

## Editorial

# Feeding infants right – status and future directions

Achieving optimal breast-feeding rates is one of the most important public health goals, although achieving 6 months of exclusive breast-feeding is quite a challenge in most parts of the world, including most of Africa. In a randomized controlled trial by Ochola *et al.*, published in this issue of *Public Health Nutrition*<sup>(1)</sup>, intensive (seven sessions) home-based breast-feeding counselling significantly improved exclusive breast-feeding rates from birth to 6 months, while semi-intensive (one session) counselling significantly improved exclusive breast-feeding at 1 month only, as compared with a control group that received no counselling. The study adds to the current knowledge that regular contact at the community level could be an effective way to support established hospital-based efforts, such as the WHO/UNICEF Baby Friendly Hospital Initiative aimed at sustaining exclusive breast-feeding of infants up to 6 months of age. The search for feasible and cost-effective approaches that could have a positive impact on exclusive breast-feeding remains ongoing.

Such efforts should also be accompanied by interventions aimed at adequate and timely complementary feeding and micronutrient supplementation as necessary. It has been estimated that some 6% of young child deaths could be prevented through optimal complementary feeding<sup>(2)</sup>. The basic principles of complementary feeding are theoretically straightforward<sup>(3)</sup> and interventions based on these principles can improve dietary intake and reduce nutritional stunting<sup>(4)</sup>.

Yet complementary foods in low-income settings tend to be low in animal foods, fruits and vegetables, and they depend heavily on cultural differences in food choices and different staples that can be grown locally in each region, as Baye *et al.* in the current issue<sup>(5)</sup> found in Ethiopia. In this case, infant diets tended to be low in Fe, Ca, Zn and vitamins A and C. Fe is particularly problematic and worrying. Poor diet quality, for example a diet based predominantly on cow's milk, might be one of several reasons for the increase in prevalence of Fe deficiency in infants and toddlers in north-west Brazil, suggest Granado *et al.*, also in the current issue<sup>(6)</sup>.

Besides diet quality, timing is another issue of concern, as diets complementary to breast milk in young children in low-income settings are often introduced too late. For example, in India only 56% of infants 6–9 months of age receive solid foods with breast milk. They are not fed often enough; less than half of Indian children aged 6–23 months are fed the recommended minimum number of times per day and two-thirds are not fed from the

minimum number of food groups. Thus only 21% of young Indian children are fed according to all three recommended practices<sup>(7)</sup>. Delayed introduction and low quality of complementary feeding of Indian children aged 6–23 months is highlighted in the paper by Malhotra in the current issue<sup>(8)</sup>. Malhotra's study, based on data from the latest National Family Health Survey<sup>(7)</sup>, shows that mothers of infants aged 6–8 months who received nutritional advice during antenatal check-ups were more likely to offer their children food more than twice daily than mothers who did not. Furthermore, nutritional information by health professionals tended to improve feeding practices up to 18 months. The need to counsel and educate mothers about children's nutritional needs and appropriate feeding practices is the main message of the paper<sup>(8)</sup>. Worth noting is that educational strategies aimed at improving complementary feeding practices work well where populations can afford the needed foods. Otherwise, although education can still have a large impact, providing food supplementation along with education may be necessary to achieve optimal impacts in the short term<sup>(9)</sup>. Clearly, further research on actions to promote appropriate complementary feeding is needed in different settings<sup>(3)</sup>.

Not addressed in the articles highlighted in this issue is the problem of overweight, which deserves greater attention in low-income settings. Health appears to deteriorate more rapidly with overweight in populations exposed to nutrient deficits *in utero* or infancy<sup>(10)</sup>. As highlighted in last month's issue of *Public Health Nutrition*, low- and middle-income countries must now deal simultaneously with the dual problems of diet insufficiencies early in life and excessive weight gain later in life. Strategies to do this are still being tested, but a logical one might, for example, deal with attempts by international food companies to lure their populations into diets based heavily on ultra-processed foods. Overall, low-income countries need to balance short- and long-term approaches in policy making and programme design. And in the current climate of product-based approaches to solve nutrition problems, they should require donors to do the same.

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## References

- Ochola SA, Labadarios D & Nduati RW (2013) Impact of counselling on exclusive breast-feeding practices in a poor urban setting in Kenya: a randomized controlled trial. *Public Health Nutr* **16**, 1732–1740.
- Jones G, Steketee RW, Black RE *et al.* (2003) How many child deaths can we prevent this year? *Lancet* **362**, 65–71.
- World Health Organization (2013) *Essential Nutrition Actions: Improving Maternal, Newborn, Infant and Young Child Health and Nutrition*. Geneva: WHO; available at [http://apps.who.int/iris/bitstream/10665/84409/1/9789241505550\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/84409/1/9789241505550_eng.pdf)
- Vazir S, Engle P, Balakrishna N *et al.* (2013) Cluster-randomized trial on complementary and responsive feeding education to caregivers found improved dietary intake, growth and development among rural Indian toddlers. *Matern Child Nutr* **9**, 99–117.
- Baye K, Guyot JP, Icard-Vernière C *et al.* (2013) Nutrient intakes from complementary foods consumed by young children (aged 12–23 months) from North Wollo, northern Ethiopia: the need for agro-ecologically adapted interventions. *Public Health Nutr* **16**, 1741–1750.
- Granado FS, Augusto RA, Muniz PT *et al.* (2013) Anaemia and iron deficiency between 2003 and 2007 in Amazonian children under 2 years of age: trends and associated factors. *Public Health Nutr* **16**, 1751–1759.
- International Institute for Population Sciences (2007) *National Family Health Survey (NFHS-3), 2005–06, India: Key Findings*. Mumbai: IIPS; available at <http://www.measuredhs.com/pubs/pdf/SR128/SR128.pdf>
- Malhotra N (2012) Inadequate feeding of infant and young children in India: lack of nutritional information or food affordability? *Public Health Nutr* **16**, 1723–1731.
- Bhutta ZA, Ahmed T, Black RE *et al.* (2008) What works? Interventions for maternal and child undernutrition and survival. *Lancet* **371**, 417–440.
- Victora CG, Adair L, Fall C *et al.* (2008) Maternal and child undernutrition: consequences for adult health and human capital. *Lancet* **371**, 340–357.