

Impact of Antiretroviral Therapy on Treatment Satisfaction and Quality of Life of PLWH in Europe

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Introduction

Although current antiretroviral therapy (ART) is highly effective, there are a number of factors that impact quality of life (QoL) and treatment satisfaction among people living with HIV (PLWH), which can lead to treatment switches.^{1,2} With the continued development of new therapies, it is important to explore the factors that lead patients to switch therapies

Objectives

- To explore the issues impacting treatment satisfaction among PLWH across 5 European countries (Germany, UK, Spain, Italy, and France)
- To understand the strength of preferences for different attributes associated with ART through a mixed-methods approach
 - There will be a specific focus on the attributes and domains that motivate PLWH to consider switching ARTs

Methods and Study Design

- This study was designed to explore a range of issues related to current ARTs through semi-structured concept elicitation interviews with PLWH
- The relative strength of preferences for attributes associated with current ARTs was estimated using a discrete choice experiment (DCE)
 - A targeted literature review guided the development of the interview guide. An advisory board with HIV experts was held to develop the attributes and levels of the DCE
 - The interview guide explored factors related to ART, the relationship between PLWH and clinicians, social support, adherence, and impact on QoL
 - The DCE is a standard survey method for capturing patients' strength of preference for different features of a treatment such as effectiveness compared with side effects and convenience
 - Seven attributes of ART were selected for inclusion in the DCE (see Figure 1). Treatment attributes were combined into hypothetical treatment profiles (using orthogonal design) and presented in pairs, and PLWH chose which treatment they preferred
 - The interview guide and DCE were piloted with PLWH (n=5)

Sample

- Ethical approval was obtained through review boards in each country
- PLWH were recruited via clinical sites or specialist recruitment agencies
 - A total of 120 PLWH took part in semi-structured in-depth interviews conducted either face to face or by telephone by experienced interviewers
 - A total of 1629 PLWH completed the DCE either online or on paper. After exclusion of surveys that failed sensitivity tests and incomplete data, 1510 PLWH remained

Data Analysis

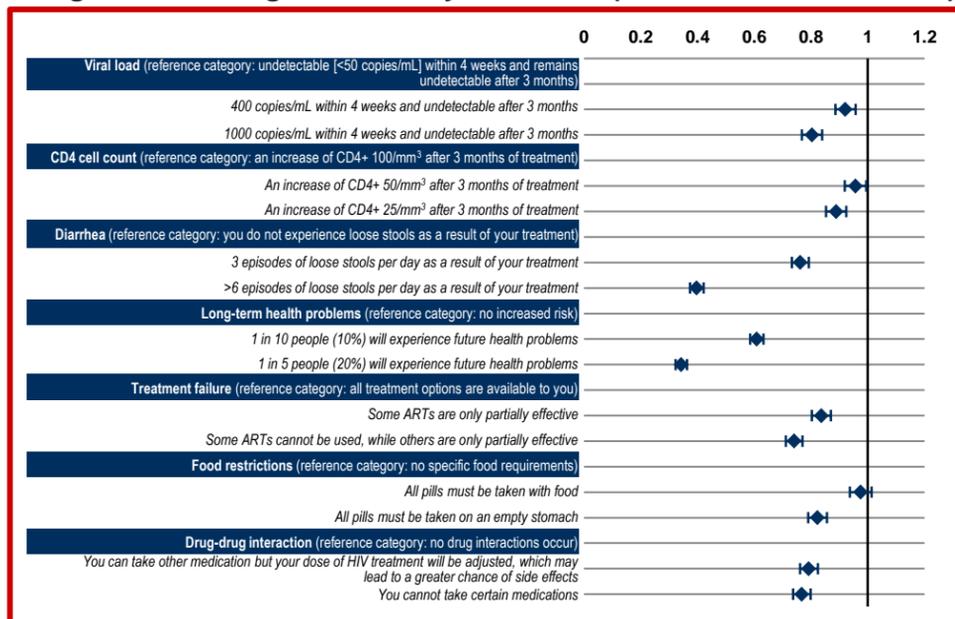
- Qualitative data were analysed thematically using MAXQDA software
- DCE results underwent a mixed logit regression model to analyse patient preferences for treatment attributes

Results

Sociodemographic Data

- In the qualitative study, 95% of PLWH were male, with a mean age of 45.3 years (SD=5.02). Most participants were highly treatment experienced. The majority of PLWH in UK, Italy, and France had switched treatments twice or more and had an undetectable viral load
- In the DCE study, 71% of PLWH were male, with a mean age of 43 years (SD=10.4). Treatment experience varied among the sample, with 24.7% on ART for ≥ 7 years, but most PLWH had experienced treatment switches

Figure 1. DCE Regression Analysis Results (Odds Ratios and 95% CIs)



- An adjusted odds ratio <1 signified lower odds of selecting a treatment with this characteristic category, compared with the reference category, independently of other characteristics

Table 1. Qualitative Themes Regarding Treatment Switches

Theme	Main reasons for switching
Side effects	Many PLWH reported the impact of side effects, including gastrointestinal effects, rash, depression, sleep disturbances, and neuropathy, which affected their work and social lives. The debilitating impact of side effects was one of the most common reasons for PLWH to switch ART
	<p><i>"If I had side effects the first thing that would happen is that I would start not taking it correctly and then I would ask the doctor to change it" (Spain)</i></p> <p><i>"I couldn't have handled it [diarrhoea] for another week ... I had to change something ... I was close to stopping the therapy if it had carried on like that" (Germany)</i></p>
Convenience	Attributes impacting treatment satisfaction related to convenience, such as number of daily doses and food restrictions, which affected patients' social lives. The availability of treatments without this requirement was another reason for switching ART
	<p><i>"You can't take that pill with food.... So ... it does affect quality of life in terms of the fact that you can't go out late and have a late meal" (UK)</i></p> <p><i>"Before I used to have a lot more drugs... I had two administrations per day, now I only have one. The treatment has been made lighter which suited me fine" (France)</i></p>
Effectiveness and treatment failure	All PLWH reported that their ART was highly effective, and most were not too concerned about treatment failure as they trusted their clinicians and believed there were other therapy options. However, patients' viral load increasing or the availability of new, more effective treatments prompted ART switches
	<p><i>"I have faith in the medication. But if it were to stop working, I assume there would be an alternative... I am sure the doctors would know what to suggest next" (Italy)</i></p> <p><i>"My defenses weren't increasing, I had 300 or 350 and the doctor said he was going to give me this treatment to see if my defenses would recover" (Spain)</i></p>
Long-term toxicity	Some PLWH said they avoided dwelling on the long-term risks associated with ART as they had no choice but to take it; however, a number of patients described the worry and uncertainty of potential health problems in the future (eg, cardiovascular, liver or kidney diseases, osteoporosis)
	<p><i>"I also worry about damage to my inner organs, liver, etc. These are things I think about and I wonder whether I will be paying the price when I'm old" (Germany)</i></p>

Conclusions

- The DCE shows that PLWH have a strong preference for ART that is highly effective, avoids side effects, and reduces the risk of long-term toxicity. Food restrictions were less important to PLWH when trading off attributes
- The mixed-methods approach provides context to these drivers. PLWH trust their ART to be effective, yet a number of issues continue to impact their satisfaction with treatment and QoL, which can lead to treatment switches

Acknowledgement

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References

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