

**NON-RETENTION OF MOTHER-BABY PAIRS IN CARE IN ELIMINATION OF  
MOTHER TO CHILD TRANSMISSION OF HUMAN IMMUNODEFICIENCY VIRUS IN  
GULU DISTRICT, UGANDA**

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## ABSTRACT

**Introduction:** Poor retention in HIV care of mother-baby pairs remains a public health challenge in the elimination of mother-to-child transmission of HIV. We determined the rate of non-retention and time-to non-retention of mother-baby pairs and associated determinants in Gulu district, Northern Uganda.

**Methods:** Mother-baby pairs enrolled into the eMTCT programme at Gulu Regional Referral Hospital (GRRH) and Lacor Hospital (LH) were followed for 18 months to determine the rate of non-retention, and time-to-non-retention in HIV care as the primary outcomes. Secondary data were obtained from Antiretroviral Treatment (ART) and Early Infant Diagnosis (EID) registers, and mother/baby appointment books at the health facilities. Additional data on possible reasons for non-retention were collected through cross sectional interviews with the mothers. Time to non-retention in HIV care was calculated as the difference in dates of enrolment into care and when last reported in care as a mother-baby pair. We used Cox proportional hazards regression analysis to assess independent risk factors for time to non-retention. Only variables with  $p < 0.2$  at the bivariable analysis or considered potential confounders were included in the multivariable regression model. The measures of association were hazard ratio with their corresponding 95% confidence intervals. Statistical significance of all estimates was based on the  $p < 0.05$ . We used Stata version 12 for statistical analyses.

**Results:** A total of 410 mother-baby pairs were enrolled in this study. Overall, non-retention by 18 month was 30.5% and was higher at GRRH (34.7%) than Lacor (25.8%); the result was borderline statistical significant,  $p = 0.049$ . The follow-up time was not long enough for the overall median time to be determined from the available data. Non-retention was higher among pairs where infant had no EID, adjusted (adj) HR=5.81; 95% CI (2.55, 13.24), non-disclosure of

mother's HIV status, adj.HR=1.86; 95% CI (1.22, 2.85), and poor quality service as determined by lack of privacy during counselling, adj.HR=1.86; 95% CI (1.26, 2.85). Non-retention was 57% lower [adj.HR=0.43; 95% CI (0.20, 0.92)] among pairs where the mothers understood and appreciated the importance of adhering to all clinic appointments together with her infant.

**Conclusion:** Nearly a third of mother-baby pairs are not retained in HIV care. Lack of early infant diagnosis services, poor quality of counselling session, and non-disclosure of mother's HIV status were key determinants of non-retention in this setting.