Nutritional care for children with feeding difficulties and disabilities

This is a summary of the following paper: *Klein A, Uyehara M, Cunningham A et al. (2023) Nutritional care for children with feeding difficulties and disabilities: A scoping review. PLOS global public health, 3, 3, e0001130.* **https://doi.org/10.1371/journal.pgph.0001130**

Malnutrition can cause disability in the short and long term, while disability can also lead to malnutrition. Children with disabilities are three times more likely to be underweight and twice as likely to be stunted or wasted than non-disabled children. Feeding difficulties are over twice as frequent in children with disabilities, compared to children without disabilities, and 80% of the one billion people with a disability live in low- and middle-income countries. These numbers demonstrate the importance of providing adequate nutritional care and support for children with feeding difficulties and disabilities. However, there are no global reviews of systems, initiatives, and programmes for improving nutritional care for these children. To address this gap, the authors conducted a non-systematic scoping review of programmes and evidence focused on supporting the nutritional care of children with feeding difficulties, related to disability or not.

In total, 127 documents, peer-reviewed or not, published between 2003 to 2022 and identified through keyword searches and snowballing, were reviewed. Interviews were conducted with 42 key informant experts in nutrition and disability. Detailed document review and interview notes were organised into two structured matrices based on challenges and opportunities. The universal progressive model of care framework for services, outlined in the Nurturing Care Framework (WHO et al., 2018), was then used to analyse the findings. In addition, authors also specifically considered the enabling environment in communities and families for accessing and benefiting from services.

The review found insufficient policies, programmes, and evidence to support children with feeding difficulties and disabilities and their families. While some resources and promising approaches exist, they are not standardised or universally used, staff are not trained to use them, and there is insufficient funding to implement them.

Additionally, their families face challenges providing the care they need, including coping with high care demands, accessing support, obtaining appropriate foods, and managing stigma. This review also revealed challenges related to knowledge, attitudes, and practices of health workers toward children with disabilities, in general, and to addressing feeding difficulties more specifically.

Addressing these needs requires systems strengthening and quality improvement at all levels of service and – more holistically – including children with disabilities in nutrition services, programmes, and policies to help them thrive. Specific interventions needed include capacity strengthening and addressing misperceptions and biases among health workers and revising relevant nutrition and health guidelines and care protocols to include appropriate guidance and support for children with feeding difficulties.

> ***"The combination of challenges in identifying feeding difficulties, a lack of understanding of the link between disabilities and feeding, and weak or non-existent referral pathways or specialised services puts these children at risk of malnutrition."***

References

WHO, UNICEF, World Bank (2018) Nurturing care for early childhood development a framework for helping children survive and thrive to transform health and human potential. Geneva: World Health Organization.

Treating growth faltering in infants under six months: Critical research gaps

This is a summary of the following paper: *Tomori C, O'Connor DL, Ververs M et al (2024) Critical research gaps in treating growth faltering in infants under 6 months: A systematic review and meta-analysis. PLOS Global Public Health, 4, 1, e0001860.* **https://doi.org/10.1371/journal.pgph.0001860**

Growth faltering, or a slower gain in weight, length, or head circumference than expected for a child's age and sex, increases the risk of mortality and morbidity. For many children, growth faltering is present at birth or develops within the first 6 months of life. Evidence is lacking on effective growth interventions for infants aged under 6 months (u6m).

This systematic review and meta-analysis was commissioned by the World Health Organization (WHO) to identify and evaluate interventions that included provision of supplemental milks to address growth faltering among infants u6m. The review was conducted according to the US National Academies of Sciences, Engineering, and Medicine guidelines. Of 7,390 deduplicated articles identified, 227 full texts were assessed for eligibility. Two randomised controlled trials were included, of which only 1 was published in a peer-reviewed journal.

The first study was a three-armed randomised controlled trial conducted in Bangladesh (2012–2015) in the context of infant rehabilitation from severe wasting. A total of 153 infants u6m admitted with diarrheal illness and weight-for-length z-score (WLZ) <-3 and/or bipedal oedema were provided with F-100, diluted F-100 (DF-100), or standard infant formula after stabilisation. While breastfeeding mothers were encouraged to continue, only about half of infants were breastfed upon trial entry and only a small proportion of their feeds were from breastmilk. Infants were offered water in between feeds, which runs counter to the WHO guidelines. Infants were discharged when they gained 15% of their weight or had oedema-free WLZ ≥-2.

The second study compared DF-100 and standard infant formula provided to infants u6m in the Democratic Republic of Congo (DRC) (2007–2008). Infants were included in the study if they were free of oedema and their mother reported breastfeeding failure or their child's lack of weight gain at home. All infants were either being breastfed or their mothers were receiving relactation support. Supplementation was halved when infants were gaining 20 g/day and stopped when infants maintained a weight gain of 10g/day for 3 consecutive days. Infants were discharged when they maintained weight gain for 3–5 days.

The Bangladesh study showed significantly higher rates of weight gain in infants receiving F-100 (mean difference 4.6 g/kg/day; p=0.004) and DF-100 (mean difference 3.1 g/kg/day; p=0.015) than those receiving infant formula. In the DRC trial, no difference in weight gain was observed for infants receiving F-100 compared to infant formula within a broader context of lactation support. The meta-analysis also showed no difference in weight gain between infants receiving DF-100 and infant formula.

The main limitation of this review was the dearth of high-quality evidence on interventions for nutritional management of infants u6m with growth faltering. The 2 included studies differed in their inclusion criteria and methods, had few shared outcomes, small sample sizes, and high attrition rates, thus limiting comparability between studies and the generalisability of study findings. Both interventions focused on providing supplemental milk, with no or limited support for breastfeeding or relactation – a misalignment with WHO guidance for exclusive breastfeeding to six months.

The authors recommend a paradigm shift to reorient research around supporting and restoring breastfeeding, rather than on supplementation. They propose a new framework to guide future research to inform development of an evidence-based decision tree to ascertain if, when, and for how long a malnourished child should receive supplemental milk and, if so, what form this should take.