

Postnatal interventions for infants under six months: A systematic review

This is a summary of the following paper: Rana R, Sirwani B, Mohandas S et al (2024) *Effectiveness of postnatal maternal or caregiver interventions on outcomes among infants under six months with growth faltering: A systematic review. Nutrients, 16, 6, 837.*

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Early life growth faltering (also referred to as failure to thrive) and malnutrition are major global public health problems. Infants aged under six months with growth faltering are a particularly vulnerable group. These first six months of life are a period of rapid maturation and development with unique dietary needs. The mother or carer thus plays a critical role in fulfilling the child's nutritional requirements.

To inform the updated World Health Organization (WHO) guidelines on the prevention and management of growth faltering among infants under six months, this review examined the effectiveness of postnatal maternal or caregiver interventions on seven domains. Anthropometric recovery, child development, anthropometric outcomes, mortality, readmission, relapse, and non-response among infants aged under six months were all considered.

A total of 13 studies with preterm and/or low birth weight infants contributed to the final synthesis, which assessed the effects of breastfeeding counselling or education (n = 8), maternal nutrition supplementation (n = 2), mental health (n = 1), relaxation therapy (n = 1), and cash transfer (n = 1) interventions. Overall, the evidence from these studies had serious indirectness and a high risk of bias.

The evidence was limited in scope and primarily ranged from 'low' to 'very low' certainty. Breastfeeding counselling or education compared to standard care might increase infant weight at one month, weight at two months, and length at one month, but with very uncertain evidence (very low quality). Maternal nutrition supplementation, in comparison to standard care, may not result in increased infant weight at 36 weeks postmenstrual age and may not reduce infant mortality by 36 weeks postmenstrual age (low quality).

Moreover, interventions for maternal mental health compared to standard care might not increase infant weight, length, and head circumference at two months, with the evidence ranging from low to very low quality. The effects of relaxation therapy versus standard care on infant weight, length, and head circumference at three months are highly uncertain (very low quality). Lastly, the evidence regarding cash transfers compared to standard care on child development scores at three months, changes in weight and head circumference z-score from birth to three months post-discharge, and readmission by three months remains highly uncertain, with very low-quality evidence.

Based on review findings, strong new WHO recommendations for maternal interventions for infants under six months with growth faltering will be challenging to make because these need a more secure underpinning evidence base. The WHO guidelines of 2013 and 2023 both recommend providing counselling and support, including mental health support, to mothers or caregivers of infants with severe malnutrition, both for inpatient and outpatient care. Given that the 2023 guidelines are still based on 'low' to 'very low' quality evidence, with little change since 2013, the authors urged the need for well-designed, well-targeted future trials assessing postnatal maternal or caregiver interventions on infants aged under six months with growth faltering, stating that this is more urgent than ever.

Rwanda: Before and after study of a national supplementary feeding programme

This is a summary of the following paper: Hebert K, Nsengiyumva E, Kayitesi C et al (2024) *Before and after study of a national complementary and supplementary feeding programme in Rwanda, 2017–2021. Maternal and Child Nutrition. https://doi.org/10.1111/mcn.13648*

According to the National Institute of Statistics of Rwanda and the Ministry of Health, 33% of all Rwandan children aged under five years are stunted. Stunting prevalence rises from 23% in children aged under six months to 39% at 18–23 months of age, showing a marked increase during the window of time when complementary foods are typically introduced. Many households struggle to access energy- and nutrient-dense complementary foods and only 22% of children aged 6–23 months are fed in accordance with all recommended infant and young child feeding practices.

To address the high burden of malnutrition among children from the most vulnerable households, and in addition to other ongoing nutrition-related interventions, the government initiated a national food supplementation programme. This study assessed the effectiveness of locally produced nutrient-dense fortified blended foods (FBF), which were provided to children aged 6–23 months and pregnant and lactating women living in vulnerable households in Rwanda, on stunting prevalence among children. This

initiative was a unique example of the successful nationwide distribution of fully subsidised FBF products for poor households.

Survey data collected in 2017, 2018, and 2021 included anthropometric and biochemical data, demographic and socioeconomic status, food security, and feeding practices – including the provision of FBF. Primary statistical analysis compared the nutritional status of children before and after FBF introduction. There was a reduction in stunting from 47% (2017–2018) to 35% (2021), equivalent to a 42% reduction in the odds of being stunted ($p < 0.001$). At baseline, a high proportion of children were anaemic and iron deficient, and there was a significant reduction in the odds of these at endline.

The remarkable reduction in stunting over a five-year period can be attributed to several factors. Notably, the study highlights the use of a targeted approach to reach the most vulnerable children and a high rate of daily and weekly consumption of the FBF during the last three years of the evaluation (2018–2021). General improvements over time to sociodemographic and household markers, as well as substantial efforts by the government to improve live-



lihoods, health, and wellbeing over the same period, were also important.

One of the study's limitations was the absence of a control group for comparing the intervention effects, as it was deemed unethical to withhold FBF from households. Further, the study was only conducted in the lowest tier of Rwanda's social support scheme households, limiting the generalisability of the results to only households with similar characteristics.