Risk Factors Associated with Lost-To-Follow-Up among Persons Living with HIV from Atlanta Metropolitan Area

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INTRODUCTION

- Understanding risk factors associated with lost-to-follow-up to HIV care (LTFU) among Persons Living with HIV (PLWH) in a Metropolitan setting provides unique information that could be used to improve retention in care in large populations.
- LTFU can lead to treatment interruptions which subsequently leads to failure to suppress the HIV and thus increases the risk of transmitting the HIV to others, HIV drug resistance, progression of HIV disease, and ultimately death.
- Patients LTFU also miss out on the opportunity to receive secondary prevention messages, counseling, and other ancillary services provided at regular medical visits.

METHODS

- **Study design**: Retrospective cohort study.
- **Study Setting:** Atlanta Metropolitan Area (AMA) served by Ryan White HIV/AIDS Program (RWHAP) Part A-funded agencies.
- **Data Source:** CAREWare electronic database.
- **Participants**: Adults and adolescents (≥13 years) living with HIV.
- **Outcome:** LTFU is defined as having a last outpatient visit that was ≥12 months in year 2018.
- **Statistical analysis:** A Cox regression random-effects model, with counties as random effects, was used to obtain adjusted hazard ratios (aHRs) and 95% confidence intervals (95%CI) for risk factors associated with LTFU.

RESULTS

Study Population:

- As of 31 December 2018, there were 17,053 PLWH from 20 counties included in the analysis of which 1,508 (8.8%) were LTFU.
- Of those LTFU, 78.9% were males, 74.3% non-Hispanic black, 60.7% men who have sex with men (MSM), and 41.1% were uninsured **(Table 1).**

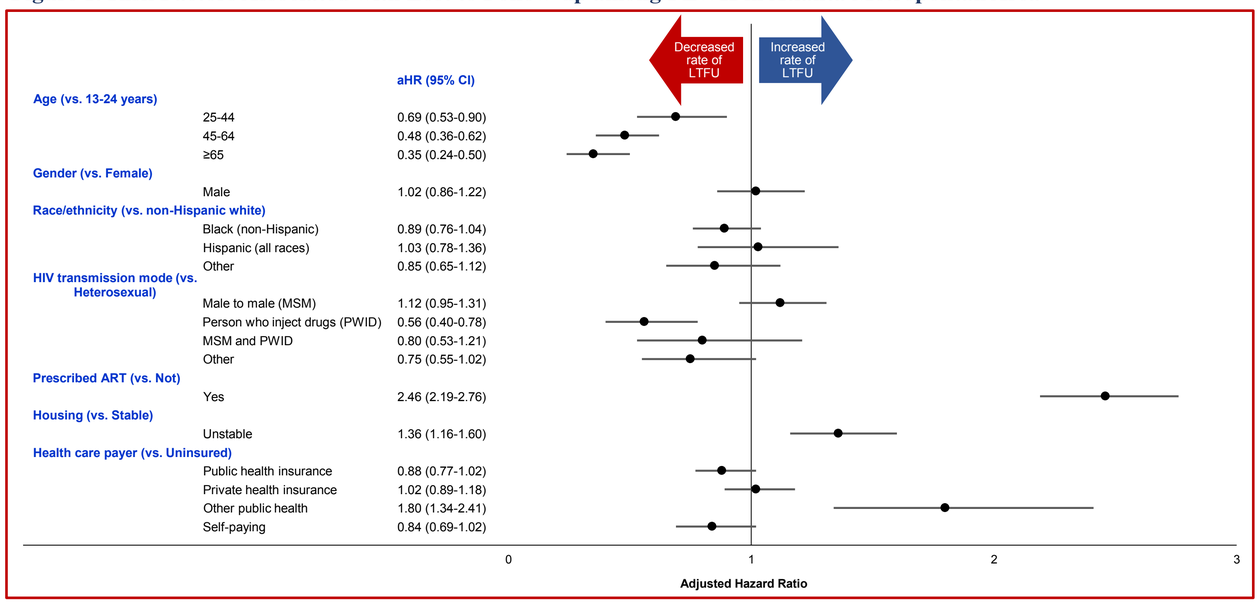
Risk Factors:

- Decreased rate of LTFU was associated with ages 25 to 44 years (aHR 0.69, 95%CI: 0.53–0.90); 45 to 64 years (aHR 0.48, 95%CI: 0.36–0.62); and ≥65 years (aHR 0.35, 95%CI: 0.24–0.50) compared to those 13 to 25 years, and in persons who inject drugs compared to heterosexual transmission (aHR 0.56, 95% CI: 0.40-0.78).
- Increased rate of LTFU was associated with prescribed antiretroviral therapy (aHR 2.46, 95%CI: 2.19–2.76), unstable housing that included homelessness (aHR 1.36, 95%CI: 1.16–1.60), and other public health insurance that included veterans or military benefits (aHR 1.80, 95%CI: 1.34–2.41) **(Figure 1).**

Table 1. Demographic Characteristics of PLWH

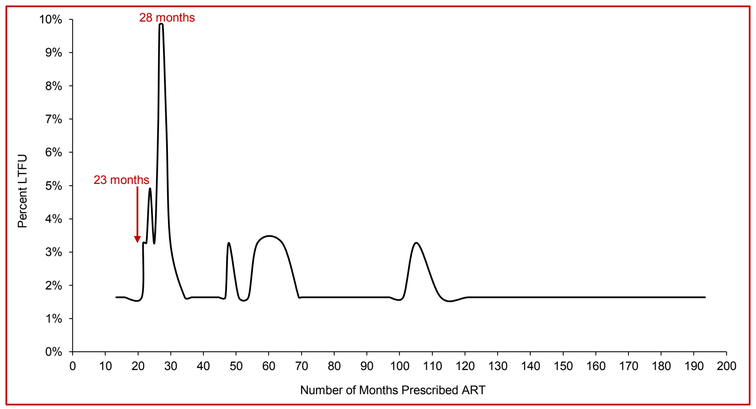
	Lost to Follow-up (N=1,508)	Not Lost to Follow-up (N=15,545)
Age group, n (%)		
13 to 24	81 (5.4)	905 (5.8)
25 to 44	683 (45.3)	7,625 (49.1)
45 to 64	677 (44.9)	6,330 (40.7)
≥65	67 (4.4)	685 (4.4)
Male, n (%)	1,190 (78.9)	11,932 (76.8)
Race, n (%)		
White (non-Hispanic)	238 (15.8)	1,911 (12.3)
Black (non-Hispanic)	1,120 (74.3)	12,045 (77.5)
Hispanic	72 (4.8)	1,057 (6.8)
Other	78 (5.2)	532 (3.4)
Mode of HIV Transmission, n (%)		
Heterosexual	449 (29.8)	5,244 (33.7)
Men who have sex with men (MSM)	916 (60.7)	9,182 (59.1)
Persons who inject drugs (PWID)	44 (2.9)	280 (1.8)
MSM and PWID	33 (2.2)	207 (1.3)
Other	66 (4.4)	632 (4.1)
Prescribed on ART, n (%)	669 (44.4)	11,507 (74.0)
Health care payer source, n (%)		
Uninsured	620 (41.1)	8,171 (52.6)
Public health insurance	378 (25.1)	4,083 (26.3)
Private health insurance	311 (20.6)	2,294 (14.8)
Other public health insurance	54 (3.6)	240 (1.5)
Self-paying	145 (9.6)	757 (4.9)
Homeless/Unstable Housing	197 (13.1)	1,276 (8.2)

Figure 1. Risk Factors Associated with Lost to Follow-up among PLWH in Atlanta Metropolitan Area



- We found that increased LTFU rate was associated with being prescribed ART compared to those not prescribed ART. Most were LTFU at 23 to 28 months of starting antiretroviral therapy (ART) **(Figure 2).** It could therefore be that as the patients continued to take ART and with time recovered their health, the desire to visit the HIV outpatient services dissipated and thus were LTFU.

Figure 2. Months on ART among those prescribed ART and were LTFU



CONCLUSIONS

- More intensive strategies aimed at PLWH that are at risk of LTFU are required, especially among younger populations and those who are unstably housed.
- Future prospective studies will need to explore the aspect of patient tracking in the RWHAP Part A-funded agencies; to understand how tracking PLWH can impact retention in care.

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