Enthusiasm for Participation in a Novel, At-Home Delivery Model for Injectable HIV Treatment Among People With HIV

To the Editors:

Long-acting injectable antiretroviral therapy (LAI-ART) is a highly effective alternative to oral ART[1,2] and shows promise for improving treatment adherence and reducing the burden associated with daily pill-taking.[3–5] Traveling to a clinic for monthly or bimonthly injections can be financially and logistically challenging for many people with HIV (PWH). In addition, limited provider time and clinic infrastructure restrict the availability of appointments needed to meet the growing demand for LAI-ART. Extra visits for injections outside of routine care may result in missed appointments and work-related repercussions because of the need for time off. These barriers can limit access to LAI-ART, reduce the effectiveness of treatment, and exacerbate existing health care disparities.[2,6] To address these challenges, it is crucial to provide alternative strategies for LAI-ART administration. Although previous studies indicate interest in expanding access options, few alternatives to clinic-based delivery are currently available.[3,7,8]

We designed the Innovative Administration of Long-Acting Injectables for HIV Treatment Enhancement at Home (INVITE-Home) study to assess the effectiveness and feasibility of home LAI-ART injections delivered by a "treatment buddy" (TBY), which may include a friend, family member, or partner. Participants, who include PWH in the San Francisco Bay Area and their chosen TBYs, will receive training from an experienced nurse practitioner to administer LAI-ART injections at home. After training, the nurse practitioner will remotely monitor the injections by TBYs at the PWHs' homes for 12 months through a Health Insurance Portability and Accountability Act (HIPAA)-compliant video feed. Study investigators will develop the training protocol, which will be based on extensive input from clinicians, PWH, and potential TBYs obtained through in-depth qualitative interviews and community advisory board feedback. All protocols will be developed with detailed safety guidelines and approved by multiple stakeholders. Approval for the study was obtained from the institutional review board at the University of California, San Francisco.

Although the INVITE-Home study aims to address barriers to LAI-ART access, enrollment is not guaranteed. Previous studies have identified fear of pain, concerns about safety and confidentiality, and reliance on others as factors that may reduce the acceptability of at-home LAI-ART.[7,9] To determine interest in receiving LAI-ART at home from a TBY and willingness to participate in the study once recruitment begins, we surveyed PWH receiving care at 2 recruitment sites before commencing recruitment for this study.

We conducted a brief survey to assess interest in the INVITE-Home study at 2 San Francisco clinics during routine LAI-ART injection visits. From June to August 2024, all eligible PWH aged 18 years and older receiving LAI-ART at the participating clinics were asked whether they wanted to participate in a self-administered paper survey. The survey asked participants to rate their interest in at-home injections on a 5-point scale, identify a TBY for administering injections, and indicate their willingness to be contacted for recruitment. In addition, we collected demographic information, including age, sex identity (cisgender man or woman, transgender man or woman, nonbinary, or other), race/ethnicity (American Indian/Alaska Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Pacific Islander, White, or Other), and duration on LAI-ART (<3, 4–6, 7–12, 13–24, or >24 months).

We classified PWH as "enthusiastic about the study" if they were both interested in home-based LAI-ART and being contacted for recruitment; the remaining were classified as "not enthusiastic about the study." Measures of central tendency were used to describe PWH demographic characteristics, interest in at-home injections, and ability to identify a TBY. We calculated prevalence ratios using log-binomial regression models to identify whether enthusiasm in the study varied by demographic characteristics and length of time on LAI-ART.

Of 105 eligible PWH receiving LAI-ART at the 2 sites during the survey period (June to August 2024), 93 responded to the survey (response = 89%). Most were cisgender men (70%) with a median age of 54 interquartile range (IQR): 42, 61). The most common self-identified racial/ethnic categories selected were White (33%), Black (27%), or Hispanic/Latino (20%). Other self-identified racial categories were combined for this analysis into an "other" category (20%). Most PWH (70%) had been on LAI-ART for >6 months. Sixty-six PWH (71%) responded that they were moderately, very, or extremely interested in receiving their injections at home; among those interested, most (n = 61, 92%) indicated they would like to be contacted when recruitment begins. Based on these responses, two-thirds (66%) of respondents were classified as enthusiastic about study participation.

Among those enthusiastic about the study, 85% reported that they could identify a potential TBY. Most respondents described their TBY as a friend (n = 33, 55%). By contrast, only 25% of those not enthusiastic about the study could identify a potential TBY. Enthusiasm for study participation did not vary by age, sex, race/ethnicity, or time on LAI-ART (Table 1). PWH who self-identified as "other" race/ethnicity were

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TABLE 1. Differences in Characteristics of PWH on LAI-ART at 2 San Francisco HIV Clinics With PRs and 95% Confidence Intervals by Enthusiasm for Participation in the INVITE-Home Study (n = 93) From June to August 2024

	All PWH	Enthusiastic About the Study	Not Enthusiastic About the Study	
	n (%)	n (%)	n (%)	PR (95% CI)
	93	61 (66%)	32 (34%)	
Median age (IQR)*	54 (42, 61)	54 (42, 59)	54 (42, 64)	1.00 (0.99, 1.01)
Sex*				
Cisgender man	63 (70%)	44 (70%)	19 (30%)	Ref
Cisgender woman	16 (18%)	11 (69%)	5 (31%)	1.02 (0.70, 1.47)
Other sex	11 (12%)	6 (55%)	5 (45%)	0.79 (0.42, 1.49)
Race/ethnicity*				
White	30 (33%)	24 (80%)	6 (20%)	Ref
Black	25 (27%)	19 (76%)	6 (24%)	0.95 (0.72, 1.26)
Hispanic/Latino	18 (20%)	12 (67%)	6 (33%)	0.83 (0.57, 1.21)
Other race/ethnicity†	18 (20%)	6 (33%)	12 (67%)	**0.42 (0.21, 0.82)**
Time on injection*				
≤6 mo	26 (30%)	17 (65%)	9 (35%)	Ref
7–12 mo	28 (32%)	21 (75%)	7 (25%)	1.14 (0.81, 1.63)
12+ mo	33 (38%)	19 (58%)	14 (42%)	0.88 (0.59, 1.32)

PWH were classified as "enthusiastic" if they were interested in home-based LAI-ART and in being contacted for recruitment.
*Missing: sex (3), time on injection (6), race/ethnicity (2), age (1).
†Other race/ethnicities selected include: Asian (8), American Indian (4), Native Hawaiian/Pacific Islander (3), Other (3).
CI, confidence interval; PR, prevalence ratios.
Bold entries indicate statistically significant prevalence ratios.

less likely to be enthusiastic about the study than those who identified as White (PR = 0.42; 95% confidence interval = 0.21, 0.82). There were no other significant differences in enthusiasm for at-home injections based on race/ethnicity. Additional details about race/ethnicities included in the "other" category and tests for statistical significance are included in Table 1.

This study has limitations, including a small sample size from only 2 clinics in a specific US city, which limits power and the generalizability of the results to other regions. The survey was also brief and thus limited in the number and scope of questions. Reasons why an individual might or might not be enthusiastic to participate or able to identify a TBY were not explored. However, the INVITE-Home study design includes a qualitative component where PWH and their potential TBYs will participate in in-depth interviews, offering deeper insights into the barriers and facilitators of at-home LAI-ART. Finally, it is possible that initial enthusiasm for at-home services may not translate into actual usage of these services. Only after concluding enrollment in the implementation–effectiveness trial of the INVITE-Home study will we be able to compare initial enthusiasm to actual study enrollment.

In summary, most patients on LAI-ART expressed initial enthusiasm about participating in at-home injections and could identify a potential TBY. Enthusiasm for the INVITE-Home study was consistent across age, sex, duration on LAI-ART, and clinic, apart from participants in the "other" race/ethnicity category, who were less enthusiastic than White participants. Given the small sample size and limited scope of this study, further exploration of the "other" race/ethnicity finding was not possible but is an important point to explore in future studies to determine whether there are cultural, social, or structural factors that can influence the differences in preference for at-home LAI-ART services or ability to identify a TBY. Overall, at-home LAI-ART has the potential to address barriers to delivery and promote equity by eliminating structural barriers. Understanding the demand for at-home services is a critical first step for implementation. These findings highlight substantial interest in at-home LAI-ART among PWH, indicating their readiness to receive injections from a TBY and confidence in having someone in their lives who could support their medical care in this way.

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