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Comparison of Access and Linkage to Care Among People Living with Human Immunodeficiency Virus When Enrolled in Florida AIDS Drug Assistance Program (ADAP)

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Background. Of the 11098 people living with HIV in southeast Michigan, over 30% are out of care, with transportation being the most commonly identified barriers. To address this barrier and re-engage patients into care, we introduced an HIV home-care program. The objective of this study was to describe the implementation of the homecare program and document the outcomes of patients enrolled.

Methods. In 2016, WSUPG ID clinic saw 1990 patients and had additional 95 clients who were virally unsuppressed and lost to care for 12 months. We called all 95 of these clients and offered homecare. We also advertised our program internally, to the Detroit Public Health Departments' Data to Care Program (Link up Detroit), and to community-based organizations. Referred patients were seen by a NP/MA team supervised by an infectious disease attending. HIV medical care delivered in home utilized same standards of care as for outpatient setting, including lab draws and counseling. Patients also had the ability to text/call provider directly on the program cell phone. This project was funding through a Part A Ryan White MAI grant.

Results. Of the 95 clients out-of-care, 38 (40%) were unreachable, 41 (43%) were reachable and 16 (17%) did not qualify (relocation, incarcerated, deceased, in-care at the time of call). 5 (5%) enrolled in homecare and additional 29 patients were referred to our program. A total of 34 patients enrolled from September 20, 2017 to September 20, 2018. Among the 34 clients, mental health barriers were the most frequently reported (depression in 20, schizophrenia or bipolar in 7, anxiety in 23, and history of trauma in 11). Of the 34 clients, 24 have achieved virologic suppression at least once during their enrollment. Among the 26 clients with 6+ months of follow-up, 17 have achieved virologic suppression.

Conclusion. Homecare offers a new, innovative healthcare delivery system which is effective at achieving viral suppression in a challenging patient population and is a successful strategy to re-engage patients in care.

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1315. Food Insecurity and Viral Suppression in Human Immunodeficiency Virus Patients on Antiretroviral Treatment at an Urban Primary Care Practice

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Background. The U.S. Department of Agriculture (USDA) defines food insecurity as a lack of consistent access to enough food for an active and healthy life. A review of the literature indicates that there are only few studies on food insecurity and people living with human immunodeficiency virus (HIV) in the United States, despite it being one of the most basic physiological need. Here, we aimed to examine the association between food insecurity and viral load suppression in people with HIV on antiretroviral therapy (ART) at an HIV primary care practice.

Methods. This was a cross-sectional study conducted at an urban university hospital HIV primary care practice in Brooklyn, New York. It included patients seen during a six month period, from July 1 until December 31, 2018, that were found to have an unsuppressed viral load while reporting being on ART. We defined unsuppressed viral load as viral load >200 copies/milliliters. Food security was measured with the Household Food Insecurity Access Scale (HFIAS), a questionnaire by USAID's Food and Nutrition Technical Assistance Program, which has demonstrated cross-cultural validity. It categorized patients into four groups: food secure and mildly, moderately or severely food insecure. Patient were contacted in clinic during their appointment or by telephone survey.

Results. A total of 145 patients were found to have an unsuppressed viral load while on ART, with 54 patients (37%) reporting food insecurity. Based on HFIAS's classification, 44 patients (30%) reported mild or moderate food insecurity, and 10 patients (7%) reported severe food insecurity. The study population demographics was 86% African American or blacks, 12% Hispanics and 2% of other race. Seventy-three patients (50%) also reported receiving benefits from New York's Supplemental Nutrition Assistance Program.

Conclusion. Food insecurity can be associated with unsuppressed viral load and was found in over one-third of our study population, with half relying on food assistance programs. It represents a complex problem fundamentally connected to issues such as poverty and unstable housing, which can negatively impact patient engagement and retention in care. Our findings highlight the importance of integrating food and social services into HIV programs, especially in lower-income populations.

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1316. Gathering Trauma Narratives: A Qualitative Study on the Impact of Traumas on People Living with HIV (PLWH)

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Background. Trauma—emotional, physical, and psychological—is common and associated with increased risk behaviors, low rates of care engagement and viral suppression, and overall poor health outcomes for people living with HIV (PLWH). In the United States, there are limited data on how trauma affects reproductive health beliefs

for PLWH and even less data on HIV providers' understanding and consideration of these experiences in their approach to patients.

Methods. Fifteen semi-structured interviews were conducted with PLWH and nine semi-structured interviews were conducted with HIV care and service providers at an academic medical center in the Southeastern United States. Transcripts were analyzed using thematic analysis. Each transcript was coded by two investigators and discussed to ensure consensus.

Results. Participants' narratives described diverse traumas, including sexual abuse ($n = 6$), the loss of a loved one ($n = 8$), and personal illness ($n = 7$). Types of trauma shared with providers included physical, sexual, illness, loss, and psychological. For patients, trauma was both a motivation for having children and a reason to stop having children. Providers perceived a variety of effects of trauma on both sexual behaviors and reproductive intentions. Reproductive counseling by HIV care providers ($n = 5$) focused on maintaining a healthy pregnancy and less on reproductive intentions prior to pregnancy. Reproductive discussions with pregnant female patients typically centered on reducing the risk of transmission in utero (including the importance of medication adherence to maintain viral suppression), what will happen during delivery, and breastfeeding risks. Reproductive discussions with males typically centered on preventing infection or re-infection of the mother.

Conclusion. PLWH interpret their trauma experiences differently, particularly when considering reproduction. Providers may not incorporate this information in counseling around reproductive health, highlighting the need for a trauma-informed healthcare practice that promotes awareness, education on the effect of past traumas on health, and access to appropriate resources.

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1317. Comparison of Access and Linkage to Care Among People Living with Human Immunodeficiency Virus When Enrolled in Florida AIDS Drug Assistance Program (ADAP)

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Background. The Southeast region of the United States contains nine out of the 10 states with the most severe syndemic of poverty and HIV infection.¹ The Florida AIDS Drug Assistance Program (FL-ADAP) and Ryan White network are crucial for linkage to care services. Data from FL-ADAP are available but seldom published; thus this study quantifies this program's impact on Florida PLWH access and linkage to care.

Methods. Data were obtained from the Florida Cohort, an ongoing cross-sectional survey among health clinics across the State of Florida from 2015 to 2018. Chi-square and binomial multivariate logistic regression analyses correlated anti-retroviral therapy (ART) access and linkage to care stratified by insurance status (ADAP vs. non-ADAP), demographics, and sexual orientation

Results. Of the total 934 PLWH, $n = 418$ (44.8%) self-reported ADAP participation. Of these, 68.4% were male, 79.7% were non-Hispanic, and 55.5% were African American. FL ADAP participants did not significantly differ by race, ethnicity, marital or education status, transportation barriers, nor the actual number of missed appointments. However, ADAP participants were slightly more likely to have same-sex relationships [OR 1.41 (CI 1.02 to 1.96)] or to be bisexual [OR 2.05 (1.21 to 3.47)]. ADAP enrollees reported greater adherence to antiretroviral therapy (ART) (94.2% vs. 87.1%; $P < 0.001$) and to have a case manager (83.8% vs. 75.4%; $P = 0.008$). Likewise, PLWH with a case manager were more likely to have ADAP [OR 2.04; (CI 1.32 to 3.17)]. However, ADAP enrollees were more likely to report barriers to care for a missed appointment (28.9% vs. 22.2%; $P = 0.02$).

Conclusion. The Florida ADAP program is successful in providing ART access, facilitating linkage to care, and improving adherence through embedded case management services. However, more resources are needed to improve ART and medical appointment adherence as well as to decrease socioeconomic barriers to care.

Table 1. Demographics of ADAP vs Non-ADAP Persons Living with HIV (PLWH) in Central Florida.

	ADAP enrolled		p-value	
	Yes N=418	No N=416		
Gender	Male	286 (68.4)	315 (61.9)	0.1037
	Female	130 (30.1)	182 (35.7)	
	Transgender	1 (0.2)	12 (2.4)	
	Other	1 (0.2)	1 (0.2)	0.9405
Ethnicity	Hispanic	85 (20.3)	104 (20.1)	
	Non-Hispanic	334 (79.7)	413 (79.9)	0.1681
Race	White	139 (33.3)	157 (30.4)	
	Black	232 (55.5)	314 (60.9)	
	Native American	1 (0.2)	5 (1.0)	
	Asian	2 (0.5)	3 (0.6)	
	Mult Race	21 (5.0)	22 (4.3)	
	Other	23 (5.5)	19 (3.7)	0.1818
Marital status	Married	36 (8.6)	38 (7.4)	
	Divorced	73 (17.5)	73 (14.2)	
	Widowed	14 (3.4)	26 (5.1)	
	Separated	29 (6.9)	32 (6.2)	
Single/never married	231 (55.3)	278 (54.0)		
	Living with partner	37 (8.9)	68 (13.2)	0.0138
Sex preference	Heterosexual	197 (47.3)	279 (55.5)	
	Homosexual	165 (39.5)	170 (34.9)	
	Bisexual	52 (12.4)	38 (7.7)	0.0003
Taking HIV meds currently	Yes	411 (98.3)	445 (87.1)	0.0003
	No	24 (5.8)	68 (12.9)	
Believes HIV meds have positive effect	Yes	391 (94.2)	445 (87.1)	0.033
	Not at all	26 (6.7)	34 (7.8)	
	Somehow	6 (1.5)	6 (1.2)	
Has HIV Healthcare in Place	Very positive	260 (72.5)	341 (79.4)	0.1085
	No	34 (8.2)	58 (11.4)	
	Yes	382 (91.8)	451 (88.6)	

	ADAP enrolled		p-value
	Yes N=418	No N=516	
HIV missed appointments			0.8533
No	315 (75.9)	389 (76.4)	
Yes	100 (24.1)	120 (23.6)	
HIV case manager			0.0101
No	49 (12.4)	89 (18.8)	
Yes	346 (87.6)	384 (81.2)	
Primary Care Provider (PCP)			0.1588
No PCP	84 (20.5)	93 (18.7)	
Different from HIV Provider	98 (23.9)	147 (29.6)	
Same as HIV Provider	228 (55.6)	257 (51.7)	
Refused treatment?			0.7647
Never	373 (90.3)	447 (88.7)	
Once	28 (6.8)	36 (7.1)	
Twice	7 (1.7)	13 (2.6)	
Three more	5 (1.2)	8 (1.6)	
Transportation			0.8978
No car	206 (49.2)	252 (48.7)	
Having car	213 (50.8)	265 (51.3)	
School completed			0.2927
Elementary	13 (3.1)	20 (3.9)	
Some high school	115 (27.5)	174 (33.8)	
GED	135 (32.3)	142 (27.6)	
Some college	94 (22.5)	102 (19.8)	
College degree	46 (11.0)	55 (10.7)	
Professional graduate	15 (3.6)	22 (4.3)	
Time to Acquiring HIV Care			0.3337
<1 month	231 (56.9)	266 (52.5)	
1-5 months	107 (26.4)	133 (26.2)	
6-12 months	17 (4.2)	38 (7.5)	
1-4 years	22 (5.4)	36 (7.1)	
5-9 years	21 (5.2)	22 (4.3)	
10-20 years	7 (1.7)	9 (1.8)	
>20 years	1 (0.3)	3 (0.6)	
Taking HIV meds as directed			0.0194
Never	8 (2.1)	5 (1.1)	
Rarely	8 (2.1)	6 (1.4)	
Sometimes	4 (1.0)	13 (3.0)	
Usually	18 (4.7)	15 (3.4)	
Almost always	103 (26.7)	84 (19.2)	
Always	245 (63.5)	315 (71.9)	

	ADAP enrolled		p-value
	Yes N=418	No N=516	
Distance from HIV Provider			0.8267
<30 min	190 (45.9)	225 (44.3)	
30 – 60 min	150 (36.2)	194 (38.2)	
>60 min	74 (17.9)	89 (17.5)	

Table 2. Odds Ratio Estimates for AIDS Drug Assistance Program (ADAP) Enrollees compared to non-ADAP PLWH.

Event	Odds Ratio (95% Confidence Intervals)
Sexuality	
Same Sex Preference	1.42 (1.02-1.96)
Bisexual	2.06 (1.22-3.47)
Other	1.51 (0.36-6.36)
Views HIV medications to have positive effect	
"somewhat"	1.86 (0.94-3.73)
"very positive"	1.05 (0.57-1.92)
Has HIV case manager	2.05 (1.32-3.17)
Takes Anti-retroviral regimen as directed	
"rarely"	0.93 (0.18-4.86)
"Sometimes"	0.18 (0.04-0.95)

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1318. Examining Multimorbidity as a Moderating Effect on the Relationship Between Substance Use and Viral Suppression Among People Living with HIV
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Background. Substance use and multimorbidity (≥2 chronic conditions) are highly prevalent among people living with HIV (PLWH). However, their impact on achieving viral suppression are not well understood. The purpose of this study was to

examine the relationship between substance use and viral suppression and the potential moderating effect of multimorbidity.

Methods. A retrospective cohort study was conducted at an academic Ryan White Funded clinic in central Kentucky. Individuals were included if they were diagnosed with HIV, seeking care between 2010 and 2014, had at least one year of follow-up, and did not have a chronic condition at the time they entered care. The primary independent variable was substance use which included alcohol, nicotine use, and/or illicit drug use; the moderating variable was multimorbidity (0, 1, ≥2 chronic conditions); and outcome was viral suppression (≤50 copies/mL). A logistic regression model was developed to examine the interaction between substance use and multimorbidity on achieving viral load suppression. The model controlled for medication adherence, insurance status, age, and CD4+ cell counts.

Results. A total of 941 individuals were included in the study, with an average age of 43.9 ± 11.7 years. Approximately 67.0% reported substance use; 54% had ≥2 chronic conditions diagnosed. The three most prevalent conditions diagnosed were hypertension (34.6%), mental health (33.9%), and diabetes (21.5%) Approximately 61.0% of substance users had ≥2 conditions. Those with viral suppression were less likely to be substance users, but were more likely to have ≥2 conditions compared with their counterparts. There was a significant interaction between substance use and multimorbidity (P = 0.037). Stratified by multimorbidity, substance use was associated with unsuppressed viral loads; among those with ≥2 chronic conditions substance users had lower odds of achieving viral suppression compared with nonusers (OR=0.24; 95% CI=0.10–0.55).

Conclusion. Substance use may impede the opportunity for PLWH to achieve viral suppression, increasing their risk of transmission and progression of disease. More research is needed to understand the role substance use plays in impacting viral load, specifically among those with multiple chronic conditions.

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1319. Events of Disengagement from HIV care and Subsequent Reengagement in a Kenyan Pastoralist Community: Frequency, Determinants, and Patient Views

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Background. Regular follow-up HIV-infected patients on antiretroviral therapy (ART) is vital to ensure viral suppression, thus reducing HIV transmission, and HIV-related morbidity and mortality. However, some patients have been reported to have events of disengagement from care with subsequent re-engagement in care, though knowledge on the magnitude and determinants of this phenomenon, particularly in pastoralist communities is scarce.

Methods. A mixed-methods study was carried out among HIV-infected patients on antiretroviral therapy (ART) follow-up between January 2014 and June 2017 at the Baringo County Referral Hospital, Kabarnet, Kenya. Records on their clinic attendance and laboratory follow-up were extracted, and those noted to have a recent event of disengagement from care who later re-engaged in care, were then purposively sampled for in-depth interviews.

Results. 342 patient records were analyzed, of which 48% (166/342) of the patients were noted to be active at the end of the study period, with 63.3% (105/166) of them noted to have one or more events of disengagement from care. Female patients, patients with baseline CD4 counts ≥200 cells/mm³, and patients with a low WHO stage category (I and II) were more likely to return to care after an experience of disengagement from HIV care (P < 0.05). Eight interviewee transcripts showed the following reported reasons for disengagement in care: long distances, stigma, work-related problems, medication side effects, competing priorities, perceived recovery of the health status, medication fatigue, and not being informed of their clinic return dates. Motivators for re-engagement in care included hospital admissions, fear of getting sick like their spouse, and phone reminders.

Conclusion. A vast majority of patients currently active in care experienced multiple events of disengagement from care. Thus, early identification of those who disengage from care is recommended, before they become lost to follow-up.

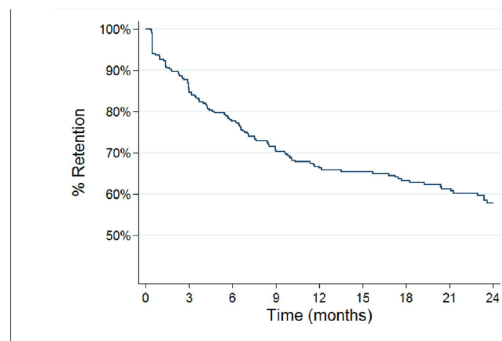


Figure 2: Kaplan Meier curve showing retention rate at 6, 12, and 24 months