

**Adherence To Anti-Retroviral Therapy Among HIV Infected Mothers On Option B Plus
Attending The Upper Mulago Post Natal Clinic.**

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ABSTRACT

Background: Over 90% of the children living with HIV in Sub-Saharan Africa acquire the infection through mother-to-child transmission (MTCT). Elimination of MTCT (eMTCT) of HIV could be realized by country wide rollout of Option B+ because of further simplification of the ART regimen, harmonization of PMTCT and HIV treatment programmes as well as reduction in transmission to serodiscordant partners. Studies have shown good adherence among people taking ART for their own health. However, in Option B+ where mothers are started on lifelong ART even when healthy for the sake of eMTCT, adherence remains questionable. Adherence to ART by mothers on Option B+ is very critical for eMTCT and long term maternal health benefits with improved infant survival by delaying emergence of resistant strains of the virus and ensuring durability of the present regimens.

The study aim was to determine the level of and factors associated with adherence to ART by mothers on Option B+ attending the post natal clinic of Mulago hospital and the infant HIV prevalence at six weeks.

Methods: HIV infected post natal mothers on option B+ attending the Upper Mulago post natal clinic with their infants were consecutively enrolled between August 2014 and January 2015. Questionnaires were administered to these mothers to gather information on adherence through the self-report and visual analogue scale (VAS) methods.

The infants' HIV DNA PCR test results routinely done by Baylor-Uganda (a pediatric HIV care center) were retrieved and recorded in the respective questionnaires.

The mean adherence by self report over a three day and seven day recall periods as well as VAS were calculated separately. The three day self report adherence and that of VAS were used to assess for factors associated with optimal adherence. Multivariate logistic regression analysis was done to determine factors independently associated with adherence to ART.

Results: A total of 228 postnatal women and their infants were enrolled. Their mean age was 26.5years (SD 5.2) and mean duration on ART was 5.8 months (SD 5.8). Their infants were seen at a mean age of 7.5weeks (SD 2.1).

The mean adherence level by self report for the three day and one week recall period was 92.3% and 93.8% respectively. Mean adherence level by VAS was 84.6%.

The proportion of mothers with optimal adherence by self report was 196/228 [86.0%, 95% CI 81.9% - 90.9%] and 181/228 [79.4%, 95% CI 74.1% - 84.7%] using three day and one week recall period respectively.

Only 69/228 [30.3%, 95% CI 24.3% - 36.3%] of the mothers had optimal adherence to option B+ ART by the VAS.

The factors that were independently associated with optimal adherence to ART by SR and VAS respectively included; duration on ART of at least six months [AOR=3.6, 95% CI 1.1- 11.6], not requiring food before taking ART [AOR= 2.9, 95% CI 1.2- 6.9] and being on an alternative ART regimen other than TDF/3TC/EFV [AOR= 2.1, 95% CI 1.1- 3.9].

The barriers to optimal adherence were; stigma within and outside the home (22.4% and 15.4%) respectively, lack of support from the partner (20.4%) and forgetfulness (11.9%).

Eight of the 228 infants (3.5%) had a positive HIV DNA PCR result.

Conclusion:

The level of adherence to option B+ ART among the HIV-positive post natal mothers in Mulago Hospital was reasonably good with majority (84.6% by SR) having optimal adherence.

The factors independently associated with adherence to ART in mothers on Option B+ were; duration on ART of at least six months, not requiring food before taking ART and being on an ART drug combination other than TDF/3TC/EFV. However, barriers to optimal adherence reported among the mothers were stigma within and outside the home, lack of support from the male partners and forgetfulness.

The prevalence of HIV at six weeks among infants born to mothers on Option B+ at Mulago hospital was low at 3.5%.