

## 3<sup>rd</sup> International Conference & Exhibition on **Biometrics & Biostatistics** October 20-21, 2014 DoubleTree by Hilton Baltimore - BWI Airport, USA

## Multiple imputation method for modeling incomplete longitudinal data with dropouts: An application to HIV bio-markers study

Nancy Achieng Odhiambo University of Kwazulu Natal, South Africa

Dropout is unavoidable in studies that involve data measured or observed longitudinally on individuals, regardless of how well they are designed and executed. In this presentation, the author will demonstrate the application and performance of multiple imputations (MI) in handling drop out in longitudinal studies. We applied the MI technique to the Sinikithemba study data, dealing with dropout using log viral load as the response variable. We assumed that the dropout mechanism is missing at random (MAR). The primary objective was to investigate the impact of dropout on the evolution of HIV Bio-markers in a model including genetic factors as covariates. The results obtained from MI were then compared to those from the analysis of the incomplete datasets directly. From the two results we could easily see that, there are differences in the findings obtained from both analyses. Therefore, there is need to account for dropout since it can lead to biased results if not properly addressed.

## **Biography**

Nancy Achieng Odhiambo has completed her Masters in Science at the age of 27 years from University of KwaZulu Natal and will be graduating with a Cum Laude in bio-statistics. She has a Postgraduate Diploma in Mathematical Sciences from the University of Cape Town and a Bachelor's degree in Education Science from Moi University, Kenya.

nancy@aims.ac.za