

# Integrated Hypertension and Diabetes Mellitus Type II Treatment and Care Among People Living with HIV/Aids Attending Care and Treatment Center in Dar Es Salaam, Tanzania in 2020: A Health Facility Based Project

Atuganile Benedict Musyani<sup>1 2</sup>, Grace Mosi<sup>1 2</sup>, Erik Kinyenje<sup>1 2</sup>, Rogath Kishimba<sup>13</sup>, Mucho Mizinduko<sup>2</sup>, Leonard Subi<sup>3</sup>, Meshack Shimwela<sup>4</sup>, Angela Thomson-Paul<sup>5</sup>

<sup>1</sup> Tanzania Field Epidemiology and Laboratory Training Programme

<sup>2</sup>Muhimbili University of Health and Allied Sciences

<sup>3</sup>Ministry of Health Community Development Gender Elderly and Children

<sup>4</sup>Temeke Regional Referral Hospital

<sup>5</sup> CDC-Atlanta

**Introduction:** Persons living with HIV/AIDS (PLHIV) now live longer due to the advancement of HIV care, rendering them at increased risk of developing Non-Communicable diseases (NCDs). Despite having strong HIV/AIDS care programs, Tanzania lacks effective integration of NCDs care among PLHIV. This project aimed at implementing and evaluating hypertension (HTN) and Type-2 diabetes mellitus (T2DM) prevention, treatment, and care efforts among PLHIV attending care and treatment clinic.

**Methods:** The project was a facility-based intervention that included collecting demographic, clinical and laboratory data from the participants. A cohort of patients diagnosed with HTN and T2DM was created and followed up for six months to ascertain disease control rates. Descriptive, bivariate, and multivariate logistic regression analyses were done to determine the association between hypertension and risk factors. Paired t-test was done to see the significance of the intervention.

**Results:** A total of 335 patients were included in the assessment for the risk factors for hypertension and T2DM, in which the prevalence was found to be 21.32% and 2.70%, respectively. With multivariate analysis, obesity (AOR=4.04 95%CI 1.72-9.52) and diabetic (AOR 5.58 95%CI 1.05-29.53) were the risk factors for having hypertension. Being employed in private or government organization and Stage 4 four of HIV disease at diagnosis were found to be at reduced risk of getting hypertension. A paired T-test showed significance difference in mean systolic blood pressure ( $t = 3.07$  w/df=81,  $p < 0.01$ ) and diastolic blood pressure ( $t=2.91$  w/df=81,  $p < 0.01$ ) while there was no difference in mean fasting blood glucose level ( $p = 0.82$ ) and body mass index  $p = 0.08$ ).

**Conclusions:** Magnitude of NCD risk factors is significantly higher among PLHIV, and there was a significant change in HTN after three months of project implementation. NCDs integration among PLHIV is possible and should be initiated and strengthened.

