

## Background

Current antiretroviral treatments (ARTs) require daily oral dosing, a challenge for some people living with HIV (PLHIV).<sup>1</sup>

Four categories of unmet medical needs associated with daily oral ARTs have been identified in studies/key informant interviews with healthcare professionals (HCPs) and PLHIV:<sup>2</sup>

1. Medical conditions interfering with daily oral administration
2. Suboptimal adherence
3. Confidentiality concerns (stigma)
4. Quality of life issues with daily oral dosing

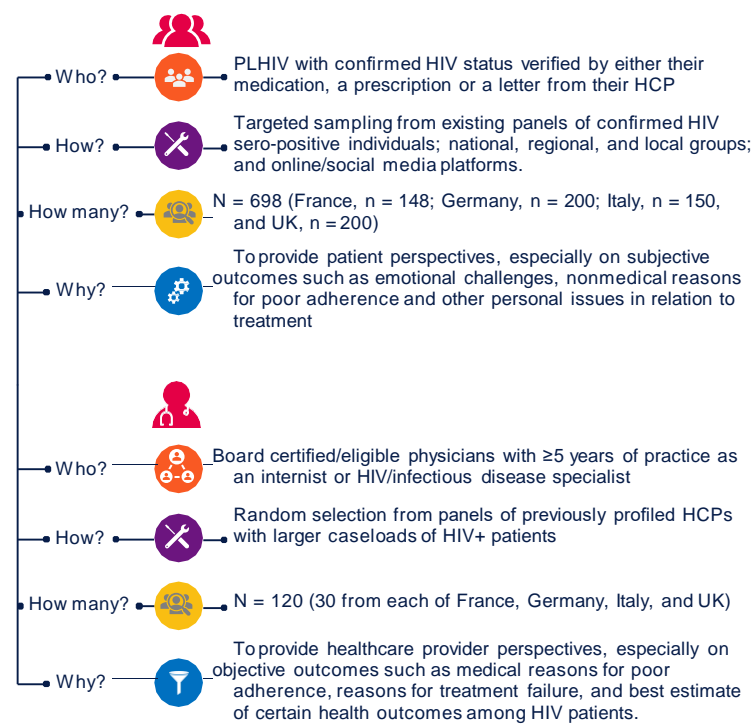
## Objective

To quantify these four categories of unmet need to assess potential benefits of alternatives to daily oral ARTs e.g., injectable long-acting regimens.

## Methodology

- Data came from the EU Unmet Needs Study.<sup>2</sup>
- Study was conducted from June-August 2019 in Germany, Italy, UK, and France.
- Two study populations:

- ✗ PLHIV (N = 698, of whom 688 were on ART) [France, 144; Germany, 198; Italy, 150; UK, 196]
- ✗ HCPs (N = 120, 30 per country)



## Measures – 4 categories of unmet medical needs

### 1 Medical Conditions Making Daily Oral ART Challenging

- "Malabsorption", e.g., from fistula, abdominal resection, or gastric by-pass
- "Gastro-intestinal issues interfering with oral administration", e.g., Gastro-esophageal reflux disease
- "Difficulty to swallow" e.g. phobia or pill aversion, esophagitis, mechanical obstruction
- "Neurocognitive conditions", e.g. Parkinson, Alzheimer, mental health issues (e.g. depression, anxiety, dementia, schizophrenia, behavioral/mood or emotional disorder due or not to recreational drug use)
- Drug-drug interactions (changed or modified their ART because of drug-drug interactions)

### 2 Suboptimal adherence

Adherence to treatment considered broadly, not only in terms of missed doses but also taking the pills at the right time and under the right conditions without overdosing:

- Among HCPs: "... what percentage of your patients on ART do you believe are not perfectly adhering to their regimen?"
- Among PLHIV: 'Missing' to take HIV Medication 'As Prescribed' in the Past Month 'Sometimes', 'Often', or 'Very Often'

### 3 Privacy and confidentiality challenges

Similar questions were asked in the HCP and PLHIV surveys regarding:

- Sharing of their HIV status with others
- Hiding of HIV medication to prevent others from knowing their HIV status
- Concerns regarding inadvertent disclosure of their HIV status
- Perceived stigma

### 4 Emotional Challenges

HCP and PLHIV questionnaires assessed treatment-related challenges, including:

- Patients' emotional well-being in coping with their HIV diagnosis
- Worries and concerns about HIV and/or HIV treatment
- Dosing schedule
- Perception of daily oral dosing as daily reminder of HIV
- Perceived short-, intermediate, and long-term impacts of treatment (e.g., impact on day-to-day life, work, or leisure activities)
- Adherence anxiety (e.g., "I worry about missing doses and not being suppressed anymore", or "I worry about missing doses and transmitting the disease which is impacting my sex life")

## Analyses

- For the HCP survey, the unit of analyses was the individual HCP for outcomes involving the physician's perceptions (n = 120), but the physician's best estimate of the patient population as a whole for outcomes involving number and percentage of patients that met a characteristic of interest.
- All results from the PLHIV survey had the individual respondent as the unit of analysis. All analyses were among those on ART (n = 688).
- Descriptive analyses were performed. Data were summarized using means and percentages.

## Results

### Demographics

HCPs reported managing a mean (SD) of 299 (177) HIV+ patients, of whom 85.7 (15.9)% were currently on ART. Among PLHIV, the mean (SD) age was 40.9 (12.0) years.

Fig 1. Characteristics of the study population (%)

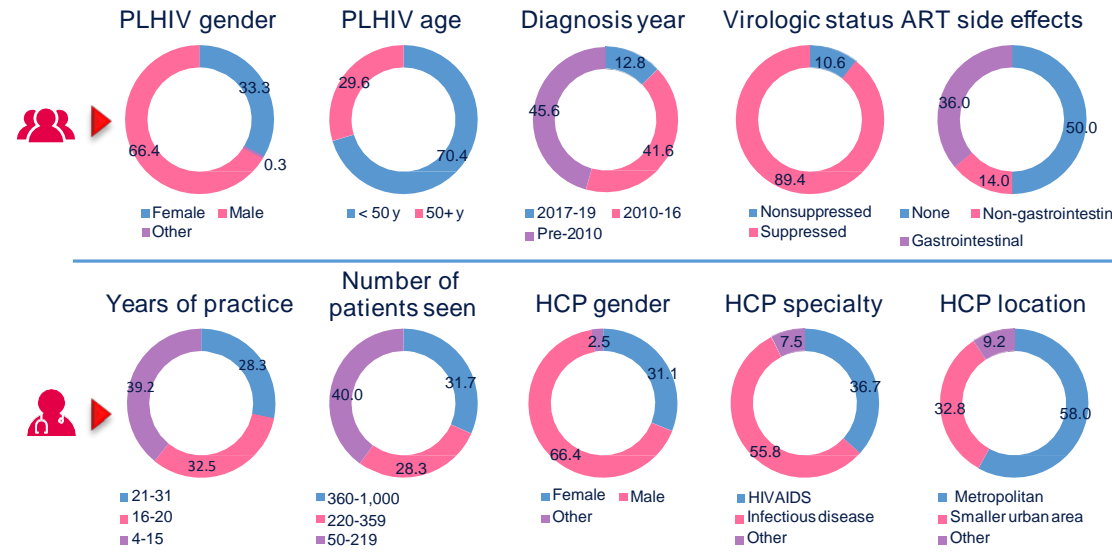
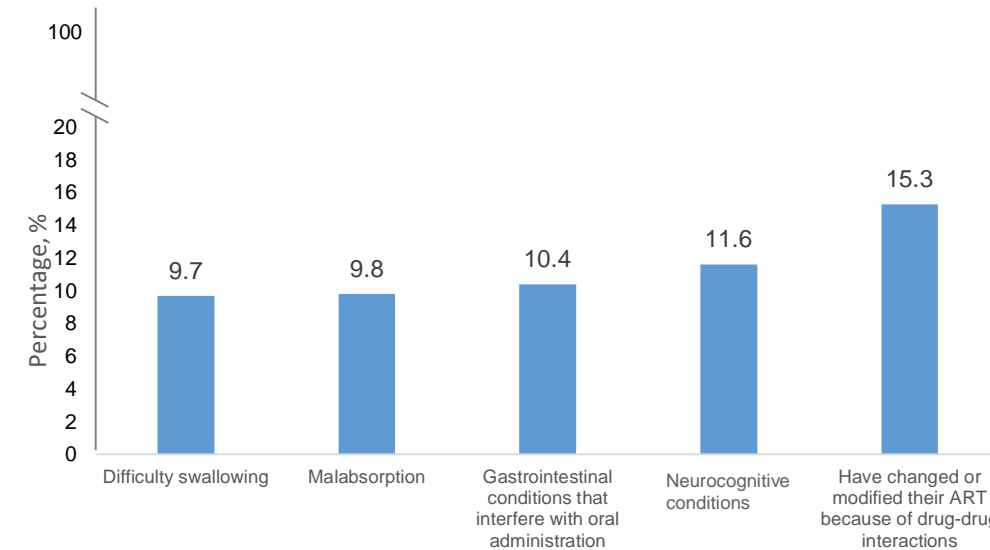


Fig 2. HCP-reported distribution of their patients with different conditions and sub-optimal adherence, overall and by country

Distribution	MALABSORPTION					GI ISSUES					DYSPHAGIA					CNS CONDITIONS					NON-ADHERENCE							
	None	1-10%	11-20%	21-30%	31-40%	41-50%	51-100%	None	1-10%	11-20%	21-30%	31-40%	41-50%	51-100%	None	1-10%	11-20%	21-30%	31-40%	41-50%	51-100%	None	1-10%	11-20%	21-30%	31-40%	41-50%	51-100%
POOLED	15.0	59.2	15.8	4.2	1.7	0.8	3.3	15.0	59.2	15.8	4.2	1.7	0.8	3.3	6.7	65.8	18.3	20.0	5.0	14.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
FRANCE	20.0	53.3	20.0	0.0	0.0	0.0	6.7	20.0	53.3	20.0	0.0	0.0	0.0	6.7	6.7	43.3	36.7	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
GERMANY	23.3	53.3	16.7	0.0	0.0	0.0	6.7	23.3	53.3	16.7	0.0	0.0	0.0	6.7	10.0	73.3	20.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
ITALY	0.0	70.0	23.3	3.3	0.0	0.0	3.3	0.0	70.0	23.3	3.3	0.0	0.0	3.3	0.0	76.7	13.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
UK	16.7	60.0	3.3	13.3	6.7	0.0	6.7	13.3	66.7	6.7	10.0	10.0	0.0	3.3	10.0	70.0	10.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

### 1 Medical conditions:

Fig 3. HCP-reported medical challenges to daily oral intake of ART (% of HIV patients)



### 2 Suboptimal adherence

Fig 4. HCP and PLHIV-reported sub-optimal adherence to daily oral administration of HIV medicines

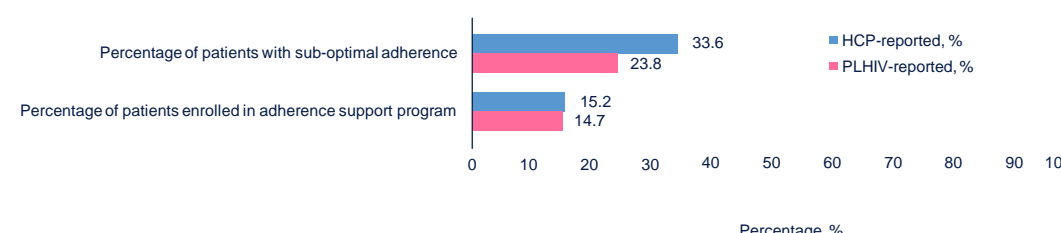
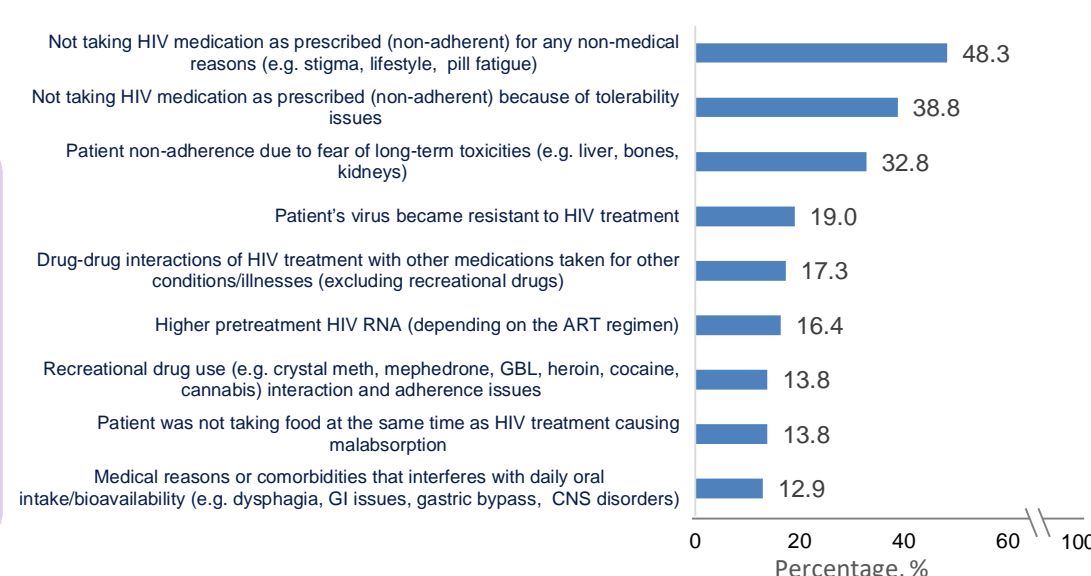
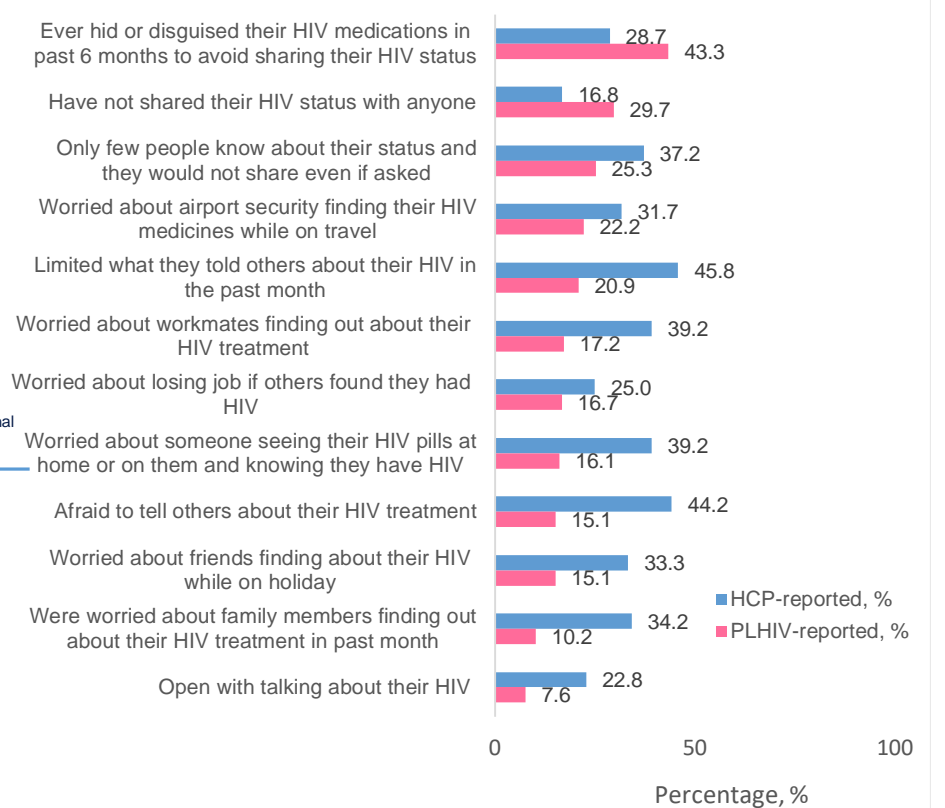


Fig 5. HCP-reported reasons for lack of virologic suppression among HIV patients currently taking ART (% of HIV patients)



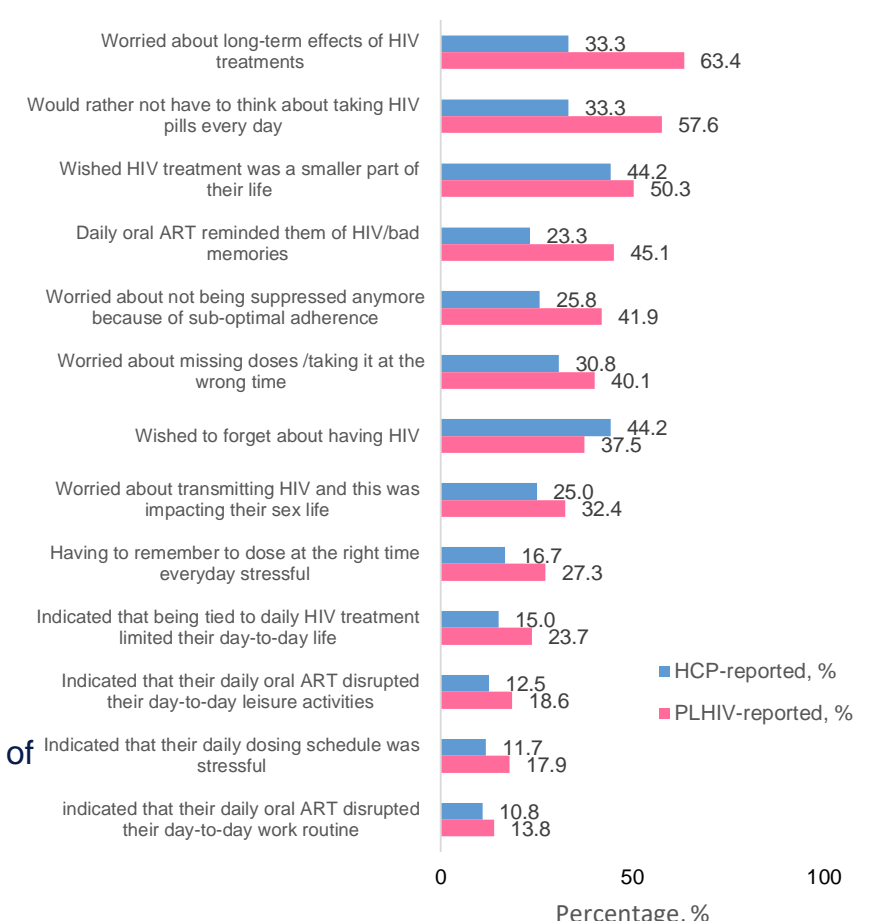
### 3 Privacy concerns

Fig 6. HCP and PLHIV-reported privacy/stigma challenges with daily oral administration of HIV medicines



### 4 Emotional challenges

Fig 7. HCP and PLHIV-reported emotional challenges with daily oral administration of HIV medicines



## Strengths and Limitations

**Strengths:** By assessing the complementary perspectives of both providers and PLHIV, this study ensured a more complete coverage of unmet needs. The data are recent and captured a broad range of issues of key importance to HIV care.

**Limitations:** The self-reported information may be subject to mis-reporting. Also, the cross-sectional design afforded only one single snapshot in time. The non-probabilistic sampling and web surveys may further limit generalizability.

## Conclusions

- ✗ HCPs estimated that approximately 10–15% of their patients were affected by each medical condition identified as interfering with daily oral administration.
- ✗ Of all PLHIV surveyed, 23.8% reported suboptimal adherence to their antiretroviral therapy.
- ✗ HCPs identified 'non-adherence for any non-medical reason' as the primary cause of virologic failure.
- ✗ Of surveyed PLHIV, 43.3% reported hiding their medication, while 45.1% saw their tablets as a daily reminder of HIV.
- ✗ For some PLHIV, daily oral medication presents challenges and there is a need for alternative modes and frequencies of administration.

## References

- 1 de Los Rios P, Okoli C, Castellanos E, et al. Physical, Emotional, and Psychosocial Challenges Associated with Daily Dosing of HIV Medications and Their Impact on Indicators of Quality of Life: Findings from the Positive Perspectives Study. *AIDS Behav.* 2020 Oct 7.
- 2 Clark L, Karki C, Noone J, et al. Quantifying people living with HIV who would benefit from an alternative to daily oral therapy: Perspectives from HIV physicians and people living with HIV. *Population Medicine.* 2020;2(October):33.

## Acknowledgements

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