

# Effectiveness and challenges of Insta prescribed porridge on nutritional status of under 5 malnourished HIV/AIDS children at Lea Toto, Kangemi, Nairobi, Kenya

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## Abstract:

A lot is published on the role of good nutrition in mitigating the effects of HIV/AIDS, but little is known about the effectiveness of prescribed diets (Food by Prescription (FBP)) in malnourished HIV infected children. The aim of the study was to determine the effectiveness of a prescribed porridge blend, branded 'Insta First Food (FF)', in improving the nutritional status of malnourished HIV infected children below 5 years attending Lea Toto comprehensive care centre, Kangemi slum, Nairobi. FF is a combination of whole maize (*Zea mays* L.), millet (*Eleusine coracana* (L.) Gaertn.), sorghum (*Sorghum bicolor* (L.) Moench), soya (*Glycine max* (L.) Merr.), sugar (*Saccharum officinarum* L.), oil, with added vitamins and minerals. The study was a quasi experimental design that compared nutritional status at baseline (entry) and final (exit). 234 HIV infected children aged 6-59 months with a Z score < -2 were eligible. The children completed the study when they attained a Z score > -1, relapsed, died or failed to achieve a Z score > -1 after 3 months. (July - October 2008). A questionnaire on socio-demographic/economic factors was administered to the caregivers and supplementary data such as infections suffered from were derived from medical records at the study centre. Chi-square was used to test associations between dependent variables (Z scores), and independent variables. A paired T-test was performed to test for mean difference between baseline and after intervention. Frequency distribution on individual variables was undertaken and cross tabulations between all categorical variables and Z-scores performed to uncover the distribution patterns. Pearson chi-square test was performed to test for association between Zscores and individual categorical variables. 81.2% attained a Z score of > -2 in 2 or 3 indicators (WAZ, HAZ and WHZ) whereas only 18.8% had 0 or 1 indicator showing > -2 after 3 months period. Weight gain was significant ( $p < 0.05$ ). Inconsistency in improvement of Z scores was significantly linked to socio-demographic/economic factors especially age of child ( $P = 0.002$ ), relationship of caregiver to child ( $P = 0.072$ ), correct porridge preparation ( $P = 0.020$ ) and age of care giver ( $P = 0.071$ ). There was significant association between training and correct porridge preparation ( $p < 0.001$ ). Children aged 0.5 - < 2 years were 3.3 times more likely to improve their nutrition status as compared to those above 2 years; correct food preparation placed a child at 2.6 fold better than wrong preparation; children with caregivers aged ~30 years were 1.9 times more likely to improve. Addressing malnutrition in HIV infected children should entail an integrated programme that addresses nutrition and socio demographic/economic factors such as age of child and caregiver, training on food intervention, family planning, medical and child care.