

Optimizing Treatment Models for People Living with HIV in Urban Zimbabwe: Findings from a Mixed-Methods Study

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Background

Zimbabwe's Ministry of Health and Child Care (MoHCC) has adopted the HIV differentiated service delivery approach, aiming to improve the quality and coverage of HIV services for people doing well on antiretroviral therapy (ART) by offering the option to shift to less-intensive models of care. Zimbabwe currently has five differentiated ART (DART) models. However, not all have been equally successful in reaching patients. Using a mix of qualitative and quantitative research methods, this study aimed to better understand the preferred characteristics of DART models among recipients of HIV care living in urban Zimbabwe.

Methods

Data collection took place at 7 health facilities in Harare and included:

- **35 key informant interviews** (KIIs) with HCWs and lay providers.
- **8 focus group discussions** (FGDs) with 54 HIV-positive adults who were eligible for DART but not currently enrolled. KII and FGD data were initially coded by question and key theme, followed by a framework analysis to organize the data by DART model preference.
- **A discrete choice experiment** (DCE) with 500 HIV-positive adults eligible for DART but not currently enrolled. A binary, unlabeled design was used to generate a statistically optimal set of 32 choices, blocked into 4 versions with 8 choices per participant (attributes and levels are shown in Table 1). Fixed effects logistic regression models were used for the analysis of main effects.
- **A quantitative survey** of the 500 DCE participants exploring DART knowledge and preferences. Tests of significance were conducted using Chi-square or Exact tests for categorical variables and t-tests for continuous variables.

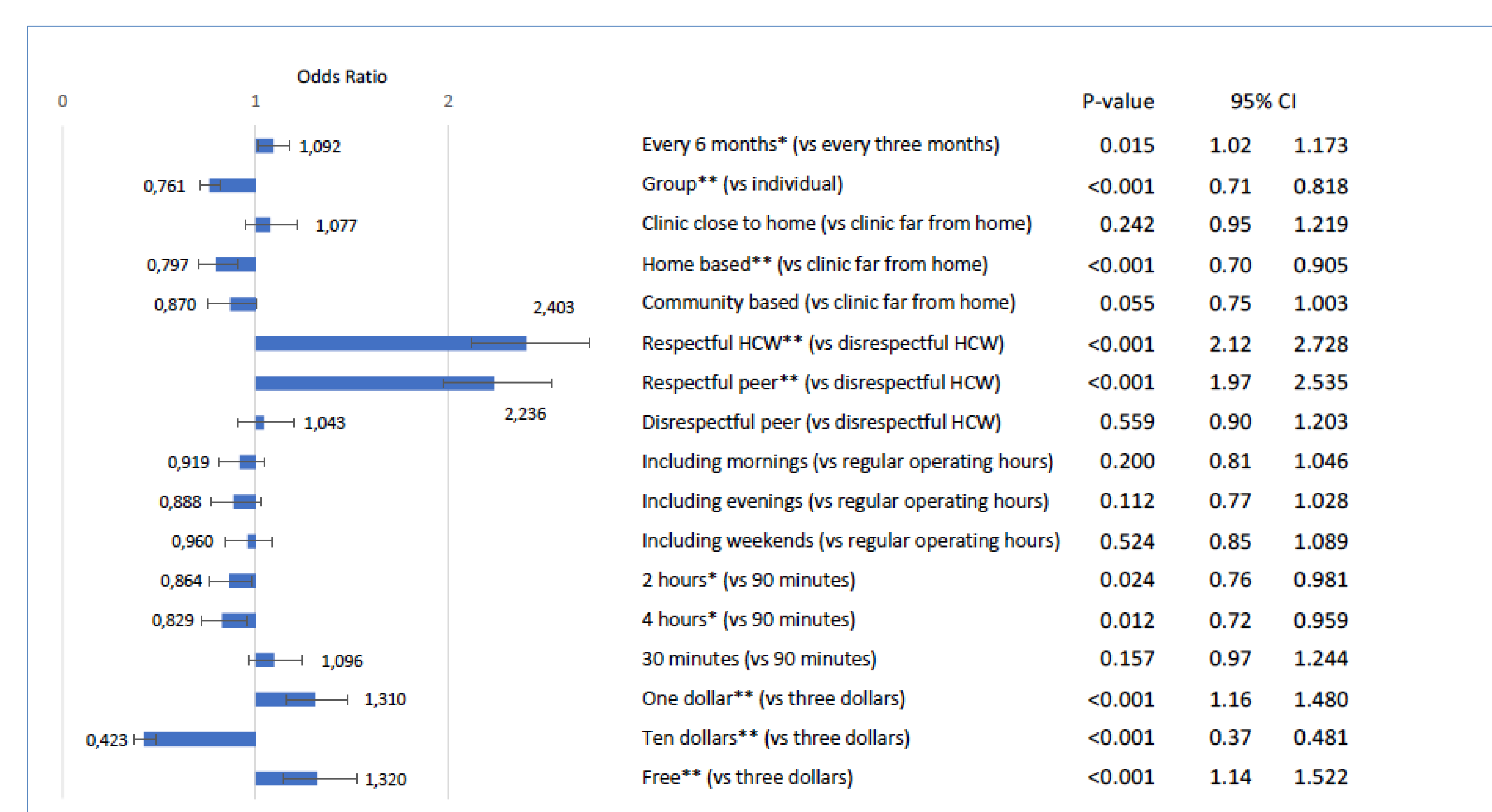
Table 1. Discrete Choice Experiment (DCE) Attributes and Levels

Attribute	Level 1	Level 2	Level 3	Level 4
Location of service delivery	Health facility close to home (10min travel time)	Health facility far from home (45min travel time)	Community based DART services	Home based DART
Individual vs. group visit	Individual	Group		
Type of provider	Professional HCW who is respectful and understanding	Professional HCW who is NOT respectful or understanding	Peer/lay person who is respectful and understanding	Peer/lay person who is NOT respectful or understanding
Visit spacing	Four times per year (every three months)	Twice a year (every six months)		
Clinic operation time	Regular work week (Mon-Fri 8am-4pm)	Work week with early morning hours (Mon-Fri 5am-4pm)	Work week with evening hours (Mon-Fri 8am-8pm)	Extended weekend hours (Mon-Sun 8am-4pm)
Total time for visit	30min	1 hour	2 hours	4 hours
Total cost of visit	Free	US\$ 1	US\$ 3	US\$ 10

Results

KIIs, FGDs, survey and DCE results were largely consistent. Most informants perceived the Fast Track model as the one most preferred by both patients and providers. Provider attitude was the strongest driver of choice in the DCE (Figure 1); provider type was not significantly important. Participants also preferred facility-based over community-based models and individual models to group models. Convenience, efficiency and privacy outweighed concerns about the cost of facility-based services and the potential advantages of group models, such as peer support. Further, although it was not the biggest driver of choice, participants had a significant preference for six-month visit spacing compared to three-month spacing.

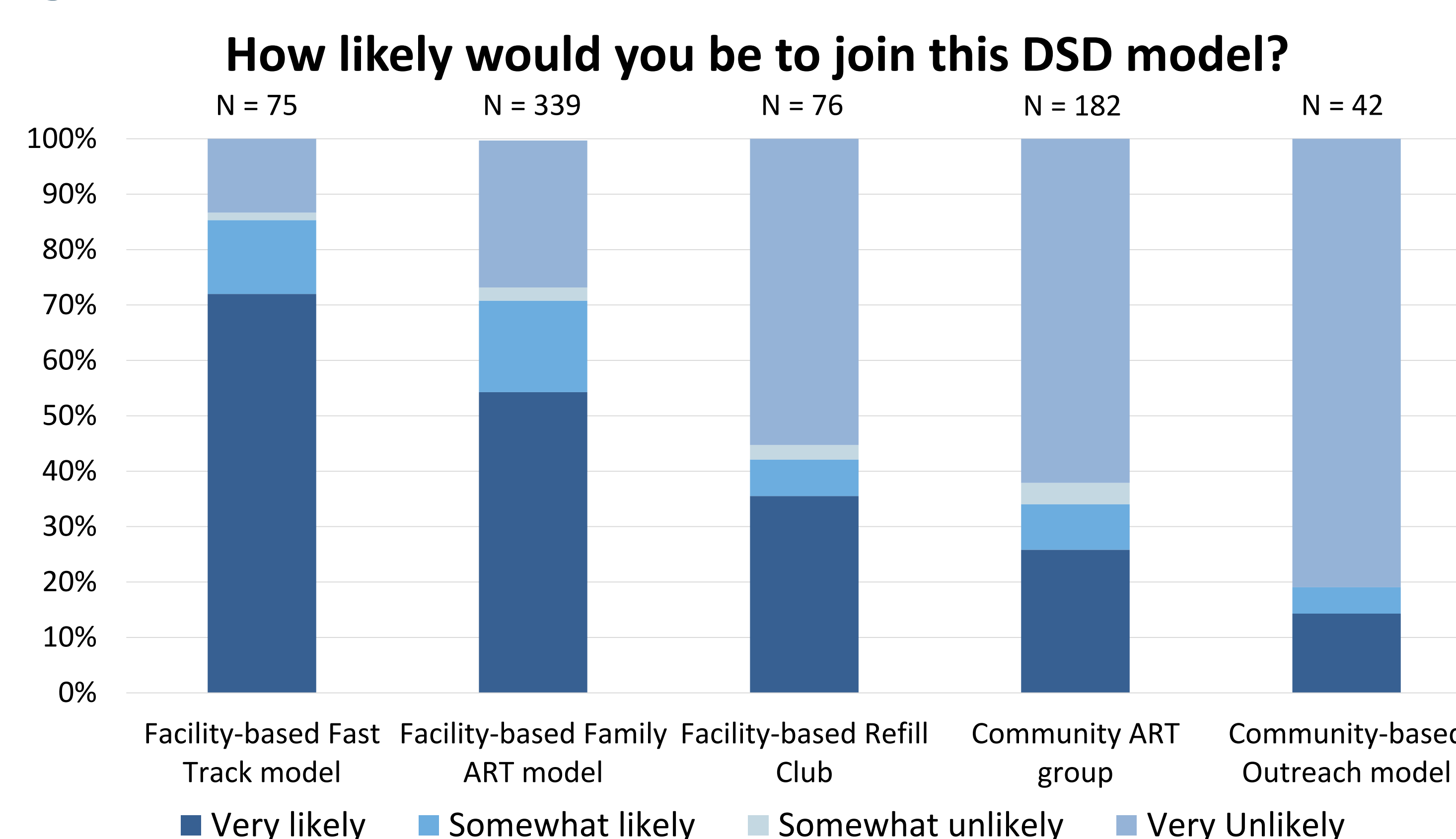
Figure 1. DCE fixed effects logistic regression results – odds ratios & 95% CIs



Note: Reference category for odds ratios is shown in brackets * Significant at 95%; ** Highly significant at 99%

In the survey (Figure 2) participants who were asked about DART preferences said they would be more likely to join facility based DART models, with very few saying they would be likely to join community-based or group models.

Figure 2. Patient preferences for specific DART models (patient survey)



Conclusion

- The preferences of stable, ART-experienced adult patients at these urban HIV treatment sites most often aligned with the characteristics of **facility-based individual models**, rather than group or community-based models.
- Prioritizing these models that include **less frequent visit spacing, multi-month prescribing and fast-track visits** for scale-up in urban areas may be the most efficient way to sustain positive patient outcomes in a patient-centered approach that reduces pressure on facilities and HCWs, and increasing health system performance.
- The **importance of HCW attitudes** in shaping patients' experiences and preferences should not be overlooked.
- Finally, empowering individual facilities to choose **contextually appropriate DART models** can help meet the needs and expectations of HIV-positive recipients of care while also creating efficiencies for the health system.