

# Food & Nutrition

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### Ready to use therapeutic supplementation in management of malnourished HIV-infected children in Tanzania

**Introduction:** Ready to use therapeutic food (RUTF) has been widely used as first line treatment for severe malnutrition in children infected with HIV. Limited evidence is available on its effectiveness when used in large public settings, with malnutrition cases due to various underlying causes.

**Methods:** In a HIV treatment program in Tanzania, a total of 1051 HIV-infected children with severe acute malnutrition (<3 BMI/WHZ), 86 exposed to RUTF (Plumpy'Nut, Nutriset) and 965 unexposed were selected for this study. The unexposed were treated according to the standard of care at that time which included Nutritional Assessment and Counseling (NAC). The primary outcome was mean change in weight-for-height Z-score (WHZ)/body mass index score (BMIZ). Secondary outcomes included changes in immune suppression and hemoglobin levels (HG). Linear regression models were used to assess the 12-week changes in WHZ/BMIZ, alanine aminotransferase (ALT) and HG levels and a log-binomial model was fit to assess the statistical significance of any difference at 12 weeks for immunosuppression.

**Results:** At 12 weeks, the mean increase in WHZ/BMI was 1.60 in children who received RUTF and 1.59 in the control (P value=0.99). Among those who received RUTE, there was 52% reduction for those who had advanced or severe immune suppression as compared to 63% in control arm (P value=0.39). The mean change in ALT level was -1.72 among those who received RUTF as compared to 1.84 in control group (P value=0.31). HG increased in both arms, 0.74 among those on RUTF and 0.72 in the control group (P value=0.99).

**Conclusion:** The use of RUTF as first line management of severe malnutrition in HIV infected children should be directed to malnourished children caused by poor intake of food. In the correct setting, quality NAC may be equally effective to RUTF and this reflects the importance of treatment that is driven by underlying causes.

### Biography

David Sando has 5 years of experience as the Monitoring and Evaluation Team Lead at the Ministry of Health and Social Welfare in the Epidemiology Unit of the National AIDS Control Program (NACP). He was a Medical Officer In-charge at the Tanzania Heart Institute (THI), supervising and overseeing daily medical activities at the facility. He has extensive research experience, mostly pertaining to HIV/AIDS in Tanzania. He received his Doctor of Medicine at Muhimbili University College of Health Sciences (MUCHS), MSc in Health Monitoring and Evaluation at Jimma University in Ethiopia, and second MSc in Epidemiology from Harvard School of Public Health.

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