

Introduction: The global community embarked on a historic quest to lay the foundation for the eventual end of the AIDS epidemic by 2030, however East and South Africa contributed 59% (more than half) of all pediatric HIV infections globally. The MOH Uganda targets 5.3% or less infant's infection rate. In Uganda, HIV prevalence among HIV exposed infants was estimated at 18% in 2018. The understanding of the remaining bottlenecks to elimination of mother-to-child transmission (eMTCT) is crucial to accelerating efforts towards eMTCT.

Objective: This study was aimed at ascertaining the prevalence and identify the factors associated with HIV seroconversion amongst Exposed infants less than 18 months in care in Pader district.

Methods: A cross sectional design was employed utilizing mixed methods of data collection to gather information on the variables that influence HIV infection seroconversion among exposed infants under the age of 18 months in care in Pader district. Quantitative data were collected using semi-structured questionnaire and done by research assistants while qualitative information was obtained through key informant interviews with facility in-charge, ART clinic in-charges, mid-wives, store assistant and clients. Overall data collection was conducted by between December 2022 and January 2023. Quantitative data was analyzed using STATA version 17, at univariable, bio-variable and multivariable levels, and thematic analysis was used to analyse qualitative data. Ethical approval was obtained from Lacor Hospital Institutional Research Ethic Committee.

Results: 384 respondents participated in the study, and 7.7% of the 384 infants Sero converted. None health facility delivery was associated with seroconversion (AOR=13.1, CI: 1.63-105.1) compared to facility births.

Infants from mothers unaccompanied by their husbands were 0.12 less likely to seroconvert (AOR = 0.12, CI: 0.03-0.51), and infants of caretaker between ages 31-40 (AOR=0.07, CI: 0.01-0.94) and infants from mother between ages 41-50 (AOR= 0.04, CI: 0.01-0.98) were less likely to seroconvert compared to their counterparts.

Additionally (qualitative): the key informants mentioned staff's attitudes, under staffing, inadequate human resource, failure of some mothers to return for subsequent PCR reported during the interviews.

Key words: Prevalence, seroconversion, HIV, and Infants.