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“Make It Convenient for Us”: Design and Delivery Preferences for a Targeted Long-Acting Drug-Combination Injectable Treatment for Children and Youth With HIV in Kenya

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Background: Long-acting all-in-one injectable combination-ART (LAI-cART) has potential to improve adherence and treatment outcomes for people with HIV. User acceptability and implementation feasibility are important to reap the full benefit. Given high rates of HIV among youth and challenges to oral-ART in children, LAI-cART products could provide significant benefit for these populations. Understanding client and provider preferences early in LAI development can guide design and delivery strategies thus accelerating pediatric access to LAI-cART.

Methods: The Targeted Long-acting Combination ART (TLC-ART) program has validated a combination triple drug LAI-cART. Grounded in the TLC-ART-101 and -301 products, we conducted semi-structured focus group discussions (FGDs) with adolescents with HIV (ages 14-19), parents of children (ages 0-10) with HIV, and healthcare workers (HCWs) from two clinics in Kenya. FGDs were audio recorded, translated and transcribed. Thematic analysis was used to identify key factors influencing LAI-cART preferences.

Results: Fifty-four individuals participated in 6 FGDs. All participants believed LAI-cART could improve adherence by reducing pill fatigue, lowering stigma, and addressing challenges with syrup formulations. Most participants preferred less frequent dosing, small volumes and a single injection, with the key feature being ease of access and convenience. Adolescents were particularly

concerned about visible injection site reactions and ensuring equitable access to new products. All participants expressed concerns about having to return to oral regimens during stockouts, having to switch to a new regimen to receive LAI-cART, and lack of proper storage leading to reduced medication effectiveness. While the TLC-ART product is developed to be a subcutaneous injection, most participants preferred clinic-based delivery by HCWs given concerns about self-injection pain, storage at home and missing out on HCW support. Adolescents suggested overcoming self-injection fears by gradually increasing independence in administration by moving from HCW delivery to supervised delivery in clinic, followed by self-injection at home. For rollout, HCWs emphasized the importance of determining eligibility requirements, while all participants felt community education, universal access and free cost would be essential.

Conclusions: LAI-cART products for children and adolescents should address self-injection fears and accessibility barriers, and include consideration of health system processes and constraints.

