

## Commentary

# What works, and what really works

Stuart Gillespie<sup>1,\*</sup> and Lindsay Allen<sup>2</sup>

<sup>1</sup>International Food Policy Research Institute, Washington, DC, USA: <sup>2</sup>University of California at Davis, CA, USA

In recent development discourse, much has been debated and written about evidence-based actions, defined as: ‘the application of the best available systematically assembled evidence in setting policy and practice’<sup>1</sup>. Nutrition is clearly not exempt from justifying itself, and it is important that *Public Health Nutrition* has addressed this in recent issues<sup>2–4</sup>.

Much of our knowledge of ‘what works’ derives from highly supervised, double-blind, placebo-controlled, randomised controlled trials. Such trials demonstrate efficacy. But there is crucially an additional dimension of ‘what works’ questions that relates to what actually has achieved a significant impact in large-scale, real-world conditions. Evidence of both is required. Yet, in many ways it is much easier to demonstrate efficacy and to establish plausible mechanisms behind effects seen in small-scale trials than it is to (a) show large-scale impact and (b) attribute it to a particular intervention. The reasons why some efficacious interventions are effective in a wider arena while others are not are also often poorly understood.

Finally, even where large-scale programmatic effectiveness is demonstrated, it is quite possible that such programmes will not influence and change/improve future nutrition-relevant policy. One prominent example of this is the persistent sidelining of the Tamil Nadu Integrated Nutrition Programme (TINP) in South India by the Government of India in favour of its centrally sponsored Integrated Child Development Services (ICDS) scheme, a markedly less cost-effective programme than TINP<sup>5</sup>. Clearly here we are entering the domain of political economy considerations, including the values, beliefs and individual mindsets of key decision-makers, the type of incentives for innovation or change and a host of other, often mystifying factors. An important question for public health nutritionists to mull over is how far we go down this road? To what extent should we be employing the art of advocacy alongside the science of nutrition?

In our recently published book<sup>6</sup>, we address both the efficacy and the effectiveness issues as they pertain to direct nutrition actions, as part of a joint initiative sponsored by the Asian Development Bank (ADB) and led by the International Food Policy Research Institute (IFPRI).

The review tracks the life cycle impacts of malnutrition in the developing world, highlighting the dynamics of

cause and consequence, and then considers what can be done to break the cycle – first from an efficacy perspective, then with regard to large-scale effectiveness. The focus is on the five major nutrition problems in low-income Asia: low birth weight, early childhood growth failure, anaemia, iodine-deficiency disorders, and vitamin A deficiency. For each of these, the nature of the problem, its prevalence, distribution, consequences and aetiology are discussed before a comprehensive review of the current evidence of efficacy of key nutrition interventions for preventing or alleviating these conditions is undertaken. The final two sections review the effectiveness of large-scale programmes and the process to be adopted for selecting and prioritising options.

Regarding efficacy, while much has been done in the last 10 years, significant gaps remain in our understanding of, for example, how to reduce low birth weight or improve child growth during the first two years of life. Some useful evidence exists (e.g. the Gambian study by Ceessay *et al.*<sup>7</sup>) but more is needed. It is all the more important to know what works given the now recognised contribution of very early (foetal) nutrition to later performance and other outcomes. It is also important to know *when* it works – what defines the critical windows when interventions are most effective, at what stage of pregnancy is it worth/not worth intervening, should we intervene even earlier during infancy/childhood than is being done now, and what are the critical levels and frequency of nutrients to be supplied to vulnerable groups?

Regarding large-scale effectiveness, our review was constrained by the dearth of well-designed evaluations of large nutrition interventions in the developing world (a major problem in itself). Despite this, we drew upon what does exist to distil a series of guidelines for improving the effectiveness, and ultimately the impact, of key nutrition interventions. The key strategies reviewed included growth monitoring and promotion, integrated care and nutrition, communications for behavioural change (focused primarily on improving care practices), supplementary feeding for women and young children, school feeding, health-related services, micronutrient supplementation, and food-based strategies.

The review concludes by synthesising the key lessons from several successful community-based nutrition interventions in Asia, and focusing on the type of process

\*Corresponding author. Email s.gillespie@cgiar.org

that needs to be initiated for deciding on the type of action or mix of actions in different situations. The choice will depend on the actual nature and distribution of the malnutrition problem, its causes, and the type of resources that are available. No single intervention or mix of interventions should ever be prescribed in isolation from a participatory process of problem assessment, causal and capacity analysis, and programme design. Cost–benefit and cost-effectiveness analyses, to the extent that they are feasible, should be incorporated in the process of deciding priorities (useful recent work has been done on this by Horton<sup>8</sup>). There are important potential synergies between many actions – carried out by multiple actors across sectors – and the combined effects of such interventions are often not merely additive, but multiplicative. ‘Key minimum packages’ that cost-effectively maximise such synergies are described for different situations. Programme goals should be prioritised with consideration to the level of a country’s development. Finally, the review concludes with a discussion of best practices in programme design and management.

In sum, progress has been made but more work is needed to show what works in different contexts. As a major part of this, stronger alliances are needed between scientists and programme people to strengthen this critical bridge between efficacy and impact.

## References

- 1 Last JM, ed. *A Dictionary of Epidemiology*, 3rd ed. New York: Oxford University Press, 1995.
- 2 Margetts B. Making *Public Health Nutrition* relevant to evidence-based action: are we doing enough? [editorial]. *Public Health Nutr.* 2001; **4**(6): 1199.
- 3 Margetts B, Warm D, Yngve A, *et al.* Developing an evidence-based approach to Public Health Nutrition: translating evidence into policy. *Public Health Nutr.* 2001; **4**(6A): 1393–7.
- 4 Brunner E, Rayner M, Thorogood M, *et al.* Making Public Health Nutrition relevant to evidence-based action. *Public Health Nutr.* 2001; **4**(6): 1297–9.
- 5 Measham AR, Chatterjee M. *Wasting Away: The Crisis of Malnutrition in India. Directions in Development.* Washington, DC: The World Bank, 1999.
- 6 Allen LH, Gillespie SR. *What Works? A Review of the Efficacy and Effectiveness of Nutrition Interventions.* United Nations Sub-Committee on Nutrition and Asian Development Bank (ADB), Manila ([www.adb.org](http://www.adb.org)), September 2001.
- 7 Ceesay SM, Prentice AM, Cole TJ, *et al.* Effects on birth weight and perinatal mortality of maternal dietary supplements in rural Gambia: 5-year randomised controlled trial. *Br. Med. J.* 1997; **315**: 786–90.
- 8 Horton S. Opportunities for investments in nutrition in low-income Asia. In: Hunt J, Quibria MG, eds. *Investing in Child Nutrition in Asia.* Asian Development Bank (ADB) Nutrition and Development Series No. 1. Manila: ADB, 1999.