

# WHAT HIV TREATMENT CHARACTERISTICS ARE IMPORTANT TO THE PATIENT? RESULTS FROM A PROSPECTIVE UK SURVEY

Michelle Orme<sup>1</sup>, Alec Miners<sup>2</sup>, Caroline Sabin<sup>3</sup>, Martin Fisher<sup>4</sup>, Sylvia Alfred<sup>5</sup>, Felipe Rogatto<sup>5</sup>, Geraldine Reilly<sup>5</sup>, Rodolphe Perard<sup>5</sup>  
<sup>1</sup>ICERA Consulting Ltd, Swindon; <sup>2</sup>London School of Hygiene & Tropical Medicine, London; <sup>3</sup>University College London, London; <sup>4</sup>Brighton and Sussex University Hospitals, Brighton; <sup>5</sup>Gilead Sciences Europe Ltd, Uxbridge

## Background

- The development of effective single-tablet regimen for anti-retroviral therapy (ART) has led to the prospect of simplified treatment for HIV patients.
- As part of a wider project assessing patient treatment preferences, we set out to collect patients' general opinion on which aspects of treatment were most important to them.

## Methods

- A prospective, multi-country, web-based survey was set up to collect data from HIV patients across Europe.
- A steering committee consisting of clinicians, nurses, pharmacists, patient group representatives, and academics guided the initial survey design.
- HIV patient organisations provided feedback on the pilot survey.
- The data for this analysis were obtained from the UK survey which took place from June to October 2014.
- The final section of the survey consisted of statements regarding the importance of five selected aspects of ART treatment.
- Patients were asked to rate how important the treatment attribute was to them, using a five-point Likert scale.
- We conducted a post-hoc analysis of these responses by gender, ethnic origin, single-tablet regimen and adherence status.
- The final question was an open question prompting the patient for their opinion on what aspects of treatment are important to them and the responses were categorised into themes. These are displayed as a word cloud where the size of the text corresponds to how frequently the theme occurs.

## Results

- Out of 316 UK respondents, responses were analysed for 291 HIV patients who were receiving ART (92.1%).
- Patient demographics are summarised in Table 1.
  - 70% of the respondents were men who have sex with men and 17% were female.
  - Across this sample, the median duration of treatment was 5 (range 0-27) years, median age was 44 (range 21-66) years, and median time since diagnosis was 8 years (range 0-30).
  - 57.4% of the respondents in the survey reported that they occasionally miss one or more doses of their ART treatment.

Table 1: Patient demographics by route of infection

	MSM	Other sexual contact	Injection drug use	Blood transfusion	Other	Total
<b>Male, N</b>	203	15	1	3	20	242
White, n (%)	191 (78.9%)	1 (0.4%)	1 (0.4%)	0 (0%)	13 (5.4%)	206 (85.1%)
Black Afro-Caribbean, n (%)	10 (4.1%)	13 (5.4%)	0 (0%)	3 (1.2%)	6 (2.5%)	32 (13.2%)
Age, median [range]	43 [21, 66]	50 [33, 56]	52	54 [51, 54]	40.5 [28, 61]	44 [21, 66]
Years since diagnosis, median [range]	7 [0, 30]	11 [2, 25]	2	12 [12, 17]	4.25 [1, 20]	8 [0, 30]
Years of ART treatment, median [range]	4 [0, 27]	11 [0, 17]	1.8	12 [10, 17]	3 [0, 18]	4 [0, 27]
Tablets per day, median [range]	3 [1, 20]	3 [1, 6]	1	5 [2, 5]	2 [1, 14]	3 [1, 20]
Never miss ART dose, n (%)	83 (40.9%)	10 (66.7%)	0	2 (66.7%)	11 (55%)	106 (43.8%)
<b>Female, N</b>	0	32	0	0	17	49
White, n (%)	-	11 (22.4%)	-	-	1 (2%)	12 (24.5%)
Black Afro-Caribbean, n (%)	-	21 (42.9%)	-	-	15 (30.6%)	36 (73.5%)
Age, median [range]	-	44.5 [29, 69]	-	-	47 [39, 62]	45 [29, 69]
Years since diagnosis, median [range]	-	9 [0, 27]	-	-	10 [2, 21]	9 [0, 27]
Years of ART treatment, median [range]	-	8.5 [0, 18]	-	-	10 [2, 14]	9 [0, 18]
Tablets per day, median [range]	-	2 [1, 8]	-	-	2 [1, 8]	2 [1, 8]
Never miss ART dose, n (%)	-	11 (34.4%)	-	-	7 (41.2%)	18 (36.7%)
<b>All, N</b>	203	47	1	3	37	291
White, n (%)	191 (65.6%)	12 (4.1%)	1 (0.3%)	0 (0%)	14 (4.8%)	218 (74.9%)
Black Afro-Caribbean, n (%)	10 (3.4%)	34 (11.7%)	0 (0%)	3 (1%)	21 (7.2%)	60 (20.6%)
Age, median [range]	43 [21, 66]	45 [29, 69]	52	54 [51, 54]	45 [28, 62]	44 [21, 69]
Years since diagnosis, median [range]	7 [0, 30]	10 [0, 27]	2	12 [12, 17]	7 [1, 21]	8 [0, 30]
Years of ART treatment, median [range]	4 [0, 27]	9 [0, 18]	1.8	12 [10, 17]	7 [0, 18]	5 [0, 27]
Tablets per day, median [range]	3 [1, 20]	3 [1, 8]	1	5 [2, 5]	2 [1, 14]	3 [1, 20]
Never miss ART dose, n (%)	83 (40.9%)	21 (44.7%)	0	2 (66.7%)	18 (48.6%)	124 (42.6%)

MSM, men who have sex with men; Other, other/unknown/not answered

- Most patients rated 'the shape, size and colour of tablets do not change' as 'Not important' (54%) [Table 2].
- 'Fewer clinic visits to monitor treatment or change tablets' and 'fewer boxes to carry around' were rated as 'Important' by 30% and 28% of patients.
- 'Other people cannot tell that I am taking HIV medicines' and 'HIV tablets can be taken together at the same time' were rated as 'Very important' by 37% and 51% of respondents respectively.
- For all five of these questions, women chose a higher importance rating more frequently than men.
- For all five of these questions, black Afro-Caribbean respondents chose 'Very important' more frequently than other respondents.
- Respondents currently on a single tablet regimen were more likely to rate 'Other people cannot tell I am taking HIV medicines' as 'Very important' [49.5% versus 30.3%]
- For the open question "What other HIV treatment characteristics are important to you?" fewer side effects and, in particular, concerns over sleep problems were mentioned most frequently by respondents [see Figure 1].
- Mental health problems were a concern to some patients. Other responses related to the inconvenience of being tied to mealtime dosing, a desire for flexible dosing and fewer, easier to swallow, smaller tablets.
- Overall, the importance ratings and the open responses indicate that there is greater concern over aspects of treatment that impact on a patient's daily routine.

## Results (cont'd)

Table 2: Frequency of response to treatment importance statements

	Rating	Not important	Of little importance	Moderately important	Important	Very important
<b>"It is important to me that the shape, size, or colour of my tablets do not change"</b>						
<b>All (n=291)</b>		<b>157 (54%)</b>	<b>48 (16.5%)</b>	<b>32 (11%)</b>	<b>24 (8.3%)</b>	<b>30 (10.3%)</b>
Gender	Male (n=242)	143 (59.1%)	40 (16.5%)	25 (10.3%)	18 (7.4%)	16 (6.6%)
	Female (n=49)	14 (28.6%)	8 (16.3%)	7 (14.3%)	6 (12.2%)	14 (28.6%)
Ethnic Origin	White (n=218)	128 (58.7%)	43 (19.7%)	26 (11.9%)	13 (6%)	8 (3.7%)
	Black (n=60)	20 (33.3%)	4 (6.7%)	6 (10%)	9 (15%)	21 (35%)
	Other (n=13)	9 (69.2%)	1 (7.7%)	0 (0%)	2 (15.4%)	1 (7.7%)
Single tablet regimen	Yes (n=101)	51 (50.5%)	17 (16.8%)	12 (11.9%)	11 (10.9%)	10 (9.9%)
	No (n=190)	106 (55.8%)	31 (16.3%)	20 (10.5%)	13 (6.8%)	20 (10.5%)
Do you ever miss a dose?	Never (n=124)	71 (57.3%)	20 (16.1%)	10 (8.1%)	9 (7.3%)	14 (11.3%)
	Yes (n=167)	86 (51.5%)	28 (16.8%)	22 (13.2%)	15 (9%)	16 (9.6%)
<b>"It is important to me that I need fewer clinic visits to monitor treatment or change tablets"</b>						
<b>All (n=290)</b>		<b>36 (12.4%)</b>	<b>39 (13.5%)</b>	<b>76 (26.2%)</b>	<b>88 (30.3%)</b>	<b>51 (17.6%)</b>
Gender	Male (n=242)	30 (12.4%)	35 (14.5%)	70 (28.9%)	69 (28.5%)	38 (15.7%)
	Female (n=48)	6 (12.5%)	4 (8.3%)	6 (12.5%)	19 (39.6%)	13 (27.1%)
Ethnic Origin	White (n=218)	31 (14.2%)	32 (14.7%)	67 (30.7%)	58 (26.6%)	30 (13.8%)
	Black (n=59)	4 (6.8%)	5 (8.5%)	7 (11.9%)	24 (40.7%)	19 (32.2%)
	Other (n=13)	1 (7.7%)	2 (15.4%)	2 (15.4%)	6 (46.2%)	2 (15.4%)
Single tablet regimen	Yes (n=101)	5 (5%)	14 (13.9%)	27 (26.7%)	39 (38.6%)	16 (15.8%)
	No (n=189)	31 (16.4%)	25 (13.2%)	49 (25.9%)	49 (25.9%)	35 (18.5%)
Do you ever miss a dose?	Never (n=124)	14 (11.3%)	16 (12.9%)	32 (25.8%)	37 (29.8%)	25 (20.2%)
	Yes (n=166)	22 (13.3%)	23 (13.9%)	44 (26.5%)	51 (30.7%)	26 (15.7%)
<b>"It is important to me that I have fewer boxes of tablets to carry around or travel with"</b>						
<b>All (n=290)</b>		<b>27 (9.3%)</b>	<b>42 (14.5%)</b>	<b>70 (24.1%)</b>	<b>80 (27.6%)</b>	<b>71 (24.5%)</b>
Gender	Male (n=242)	25 (10.3%)	36 (14.9%)	66 (27.3%)	62 (25.6%)	53 (21.9%)
	Female (n=48)	2 (4.2%)	6 (12.5%)	4 (8.3%)	18 (37.5%)	18 (37.5%)
Ethnic Origin	White (n=218)	26 (11.9%)	39 (17.9%)	61 (28%)	51 (23.4%)	41 (18.8%)
	Black (n=59)	0 (0%)	2 (3.4%)	5 (8.5%)	25 (42.4%)	27 (45.8%)
	Other (n=13)	1 (7.7%)	1 (7.7%)	4 (30.8%)	4 (30.8%)	3 (23.1%)
Single tablet regimen	Yes (n=101)	4 (4%)	8 (7.9%)	20 (19.8%)	43 (42.6%)	26 (25.7%)
	No (n=189)	23 (12.2%)	34 (18%)	50 (26.5%)	37 (19.6%)	45 (23.8%)
Do you ever miss a dose?	Never (n=124)	5 (4%)	14 (11.3%)	38 (30.7%)	32 (25.8%)	35 (28.2%)
	Yes (n=166)	22 (13.3%)	28 (16.9%)	32 (19.3%)	48 (28.9%)	36 (21.7%)
<b>"It is important to me that other people cannot tell I am taking HIV medicines"</b>						
<b>All (n=289)</b>		<b>55 (19%)</b>	<b>39 (13.5%)</b>	<b>45 (15.6%)</b>	<b>43 (14.9%)</b>	<b>107 (37%)</b>
Gender	Male (n=241)	48 (19.9%)	35 (14.5%)	43 (17.8%)	33 (13.7%)	82 (34%)
	Female (n=48)	7 (14.6%)	4 (8.3%)	2 (4.2%)	10 (20.8%)	25 (52.1%)
Ethnic Origin	White (n=218)	50 (23%)	32 (14.8%)	43 (19.8%)	31 (14.3%)	61 (28.1%)
	Black (n=59)	3 (5.1%)	4 (6.8%)	1 (1.7%)	9 (15.3%)	42 (71.2%)
	Other (n=13)	2 (15.4%)	3 (23.1%)	1 (7.7%)	3 (23.1%)	4 (30.8%)
Single tablet regimen	Yes (n=101)	13 (12.9%)	9 (8.9%)	14 (13.9%)	15 (14.9%)	50 (49.5%)
	No (n=188)	42 (22.3%)	30 (16%)	31 (16.5%)	28 (14.9%)	57 (30.3%)
Do you ever miss a dose?	Never (n=124)	13 (10.5%)	25 (20.2%)	21 (16.9%)	18 (14.5%)	47 (37.9%)
	Yes (n=165)	42 (25.5%)	14 (8.5%)	24 (14.6%)	25 (15.2%)	60 (36.4%)
<b>"It is important to me that my HIV tablets can be taken together at the same time"</b>						
<b>All (n=288)</b>		<b>10 (3.5%)</b>	<b>11 (3.8%)</b>	<b>32 (11.1%)</b>	<b>88 (30.6%)</b>	<b>147 (51%)</b>
Gender	Male (n=240)	9 (3.8%)	10 (4.2%)	28 (11.7%)	71 (29.6%)	122 (50.8%)
	Female (n=48)	1 (2.1%)	1 (2.1%)	4 (8.3%)	17 (35.4%)	25 (52.1%)
Ethnic Origin	White (n=218)	8 (3.7%)	10 (4.6%)	26 (12%)	71 (32.9%)	101 (46.8%)
	Black (n=58)	1 (1.7%)	0 (0%)	5 (8.5%)	17 (28.8%)	36 (61%)
	Other (n=13)	1 (7.7%)	1 (7.7%)	1 (7.7%)	0 (0%)	10 (76.9%)
Single tablet regimen	Yes (n=101)	3 (3%)	1 (1%)	7 (7%)	35 (35%)	54 (54%)
	No (n=188)	7 (3.7%)	10 (5.3%)	25 (13.3%)	53 (28.2%)	93 (49.5%)
Do you ever miss a dose?	Never (n=124)	2 (1.6%)	4 (3.2%)	16 (12.9%)	34 (27.4%)	68 (54.8%)
	Yes (n=164)	8 (4.9%)	7 (4.3%)	16 (9.8%)	54 (32.9%)	79 (48.2%)

Figure 1: Responses to the open question: "What other HIV treatment characteristics are important to you?"



## Conclusion

- UK patients rate several treatment characteristics as important, including a simplified treatment regimen with fewer tablets, a more flexible dosing schedule that is not tied to mealtimes, and less conspicuous to other people.
- The responses to the open question also underlined the importance of these characteristics, but highlighted the importance of other attributes such as fewer side effects, such as sleep problems and mental health issues, and smaller, easier to swallow tablets.
- Further information on patient preferences can be found on the accompanying poster (P4).