrEP. We tabulated responses to this question by sociodemographic, clinical, sexual and oral PrEP history characteristics, and used chi-squared tests to assess for differences in oral versus LAI preferences. Study procedures were approved by the Swaziland Ministry of Health National Research Review Board and the Chesapeake Institutional Review Board, and all respondents gave oral consent to participate.

Of the 115 individuals who completed the questionnaire, 109 (95%) completed the PrEP preferences question, 2 (2%) expressed no preference for oral or LAI PrEP, and 107 (93%) stated a clear preference for oral or injectable PrEP, and were included in this analysis. Respondents were 86% (92/107) female and had a median age of 28 years (IQR 22–35). The majority [78% (n=83)] had completed secondary education or greater and claimed full-time employment [71%, (n=57)]. The most common reasons for clinic attendance were family planning [22% (n=24)], PrEP initiation or follow-up [22% (n=23)], and HIV testing and counseling (20% (n=20)). Most [92% (n=98)] reported a primary partner, but many [41% (n=40)] did not know the HIV status of their primary partner; and among those who did not, only 35% (14/40) reported using condoms for each of their last 10 sexual encounters. Of those currently taking PrEP (n=18), most (72%) had disclosed use of PrEP to their partner.

Seventy-five percent of respondents (95% CI 65–83%) expressed a preference for LAI every two months over daily oral PrEP. This preference was reported in both sexes ($P=0.16$), across the spectrum of age ($P=0.78$), and across educational attainment categories ($P=0.12$, Supplementary Table 1). There was also a preference for LAI PrEP irrespective of number

of sexual partners in the past 12 months, condom use practices, or disclosure of PrEP use to partners. Notably, we found that most women currently or previously using PrEP also stated a preference for LAI over oral PrEP (Figure 1).

In summary, approximately 3 in 4 individuals engaging in PrEP services in outpatient care in Swaziland reported a preference for LAI over oral PrEP for prevention of HIV, and this preference was consistent across demographic and sexual behavior characteristics. Moreover, those starting PrEP on the day of the interview and those who had experienced PrEP in the past were particularly in favor of LAI. Although our data are cross-sectional and drawn from a population that only has access to oral PrEP, results are in keeping with prior work. A mixed methods study conducted during the HPTN 076 study, in which young HIV-negative women received injectable rilpivirine for PrEP, also suggested that women had a preference for LAI over oral PrEP.^[16] Interestingly, the level of stated desirability in that study and ours appears similar to or slightly higher than rates reported in men who have sex with men in the United States, among whom approximately 50–80% have stated a preference for LAI.^[15, 17, 18] Our findings suggest a potential for LAI PrEP for HIV prevention among women in the Southern African region, a population that has been historically difficult to reach with effective PrEP services. Consequently, as LAI PrEP efficacy data among young women in Southern Africa become available, an important next step will entail conducting demonstration studies to assess the real-world feasibility and effectiveness of LAI agents for HIV PrEP.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure 1.

Proportion of women completing a public-sector ambulatory visit in Swaziland who report a preference for long-acting injectable PrEP over once-daily oral PrEP for HIV prevention.

PrEP: HIV pre-exposure prophylaxis