

# **PATTERNS OF CLINICAL IMPROVEMENT OF SEVERELY MALNOURISHED CHILDREN ADMITTED AT JARAMOGI OGINGA ODINGA TEACHING AND REFERRAL HOSPITAL KISUMU, KENYA.**

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## **Background**

Worldwide approximately 19 million children under five are affected by severe acute malnutrition. It remains a prevalent problem in developing countries, in 2017 an estimated 482,882 children required treatment for acute malnutrition in Kenya. WHO recommends admission for management of severe acute malnutrition of infants and children between 6-59 months who have a MUAC of less than 115mm or a weight -for-height  $\leq -3$  z-score of the WHO growth standards or have bilateral oedema.

## **Objective**

The objective of the study was to determine the patterns of clinical improvement of severely malnourished children admitted at JOOTRH from January 2015 to December 2016.

## **Methodology**

We used a retrospective cross-sectional study design. It included infants and children (6-59 months) diagnosed with severe acute malnutrition between 1st January 2015, and 31st December 2016. The patient records were retrieved from the hospital registry for the period. The monitoring parameter included was weight gain, improvement in the Z score, improvement in MUAC, resolution of oedema, resolution of danger signs.

## **Preliminary results**

The male to female ratio was 3:1, the average age was 16.97(SD 8.5) months, with a median of 17 months, 6.2% were HIV positive, 18.8% were HIV sero-exposed. 53.1% presented with non- oedematous severe acute malnutrition, 9.4% mild oedema, 28.1% moderate oedema and 9.4% severe oedema. 38.4% presented with no dehydration, 31.2% presented with some dehydration, 25% with severe dehydration and 6.2% in shock. 84.4% had a Z score of -3 or less. The most common comorbidities were anaemia (28.1%) and acute gastroenteritis (18.8%). The average weight-gain per day was 8.16g/kg/day (SD 5.81), resolution of oedema occurred at an average of 8.7, 5.7 and 3 days for severe, moderate and mild oedema respectively. 71.9% recovered and 28.1% died, the average hospital stay duration was 10.16(SD 6.8) days.

## **Conclusion**

The preliminary results reveal poor outcomes compared to the SPHERE acceptable standards, the case fatality ratio is greater than 10%, however the duration of hospital stay and the average weight gain are within acceptable standards.

Key words.

World Health Organization (WHO), Mid-Upper Arm Circumference (MUAC), oedema, weight-gain