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Trends and Issues



Trends

The more generalized discussion of nutrition status and infection risk¹⁰ seen in the 1960s has been replaced by nutrient-specific strategies. The impact of undernutrition has been segregated into (i) specific vitamin and mineral deficiency impact on physiology and on future incomes, and (ii) childhood growth faltering of weight, height, and body mass¹¹ due to poor household food security and/or chronic infection.¹² Corrections of social conditions that are correlated with poor growth attainment or micronutrient deficiencies have become important elements for successful nutrition intervention programs. In countries where development has proceeded rapidly, the problem of overnutrition is also emerging quickly, which increases risk for several chronic diseases.¹³

As urbanization and increases in life expectancy have changed the demographic profile of the Asia and Pacific region, more effort is needed in developing effective nutrition programs for urban areas, and for all types of nutrition risks. Traditionally, nutrition programs have focused on undernutrition and on child growth. As many chronic diseases encountered in older age-groups, such as heart disease, obesity, and stroke, are increasingly linked to nutrition, it is important to develop and test interventions in promoting good nutrition and health behavior for chronic diseases as well as health problems associated with undernutrition.

Nutrition transition implies an epidemiological transition from endemic deficiency and infectious diseases, for which poor nutrition is a risk factor, toward diet-related chronic diseases, including obesity and diabetes. National food and agricultural policies that consider diet-related chronic diseases are increasingly becoming a priority. There is a need to promote healthy eating patterns and lifestyles and reinforce the use of mass media to build public awareness regarding healthy dietary habits. Innovative programs are required, which will integrate national nutrition, food and agricultural policies, and

¹⁰ Taylor, C. and N. Scrimshaw. 1964. *Nutrition and Infection*. Geneva: World Health Organization.

¹¹ Body mass in children is usually expressed as weight for height.

¹² Usually related to poor access to water and lack of household sanitation.

¹³ The Helen Keller International-Indonesia (HKI) nutritional surveillance system (NSS) suggests that 20% of poor urban mothers are obese, even many with low-weight children. Moreover, ischemic heart disease and stroke have been cited as the major causes of death in Indonesia since 1985. Diabetes and hypertension are becoming more common, and various types of cancer are also beginning to become significant causes of death and morbidity.

program development with mass communication efforts. As there is yet not enough experience in the Asia and Pacific region to develop these programs, pilot studies and research are required. Adopting a modified (hybrid) modality RETA/TA, which allows small investment components with clear and simple processing and administrative procedures, could help in elaborating such new program approaches.

In the growing urban areas of Asia and the Pacific, the development of growth monitoring and community nutrition will be much more difficult than in rural areas. However, urban areas offer more opportunities for improvement of childhood nutrition. For example, day care could help mobilize mothers to enter the workforce; it could also be a venue for feeding programs, growth monitoring, and training for good health behavior. Schools could offer an opportunity to focus on vulnerable age groups for poor nutrition. Efforts are needed to help develop activities that are unique to the urban environment, as this is the area where improving nutrition status will be increasingly important in many parts of the region in the future.

Three basic nutrition policy paradigms underlie various DMCs' approaches to nutrition. The first paradigm entails nutrition through prosperity, and focuses on full employment and empowerment of families through increasing purchasing power. The second approach has been to focus on food policy, ensuring adequate production of food, food distribution systems, and buffer stocks to maintain price stability. The third approach has been the public health approach, with infection control, food safety programs, growth monitoring of infants and children, dietary supplementation of micronutrients, and targeted nutrition supplementation and nutrition promotion. Some DMCs use a combination of these approaches, but many countries have relied on one approach as their primary nutrition policy orientation.

The social safety adjustment loans implemented in DMCs around the region are credited with playing a significant role in maintaining health and nutrition. The National Development Planning Agency (BAPPENAS) in Indonesia cites the social safety adjustment loan¹⁴ as one of the primary factors that kept the nutrition status of school-aged children from deteriorating during the 1997–2001 economic and political crisis.¹⁵ Social safety and the

¹⁴ Loan 1622-INO: *Social Protection Sector Development Project*, for \$100 million, approved on 9 July 1998, and completed 31 December 1999.

¹⁵ British Council. 2004. *Social Safety Net: Ensuring Basic Social Services for the Poor in Indonesia*. Jakarta.

Government's response to emergency situations seem to be one area where ADB can make significant contributions to vulnerable populations.

Scientists and advocates are bringing to the attention of policymakers in countries around the world that fortification of flour with folic acid is a safe and cost-effective approach for preventing neural tube defects, such as spina bifida and anencephaly.¹⁶ This has consequently increased the demand for a sound, science-backed policy. In the effort to reduce the prevalence of neural tube defects, fortification of grain products with folic acid has been mandated in the United States (US) since 1998.¹⁷

Issues

Malnutrition has many roots. Among others, malnutrition can be caused by social disenfranchisement of the poor, excessive risk of infection, lack of availability of high-quality maternal and child health services, low education attainment, lack of availability of family planning services, high cost of food, poor food safety, lack of employment, and lack of social safety nets. To effectively reduce the magnitude of malnutrition, nutrition programs must consider the unique nature of malnutrition for the various population groups, and promote social development in other sectors.

There is great debate concerning whether nutrition and food are the responsibility of the government (a public good) or the domain of the consumer (a private good). It appears that this question is also a function of consumer demand for good nutrition, which in turn is a function of education and of cultural practices. Among consumers with adequate information for making appropriate dietary decisions, the responsibility of the government is limited

¹⁶ Spina bifida is a disorder involving incomplete development of the brain, spinal cord, and/or their protective coverings. It is caused by the failure of the fetus's spine to close properly during the first month of pregnancy, resulting in significant damage to the nerves and spinal cord. Anencephaly occurs when the "cephalic" or head end of the neural tube fails to close, resulting in the absence of a major portion of the brain, skull, and scalp.

¹⁷ Oakley, G.P. Jr., M.B. Weber, K.N. Bell, and P. Colditz. 2004. *Birth Defects Research. Part A, Clinical and Molecular Teratology*. Scientific Evidence Supporting Folic Acid Fortification of Flour in Australia and New Zealand. Atlanta, Georgia: Department of Epidemiology, Rollins School of Public Health, Emory University; and Simmons, C.J., B.S. Mosley, C.A. Fulton-Bond, and C.A. Hobbs. 2004. *Birth Defects Research. Part A, Clinical and Molecular Teratology*. Birth Defects in Arkansas: Is Folic Acid Fortification Making a Difference? Little Rock, Arkansas: Arkansas Center for Birth Defects Research and Prevention, College of Medicine, Department of Pediatrics, University of Arkansas for Medical Sciences and Arkansas Children's Hospital.

to ensuring that updated information continues to be disseminated to them. In areas where the capacity of the consumer is weak, usually due to low education attainment, the government needs to play a stronger role in improving nutrition and education. There is evidence that poor nutrition contributes to risk of poverty and reduced capacity of human input.

Most nutrition interventions have been consistently cited as being cost effective and having very low unit costs that can be borne almost entirely by the consumer. In using cost per DALY, nutrition improvement ranks well against other types of interventions in most of the regions of the world, and iodine fortification in areas of endemic iodine deficiency disorders sets the standard for impact and low cost.¹⁸ Benefit-cost analysis, nutrition intervention in household food security, supplemental feeding, and micronutrient malnutrition have a discounted 20-year benefits stream exceeding cost, ranging from an 8% return for supplementing the feeding of infants and school children, to a 250% return for fortification of salt. However, as noted earlier, the poor in the region often do not consume processed food.

The time needed for a fortification intervention to become effective in developing countries is likely to be much longer than in developed countries because in the former, such vehicles as salt and flour are often produced in numerous widely dispersed home industries. Fortification of salt in the US started in the 1920s with relevant laws passed by 1930, and by 1940, high rates of goiter among school children common in rural areas in Michigan, Minnesota, and Wisconsin had disappeared. This was helped by the fact that only 17 manufacturers of salt existed throughout the US; hence, quality control and product monitoring were relatively easy to achieve. In Indonesia, there are over 14,000 producers of sea salt, which is a much wetter, coarser, and dirtier salt than if produced from crushed rock salt as in the US. Hence, it is much more difficult to achieve universal household salt fortification, despite the strong effort demonstrated in the country. Salt fortification is not the only way that additional iodine has been given to populations. In Australia, iodine is used as disinfectant for milk products. In Switzerland (another area historically endemic for iodine deficiency disorders), it was added to bread. Malaysia, Thailand, and Italy have successfully experimented with the use of iodine as disinfectant for drinking water. Thus, beyond the food consumption patterns of various populations in Asia and the Pacific, other factors might also influence the appropriate vehicles for

¹⁸ World Bank. 1993. *World Development Report: Investing in Health*. New York: Oxford University Press.

improving the efficiency and the effectiveness of micronutrient interventions.

In general, the start-up cost for food fortification is relatively inexpensive for the food industry, and recurrent costs are rapidly passed on to the consumer. However, an important large capital cost component is consistently ignored in program design, such as setting up the product monitoring, and the quality assurance of fortification programs within the government. This component might include the installation of laboratories (particularly for quality control), training of personnel, and development of enforcement mechanisms. While most development partners seem eager to help set up fortification projects, they seem less inclined either to

ensure that these projects consistently turn out high-quality products that are valued by the consumer, hence are sustainable, or that the government and consumer groups have the capacity to monitor and enforce a uniform product across food manufacturers, and imported food.

The tendency is to compare one component of a nutrition program against another, such as supplementation in community nutrition, compared with fortification or growth monitoring. Significant nutrition improvement is usually generated by bundles of activities supported by stakeholders, such as governments and key consumer groups. For example, (i) supplementation cannot be effective without a strong health promotion component; (ii) involvement of NGOs and civil society could help improve coverage and reduce the cost of program implementation; (iii) growth monitoring without a strong education component is less effective; and (iv) promoting fortification without developing surveillance and monitoring of the product at the producer, wholesaler, and household levels, supported by consumer awareness, reduces the potential impact of the program.

There are many development partners advocating various nutrition issues and interventions. Sometimes competition among them is seen. This should be discouraged. To achieve successful and sustainable nutrition and food fortification programs, development partners should collaborate in a complementary manner. Appendix 6 shows a list of partners associated with nutrition.



Selling fortified flour in the Kyrgyz Republic. Start-up costs are relatively low, but programs must provide for monitoring and quality assurance.