

## Authors

<sup>1</sup>Brian Kwizera, <sup>1</sup>Gallican Rwibasira, <sup>1</sup>Benjamin Bizimana, <sup>1</sup>Eric Remera, <sup>2</sup>Veronica Mugisha  
<sup>3</sup>Samuel S. Malamba

<sup>1</sup>*Division of HIV, STIs, Viral Hepatitis and OVDC, Rwanda Biomedical Center, Ministry of Health;* <sup>2</sup>*ICAP at Columbia University, Mailman School of Public Health, Kigali, Rwanda;*  
<sup>3</sup>*Consultant*

## **Title: Shifting from 3-multimonth prescribing (3MMP) to 6-multimonth prescribing (6MMP) was associated with non-inferior outcomes for adults on antiretroviral therapy in Rwanda.**

**Background:** In 2016, WHO endorsed multi-month prescription (MMP) of antiretroviral therapy (ART) to reduce drug refill frequency for clients established on ART and increase efficiency at both client and health facility (HF) level. Rwanda started the 3-MMP initiative in 2017 and moved to 6-MMP in July 2020. People Living with HIV (PLHIV) who meet eligibility criteria (age  $\geq 18$ , on ART for  $>12$  months with at least 2 consecutive viral load tests [VLT]  $<200$  copies/mL) can opt into the 6-MMP model, which includes twice-yearly clinic visits and VLT, and provision of 6-months of ART at each visit. We reviewed charts of clients who transitioned from 3-MMP to 6-MMP to compare the outcomes of the two models.

**Description:** We reviewed charts of all PLHIV receiving at least one year of 3-MMP followed by one year of 6-MMP at a convenience sample of 22 HFs in Kigali, Rwanda, abstracting data on VLT results, VL Target NOT Detected [TND: VL=0], undetectable VL [uVL: VL $<20$ ] and VL Suppression [VLS: VL $<200$  copies/mL] and retention rate defined as reporting in time ( $<1$  week) for ART pickups and VLT. We used paired t-testing to compare VLT and retention for clients' last 12 months on 3MMP vs their first 12 months on 6MMP. VL absolute values were log-transformed and analyzed as either mean or median log VL.

**Lesson Learned:** 10,129 PLHIV were enrolled at study HFs. There was no significant difference in the mean-log VL values (1.32 vs 1.33) during 3-MMP vs 6-MMP ( $p=0.998$ ). 28.7% of PLHIV had VL TND during 6-MMP (95%CI: 27.8-29.5) compared to 22.7% during 3-MMP (95%CI: 21.9-23.5)  $p<0.001$ . The proportion of PLHIV with VLS during the 6-MMP period was very high 99.4% (95%CI: 99.2-99.6) but slightly lower than observed during the 3-MMP period 99.8% (95%CI: 99.7-99.9), ( $p<0.001$ ). Retention improved with exposure time, 67% at 6-months and 74% after 12-months of ART exposure. Stratification showed no significant difference by sex and age group.

**Conclusions/Next steps:** Transitioning PLHIV established on ART from 3-MMP to 6-MMP did not majorly affect VL outcome measures. Retention improved with establishment on ART for both periods. HIV programs should consider offering the option of 6-MMP one year after initiating ART.

**Word Count: 350/350**