High viral load suppression rates among people living with HIV receiving multi-month dispensing

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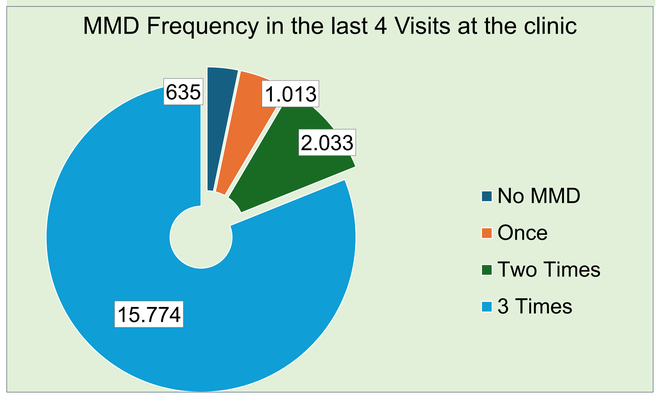
BACKGROUND

The World Health Organization **(**WHO) recommended differentiated service delivery (DSD) with multi-month dispensing (MMD) as a way of improving care for people living with HIV (PLHIV). Uganda adopted MMD in the 2020 consolidated guidelines for the prevention and treatment of HIV and AIDS in Uganda. We sought to determine the likelihood of viral load (VL) non suppression among PLHIV on MMD in Mubende region, central Uganda.

METHODS

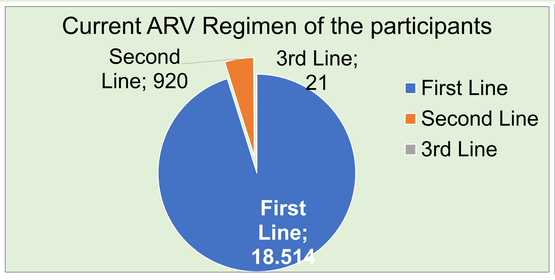
A cross sectional review of Uganda Electronic Medical Records (Uganda EMR) System program data was conducted at 10 purposively selected high volume facilities in eight districts of central Uganda. We included PLHIV who had one recent documented VL result from January 2022 to February 2023 at last visit. Demographics such as age and sex, current anti-retroviral therapy(ART) regimen, nutritional status were extracted as of last visit. Data on history of advanced HIV disease status and frequency of MMD were retrieved from information over the 13 months of patient care. Data were analyzed by univariate, bivariate, and multivariable methods. Logistic regression models were used to assess the effect of MMD on VL suppression among PLHIV. Analysis included PLHIV switched to MMD after being determined stable i.e., on ART for more than 6 months, with a suppressed VL, absence of Advanced HIV Disease (AHD) and not pregnant or not lactating for less than 6 months. PLHIV who didn't fall in these criteria were considered as non-MMD.

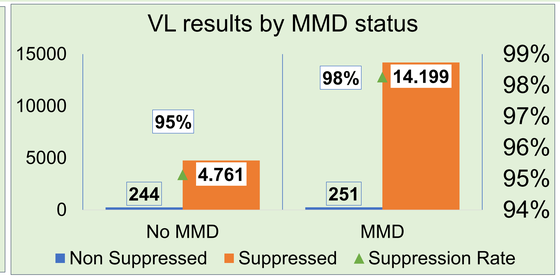


Participants on MMD but with a **history of AHD** and those on MMD on **2nd line ARV regimen** had increased odds of attaining VL non suppression, aOR of 4.71 (95% CI: 2.82-7.86) and 2.31 (95% CI: 1.69-3.16) respectively compared to those with no history of AHD and those on 1st line ARV regimen.

RESULTS

We reviewed records for 19,455 PLHIV for whom 67% were women. Median age of the participants was 37 years (Interquartile range- (IQR): 29-47) with 10% of the participants being <20 years. 97% (18,960/19,455) of the participants had a suppressed VL of less than 1,000 copies/mL Median duration on ART for clients initially not on MMD but switched to MMD was 74 months (IQR: 45-105) and 52 months ((IQR): 21.5-89.5) for non MMD. Overall, 96.7% (18,820/19,455) PLHIV received MMD, of which 98% (18,440/18,820) were virally suppressed on the last VL. Participants on MMD had significantly lower odds of VL non suppression compared to those on non-MMD (Adjusted Odds Ratio (aOR) of 0.09 (95% CI: 0.07-0.12). However, participants on MMD but with a history of AHD and those on MMD on 2nd line ARV regimen had increased odds of attaining VL non suppression, aOR of 4.71 (95% CI: 2.82-7.86) and 2.31 (95% CI: 1.69-3.16) respectively compared to those with no history of AHD and those on 1st line ARV regimen.





CONCLUSIONS

PLHIV on MMD with history of AHD and PLHIV on MMD on second line ARVs have increased likelihood of VL non suppression and therefore need to be monitored closely monitored. An in-depth qualitative study may be helpful to understand other factors that contribute to increased odds of suppression among clients on MMD.

ADDITIONAL KEY INFORMATION:

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