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Demographic and Clinical Characteristics of Treatment-Naïve People With HIV, and Their Healthcare Professionals' Reasons for Treatment Choice: Findings From a Real-World Survey in Five European Countries

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Conclusions

- Although first-line Antiretroviral therapy (ART) prescribing generally followed European guidelines,[1] regimen preferences and reasons for choice of regimen as reported by prescribing healthcare professional (HCPs) varied depending on patients' baseline characteristics
- Following balancing on population differences, HCPs' reasons for choice varied when comparing B/F/TAF and DTG/3TC
- Attributes relating to efficacy and side effects were important for choice of both B/F/TAF and DTG/3TC
- These results warrant additional studies to understand HCP perceptions of ART as well as the key needs of People with HIV

Plain Language Summary

- People with HIV can treat their condition using drugs called antiretroviral therapies (ARTs). ARTs allow people with HIV to be symptom free, but many things affect which type of ART people receive from their doctors
- The most common types of ART are called B/F/TAF and DTG/3TC. B/F/TAF is made up of different drugs combined into one tablet and DTG/3TC is made up of two different drugs combined in one tablet
- We wanted to look at the reasons why doctors might prescribe one type of ART over another to patients who were receiving ART for the first time (known as treatment naïve)
- We asked 181 doctors and 1099 treatment naïve people with HIV in Europe between September 2022 and June 2023
- Doctors said that their main concern when prescribing an ART treatment to someone with HIV was the treatment's ability to reduce the amount of HIV in their patients' blood
- Most doctors in our study said they prescribed B/F/TAF or DTG/3TC to treatment naïve people with HIV
- We predicted that doctors would choose B/F/TAF over DTG/3TC for treatment naïve people when doctors were worried about drug interactions with other drugs or food. Doctors would also choose B/F/TAF because it stays longer in the body
- We predicted that doctors would choose DTG/3TC over B/F/TAF for treatment naïve people when they wanted to decrease the number of drugs within one tablet and if they were concerned about the shame of taking HIV medicine
- In the end, doctors thought of a wide range of reasons when choosing an ART type for treatment naïve people with HIV. This study shows how hard it can be when choosing ART treatment

Introduction

- HIV Antiretroviral therapy (ART) has transformed HIV infection into a manageable chronic condition, allowing prolonged disease-free survival, sustained virologic suppression and reduced levels of HIV transmission[2]
- Oral INSTI-based regimens are recommended as a first-line therapy for treatment-naïve (TN) People with HIV by several health bodies including US guidelines
- A variety of factors can influence HCP prescribing patterns, apart from guidelines[3]

Objective

- We aim to compare demographics and clinical characteristics for TN People with HIV receiving different classes of ART, and the reasons for HCP treatment choice with respect to B/F/TAF or DTC/3TG

Methods

- Data were drawn from the Adelphi HIV Disease Specific Programme,[4-7] a real-world, cross-sectional survey including retrospective clinical data run between September 2022 and June 2023 in France, Germany, Italy, Spain, and the UK
- HCPs provided data for ten sequential consulting People with HIV. Demographics and clinical characteristics (where available) were compared between ART classes using ANOVA or Chi-square tests
- Descriptive analysis was used to compare differences between ART classes with respect to HCPs' reasons for choice of current ART
- HCP-reported reasons for treatment choice of B/F/TAF or DTC/3TG were grouped using principal component analysis (PCA), and no amendments were made to the factors produced
- Inverse probability weighted regression adjustment (IPWRA) was used to predict the percentage of People with HIV for whom their HCP would select a response within a given factor by the most frequent ARTs
- The groups (people with HIV currently prescribed B/F/TAF or DTC/3TG) were balanced according to the following covariates: age, sex, employment status, smoking status, sexual partners, history of substance abuse, time from diagnosis to initiation of treatment, viral load prior to initiation of treatment

Results

Demographics (Table 1)

- HCPs (n = 181) provided data for 1099 TN People with HIV
- HCPs were typically based in an urban environment (85%), with 20% currently involved in clinical trials and 40% never have been. Almost three quarters (73%) agreed or strongly agreed that they followed medical practice guidelines (data not shown)
- Overall, TN People with HIV had a median age of 36 (IQR:30-45) years, 72% were cisgender male and 81% (n=756/929) were White (**Table 1**)

Clinical Characteristics (Table 2)

- Across the treatment regimens, statistically significant differences (p<0.05) were observed for most baseline characteristics
- Single-tablet regimen (STR) were the most frequently prescribed (88%), containing an Integrase strand Transfer Inhibitor (INSTI) (69%, n=668/963
- The most prescribed regimens were B/F/TAF (37%) and DTG/3TC (10%), with other treatment regimens grouped by third agent drug class due to lower frequency of prescribing of these agents
- For PWH receiving an MTR, the most common class of third agent drug class were INSTIs which were received by 42% of People with HIV
- The median viral load (VL) prior to current treatment was 31,750 (IQR: 4500-110000; n = 711) copies/mL and CD4 count was 384 (IQR: 240-561, n=737) cells/mm^3
- At the time of data collection, 64% of TN-People with HIV had no comorbidities
- The median time on current treatment was 1.03 years (IQR: 0.4-2.4)

Reasons for Choice (Figure 1)

- The most common HCP-stated reason for selecting current ART was virologic potency (65%), followed by tolerability (52%) and clear and simple dosing instructions (45%)
- Further reasons for treatment selection varied across regimens (**Figure 1**)

Results

Table 1. Baseline demographics of TN-people with HIV by ART regimen and drug class

		BIC/TAF/FTC n = 404	DTG/3TC n = 112	Other DTG-based STRs n = 88	Other INSTI-based STRs n = 64	NNRTI-based STRs n = 197	PI-based STRs n = 98	MTRs n = 136	p-value
Age	Median (IQR)	36.0 (29.0 , 44.0)	35 (30.0 , 43.0)	38.5 (31.0 , 49.0)	40.5 (34.0 , 48.5)	36 (29.0 , 47.0)	34 (29.0 , 42.0)	38.5 (30.0 , 49.0)	0.0034
Sex n (%)	Cisgender man	308 (76.2)	89 (79.5)	60 (68.2)	46 (71.9)	125 (63.8)	73 (75.3)	92 (68.7)	
	Cisgender woman	69 (17.1)	23 (20.5)	17 (19.3)	14 (21.9)	61 (31.1)	16 (16.5)	33 (24.6)	0.0030
	Transgender woman	14 (3.5)	0 (0.0)	8 (9.1)	3 (4.4)	3 (1.5)	5 (5.2)	3 (2.2)	
	Transgender man	1 (0.3)	0 (0.0)	1 (1.1)	1 (1.6)	4 (2.0)	1 (1.0)	2 (1.5)	
	Other	12 (3.0)	0 (0.0)	2 (2.3)	0 (0.0)	3 (1.5)	2 (2.1)	4 (3.0)	
Sexual orientation n (%)	Homosexual	226 (55.9)	62 (55.4)	50 (56.8)	29 (45.3)	73 (37.1)	38 (38.8)	55 (40.4)	0.0002
	Heterosexual	148 (36.6)	41 (36.6)	34 (38.6)	30 (46.9)	111 (56.4)	48 (49.0)	63 (46.3)	
	Bisexual /Pansexual	30 (7.4)	8 (7.1)	4 (4.6)	5 (7.8)	13 (6.6)	11 (11.2)	18 (13.2)	
	Other (specify)	0 (0.0)	1 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	
Ethnicity n (%)	n	354	95	65	47	165	97	106	0.2121
	White	297 (83.9)	85 (89.5)	52 (80.0)	37 (78.7)	130 (78.8)	80 (82.5)	75 (70.8)	
	Hispanic/Latino	31 (8.8)	7 (7.4)	8 (12.3)	4 (8.5)	11 (6.7)	9 (9.3)	9 (8.5)	
	Afro-Caribbean	12 (3.4)	1 (1.1)	3 (4.6)	5 (10.6)	17 (10.3)	6 (6.2)	16 (15.1)	
	Other*	14 (4.0)	2 (2.1)	2 (3.1)	1 (2.1)	7 (4.2)	2 (2.1)	6 (5.7)	

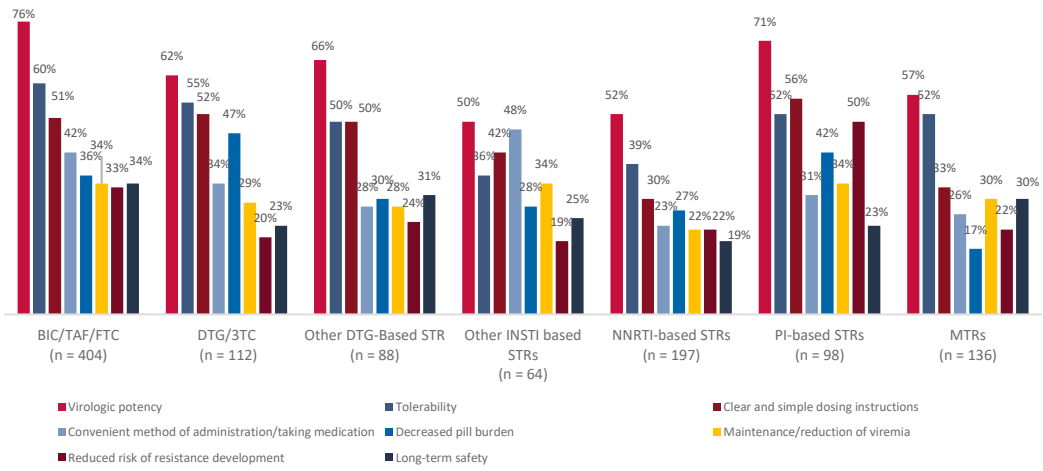
DTG: dolutegravir; INSTI: Integrase strand transfer inhibitors; MTR; Multi-tablet regimen; NNRTI: non-nucleoside reverse transcriptase inhibitors; PI: Protease inhibitors; STR: Single tablet regimen; TN: Treatment-naïve.

Table 2. Baseline clinical characteristics of TN-People with HIV by ART regimen and drug class

		BIC/TAF/FTC n = 404	DTG/3TC n = 112	Other DTG-based STRs n = 88	Other INSTI-based STRs n = 64	NNRTI-based STRs n = 197	PI-based STRs n = 98	MTRs n = 136	p-value
Length of time on current ART, years, median (IQR)		0.9 (0.3, 1.0)	1.0 (0.4, 1.9)	1.9 (0.9, 4.8)	2.1 (0.8, 4.3)	1.2 (0.6, 2.4)	0.8 (0.4, 1.9)	1.4 (0.4, 3.3)	<0.0001
Viral load prior to initiation of current ART, copies/mL, n; median (IQR)		289; 47,000 (9870.0, 1.6e+05)	87; 7814 (1280.0, 38,600.0)	56; 73,781.5 (22,082.5, 1.8e+05)	36; 57,595.5 (15,000.0, 2.3e+05)	103; 18,800 (3444.0, 50000.0)	74; 12,000 (1240.0, 59000.0)	66; 52,450 (10,000.0, 1.5e+05)	0.0191
CD4 count prior to initiation of current ART, cells/mm^3, n; median (IQR)		287; 420 (223.00 , 580.00)	89; 533 (418.00 , 660.00)	58; 306.5 (240.00 , 390.00)	36; 289 (200.00 , 461.00)	113; 340 (260.00 , 500.00)	81; 415 (222.00 , 620.00)	73; 327 (200.00 , 453.00)	<0.0001
CDC stage, n (%)	1 (CD4 count ≥500 cells/mm^3)	293 (72.5)	96 (85.7)	51 (58.0)	46 (71.9)	126 (64.0)	77 (78.57)	77 (56.6)	<0.0001
	2 (CD4 count ≥200 cells/mm^3)	43 (10.6)	7 (6.3)	23 (26.1)	9 (14.1)	41 (20.8)	10 (10.2)	21 (15.4)	
	3 (CD4 count <200 cells/mm^3)	46 (11.4)	1 (0.9)	7 (7.95)	1 (1.6)	15 (7.61)	8 (8.16)	15 (11.0)	
	Unknown	22 (5.5)	8 (7.1)	7 (8.0)	8 (12.5)	15 (7.6)	3 (3.1)	23 (16.9)	
Presence of any resistance mutations, n (%)	n	319	90	65	42	133	52	95	<0.0001
	No treatment resistance mutations	306 (95.9)	84 (93.3)	57 (87.7)	40 (95.2)	107 (80.5)	46 (88.5)	62 (65.3)	
	Treatment resistance mutations (any)	13 (4.1)	6 (6.7)	8 (12.3)	2 (4.8)	26 (19.6)	6 (11.5)	33 (34.7)	
No comorbidities, n (%)		268 (66.3)	78 (69.6)	54 (61.4)	38 (50.0)	127 (64.5)	68 (69.4)	76 (55.9)	0.0261

DTG, dolutegravir; INSTI, Integrase strand transfer inhibitors; MTR, Multi-tablet regimen; NNRTI, non-nucleoside reverse transcriptase inhibitors; PI, Protease inhibitors; STR, Single tablet regimen; TN, Treatment-naïve.

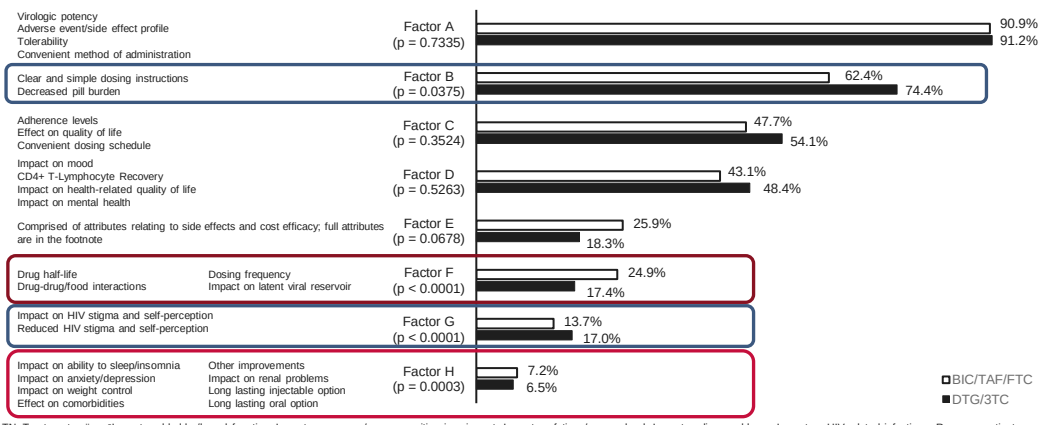
Figure 1. Most common HCP-stated reasons for treatment choice for TN-people with HIV by ART regimen and drug class



DTG, dolutegravir; INSTI, Integrase strand transfer inhibitors; MTR, Multi-tablet regimen; NNRTI, non-nucleoside reverse transcriptase inhibitors; PI, Protease inhibitors; STR, Single tablet regimen; TN, Treatment-naïve.

- IPWRA indicated several PCA-derived factors were associated with BIC/TAF/FTC or DTG/3TC.
- Characteristics aligned with these factors are depicted in **Figure 2**
- Attributes in Factor A were most frequently reported by HCPs as a reason for choice of ART, with no difference between BIC/TAF/FTC and DTG/3TC
- Attributes in Factors F and H were more likely to be associated with the choice of BIC/TAF/FTC by physicians, and attributes in Factors B and G with the choice of DTG/3TC

Figure 2. Predicted percentages for factorized physician-reported reasons for choice of treatment split by BIC/TAF/FTC and DTG/3TC



TN, Treatment-naïve. [a]Impact on bladder/bowel function, Impact on memory/ neurocognitive impairment, Impact on fatigue/energy level, Impact on liver problems, Impact on HIV-related infections, Removes patient concerns about missing a dose, Treatment reimbursement/insurance coverage, Amount of monitoring/resource utilization, Self-care/ability to take part in Activities of Daily Living, Cost effectiveness, Patient out-of-pocket cost, Local and/or regional formulary support

References: **1**. EACS Guidelines 2021. https://www.eacsociety.org/media/final2021eacsguidelinesv11.0_oct2021.pdf (accessed June 24, 2024). **2**. Saag, M.S., et al., *JAMA*, 2020. 324(16): p. 1651-1669. **3**. Price S.M., et al., 2021. *Res. Soc. Admin. Pharm.*17(10): p. 1770-1779. **4**. Anderson, P., et al., *Curr Med Res Opin*, 2008. 24(11): p. 3063-72. **5**. Anderson, P., et al., *Curr Med Res Opin*, 2023 39: p. 1-9. **6**. Babineaux, S.M., et al., *Value Health*, 2016. 17(7): p. A728. **7**. Higgins, V., et al., *Diabetes Metab Syndr Obes*, 2016. 9: p. 371-380.

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Disclosures: **AM**, **TC**, and **JG** are employees of, own stock in, Gilead Sciences, Inc. **HJ**, **KL**, **WA**, **FH** and **TH** are employees of Adelphi Real World.

Limitations: Participating PWH may not reflect the general population of people with HIV, since the DSP only includes patients who are consulting with their physician. This means that PWH who consult more frequently have a higher likelihood of being included.

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