

Factors associated with antiretroviral treatment failure amongst people living with HIV on antiretroviral therapy in resource poor settings: A Systematic Review

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Background: Despite the number of people accessing antiretroviral (ARV) therapy has increased, there is limited information about virological failure and its factors among HIV-positive (HIV+) individuals enrolled in HIV care in many poor resource settings. The aim of this review was to identify factors associated with antiretroviral treatment failure among individual living with HIV on ART in resource poor settings.

Method: We conducted a comprehensive search of MEDLINE (PubMed), Excerpta Medica database (EMBASE), Cochrane Central Register of Controlled Trials (CENTRAL), World Health Organization's (WHO's) library database, Latin American and Caribbean Health Sciences Literature (LILACS). We included observation studies (cohort, case control and cross-sectional studies) where adolescents and adults living with HIV were on antiretroviral treatment regardless of the ART regimen. The outcomes of interest were immunological failure, virological failure and clinical failure. We screened titles, abstracts, and the full texts of relevant articles in duplicate.

Disagreements were resolved by consensus. We analysed data by doing a meta-analysis to pool the results for each outcome of interest.

Result: Antiretroviral (ARV) failure was about 6 times higher among patients who had poor adherence as compared to poor (OR= 5.90, 95% CI: 3.50, 9.94). The probability of treatment failure was about 5 times higher among patients who had CD4 <200 cells/mm³ as compared to their counterparts ≥200 CD4 cells/mm³ (OR=4.82, 95% CI: 2.44, 9.52). The result has shown that the low adherence and CD4 count below <200 cells/mm³ have significantly associated with ARV treatment failure on HIV positive patient in resource-limited setting.

Conclusion: The findings of this review highlighted that low CD4 counts and poor adherence to ART were associated of ART treatment failure, there is urgent that health professionals, HIV programmes should focus on novel approaches for patients who have these characteristics in order prevent ART failure