

# NUTRITION AND FOOD SECURITY STATUS OF PLHIV AND GAP ANALYSIS IN COMPREHENSIVE CARE CLINICS IN KENYA

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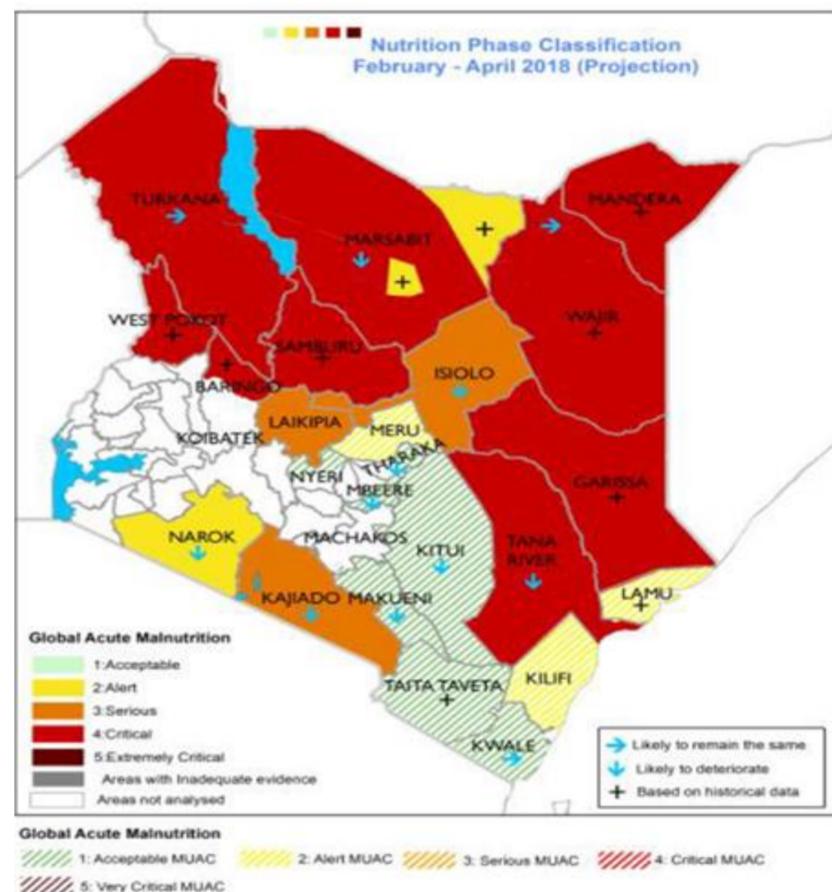
## Background:

Kenya is one of the UNAIDS fast track countries and global plan prevention of mother-to-child transmission (PMTCT) countries. High levels of malnutrition and food insecurity exist in the arid and semi-arid areas in turn affecting people living with HIV (PLHIV) and their households.

Inadequate nutrition has been identified as a major health concern in the care of PLHIVs. Malnutrition compromises the effectiveness of Antiretroviral Treatment (ART) and has adverse effects on morbidity and mortality.

The prevalence of undernutrition in Kenya is high. According to the Kenyan Demographic Health Survey (KDHS) 2014, 26% of children under the age of five are stunted, 11% are under weight and 4% are wasted.

Under the leadership of Ministry of Health (MOH), the National AIDS and STI Control Programme (NASOP) and the UN World Food Programme (WFP) undertook a study to assess the nutrition and food security status of PLHIV accessing treatment in order to guide decision making on appropriate nutrition and food support interventions for comprehensive treatment packages.



## Methods:

Across sectional study was undertaken between September and December 2012. A two-stage cluster sampling methodology was applied in sampling of the CCCs. 31 Comprehensive Care Clinics (CCCs) in 10 NASCOP regions were selected<sup>1</sup>. Simple random sampling was applied to select the clients. 3690 (2790 adults and 900 children) were enrolled.

Three categories of clients were considered; clients on prophylaxis not on ART; on ART < six months, and on ART > six months. Data management and statistical analyses were performed using SPSS v.18 and WHO Anthro software.

## Analysis:

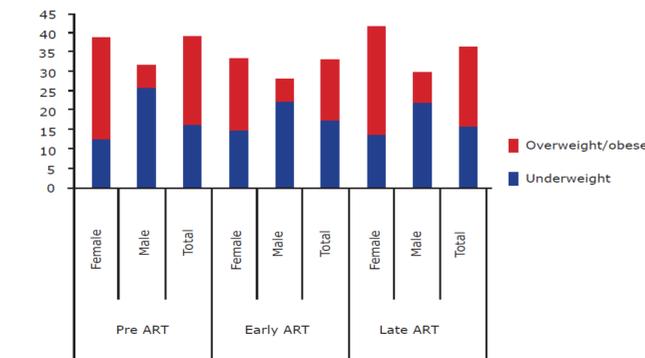
Correlation between the anthropometric indicators, Individual Dietary Diversity Score (IDDS) and Food Consumption Score (FCS), were determined using Spearman's rho/Pearson's correlation coefficient depending on the distribution. P-value was considered statistically significant at < 0.05. For children below age of five years, weight and height measurements were transformed into weight-for height Z-scores using WHO Anthro to determine prevalence of Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) (WHO, 2006). Sex and age specific BMI-for-age Z-scores (BAZ) were calculated using WHO AnthroPlus for children aged 5-17 years.

## Ethical Considerations:

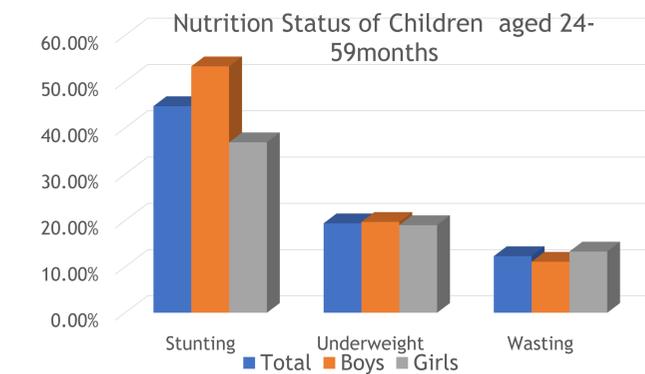
Permission to undertake the survey was received from the KEMRI Scientific Steering Committee and ethical approval was obtained from the KEMRI/ National Ethics Review Committee. Participants received both oral and written information about the study in English and Kiswahili. Informed verbal and written consent and assent was sought from adults 18 years and above and from guardians/caretakers of minors aged 2-17 years, respectively.

## Results:

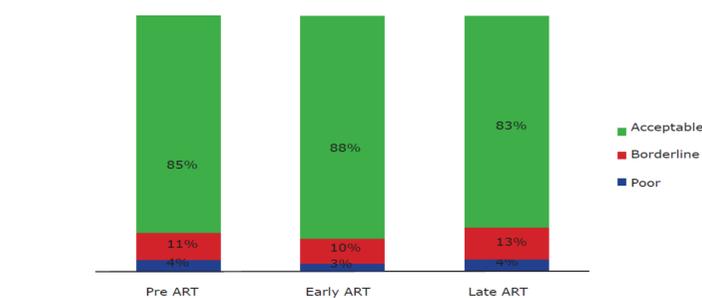
Thinness was more prevalent in males: Pre- ART 26.1%, Early ART 22.5% and Late ART (22.0 percent) than in the females (12.6 %) among Pre- ART, (14.9%) among Early ART and (13.7 %) among Late ART. Overweight/obesity was (23 %, 15.7 % and 20.4 %) in Pre- ART, Early and Late ART respectively. Late ART females presented with the highest prevalence of overweight/obesity 28.0 % and Early ART male clients had the lowest prevalence (5.8 percent).



More boys (53.3%) than girls 36.9% were stunted among children 24-59 months (p=0.04). Severe thinness was higher in boys (14.3%) compared to girls, albeit not significant (11.3%) (P=0.773).



## Distribution of Malnutrition by Gender



In adults, FCS was acceptable (>35). (88 %, 85 %, and 83 %) of Early ART, Pre- ART and Late ART respectively, 10 to 13 % had borderline FCS (21.5-35), while less than 5 % had poor FCS (0-21).

## Conclusions:

Men and women are presenting different forms of malnutrition. Underweight in children and men, and overweight in females depicts the challenge of managing the double burden of malnutrition in PLHIV and calls for interventions that take into cognizance the emerging trend.

**Demographics:** Gender disparity in the distribution of HIV infection continues to be observed across the country with women bearing the highest burden among adults, and boys among the children.

**Nutritional status:** Underweight was reported in children and men, and overweight observed in most of the adults depicts the challenge of managing the double burden of malnutrition in PLHIV. High waist and hip circumferences in the adult study population are a possible metabolic syndrome risk.

**Food Security:** Food consumption score as a measure of food security was acceptable. However, consumption of foods high in key nutrients such as iron, vitamin C and minerals was suboptimal.

**Capacity:** Routine nutrition assessment, monitoring and evaluation of nutrition related activities are not given high priority, while in certain circumstances; the assessments are incomplete, thus rendering them ineffective. Good effort by partners and government has been placed in ensuring that reporting at different levels of the care system is undertaken. However, more efforts on coordination and harmonization of reporting tools is highly required for effective data collection.



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## Footnotes

<sup>1</sup> Nairobi, Western, Nyanza, North Eastern, Central, Coast, North Rift, South Rift, Eastern North and Eastern South in Kenya