



## Long-term outcomes for children with disability and severe acute malnutrition in Malawi

Research snapshot<sup>1</sup>

Despite broad understanding that severe acute malnutrition (SAM) and disability can cause and influence one another, there is limited information on their co-existence in low-income settings and linkages are seldom considered by those working in programmes. This study aimed to describe the prevalence, characteristics and outcomes of disability among children with SAM from a hospital in Blantyre, Malawi, using data from two longitudinal cohort studies, following up survivors who had been treated for SAM one and seven years after discharge. Disability at admission was originally identified clinically and at the seven-year follow-up using a standardised screening tool, the 'Washington Group Questionnaire'. Clinical and anthropo-

metric profiles were compared with sibling and community controls.

According to clinical assessment at admission, 6.4% (60/938) of SAM children had an obvious disability. At the seven-year follow-up, 18% (11/60) of these children were still known to be alive. SAM children with a clinically identified disability at admission had a 6.99 times greater risk of dying by seven-years post-discharge compared to those admitted without disability (relative risk adjusted for age, sex and HIV status 6.99, 95% CI 3.49 to 14.02,  $p < 0.001$ ). Children with some types of disability were at particular risk of death: by the seven-year follow up, 7.82% of children with cerebral palsy had died. Children with a clinically obvious disability were older on average, less likely to be HIV positive and to have oedema

but more likely to be severely malnourished than children without disability at admission. At the seven-year follow-up, those children were more stunted, had less catch-up growth, smaller head circumference, weaker hand grip strength and poorer school achievement compared to non-disabled survivors. The use of the Washington Group Questionnaire confirmed disability in all children identified with disability at admission plus many more children not previously identified.

The authors conclude that SAM children with disability face a much greater risk of mortality than non-disabled children one and seven-years post-discharge. To help children survive and thrive after SAM treatment, it is vital that those with an underlying disability are identified and supported. SAM treatment programmes should also consider structured screening tools to better identify children at risk.

<sup>1</sup> Lelijveld N, Groce N, Patel S, *et al.* (2020). Long-term outcomes for children with disability and severe acute malnutrition in Malawi *BMJ Global Health* 2020;5:e002613.

## Antimicrobial and micronutrient interventions for the management of infants under six months of age identified with severe malnutrition

Research snapshot<sup>1</sup>

Infants under 6 months (U6M) contribute a significant proportion of the burden and mortality of severe malnutrition globally, with 3.8 million infants U6M estimated as being severely wasted and 4.7 million moderately wasted. Evidence of underlying aetiology in this population is sparse but it is known that the group includes ex-preterm and low birthweight (LBW) infants. They also represent a unique population given their dependence on breastmilk or a safe, secure alternative. Nutrition agencies and health providers struggle to make programming decisions on interventions for this group based upon the 2013

WHO Guidelines for the 'Management of Severe Acute Malnutrition in Infants and Young Children' since there is no published interventional trial data that focusses on this population. This review summarises the evidence-base for a selection of common interventions in order to inform policies for the management of severely malnourished infants U6M. Of the 94 articles identified for inclusion, none focused exclusively on severely malnourished infants U6M. There was, therefore, a lack of direct evidence for this population group. In closely related populations, the evidence-base was also neither strong nor extensive.

Key findings by intervention were:

- Antibiotics:** systematic use, as per current WHO guidelines
- Deworming:** no evidence of systematic use in infants but some evidence in breastfeeding mothers of malnourished infants
- Vitamin A:** use of low-dose supplementation in deficient populations only
- Vitamin D:** 6 months supplementation, as per current WHO guidelines for LBW
- Iron:** routine use not recommended
- Zinc:** supplement as per guidelines for infants with diarrhoea and routine use in regions with zinc deficiency
- Folate:** routine use not recommended Maternal supplementation: insufficient evidence to justify routine use
- ReSoMal:** use in malnourished infants U6M, as per current WHO guidelines

Considerable heterogeneity in terms of the age range of the population studied, an anthropometric definition of malnutrition, the dosage and duration of interventions and the outcomes studied make it challenging to summarise the evidence. However, the results provide an initial evidence-base to inform interim policy and programme decisions and future research agenda. More guidance for programmers based on increased evidence is urgently needed.

<sup>1</sup> Campion-Smith, T. J., Kerac, M., McGrath, M., & Berkley, J. A. (2020). Antimicrobial and micronutrient interventions for the management of infants under 6 months of age identified with severe malnutrition: a literature review. *PeerJ*, 8, e9175. <https://doi.org/10.7717/peerj.9175>



Health caregiver checking the weight of a CMAM outpatient at a Health Center in Bauchi, Nigeria