Patterns and Correlates of Participant Retention in the U.S. PrEP Demonstration Project

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BACKGROUND
- Safe and effective use of Pre-exposure Prophylaxis (PrEP) depends on retention in care after initial engagement.
- Three clinically important categories of retention in care can be identified:
  - Those who are interested in PrEP but do not follow-up beyond the initial visits
  - Those who continue to follow-up but miss one or more visits
  - Those who follow-up regularly as scheduled.
- Patterns of retention may have different implications for safety and future engagement.
- Understanding individual and community-level characteristics of PrEP users who exhibit various patterns of retention in PrEP care may allow tailored interventions to improve retention.
- We sought to identify baseline and early characteristics that are associated with these three patterns of retention in PrEP care.

METHODS
- 557 HIV-uninfected men who have sex with men (MSM) and transgender women (TGW) were enrolled across three sites.
- Follow-up visits occurred at 4, 12, 24, 36, and 48 weeks.
- Dried blood spot (DBS) samples for tenofovir diphosphate levels (TFV-DP) were collected at all scheduled follow-up visits and were analyzed on a subset of participants.
- Demo Project participants’ patterns of retention were assigned to one of three categories: early loss to follow-up (ELTF) within the first 12 weeks of the study, retention through the study, or intermittent retention.
- For each group, baseline characteristics were tabulated. A two-step multivariable analysis was performed.
- DBS were analyzed separately because they were only available on a subset of individuals.

RESULTS
- Overall, 366/554 (66.1%) of enrolled participants in the Demo Project were retained for all study visits, 127/554 (22.9%) had intermittent retention, and 61/554 (11.0%) had early loss to follow-up (ELTF).
- The prevalence of ELTF was highest at the Miami site: 127/277 (45.9%) compared with 12/157 (7.6%) in San Francisco and 22/160 (13.7%) in Washington, D.C. for 48 weeks from 2012.
- Among enrolled participants, 366/554 (66.1%) completed retention were:
  - Factors associated with ELTF (but not intermittent retention) compared with full retention were:
    - Younger age was also associated with both ELTF and intermittent retention.
    - Factors associated with ELTF (but not intermittent retention) compared with full retention were:
      - Black race (compared with white, non-Hispanic).
      - Reporting giving/receiving money or other items for sex.
      - Fewer known HIV-positive partners (<2 vs. >= 2).
      - Being disabled or unemployed.
- TFV-DP levels were most consistently protective among those with complete retention.
- Participants with intermittent retention in PrEP care were also more likely to have TFV-DP levels below the threshold for protection.

CONCLUSIONS
- The majority of participants in the PrEP Demo Project were retained in care during the study period.
- Retention varied by site but was significantly influenced by age, race, employment status, and prior PrEP awareness.
- Key populations, such as black MSM and younger adults, are disproportionately lost in the first 12 weeks of PrEP care.
- Focused and early interventions during initial PrEP visits may enhance continuation in PrEP care.

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Multivariable model of factors associated with patterns of retention.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>ELTF vs Complete Retention</th>
<th>Intermittent vs Complete Retention</th>
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<tbody>
<tr>
<td>Age (in years)</td>
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<tr>
<td>Race/Ethnicity</td>
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<td>Education</td>
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<td>Employment</td>
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<td>Referral status</td>
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<td>Risk behaviors</td>
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<td>Current employment status</td>
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<td>Prior PrEP awareness</td>
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<td>Knowledge</td>
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<td>HIV status</td>
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REFERENCES

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