Survey items and response distribution

Survey items and response distributions (by percent %).

Items	Scale	Response values 1	2	3	4
		% below			
Acceptability of telehealth for HIV care					
1. If you can use live video calls (like skype, facetime, live chat…) to see and talk to your doctor instead of coming to clinic appointments how likely would you use it?	1–5[a]	13	14	17	31
2. If you can use live video call to see and talk to your doctor instead of coming to clinic appointments, how often would you use it?	1–5[b]	17	20	26	15
Benefits of telehealth for HIV care					
3. This service will help me because it will fit better my schedule	1–5[c]	23	46	11	15
4. This service will help me because I will not need to travel to clinic	1–5[c]	21	42	10	18
5. This service will be good for me because I will have more privacy at home	1–5[c]	19	43	10	22
6. This service will be good for me because no one will see me at the HIV clinic	1–5[c]	12	26	11	39
Concerns about telehealth for HIV care					
7. My doctor will not be able to examine me well	1–5[d]	21	16	14	21
8. My personal information will not be safe using the internet	1–5[d]	20	8	11	14
9. I will not be able to express myself very well	1–5[d]	14	9	14	19
10. I will use too much data on my phone service or internet	1–5[d]	12	5	8	13

[a] 1= very unlikely, 2= unlikely; 3= uncertain, 4= likely, 5=very likely
[b] 1= never, 2= rarely; 3= sometimes, 4= frequently, 5= always
[c] 1= strongly agree, 2= agree; 3= uncertain, 4= disagree, 5= strongly disagree
[d] 1= extremely concerned, 2= moderately concerned; 3= somewhat concerned, 4= slightly concerned, 5= not at a concerned

Conclusion. Telehealth programs for PWH can improve retention in care. A modification of the definition for retention in care, incorporating telehealth, should be considered. Availability and confidence using various telehealth technologies need to be addressed to increase acceptability and usage of telehealth among PWH.

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1043. The impact of integrase strand transfer inhibitors (InSTIs) on weight gain among adults with HIV in clinical care

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Session: P-47. HIV: Treatment

Background. Integrase strand transfer inhibitors (InSTIs) as ART for HIV has been associated with clinically significant weight gain, in addition to the "return to health phenomenon".

Methods. We conducted a cohort study on adults over 18 with HIV, who had baseline weights and an additional weight at least 6 months later. Individuals with malignancies, thyroid disorders, and disseminated tuberculosis or mycobacterium avium complex were excluded. To understand the impact of InSTIs on chronic vs. recently infected persons, we divided the cohort into four groups: (1) well-controlled on non-InSTI ART [WN] (2) well-controlled on InSTI ART [WI] (3) uncontrolled on non-InSTI ART [UN], and (4) uncontrolled on InSTI ART [UI]. Well-controlled persons (viral load < 2000) were proxies for chronic infection on long-term ART and uncontrolled for recently infected and initiated on ART. New diagnoses of diabetes, hyperlipidemia, and hypertension were determined by ICD10 codes. Participants with a weight change more than 10 kg in 6 months were excluded.

Results. 612 of the initial 910 participants in the cohort met the inclusion criteria. Comparing those who remained on the designated regimen throughout the study led to 86 WN, 153 WI, 166 UN, and 145 UI. Mean weight change at 6 months for WN was +0.22 kg (95% CI [-0.86, 1.3]), at 1 year was -0.86 kg (95% CI [-2.94, 1.22]), and at 2 years was +0.026 kg (95% CI [-2.347, 2.399]). For WI, mean weight change at 6 months was +0.21 kg (95% CI [-0.79, 1.21]), at 1 year was -0.50 kg (95% CI [-2.02, 1.04]), and at 2 years was +0.43 kg (95% CI [-1.35, 2.21]). UN gained weight until the first year (+1.74 kg at 6 mo (95% CI [0.24, 3.24]) and +3.84 kg at 1 year (95% CI [1.57, 6.11])), but plateaued at 2 years (+2.42 kg (95% CI [-0.44, 5.28])). At 6 months mean weight gain for UI was +0.78 kg (95% CI [-0.15, 1.71]), at 1 year was +2.33 kg (95% CI [1.02, 3.64]), and at 2 years was +3.04 kg (95% CI [1.2, 4.85]). WI had a higher incidence of diabetes (37% vs. 32%, p=0.40), hyperlipidemia (32% vs. 29%, p=0.66), and hypertension (34% vs. 26%, p=0.19) compared to WN.

Conclusion. InSTIs may confer a larger and more sustained weight gain among individuals in the first two years after ART initiation. Well controlled individuals did not have statistically significant weight change, but those on Insti-based ART had more metabolic diseases.

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1044. The Incidence and Severity of Drug interactions Before and After Switching Antiretroviral Therapy to Bictegravir/Emtricitabine/Tenofovir Alafenamide in Treatment Experienced Patients

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Session: P-47. HIV: Treatment

Background. Switching antiretroviral therapy (ART) in virally suppressed people with HIV (PWH) can simplify treatment, improve tolerability, and limit long-term toxicity. It can also influence the presence of drug interactions (DIs) in a positive or negative manner among patients receiving concomitant medications (CMs). The extent to which switching ART to bictegravir/emtricitabine/tenofovir alafenamide (BIC/FTC/TAF) influences DIs in treatment-experienced PWH is unclear. The purpose of this study was to assess changes in the incidence and severity of DIs after switching to BIC/FTC/TAF.

Methods. This was a multicenter retrospective cohort study of PWH on ART and at least one prescription CM who switched to BIC/FTC/TAF between 3/2018 and 6/2019. Using the University of Liverpool's HIV drug interaction checker, two DI analyses were performed for each patient. The first assessed patients' pre-switch ART regimen with their CM list. The second assessed the same CM list with BIC/FTC/TAF. Each ART-CM combination was given a numerical score of 0 (no or potential weak interaction), 1 (potential interaction), or 2 (contraindicated interaction). Total DI scores for each patient, both before and after switching to BIC/FTC/TAF, were then calculated. A paired t-test analyzed changes in DI scores following ART switches and a linear regression model examined factors contributing to DI score reductions.

Results. A total of 411 patients were included in the analysis (Table 1) of which 236 (57%) had at least one DI present at baseline. On average, patients had a baseline DI score of 1.4 (SD 1.8) and experienced a 1 point reduction (95% CI -1.1,-0.8) after switching to BIC/FTC/TAF ($p < 0.0001$). After adjusting for demographic variables as well as baseline ART and CM categories in the regression model, switching to BIC/FTC/TAF led to significant DI score reductions in patients receiving CMs for the following conditions: cardiovascular disease, neurologic and psychiatric disorders, chronic pain, inflammation, gastrointestinal and urologic conditions and conditions requiring hormonal therapy (Table 2).

Table 1. Descriptive Summary of Baseline Characteristics, n =411.

Table 1. Descriptive Summary of Baseline Characteristics, n =411.

		All (n=411)
Site, n (%)	University of Maryland, Baltimore	100 (24.3)
	Thomas Jefferson University Hospital	95 (23.1)
	The Brooklyn Hospital	61 (14.8)
	Indiana University LifeCare	60 (14.6)
	University of Illinois at Chicago	40 (9.7)
	Memorial Healthcare System	35 (8.5)
	University of California, San Francisco	20 (4.9)
Age, mean (SD)		51.3 (12.4)
Gender, n (%)	Male	253 (61.6)
	Female	151 (36.7)
	Transgender female	7 (1.7)
Race, n (%)	Black/AA	290 (70.6)
	White	75 (18.2)
	Hispanic/Latinx	36 (8.8)
	Asian	8 (1.9)
	Native Hawaiian/Other Pacific Islander	2 (0.5)
Number of years with HIV diagnosis, median (Q1, Q3)[1]		14.0 (8.0, 22.0)
Total number of years on ART, median (Q1, Q3)[2]		10.0 (6.0, 15.0)
Number of previous ART regimens, n (%)[3]	1-3	214 (52.1)
	4-6	60 (14.6)
	7 or more	11 (2.7)
Viral suppression (HIV RNA < 200 copies/mL), n (%)[4]	Yes	324 (78.8)
	No	52 (12.7)
Switch reason, n (%)[5]	Long term safety	97 (23.6)
	Complexity	69 (16.8)
	Other	66 (16.1)
	Drug interactions	58 (14.1)
	Side effects	45 (10.9)
	Not documented	36 (8.8)
	Toxicity	14 (3.4)
	Virologic failure	5 (1.2)
	Cost	2 (0.5)
Polypharmacy (5 or more concomitant medications), n (%)	Yes	234 (56.9)
	No	177 (43.1)
Number of concomitant medications, median (Q1, Q3)		5.0 (3.0, 9.0)
Number of concomitant medications, n (%)	0	7 (1.7)
	1-4	172 (41.8)
	5-9	141 (34.3)
	10-14	66 (16.1)
	15-19	16 (3.9)
	20 or more	9 (2.2)
Dolutegravir-based ART, n (%)		155 (37.7)
Elvitegravir-based ART, n (%)		124 (30.2)
NNRTI-based ART, n (%)		71 (17.3)
PI-based ART, n (%)		59 (14.4)
Presence of at least one interaction between a subject's baseline ART and the following medication categories, n (%)	Neurologic/Psychiatric	91 (22.1)
	Polyvalent Supplements	79 (19.2)
	Cardiovascular	77 (18.7)
	Anti-inflammatory	48 (11.7)
	Hyperglycemic	38 (9.2)
	Gastrointestinal/Urologic	33 (8.0)
	Anti-infective	22 (5.4)
	Pain	22 (5.4)
	Hormonal Therapies	20 (4.9)
	Other	13 (3.2)

[1] There are 51 (12.4%) missing.
[2] There are 144 (35.0%) missing
[3] There are 126 (30.7%) missing.
[4] There are 35 (8.5%) missing.
[5] There are 19 (4.6%) missing

Table 2. Linear Regression for the Difference of DI scores (post – pre), n =376.

Table 2. Linear Regression for the Difference of DI scores (post – pre), n =376.

Variable	Estimate	95% CI	p-value
Intercept (ref: 51 years old and Black/AA)	0.38	(0.01, 0.75)	**0.05**
Age	0.00	(0.00, 0.01)	0.13
White	-0.17	(-0.36, 0.02)	0.08
Other race (Hispanic/Latino, Asian, Native Hawaiian/Other Pacific Islander)	0.05	(-0.18, 0.29)	0.66
Viral suppression (Yes)	-0.17	(-0.38, 0.04)	0.11
Dolutegravir-based ART (Yes)	-0.18	(-0.50, 0.15)	0.28
Elvitegravir-based ART (Yes)	0.00	(-0.34, 0.34)	1.00
NNRTI-based ART (Yes)	0.23	(-0.11, 0.57)	0.19
PI-based ART (Yes)	-0.03	(-0.37, 0.32)	0.89
Interactions between the patient's ART and Cardiovascular Meds at Baseline (Yes)	-1.42	(-1.64, -1.19)	**<.0001**
Interactions between the patient's ART and Hyperglycemic Meds at Baseline (Yes)	0.02	(-0.23, 0.28)	0.85
Interactions between the patient's ART and Anti-inflammatory Meds at Baseline (Yes)	-1.90	(-2.14, -1.65)	**<.0001**
Interactions between the patient's ART and Pain Meds at Baseline (Yes)	-1.49	(-1.85, -1.13)	**<.0001**
Interactions between the patient's ART and Antiinfectives at Baseline (Yes)	-1.05	(-1.38, -0.72)	**<.0001**
Interactions between the patient's ART and Hormonal Theraples at Baseline (Yes)	-0.82	(-1.16, -0.48)	**<.0001**
Interactions between the patient's ART and Neurologic and Psychiatric Meds at Baseline (Yes)	-1.52	(-1.72, -1.32)	**<.0001**
Interactions between the patient's ART and Gastrointestinal and Urologic Meds at Baseline (Yes)	-1.51	(-1.79, -1.24)	**<.0001**
Interactions between the patient's ART and Polyvalent Supplements at Baseline (Yes)	-0.02	(-0.21, 0.17)	0.82
Interactions between the patient's ART and Other Meds at Baseline (Yes)	-0.86	(-1.27, -0.45)	**<.0001**

Conclusion. Switching ART to BIC/FTC/TAF can reduce the incidence of DIs among treatment-experienced PWH who are receiving CMs for a broad range of comorbid conditions.

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1045. Treatment-Related Physical, Emotional, and Psychosocial Challenges and their Impact on Indicators of Quality of Life

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Session: P-47. HIV: Treatment

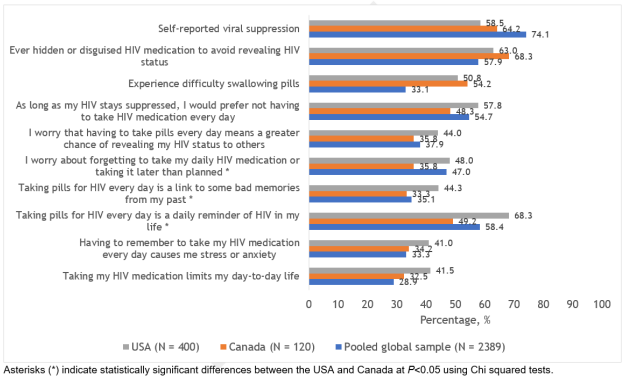
Background. Despite effectiveness of antiretroviral therapy (ART), some people living with HIV (PLHIV) still face barriers to daily oral ART adherence, including inconvenient scheduling, food requirements, adverse effects, and privacy concerns. We characterized treatment-related physical, emotional, and psychosocial challenges among PLHIV from 25 countries.

Methods. 2389 PLHIV adults on ART were surveyed in the 2019 Positive Perspectives Study, a standardized, self-reported survey of HIV patients aged 18-84 years on treatment. Data were collected on ART-related perceptions and behaviors. Descriptive and multivariable analyses were performed.

Results. Most participants were male (67.9%), aged < 50 years (70.7%), and reported viral suppression (74.1%). ART-related challenges included cueing of bad memories (58.4%), disguising HIV pills (57.9%), stress (33.3%), and difficulty swallowing pills (33.1%). Privacy and emotional challenges were generally similar between the USA and Canada (Figure 1). In the pooled sample, those who felt limited by their ART had higher odds of reporting suboptimal overall health (AOR 1.90, 95%CI:1.57-2.29), treatment dissatisfaction (AOR 2.21, 95%CI:1.82-2.69), and suboptimal adherence (AOR 1.90, 95%CI:1.57-2.29). Difficulty swallowing, any side effects, and privacy concerns were associated with increased odds of suboptimal overall health (AOR 2.10, 1.88, and 1.43, respectively) and suboptimal adherence (AOR 2.51, 1.50, and 1.87, respectively; all $P< 0.05$); results for other outcomes are in Figure 2. Overall, 12.6% (302/2389) had shared their HIV status solely with their primary HIV provider, whereas 6.8% (163/2389) "always" shared their HIV status. Only 52.0% were comfortable discussing ART-related privacy concerns with providers, although 29.0% overall missed ≥1 ART dose in the past month from privacy concerns. Overall, 54.7% preferred a nondaily regimen if their HIV stays suppressed, while 72.3% were open to ART with fewer therapies.

Figure 1

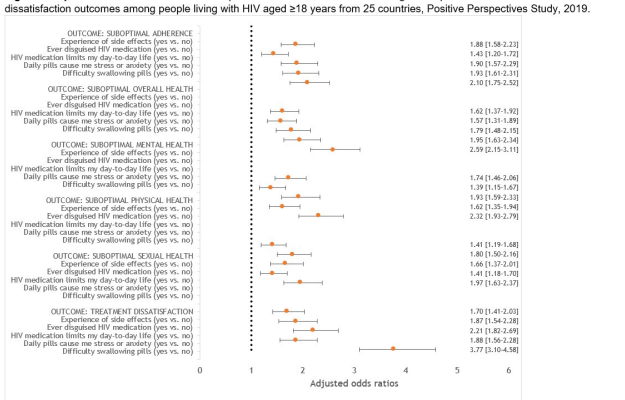
Figure 1. Percentage of people living with HIV aged ≥18 years from 25 countries who reported various physical and psychosocial challenges with their treatment, Positive Perspectives Study, 2019.



Asterisks (*) indicate statistically significant differences between the USA and Canada at $P<0.05$ using Chi squared tests.

Figure 2

Figure 2. Adjusted odds ratios of the relationship between various treatment challenges and poor health and treatment dissatisfaction outcomes among people living with HIV aged ≥18 years from 25 countries, Positive Perspectives Study, 2019.



All analyses were adjusted for age, gender, race, education, region, and duration of disease. Suboptimal adherence was defined as a report of ≥1 reason for which the respondent missed ART doses ≥5 times within the past month.

Conclusion. This study identified several challenges with ART among PLHIV, underscoring the need for increased flexibility of ART delivery to meet diverse patient needs. Addressing these needs may improve overall health outcomes for more PLHIV on therapy.

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1046. Week 48 Outcomes from the BRAAVE 2020 Study: A Randomized Switch to B/F/TAF in African American Adults with HIV

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