Editorials 537

- 2 The Giessen Declaration. *Public Health Nutrition* 2005; **8**(6A): 783–6.
- 3 Blackburn H. Diet and mass hyperlipidemia: a public health view. In: Levy RB, Dennis B, Ernst N, eds. *Nutrition, Lipids* and Coronary Heart Disease: A Global View. New York: Raven Press, 1979.
- 4 Cannon G. Food and Health. The Experts Agree. London: Consumers' Association Ltd, 1992.
- 5 Ottawa Charter for Health Promotion, *Bulletin of the Pan American Health Organization* 1987; **21**(2): 200–4.
- 6 Diez Roux AV. Residential environments and cardiovascular risk. *Journal of Urban Health* 2003; 80(4): 569–89.
- 7 Mutch DM, Wahli W, Williamson G. Nutrigenomics and nutrigenetics: the emerging faces of nutrition. FASEB Journal 2005; 19(12): 1602–16.
- 8 Gibney MJ, Walsh M, Brennan L, Roche HM, German B, van Ommen B. Metabolomics in human nutrition: opportunities

- and challenges. *American Journal of Clinical Nutrition* 2005; **82**(3): 497–503.
- 9 Roche HM, Phillips C, Gibney MJ. The metabolic syndrome: the crossroads of diet and genetics. *Proceedings of the Nutrition Society* 2005; **64**(3): 371–7.
- 10 Oommen AM, Griffin JB, Sarath G, Zempleni J. Roles for nutrients in epigenetic events. *Journal of Nutritional Biochemistry* 2005; 16(2): 74–7.
- 11 Waterland RA, Jirtle RL. Early nutrition, epigenetic changes at transposons and imprinted genes, and enhanced susceptibility to adult chronic diseases. *Nutrition* 2004; 20(1): 63–8.
- 12 Margetts B. Stopping the rot in nutrition science [editorial]. *Public Health Nutrition* 2006; **9**(2): 169–73.
- 13 Yngve A, Hambraeus L, Lissner L, Majem LS, Vaz de Almeida MD, Berg C, *et al.* The Women's Health Initiative. What is on trial: nutrition and chronic disease? Or misinterpreted science, media havoc and the sound of silence from peers? *Public Health Nutrition* 2006; **9**(2): 269–72.

Achieving the Millennium Development Goals through mainstreaming nutrition: speaking with one voice

At the most recent meeting of the Standing Committee on Nutrition of the UN system in Geneva in March of this year (2006), there was a dramatic shift in the tenor of the opening plenary session. Three very high-ranking officials of three of the largest implementing UN agencies (WHO, UNICEF, World Bank), along with WFP and FAO, produced – independently of one another – a clear, consistent message focusing on the importance of nutrition for development. In each case this was couched within the comparative advantage of each agency.

It was also striking that none of the speakers came from a background of nutrition training - one economist, one public health physician, one health economist and one development expert. All had been converted by enthusiastic nutrition colleagues within their particular agency, and by long experience in many countries, and an expanding evidence base. All referred to the same evidence base - the Bellagio Child Survival Study Group¹ and subsequent papers, published not in nutrition or even public health journals but in medical journals (the Lancet and the British Medical Journal in particular), although the significance of this will not be discussed here. But all were somewhat perplexed as to why nutrition issues were not an automatic component of all national health and development programmes, including within each agency. They had clearly used their considerable experience in the public sector to think this through, especially the importance of having a common and consistent message.

Another remarkably common theme from all these speakers was the extent to which attainment of the Millennium Development Goals (MDGs) is at the top of their agendas and is now driving all programme planning and implementation. The insight - known to all working in nutrition and development - that reaching the MDGs will require mainstreaming of nutrition interventions in at least six of the goals and perhaps all eight² seems to have reached a number of influential ears. Equally, all accepted without question that national development does not happen without improved nutrition and health and a reduction in inequities; i.e. nutrition is not only an outcome of economic development, but an essential input to all such development. All of this raises a rephrasing of the old question: when will nutrition stop being the Cinderella of health interventions when it comes to global funding priorities? Why, for example, is there no Global Fund for broad-based nutrition programming?

A further striking commonality was that they came with the same request to all those present, as well as to the wider public health nutrition sector in general: agree on terminology, agree on the same priorities and simplify the message. They all promised that if these three things were to happen, they would push nutrition programmes and advocate for nutrition funding and programming within their agencies.

Some may rightly say that nutrition is intrinsically more complex than some other public health interventions such as immunisation. The UNICEF conceptual framework is widely accepted as the basis for the analytical framework of nutrition problems and may be one basis for common approaches, but with the increasing understanding that all three groups of factors must be addressed: immediate

538 Editorials

causes, underlying causes and basic causes³, with the reduction of poverty and inequities being an essential part of the basic causes that need to be addressed. However, although access to food, caring practices, health infrastructures and the environment are considered as the underlying causes of nutrition, very few studies have investigated the relative importance of these factors in both the short term and the long term. One of the few multi-country studies which included various indicators as proxies for the underlying factors showed that national food availability and accessibility contributed significantly to the variance in undernutrition of the population under 5 years of age⁴. The other three most important underlying factors were women's education, women's status (relative to men) and the health environment in which these children were living⁴.

But there is also a danger in simplifying the message too much: we end up at the lowest common denominator. More in-depth studies at country level have shown that particularly the non-grain food component of food expenditure (usually nutrient-rich foods beyond the reach of families living in poverty) was the main determinant of differences in micronutrient status or quality of the diet. For example, data from the nutrition/health surveillance systems from Bangladesh and Indonesia showed the impact of macroeconomic changes on the rates of underweight and stunting (Bangladesh) and on rates of micronutrient deficiencies (Indonesia)^{5,6}. In the case of Bangladesh, the increased production of rice as a result of new rice varieties and the liberalisation of the market were responsible for a decline of about 15-20% in underweight in children aged 6-59 months⁶. The Indonesian case study showed that the urban poor were the hardest hit by the Asian economic crisis⁵, unlike in Africa where the rural poor are those being affected the most and where three-quarters of those living in rural areas also live below the poverty line⁷.

However, health and nutrition professionals have mainly based the effectiveness of their programmes on short-term outcomes, e.g. vitamin A capsule programmes, and have focused their nutrition interventions on the immediate causes. In the case of nutrition this has tended to be requesting support for micronutrient supplementation or fortification programmes. However, small successful interventions, often supported by non-governmental organisations, have repeatedly been shown to be effective but they are rarely scaled-up sustainably. The recent Child Survival interventions proposed by the Bellagio Study Group¹ specifically stated that they referred only to more proximal interventions, ones that could be delivered through primary health-care clinics and community-based structures. Whilst these interventions are crucial and will save many lives, we know that nutrition status is affected by factors that go beyond the delivery of commodities such as supplements. In countries where child survival is most problematic, health systems (and the

education system) are in disarray⁸. So, while this series, the later neonatal one and the proposed nutrition series are an essential contribution to revitalising national and international commitment to child survival, their impact will not be successful or sustained unless more distal levels are also addressed.

Nevertheless, effective solutions are known and the evidence base has never been stronger. Questions are now being raised about the sustainability of mass immunisation campaigns⁹, the effectiveness of health facility-based growth monitoring10 and the appropriateness of oral rehydration therapy when promoted as sachets if there is not a corresponding emphasis on nutrition, water and sanitation¹¹. Evaluations have found that it is only when these core service activities are embedded in a more comprehensive approach (which includes paying attention to health systems and human capacity development) are real and sustainable improvements seen in the health status of populations¹². In fact, those in charge of other major diseases such as HIV, tuberculosis and malaria are also increasingly realising that even the straightforward delivery of medications for these conditions is dependent upon a well-functioning health service and community engagement. For many of these programmes local capacity development has been undermined through a reliance upon centrally devised, health facility-based solutions with an emphasis upon disease (as opposed to the underlying determinants of ill health). In addition, community participation has often been distorted into becoming a conduit for the delivery of different sorts of commodities¹³. The nutrition community has long recognised this shortcoming of focusing just upon one level and has recognised that influences on nutrition status occur at the four major levels: family, community, national and global.

There are several relatively simple steps we must take: agree on terminology and the range of interventions needed at all four levels of social governance, and then 'stay on message'. Nutrition interventions will increasingly become integrated into child survival-type activities and efforts in scaling-up will become important drivers of expanded programmes, not least because it appears that is where the funds will be. However, there are also interventions such as prevention and control of iodinedeficiency disorders, and other fortification programmes, where the programmes should be aimed nationally in the first instance and where the private sector is essential. Significant progress is being made in sectors not traditionally associated with nutrition but in which it is essential that progress is made if nutrition and health are to improve: sectors such as women's education, increasing accessibility to food supplies (and reducing population pressures) and promoting measures to improve women's status, along with the increasing recognition of the need to improve the overall health environment. They are all, to a greater or lesser extent, self-reinforcing; i.e. improvements

Editorials 539

in one area will have a positive impact on others. Such investments should be seen as complementary to more direct nutrition interventions such as breast-feeding promotion and nutrition education⁴. All actions need to explicitly address poverty and inequity to be sustainable.

It does appear that we, the nutrition community, have an historic opportunity. However, this has happened before in the late 1980s and was lost. This time we must work together, complementing one another's comparative advantages, harnessing our differences creatively and agree on the common approaches. Maybe it is also time to look more critically at the training and professionalism of nutritionists, and to aim at building capacity, the last especially in resource-poor settings. Increased attention to honing our messages, as at the SCN meeting, might be an important early step. However, the article focusing on the situation in sub-Saharan Africa in the present issue shows the magnitude – and breadth – of the challenge¹⁴, as does the recent report on the progress towards the first MDG on poverty and hunger¹⁵. Nevertheless, recent events such as the World Bank's repositioning of nutrition in their programmes¹⁶, the increased focus on nutrition and food safety (one of only 15 new focus areas) by WHO, the publication by UNICEF of the report on progress towards the first MDG¹⁵, joint Memoranda of Understanding between agencies and the various alliances and international non-governmental organisations as e.g. between WFP and UNICEF, the recent harmony shown at the SCN and so on, suggest many of these things may already be happening. The next step is to monitor and evaluate the resulting strengthened national programmes so that the lessons to be learned are clear.

Acknowledgements

The opinions in this Editorial are those of the authors and do not necessarily reflect the views of their organisations. None of the authors has competing interests.

Ian Darnton-Hill^{1,*}, Martin W Bloem² and Mickey Chopra³

¹Senior Adviser, Child Survival and Nutrition, Nutrition Section, UNICEF, New York, NY 10006, USA *Email: idarntonhill@unicef.org

²Chief, Nutrition, World Food Programme, Rome, Italy

³Director, Health Systems Research Unit, MRC, South Africa and Associate Professor, School of Public Health, University of the Western Cape, Capetown, South Africa DOI: 10.1079/PHN2006965

References

- Black RE, Morris SS, Bryce J. Where and why are ten million children dying every year? *Lancet* 2003; 361: 2226–34.
- 2 United Nations System Standing Committee on Nutrition. Nutrition for Improved Development Outcomes. 5th Report on the World Nutrition Situation. Geneva: WHO, 2004. Available at http://www.unsystem.org/scn/Publications/ AnnualMeeting/SCN31/SCN5Report.pdf.
- 3 UNICEF. Strategy for Improved Nutrition of Children and Women in Developing Countries. Policy Review Paper E/ICEF/1990/1.6. New York: UNICEF, 1990.
- 4 Smith L, Haddad L. Explaining Child Malnutrition in Developing Countries: A Cross-country Analysis. IFPRI Research Report 111. Washington, DC: IFPRI, 2000.
- 5 Bloem MW, de Pee S, Darnton-Hill I. Micronutrient deficiencies and maternal thinness: first chain in the sequence of nutritional and health events in economic crises. In: Bendich A, Deckelbaum RJ, eds. Preventive Nutrition: The Comprehensive Guide for Health Professionals., 3rd ed. Totowa, NJ: Humana Press.
- 6 Torlesse H, Kiess L, Bloem MW. Association of household rice expenditure with child nutritional status indicates a role for macroeconomic food policy in combating malnutrition. *Journal of Nutrition* 2003; **133**: 1320–5.
- 7 Chopra M. Food Security, Rural Development and Health Equity in Southern Africa. EQUINET (Regional Network for Equity in Health in Southern Africa) Discussion Paper No. 22. Harare, Zimbabwe: EQUINET, 2004.
- 8 UN Millennium Project. Who's got the Power? Transforming Health Systems for Women and Children. Summary version of the report of the Task Force on Child Health and Maternal Health. New York: UN, 2005; 1–24.
- 9 Hall AJ, Cutts FT. Lessons from measles vaccination in developing countries. *British Medical Journal* 1993; 307: 1294–5.
- Chopra M, Sanders D. Is growth monitoring worthwhile in South Africa? South African Medical Journal 1997; 87: 875–8.
- 11 Gutierrez G, Tapia-Conyer R, Guiscafre H, Reyes H, Martinez H, Kumate J. Impact of oral rehydration and selected public health interventions on reduction of mortality from child-hood diarrhoeal diseases in Mexico. *Bulletin of the World Health Organization* 1996; 74: 189–97.
- 12 Halstead SB, Walsh JA, Warren K, eds. *Good Health at Low Cost.* New York: Rockefeller Foundation, 1985.
- 13 Fitzroy H, Briend A, Fauveau V. Child survival: should the strategy be redesigned? Experience from Bangladesh. Health Policy and Planning 1990; 5: 226–34.
- 14 Chopra M, Darnton-Hill I. Responding to the crisis in sub-Saharan Africa: the role of nutrition. *Public Health Nutrition* 2006; **9**(5): 544–50.
- 15 UNICEF. Progress for Children. A Report Card on Nutrition, Volume 4. New York: UNICEF, 2006; 33 pp.
- World Bank. Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action. Directions in Development Paper. Washington, DC: International Bank for Reconstruction and Development/World Bank, 2006.