

Inpatient and outpatient treatment for acute malnutrition in infants under six months: a qualitative study from Senegal Research snapshot¹

Treatment for children aged 6-59 months with acute malnutrition has shifted towards an outpatient, community-based approach, while infants under six months old are mostly treated in hospital. In light of the large problem of malnutrition in infants under six months old in Senegal (5.4% prevalence), a descriptive study was undertaken to describe barriers and facilitators for outpatient and inpatient treatment of care for this age group in a semi-urban setting. In-depth interviews and focus group discussions with mothers of malnourished infants, conducted over four months (July-September 2015) in two case clinics (one inpatient, one outpatient), explored three key factors for a successful nutrition programme: access, quality of care and community engagement.

Nine facilitators and barriers emerged from the data. Outpatient care was perceived to be more accessible than inpatient in terms of distance and cost; mothers were motivated to seek support from community health centres when free infant formula was available as part of care. Trust could be more easily generated in an outpatient setting that mothers were already familiar with. In terms of quality of care in the outpatient setting, the cup-and-spoon re-lactation technique was used effectively but needed close supervision and basic medical care could be offered to outpatients, provided that referral of complicated cases was adequate. Inpatient care allowed for more intensive health/nutrition education due to more time for individualised support, although this could be

done in an outpatient setting. The lack of community-level breastfeeding counselling and community education on breastfeeding was identified as an important gap. In terms of community engagement, the community appeared to play a key role in treating malnourished infants through its influence on health-seeking behaviour, peer support and breastfeeding practices. The level of support to mothers of malnourished infants varied widely and domestic task load of mothers was often a barrier to infant care and breastfeeding. The authors conclude that outpatient care does facilitate access to treatment and the community has the potential to be much engaged, although more attention is required for breastfeeding support. An outpatient community-based treatment approach with an emphasis on breastfeeding should be considered going forwards.

¹ van Immerzeel TD, Camara MD, Deme Ly I, and de Jong RJ. Inpatient and outpatient treatment for acute malnutrition in infants under 6 months; a qualitative study from Senegal. *BMC Health Services Research* (2019) 19:69 <https://doi.org/10.1186/s12913-019-3903-x>

Prevention and treatment of acute malnutrition in humanitarian emergencies: a multi-organisation collaboration to increase access to synthesised evidence Research snapshot¹

Programme decision-making to prevent and treat acute malnutrition in an emergency can be hampered by a lack of accessible and relevant overviews of directly available, robust research evidence. This paper describes a process whereby a multi-disciplinary, international group of specialists worked together to build relevant and effective collections of available systematic reviews on acute malnutrition, published and disseminated as online collections, to improve access to concise, synthesised, relevant and up-to-date evidence for programming.

A group of 21 volunteers and stakeholders from multiple backgrounds collaborated between March

2017 and March 2018 to review and curate collections of systematic reviews of interventions for the prevention and treatment of moderate and severe acute malnutrition (MAM and SAM) in humanitarian emergencies. The methodology loosely followed general guidance for overviews of systematic reviews with a pre-defined question, formulated using the Population, Intervention, Comparison, Outcomes and Study design (PICOS) format and search strategies applied to multiple databases. Pairs of collaborators first screened the search yields to identify potentially eligible reviews, after which other pairs screened the list of potentially eligible reviews for relevance that were included in

the final collections. Three collections were published and are publicly available: one of non-Cochrane reviews published on the Evidence Aid website² and two of Cochrane reviews; one on the treatment of acute malnutrition and one on its prevention, published by Cochrane.³ These collections will be updated regularly to provide up-to-date evidence to inform nutrition-in-emergencies decision-makers and programmers. Such collaboration and collation could benefit other subject areas; Evidence Aid is eager to support new collections around other topics relevant to humanitarian emergencies and can be contacted at info@evidenceaid.org

¹ Allen, C., Jansen, J., Naude, C. et al. Prevention and treatment of acute malnutrition in humanitarian emergencies: a multi-organisation collaboration to increase access to synthesised evidence. *Int J Humanitarian Action* 4, 11 (2019) [doi:10.1186/s41018-019-0057-8](https://doi.org/10.1186/s41018-019-0057-8)
² Evidence Aid (2018) Evidence aid nutrition collection. Available at: www.evidenceaid.org/prevention-and-treatment-of-acute-malnutrition-in-emergencies-and-humanitarian-crises/
³ Cochrane Special Collections. Treatment of malnutrition, available at: www.cochranelibrary.com/collections/doi/10.1002/14651858.SC000032/full; and Prevention of malnutrition, available at: www.cochranelibrary.com/collections/doi/10.1002/14651858.SC000031/full

Efficacy of F-100, diluted F-100, and infant formula for treatment of infants under six months with severe acute malnutrition Research snapshot¹

A double-blind randomised clinical trial was conducted between March 2012 and January 2015 to assess the efficacy and safety of F-100, diluted F-100 (F-100D), and infant formula (IF) for dietary management in the rehabilitation phase of the management of severe acute malnutrition (SAM) of infants under six months of age. Infants (n = 153) were enrolled at the Nutrition Rehabilitation Unit of Dhaka Hospital of the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr) in Dhaka and were randomly assigned to any of the three diets after stabilisation.

Two ml blood was collected on study days 1, 3, and 7 for measuring serum electrolytes, creatinine and osmolality, urine samples for specific gravity and osmolality creatinine ratio. Renal solute load (RSL) and potential RSL were calculated. Infants were discharged when they had gained 15% of their admission body weight or had oedema-free weight-for-length z-score (WLZ) ≥ -2 .

Results showed that infants fed F-100 and F-100D had higher weight gain than infants who received IF. The mean difference between F-100 and IF was 4.6 g/kg/d (95% CI 1.5–7.6, P = 0.004). The mean difference between F-100D and IF was

3.1 g/kg/d (95% CI 0.6–5.5, P = 0.015). Total energy intake from the study diet and breastmilk was significantly higher in infants fed F-100 compared with the other two diets (P = 0.001 in each case). RSL was highest in infants fed F-100, but serum sodium showed no sign of elevation. Urinary specific gravity and serum sodium values were within normal range. Controversy about feeding F-100 has concerned its renal solute load and the possible risk of negative water balance and hypernatraemic dehydration. As expected, the estimated renal solute load was lower than the potential renal solute load in all three groups as solutes were being deposited in tissue growth. The authors conclude that F-100 can be safely used in the rehabilitation phase for infants under six months of age with SAM and there is no need to prepare alternative formulations.

¹ Islam, M.M., Huq, S., Hossain, M.J. et al. *Eur J Nutr* (2019). <https://doi.org/10.1007/s00394-019-02067-5>