Incidence and Predictors of attrition among Children on Antiretroviral Therapy at University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia; 2019: Retrospective Follow up Study

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Research Focus: *Burden of attrition in HIV infected children*

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ABSTRACT

Introduction: The incidence of attrition in children on Antiretroviral Therapy is higher in resource-limited settings when compared to developed countries, and it remains a critical challenge for HIV treatment success among children on antiretroviral therapy.

The introduction of antiretroviral therapy has led to a significant decline in HIV related morbidity and mortality. However; this can only achieve if children retained in ART service

Objective: The aim of this study was to assess the incidence of attrition and identify the predictors of attrition among children who are on antiretroviral therapy at University of Gondar comprehensive specialized Hospital, Northwest Ethiopia.

Methods: An institution-based retrospective follow up study was conducted among 357 HIV positive children at University of Gondar Comprehensive specialized Hospital f from January 1, 2005 to 30, December 2018 G.C. Simple random sampling technique was used to select each child on ART. Data was collected by chart review using structured and pre-tested data abstraction checklist. SPSS 22 and STATA 14.0 were used for data entry and analysis respectively. A Kaplan Meier curve was estimated median survival time. Life table was used to determine the cumulative probability of survival at different period time. Log rank test entered in the multivariable to see the difference between categorical variables, and Cox proportional hazards model assumption was checked by through Schoenfeld residual test.

In Cox proportional hazard model were bi-variable having 0.25 computed to multivariable, and variables having P- value <0.05 at 95% confidence interval were considered as statistically significant predictors for the incidence of attrition

Results: A total of 344 child records with a completeness rate of 96.4% were reviewed and included in the analysis. Children were followed for different periods of time (4 month to 13.9 years) that give a total of 19,081 Child-month observations. The Median follow-up period was 4.3 (IQR; 4.3±4.7) years and the Median survival time was 132 months. The incidence rate of attrition was 6.6 per 100 PYO (95% CI (5.5, 8.0). 105(30.5%) children were recorded as Attrition in the follow-up period. In multivariable models the baseline WHO clinical staging III& IV with [AHR: 2.3 (95% CI: 1.3, 4.0)], baseline weight-for-age <-2 z-score [AHR: 3.1(95% CI: 1.7, 5.3)], cotrimoxazole non-users [AHR: 2.5 (95% CI: 1.4, 4.3)], and baseline Hemoglobin levels ≤ than10 mg/dl[AHR: 2.7 (95% CI: 1.5, 47)] were predictors of attrition at 95% significance level.

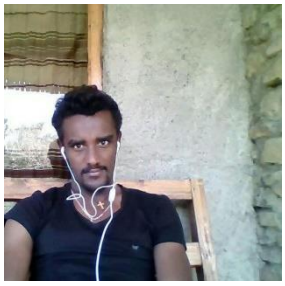
Conclusion: The overall incidence of rate attrition was high. Baseline WHO clinical staging III/IV, baseline hemoglobin ≤10 mg/dl, cotrimoxazole (CPT) non-user, and underweight at baseline (weight-for-age <-2 z-score) were found to be the main predictors of attrition.

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BIOGRAPHY

Ermias Sisay Chanie has her expertise in different area mainly in pediatric and child health. He is very interested in pediatric and child health thematic area. He has around 40 publication international journal (i.e., https://scholar.google.com/citations?user=xmK1Q5YAAAAJ&hl=en). In addition, his conducting so may research's including and his conducing so many researches in this time. Such as*: Impact of Respiratory distress syndrome and perinatal asphyxia on the survival of preterm neonates in in East Africa context*: Estimation of Lifetime Survival Status and Predictors of Mortality Among TB with HIV Co-infected Children in Ethiopia, *and Half-life Time Prediction to Develop First-line Antiretroviral Treatment failure in Ethiopia.*: Based on his previous research he got different certificate/ award from nation to international conference. Due to his research is the significant and importance to reduce child morbidity and mortality. His is very positive for everyone and believing on hardworking. He wants to learn his PHD in international universities specially in Europe to improve his indigenous talent and disseminate his research in large scientific world since he is living in resource limited setting in Ethiopia.

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