



This selection of summaries and 'snapshots' of peer-reviewed papers provides important evidence to inform the policy and programming discourse around child wasting in South Asia. Several epidemiological papers describe the prevalence, patterns and drivers of child wasting in the region while others evidence that size at birth,

maternal undernutrition and early growth faltering are key drivers of wasting. Summaries of interventions on maternal nutrition to improve child nutrition status include research on food and cash transfers in Nepal, food supplementation in Pakistan and integrated maternal nutrition interventions in Bangladesh. Three snapshots touch on infant and young child feeding, de-

scribing evidence of wasting protection from optimal practice, environmental enteric dysfunction and stunting links, and the potential to influence gut microbiota in malnourished children using adapted complementary foods. Recently published papers project global and considerable regional impact of the COVID-19 pandemic on levels of child wasting.

BANGLADESH

Integrating nutrition interventions into an existing maternal, neonatal and child health programme in Bangladesh Research snapshot¹

Maternal undernutrition is a major public health concern globally, contributing to poor foetal and early childhood growth, and increased infant morbidity and mortality. Limited evidence exists on delivering multiple interventions for maternal nutrition simultaneously. Alive & Thrive addressed this gap by integrating nutrition services into an existing maternal, neonatal and child health (MNCH) programme in Bangladesh. In the nutrition-focused model, besides standard antenatal care (ANC), women received intensive antenatal and postpartum nutrition counselling, pregnancy weight monitoring, provision of free calcium and iron and folic acid (IFA) supplements, and promotion of optimal breastfeeding practices, all provided through monthly home visits by a health worker or volunteer. Community mobilisation was carried out simultaneously through videos and discussions with women, husbands, family members and community members. The effect of providing nutrition-focused MNCH compared with standard MNCH (ANC with

standard nutrition counselling) was evaluated through a cluster-randomised evaluation.

Cross-sectional surveys were undertaken at baseline (2015) and endline (2016) with 300 and 1,000 pregnant or recently delivered women respectively per survey round. Difference-in-difference effect estimates were derived, adjusted for geographic clustering and infant age and sex. Household exposure to frontline workers was high in both groups (80-90%), but was significantly higher in nutrition-focused MNCH areas at endline. Mothers in the nutrition-focused MNCH group were visited more frequently than those in the standard MNCH group by health workers [6.0 times (95% CI: 5.8, 6.1 times) compared with 3.7 times (95% CI: 3.6, 3.9 times)] and by health volunteers [8.1 times (95% CI: 7.8, 8.5 times) compared with 3.2 times (95% CI: 2.9, 3.4 times)]. Coverage of community mobilisation activities was around 50%. Improvements were significantly greater in the nutrition-focused MNCH group than in

the standard MNCH group for consumption of IFA [effect: 9.8 percentage points (pp); 46 tablets] and calcium supplements (effect: 12.8 pp; 50 tablets). Significant impacts were observed for the number of food groups consumed (effect: 1.6 food groups), percentage of women who consumed ≥ 5 food groups per day (effect: 30.0 pp), and daily intakes of several micronutrients. A significant impact was also observed for exclusive breastfeeding ((EBF); effect: 31 pp) but not for early initiation of breastfeeding. The authors conclude that the integration of nutrition interventions into ANC is effective when implemented well, particularly when facilitated by a solid and functional system for early pregnancy detection and ANC service delivery.

¹ Nguyen PH, Kim SS, Sanghvi T, et al. Integrating Nutrition Interventions into an Existing Maternal, Neonatal, and Child Health Program Increased Maternal Dietary Diversity, Micronutrient Intake, and Exclusive Breastfeeding Practices in Bangladesh: Results of a Cluster-Randomized Program Evaluation. *J Nutr*. 2017;147(12):2326-2337. doi:10.3945/jn.117.257303. <https://pubmed.ncbi.nlm.nih.gov/29021370/>

Factors influencing maternal nutrition practices in a large scale maternal, neonatal and child health programme in Bangladesh Research snapshot¹

Improving maternal nutrition practices during pregnancy is essential to reduce the high burden of maternal, infant and child undernutrition and mortality. This paper examines the maternal, household and health-service factors influencing maternal nutrition practices in the context of a large-scale maternal, neonatal and child health (MNCH) programme in Bangladesh. Data were drawn from a household survey of pregnant (n = 600) and recently delivered women (n = 2,000). Multivariate linear and logistic regression analyses were used to examine the determinants of three outcomes: consumption of iron and folic acid (IFA) tablets; consumption of calcium tablets; and diverse diets. During pregnancy, women consumed 94 ± 68 IFA and 82 ± 66 calcium tablets (out of 180 as recom-

mended) and only half consumed an adequately diverse diet. Good nutrition knowledge was the key maternal factor associated with higher consumption of IFA ($\beta = 32.5$, 95% CI: 19.5, 45.6), calcium tablets ($\beta \sim 31.9$, 95% CI: 20.9, 43.0) and diverse diet (OR = 1.8, 95% CI: 1.0 \pm 3.1), compared to poor knowledge. Women's self-efficacy in following recommended practices and perception of enabling social norms were significantly associated with dietary diversity. At the household level, women who reported a high level of spousal support were more likely to consume IFA ($\beta = 25.0$, 95% CI: 18.0, 32.1) and calcium tablets ($\beta = 26.6$, 95% CI: 19.4, 33.7) and have a diverse diet (OR = 1.9, 95% CI: 1.2, 3.3), compared to those who received low support. Health-service factors associated with higher intakes of IFA and

calcium tablets were early and more prenatal care visits and receipt of free supplements. Combined exposure to several of these factors was attributed to the consumption of an additional 46 IFA and 53 calcium tablets and 17% higher proportion of women consuming diverse diets.

MNCH programmes provide a delivery platform with the potential to reach large proportions of pregnant women with essential nutrition interventions. However, effective integration of a package of nutrition interventions may require priority strategies. This study illustrates that improving both demand side (such as maternal knowledge, self-efficacy and perceptions of social norms) and supply side (such as early registration in prenatal care and provision of free supplements), together with family support, have the potential to improve maternal nutrition practices.

¹ Nguyen PH, Sanghvi T, Kim SS, et al. Factors influencing maternal nutrition practices in a large scale maternal, newborn and child health program in Bangladesh. *PLoS One*. 2017;12(7):e0179873. Published 2017 Jul 10. doi:10.1371/journal.pone.0179873 <https://pubmed.ncbi.nlm.nih.gov/28692689/>