

**README which was submitted to the data archive:**

**\*\*\* Bayesian Statistical Analysis of Antiretroviral Therapy (ART) combinations on the treatment of Human immunodeficiency virus/ Acquired Immune Deficiency Syndrome (HIV/AIDS) epidemics in Limited Resource Settings: A case study of Zambia. \*\*\***

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**\*\*\*General Introduction\*\*\***

This dataset contains data collected during a survey of Bayesian analysis of Antiretroviral (ARV) combination in the treatment of Human immune virus, as part of Urban N. Haankuku's PhD Thesis project (December 2016) with the University of South Africa. It is being made public both to act as supplementary data for publications and the PhD thesis of Haankuku and in order for other researchers to use this data in developing statistical models. The data in this data set was collected on the performance of ARV combinations in the treatment of HIV naïve patients in Livingstone district, Zambia, between January 2016 and December 2016. This research project was approved by University of Zambia Bio-Ethical Research Committee (UNZABREC) and the National Health Research ethics (NHRA).

**\*\*\*Purpose of the project\*\*\***

The data in this data set was collected on the performance of ARV combinations on HIV naïve patients in order to build a Beta-Binomial hierarchical model on the estimation of probability treatment failures of combinations used in Zambia, determination of survival time using both Bayesian methods, conventional methods and monitoring of disease progression using Wishart-multinomial model using CD4 counts.

**\*\*\*Questionnaires\*\*\***

Questionnaires for Medical personals and Laboratory technicians where conduct in order to have a broader understanding of ARV administration and care/management of HIV patients.

**\*\*\*Description of the data in this data set\*\*\***

The data included in this set has been tabulated as follows: there is a serial number which hides the true identity of the patients, age, gender, first baseline regimen (ARV combination given), treatment outcome, weight of patients measured every twelve weeks up to 48 weeks, CD4 count measured every twelve weeks from the initial diagnosis for 48 weeks and last column log CD4 counts. The abbreviation and generic names of the ARV being analysed are provided as regimen given to patients. In this project Winbugs software was used in the analysis of the data. Full generic names of the antiretroviral with their abbreviation are provided as key at the bottom for

the two ARV classes used in Zambia for treatment of HIV. The time for treatment failure/censored are given as months (m), days (d) or weeks (wks). Indicator for failure is 1 and censored as 0. First baseline regimen of ARV combination is indicated as: 1,2,3,4,5,6 as shown above the data set. Weight of patients is indicated as: initial, first visit, up to fourth visit. The CD4 counts is indicated as: initial, first visit up to fourth visit. The initial visits for CD4 count were transformed into logarithm on the last column for easy calculation.