

Post-discharge interventions for children hospitalised with severe acute malnutrition

Research snapshot¹

It is well-evidenced that children hospitalised with severe acute malnutrition (SAM) have poor long-term outcomes following discharge including high rates of mortality, relapse to acute malnutrition, risk of infection and impaired cognitive development. While this evidence has resulted in calls for better support for children following discharge from inpatient treatment, there is currently minimal guidance and evidence on how to achieve this.

This systematic review and meta-analysis examined the types and effectiveness of post-discharge interventions for improving outcomes in children 6-59 months of age recovered from complicated SAM. Peer-reviewed and grey literature was searched in December 2019; 15 articles were found, representing 10 studies in seven countries.

Interventions identified in the papers included the provision of zinc, probiotics, antibiotics, pancreatic enzymes and psychosocial stimulation.

There was no evidence that zinc reduced mortality post-discharge in the single study reporting deaths. The two studies that gave probiotics did not find significant differences in post-discharge mortality, however the meta-analysis of the combined data suggested that prebiotics did reduce mortality (relative risk (RR): 0.72; 95% CI: 0.51, 1.00; P = 0.049). Antibiotics reduced post-discharge infectious morbidity but did not reduce mortality. Pancreatic enzyme supplementation reduced inpatient mortality (37.8% compared with 18.6%, P < 0.05) but there was no evidence of benefit on post-discharge outcomes. All studies providing psychosocial stimulation found improved neu-

rodevelopmental scores in one domain and meta-analysis showed an associated reduction in post-discharge mortality (RR: 0.36; 95% CI: 0.15, 0.87).

Other interventions of potential relevance that were not incorporated here as they were applied to outpatient SAM recoverees include cash transfers, water treatment packages and consideration of optimal timing of antiretroviral therapy initiation in HIV-infected children.

The authors summarise that there is currently limited evidence to inform post-discharge interventions in children recovered from complicated SAM despite the urgent need for evidence. Only 10 trials from the past five decades met the inclusion criteria. Several biomedical and psychosocial approaches show promise but further exploration is required.

¹ Noble, C C, Sturgeon, J P, Bwakura-Dangarembizi, M, Kelly, P, Amadi, B and Prendergast, A J (2021) Postdischarge interventions for children hospitalized with severe acute malnutrition: a systematic review and meta-analysis. *The American journal of clinical nutrition*, 113(3), pp.574-585.

Conceptual framework of food systems for children and adolescents

Research snapshot¹

Malnutrition in all its forms – undernutrition, micronutrient deficiencies and overweight/obesity – affects all age groups across the world and children and adolescents are especially vulnerable. In low- and middle-income countries, only one quarter of young children receive a diverse diet necessary for growth and development. Access to healthy and nutritious food is important throughout the life course and there is growing recognition that the current ‘food system’ needs radical transformation to ensure nutritious, safe, affordable and sustainable diets for all. However, much of the discussion on transforming food systems has not included children and adolescents

as key stakeholders. Given the unique nutritional needs of this group and their susceptibility to malnutrition, food system transformations need to explicitly incorporate this angle.

This paper proposes a new conceptual framework (the ‘Innocenti Framework’) to better articulate how the diets of children and adolescents are shaped by food systems. The food system determinants within the framework include food supply chains, external food environments, personal food environments and the behaviours of caregivers, children and adolescents. Examples of diet determinants specific to children and adolescents include the influence of schools, on

both access to information and as potential buyers of healthy food products, and intra-household dynamics. The framework also conceptualises the dynamic linkages between the determinants, influencers and drivers of food systems. The structure of the framework is based on that of the more general food systems conceptual framework developed by the ‘high level panel of experts on food security and nutrition’ committee. The framework highlights the diversity of actors that influence the diets of children and adolescents and calls for greater emphasis on the governance and accountability mechanisms of these actors in order to ensure access to nutritious, safe and affordable food.

¹ Raza, A, Fox, E L, Morris, S S, Kupka, R, Timmer, A, Dalmiya, N and Fanzo, J (2020) Conceptual framework of food systems for children and adolescents. *Global Food Security*, 27, p.100436.

The proposed ‘Innocenti Framework’ which outlines how the diets of adolescents and children are shaped by food systems

