Abstract #1249

USING BEST-WORST SCALING EXPERIMENTS TO IDENTIFY PROFILES OF CLIENT AND PROVIDER PREFERENCES FOR REENGAGEMENT STRATEGIES IN PUBLIC HIV CLINICS IN LUSAKA, ZAMBIA

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Background

- In the setting of rapid expansion of ART coverage in Sub-Sharan Africa, treatment interruptions after ART initiation have emerged as a critical driver of poor HIV treatment outcomes.
- People living with HIV (PLWH) who have interrupted treatment may now represent one of the most significant contributors to population-level viremia and those presenting with advanced HIV.
- Even after reengaging back into care after a treatment interruptions, the risk for repeat disengagement remains very high. Tailored reengagement strategies that provide support for sustainable engagement in the face of uncertainty and diverse challenges are needed.
- We used best-worst scaling (BWS) experiments—a quantitative preference methodology—to understand how client and health care workers (HCW) rated and prioritized different care delivery for features for supporting reengagement in HIV care.

Objectives

- To identify the most and least desired features for reengagement strategies among both client returning to care and HCWs, and compare priorities across cadres.
- To segment clients and HCWs into subgroups with distinct preference patterns for reengagement strategies.
- To identify sociodemographic, care history, and social factors among clients returning to HIV care associated with different preference profiles.

Methods

Study Population

- We conducted BWS surveys to quantify relative preferences among:
  - Clients returning to care after being out of care (defined as being > than 30 days without ART or late to their last appointment or without ART drugs)
  - HCWs providing HIV services
- All participants were from 6 Ministry of Health-run facilities in Lusaka Province supported by the Centre for Infectious Disease Research in Zambia (CIDRZ), an NGO supporting HIV care services.

Measurements:

- BWS surveys asked participants to identify statements about varied care features and reengagement services they felt were most and least important across multiple-choice sets.
- We also collected data on client and HCW socio-demographics. Clients were also asked about visit history, reasons for treatment interruptions, and unexpected life events (ULEs).

Analyses:

- We used Hierarchical Bayes models to calculate normalized preference scores (rescaled 0 - 100), and performed latent class analysis (LCA) to identify unique preference profiles for reengagement strategies for clients and health care workers.
  - LCA assumes the population is made of different, but unobserved, subpopulations with distinct preference patterns and uses the observed data to identify these subgroups.
- To improve the reliability of our data, we removed respondents who had a low (<80th percentile) RLH (root-likelihood) fit statistic (i.e., those with random/inconsistent responses) and those who completed the BWS in <40% of the median survey time (speedy responders).
- We used a ladder plot to compare overall preferences between clients and HCWs and frequency tables to examine the distribution of latent class membership across client subgroups, including sociodemographic characteristics, reengagement status, barriers to care, and the presence of ULEs.

Results

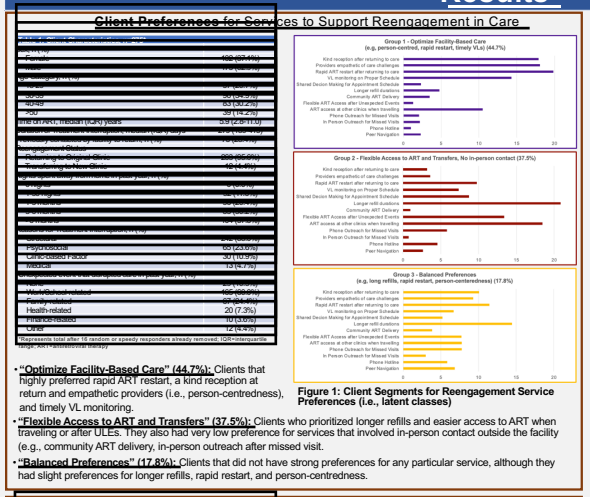
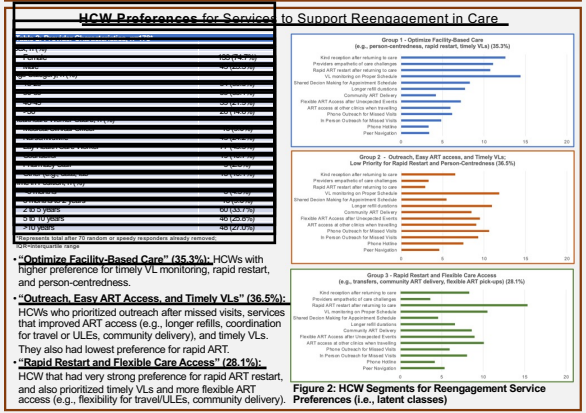


Figure 1: Client Segments for Reengagement Service Preferences (i.e., latent classes)

- **"Optimize Facility-Based Care" (44.7%):** Clients that highly preferred rapid ART restart, a kind reception at return and empathetic providers (i.e., person-centredness), and timely VL monitoring.
- **"Flexible Access to ART and Transfers" (37.5%):** Clients who prioritized longer refills and easier access to ART when traveling or after ULEs. They also had very low preference for services that involved in-person contact outside the facility (e.g., community ART delivery, in-person outreach after missed visit.
- **"Balanced Preferences" (17.8%):** Clients that did not have strong preferences for any particular service, although they had slight preferences for longer refills, rapid restart, and person-centredness.



- **"Optimize Facility-Based Care" (35.3%):** HCWs with higher preference for timely VL monitoring, rapid restart, and person-centredness.
- **"Outreach, Easy ART Access, and Timely VLs" (36.5%):** HCWs who prioritized outreach after missed visits, services that improved ART access (e.g., longer refills, coordination for travel or ULEs, community delivery), and timely VLs. They also had lowest preference for rapid ART.
- **"Rapid Restart and Flexible Care Access" (28.1%):** HCW that had very strong preference for rapid ART restart, and also prioritized timely VLs and more flexible ART access (e.g., flexibility for travel/ULEs, community delivery).

Figure 2: HCW Segments for Reengagement Service Preferences (i.e., latent classes)

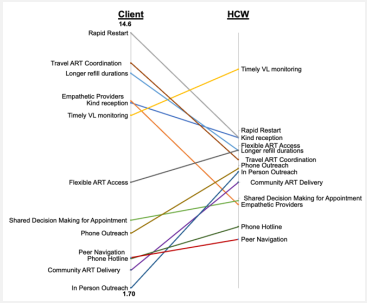
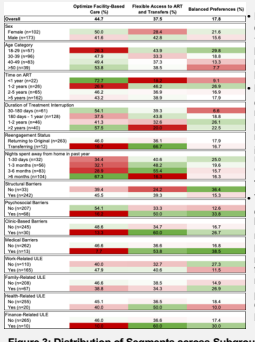


Figure 3: Comparison of Overall Client versus HCW Preferences

- Clients and HCWs generally had similar ranking for various reengagement services with a few notable exceptions
  - Clients had much stronger preference for rapid restart, providers who were empathetic towards the care challenges they faced compared to HCWs, and coordination for ART pick-ups at other clinics for travel.
  - Additionally, they had stronger negative preferences for services that involved in-person contact outside the facility (e.g., community ART delivery, in-person outreach).
  - HCWs had a stronger preference for timely VL monitoring, In person outreach and community ART.
- Overall, clients had more separation in their preferences (i.e., stronger preferences at both the high and low end) compared to HCWs.



- Female; older age; short duration of ART; treatment interruptions of >6 months or >2 years; and highly mobile populations were more likely to prefer **"Optimized Facility-Based Care"**
- Men; younger clients; those currently transferring; moderately mobile populations; those with psychosocial, clinic-based, or medical reasons for treatment interruption; or finance-related ULEs were more likely to prefer **"Flexible Access to ART and Transfers."**
- Younger clients; increased duration of treatment interruption; lack of structural barrier or work-related ULE; or those with psychosocial, clinic-based, or medical barrier or family- or finance-related ULE were also more likely to not have strong preferences amongst available choices (i.e., **"Balanced Preferences"**.)

Figure 3: Distribution of Segments across Subgroups. Cells are color-coded green or red if subgroup is more or less likely, respectively, to belong to a particular preference segment as compared to the overall average.

Conclusions

- Clients and HCW had diverse preferences for strategies to improve reengagement were observed.
  - 44.7% of clients prioritized rapid restart and more person-centred interactions (**"Optimize Facility-Based Care"**), 37.5% preferred more flexible access to ART to accommodate travel and ULEs (**"Flexible Access to ART and Transfers"**), and 17.8% did not have strong preferences for particular services (**"Balanced Preferences"**)
  - 35.3% of HCWs also favored **"Optimized Facility-Based Care"** (timely VLs, person-centredness, rapid restart), 36.5% prioritized outreach after missed visits and improved ART access (but not rapid restart) (**"Outreach, Easy ART Access, and Timely VLs"**), and 28.1% strongly favored rapid restart as well as more flexible ART access (**"Rapid Restart and Flexible Care Access"**).
- Overall, clients had stronger preferences for rapid restart, person-centredness, and easier ART access when travelling compared to HCWs; HCWs in particular had a very high preference for timely VL monitoring as well as iIn person outreach and community ART (which were ranked low by clients.
- Among clients, diversity in preference patterns may be driven by underlying life circumstances. For example, men and younger people want more flexibility with ART access, while women, older individuals, and those new to ART prefer a more person-centred clinic experience.

Implications

- To address the diversity of preferences across population segments, strategies to improve reengagement in care must address both person-centredness and clinical care at the facility as well as adopt novel strategies to improve flexibility and access to ART and accommodate uncertain life circumstances (e.g., travel, ULEs).
- Deeper understanding of the underlying drivers of the different preferences will be critical for the development of tailored, client-centred reengagement strategies as stated preferences can sometimes differ from revealed preferences.
  - For example, a lack of strong preferences amongst clients may indicate other challenges at play that may not be solved with these set of features. Similarly, some clients may not see improved facility experience as a solution if they have only experienced bad clinic visits.
- Attention to apparent discrepancies in preferences between clients and HCWs are essential in developing strategies to improve reengagement.
  - For example, health systems are enthusiastic about approaches to increase access to care outside of facilities (e.g., community-based outreach and ART delivery), but clients may not desire these approaches and may prefer more flexibility in order to maintain their autonomy.
- User-centred approaches that can synthesize these diversity in preferences will be needed to co-create multi-pronged and tailored reengagement strategies to address the needs of all returning PLHIV.

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