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Introduction

- Current antiretroviral treatments (ARTs) require daily oral dosing—a challenge for some people living with HIV (PLHIV).¹
- Unmet needs associated with daily oral dosing include medical conditions interfering with oral administration, suboptimal adherence, confidentiality concerns, and emotional wellbeing related to daily tablet requirements.²
- With dosing every two months, long-acting cabotegravir and rilpivirine (CAB + RPV LA) is an innovative treatment for virally suppressed PLHIV proven to be as effective as daily oral ARTs.^{3,4}
- We assessed what proportion of PLHIV, and physicians would be interested in this long-acting regimen (LAR), and why.

Methods

- Two web-based surveys were administered to 120 HIV physicians and 688 PLHIV on ART from France, Germany, Italy, and the UK during June-August 2019.
- A balanced overview of the long-acting regimen was provided:

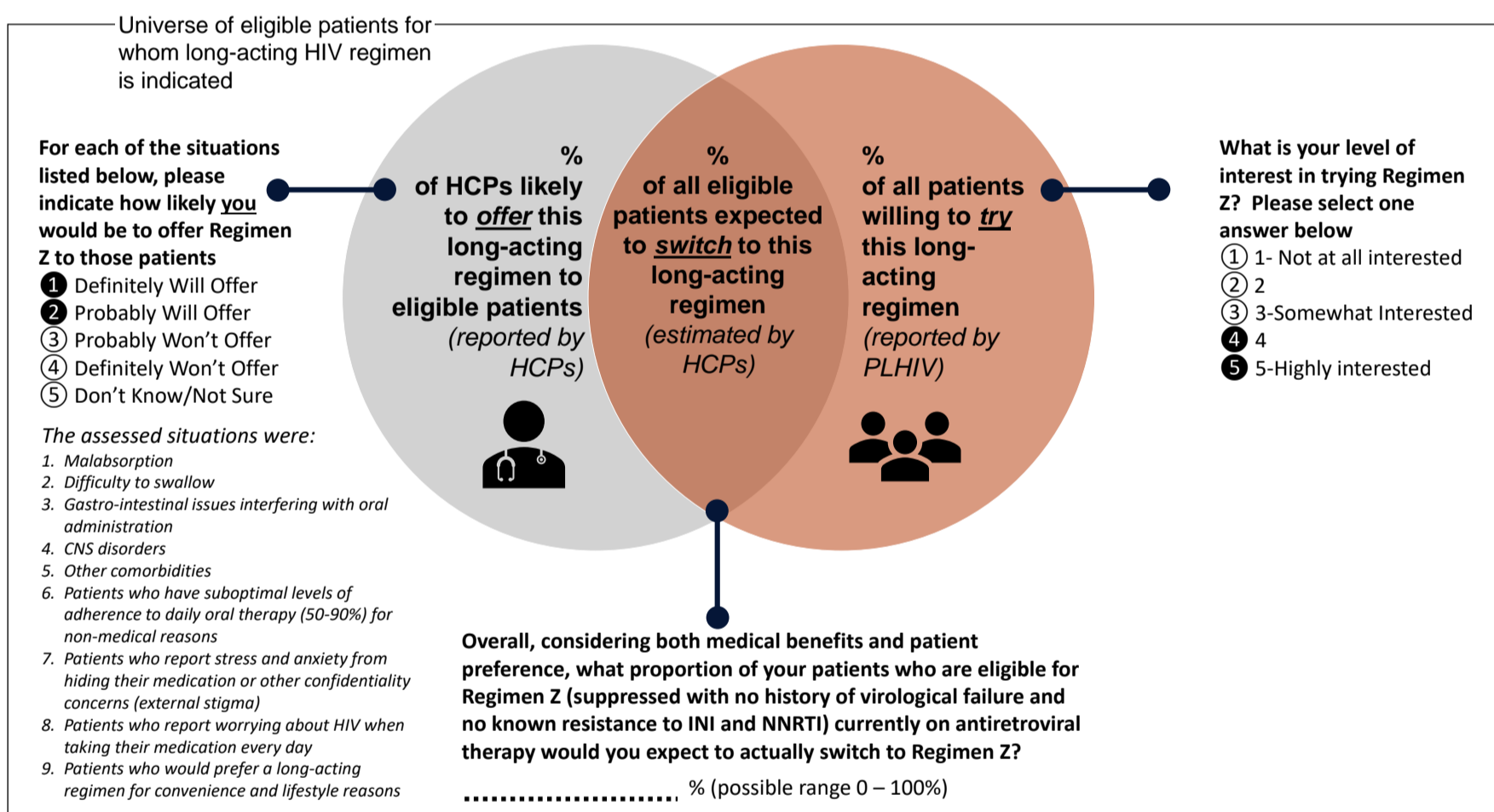
Below is the description of a hypothetical new product for treating HIV infection and we would like to ask you a few questions about your preferences. Please note this is a completely hypothetical product, which may or may not be available to you in the future.

Please read the description of Regimen Z below carefully so that you can answer the questions that follow.

- Regimen Z is a complete, long-acting injectable HIV regimen
 - For people living with HIV who are currently undetectable/virally suppressed and expected to be sensitive to the active components
 - Given once every 2 months
 - The injections are administered around the same day of the month
 - Injections can be given as much as 7 days prior or 7 day following the planned injection date, as needed
 - Given by a nurse, doctor, or other healthcare professional
 - 2 injections are given during the same visit in the gluteal muscle (buttocks)
 - Once injections are started, there is no need for any other pills or medications to treat HIV
- Regimen Z is expected to be as effective at keeping patients undetectable as other HIV treatments in clinical trials
 - Most people experience a mild pain when getting the injection. If there is soreness, it typically lasts 3 days or less
 - Side effects are uncommon. When experienced, they are usually mild to moderate. Most common side effects (other than pain when getting the injection) are fatigue, fever, headache, and nausea.
 - Most patients considered the pain when receiving the injections as "totally" or "very" acceptable
 - Patients who enrolled in clinical trials preferred the long-acting injectable treatment compared to their prior daily oral regimen leading to very low discontinuation rates

For the purpose of this questionnaire, we assume Regimen Z comes at similar cost to you compared to your current treatment.

- PLHIV interest in trying this LAR ("very"/"highly"), and physicians' willingness to offer ("Definitely"/"Probably") in different situations, with perceived benefits and concerns, were assessed.



Results

Figure 1. Characteristics of the study population

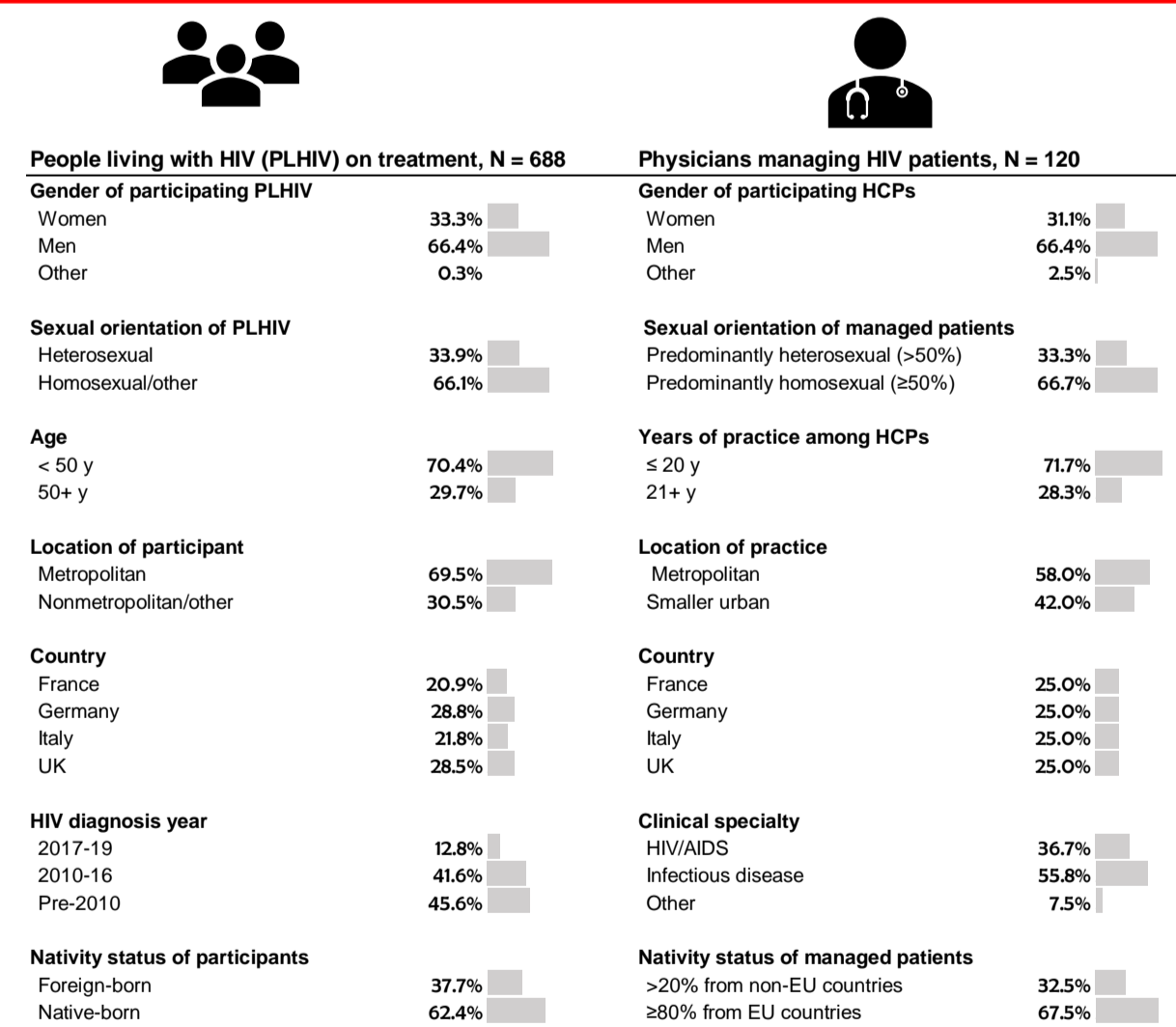


Figure 2. Percentage of all PLHIV interested in trying the described long-acting HIV regimen, and HCPs' estimate of the percentage of their eligible patients that would switch

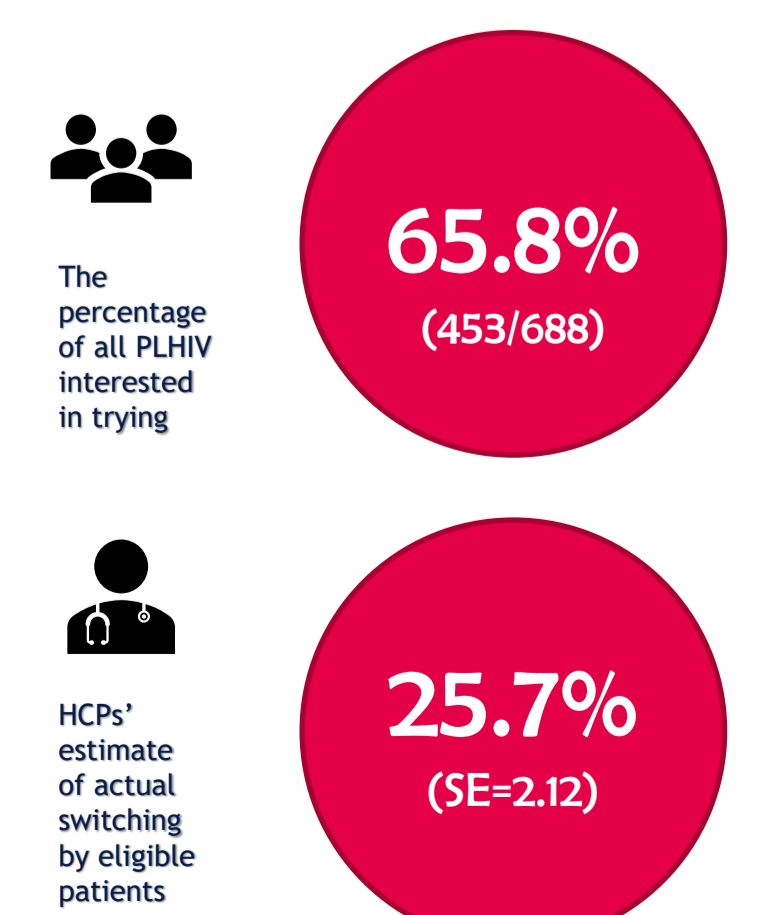


Figure 3. Percentage of PLHIV with the listed unmet needs who felt the long-acting regimen would help with those issues

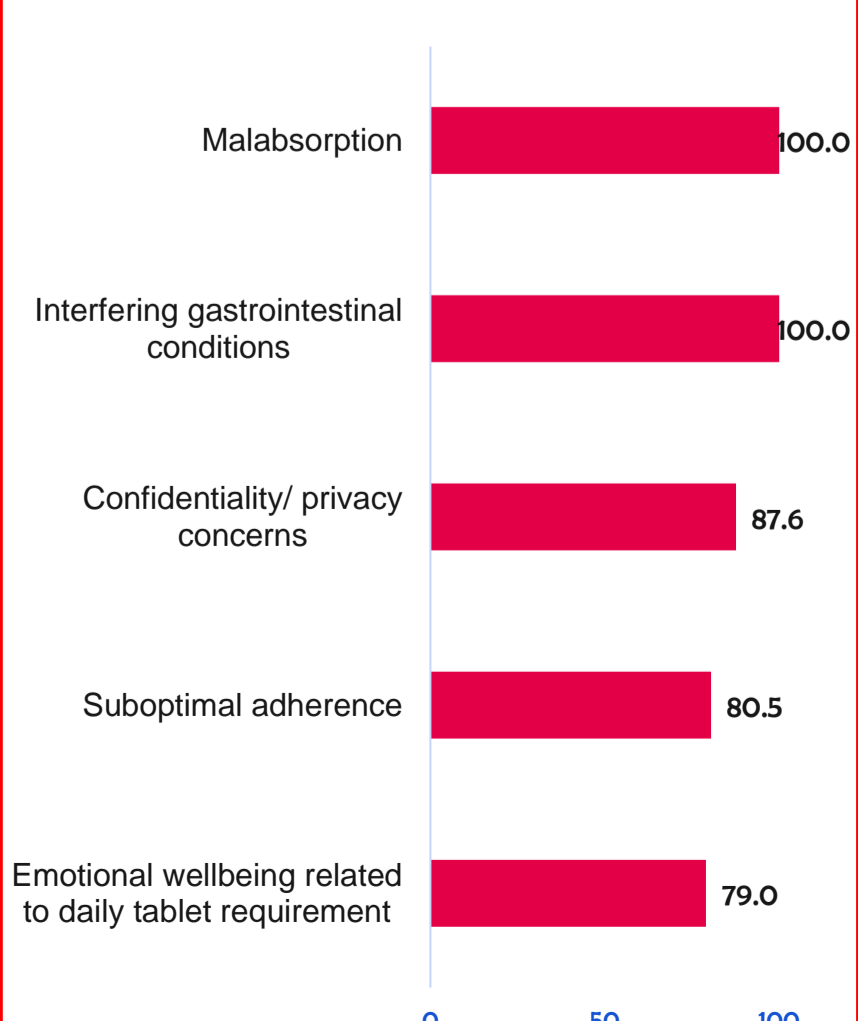
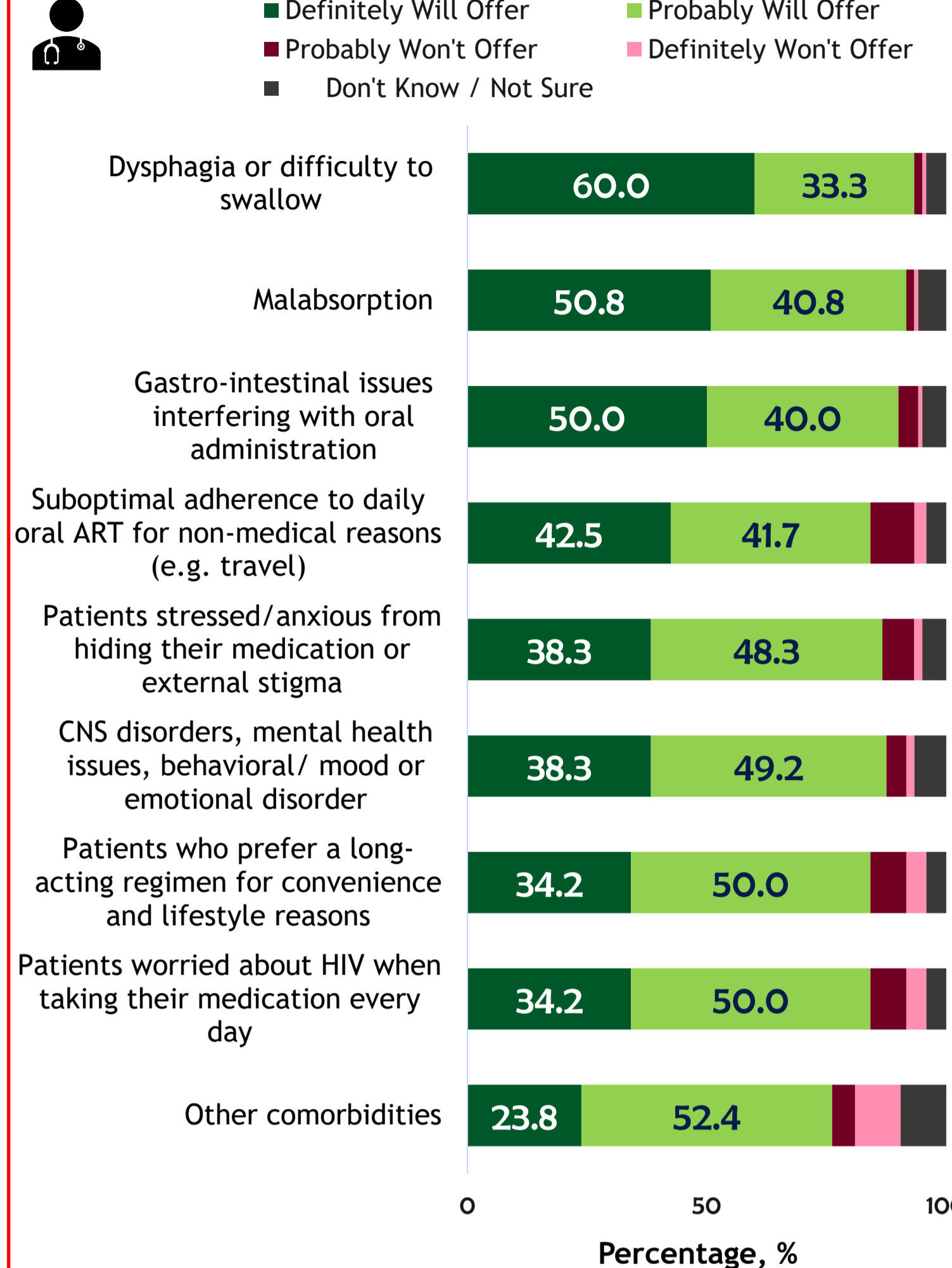
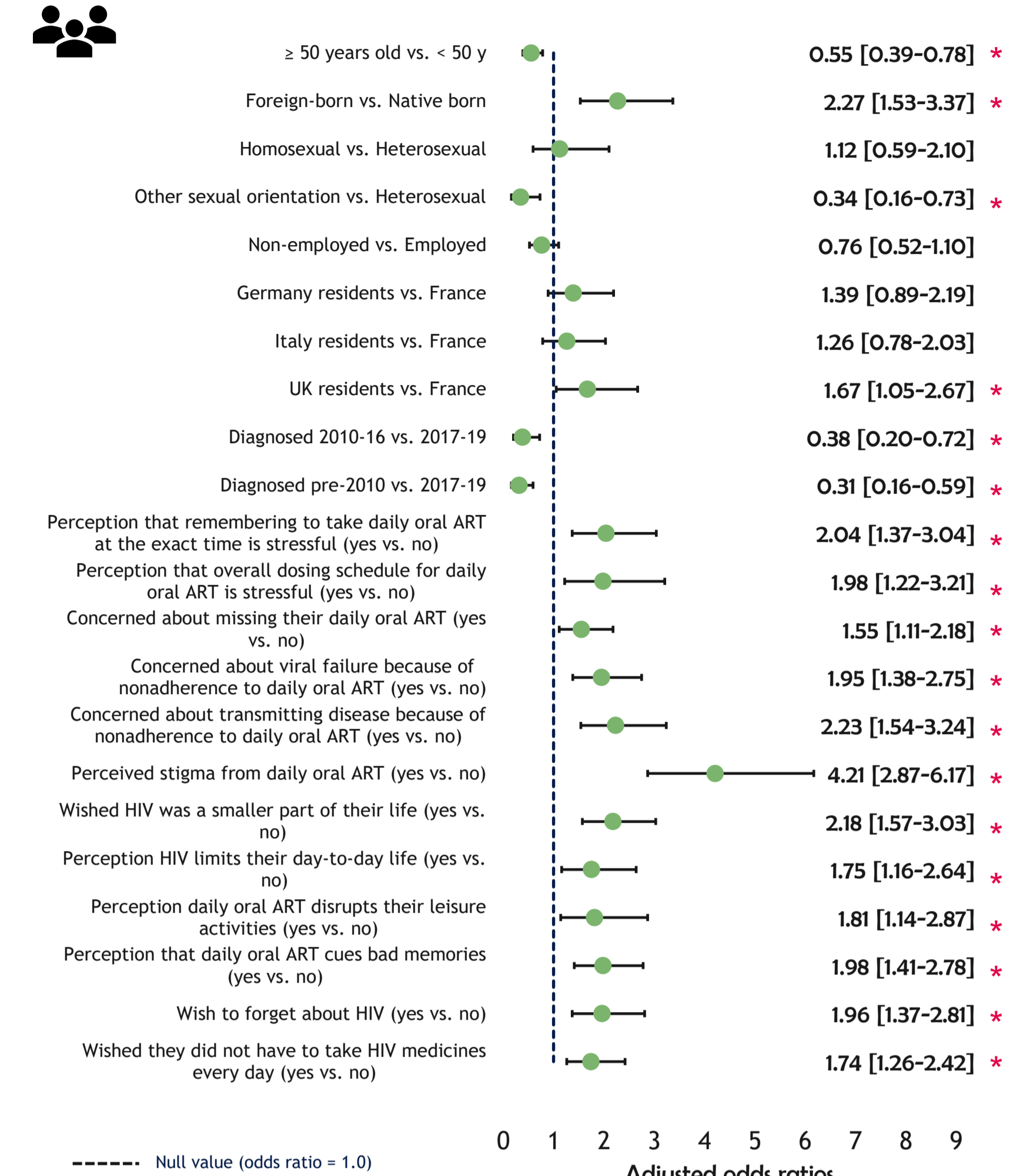


Figure 4. Degree of HCPs' willingness to offer long-acting HIV regimen for PLHIV in different situations (N = 120)



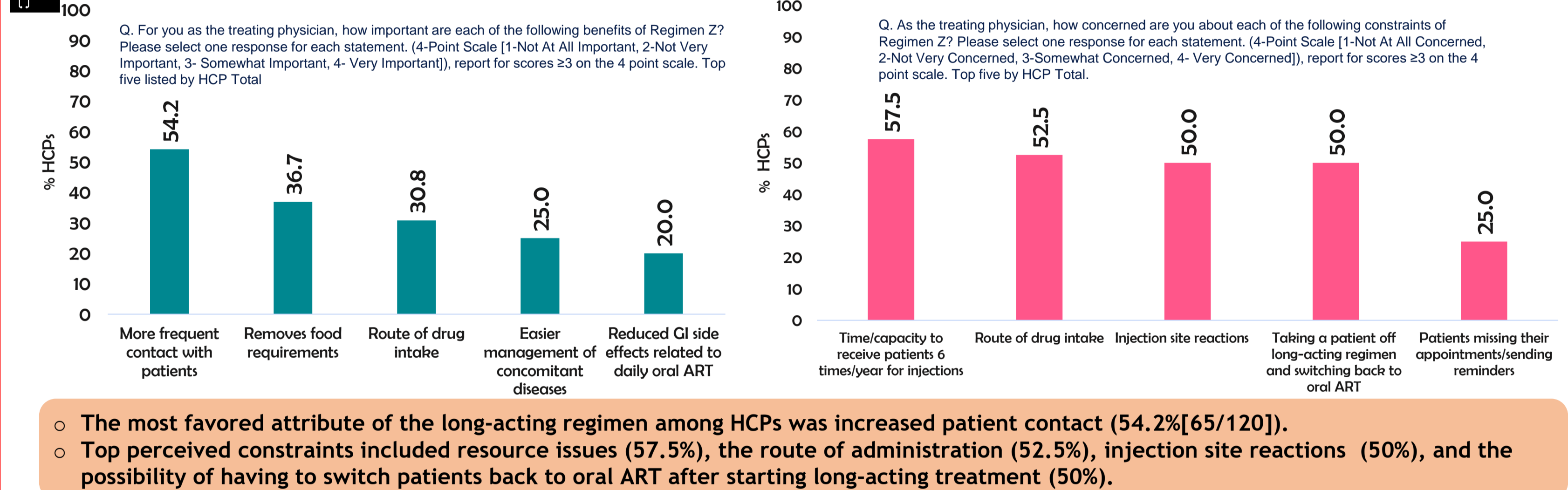
HCP are willing to offer the described long-acting regimen not only to PLHIV with strong medical needs (e.g., 93.3% for "dysphagia or difficulty to swallow") but also for PLHIV with emotional challenges or convenience reasons (e.g., 84.2% for "convenience and lifestyle reasons")

Figure 5. Adjusted odds ratios for factors associated with interest in trying a long acting HIV regimen among people living with HIV on treatment (N = 688)



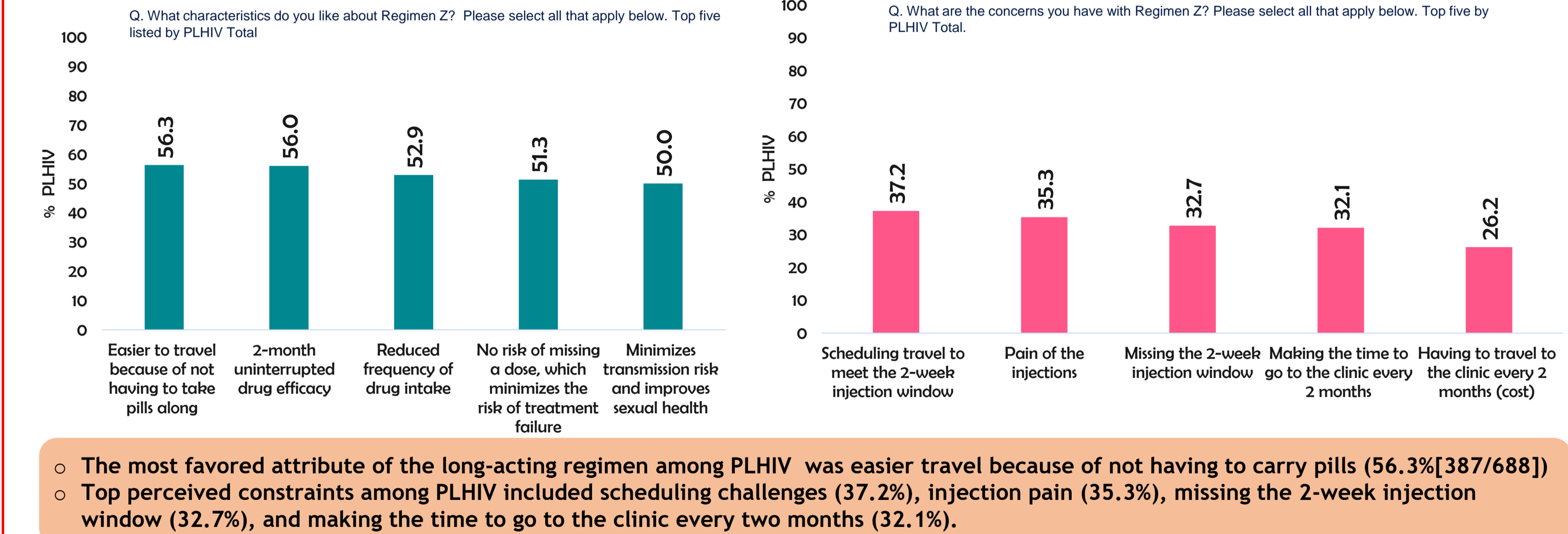
Odds of indicating interest in trying the long-acting regimen were: Lower among older than younger adults, and among those diagnosed 2010-16 and pre-2010 compared to 2017-19. Higher among those with vs without a report of emotional, psychological, and other functional limitations because of HIV

Figure 6. Top 5 perceived benefits and constraints to using a long-acting regimen, HCPs' perspective (N = 120)



The most favored attribute of the long-acting regimen among HCPs was increased patient contact (54.2% [65/120]). Top perceived constraints included resource issues (57.5%), the route of administration (52.5%), injection site reactions (50%), and the possibility of having to switch patients back to oral ART after starting long-acting treatment (50%).

Figure 7. Top 5 perceived benefits and constraints to using a long-acting regimen, PLHIV's perspective (N = 688)



The most favored attribute of the long-acting regimen among PLHIV was easier travel because of not having to carry pills (56.3% [387/688]). Top perceived constraints among PLHIV included scheduling challenges (37.2%), injection pain (35.3%), missing the 2-week injection window (32.7%), and making the time to go to the clinic every two months (32.1%).

Conclusions

- HCPs estimated that 25.7% of eligible patients would switch to the long-acting regimen, while 2 in 3 PLHIV were interested in trying the long-acting regimen.
- Both physicians and PLHIV viewed the long-acting HIV regimen as addressing unmet needs. HCPs are willing to offer not only in case of unmet medical needs or emotional burden but also for convenience of PLHIV.
- PLHIV groups that showed the highest interest in switching included: younger adults aged < 50 years, recently diagnosed individuals, and those experiencing various emotional, psychological, physical, and functional limitations because of HIV.
- The most favored attributes of long-acting regimen were easier travel because of not having to carry pills for PLHIV and increased patient contact for physicians.
- Perceived negative attributes among HCPs included scheduling challenges, the route, injection site reactions, and the possibility of having to take a patient off long-acting regimen and switching back to oral ART. For PLHIV, the top perceived negative attributes included scheduling challenges, injection pain, missing the 2-week injection window, and making the time to go to the clinic every 2 months.
- Alternative treatment routes including long-acting HIV regimens, may help address unmet needs and may improve adherence and retention in care.

Acknowledgments: Statistical support was provided by Zatum LLC.

References: 1. de Los Rios P, Okoli C, Puneekar Y, et al. Prevalence, determinants, and impact of suboptimal adherence to HIV medication in 25 countries [published online ahead of print, 2020 Jun 25]. *Prev Med*. 2020;139:106182. doi:10.1016/j.ypmed.2020.106182. 2. Clark L, Karik 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 (In press). 3. Margolis DA, Gonzalez-Garcia J, Stellbrink HJ, et al. Long-acting intramuscular cabotegravir and rilpivirine in adults with HIV-1 infection (LATTE-2): 96-week results of a randomised, open-label, phase 2b, non-inferiority trial. *Lancet*. 2017;390(10101):1499-1510. doi:10.1016/S0140-6736(17)31917-7. 4. L Stama, R Porcher, C Chakvetadze, A Cros, F Linard, L Gallardo, JP Viard, S Carrillon, JM Molina. Injectable long acting antiretrovirals for HIV treatment or prevention: the ANRS CLAPT study. 2019 British HIV Association Conference. EACS 2019 – Abstract Book. PE30/9. <https://doi.org/10.1111/hiv.12814>.