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NUTRITION

KNOWLEDGE SUMMARY: WOMEN'S & CHILDREN'S HEALTH

2012

Malnutrition in all forms is a major contributor to disease and early deaths for women and children. Undernutrition can lead to health problems across generations, particularly among the most vulnerable populations. Overnutrition leading to overweight and obesity is increasing rapidly among low and middle-income countries, increasing the prevalence of chronic noncommunicable diseases and associated healthcare costs. Rapid progress in improving food and nutrition security is needed to reach health and development goals beyond 2015. Evidence-based, cost-effective, and relatively simple solutions to reduce malnutrition, together with nutrition-sensitive development strategies, need to be scaled up. Increased political commitment and sustained financial investment and action are urgently needed.

The Partnership for Maternal, Newborn & Child Health

gain Global Alliance for Improved Nutrition

1,000 DAYS

UICC global cancer control

United Nations System Standing Committee on Nutrition

World Health Organization

Save the Children

World Vision International

The problem

Undernutrition

A child's right to adequate and appropriate nutrition is stipulated under Article 6 and 24 of the Convention on the Right's of the Child;[1] nonetheless, in 2010, an estimated 171 million children (167 million of whom live in developing countries) were stunted[2] (Box 1). Children who are stunted are at a greater risk of having difficulty learning, playing, engaging in normal childhood activities and being productive members of society later in life.[3] Undernourished children are also more susceptible to frequent and repeated disease and illness due to a weakened immune response, as well as at a greater risk of becoming overweight or obese later in life.[4] A child's nutritional future begins with the mother's nutritional status in adolescence and during pregnancy.[5]

Young women and mothers are faced with many underlying challenges to fulfilling their nutritional needs, including poverty, a lack of education on healthy diets and infant care, poor access to a diverse variety of affordable, nutritious and safe foods, as well as inadequate healthcare and sanitation. Gender inequality and restrictive cultural practices exacerbate women's unequal access to appropriate nutrition.[6]

Women and children are also affected by undernutrition from micronutrient deficiencies, or 'hidden hunger', which affects over 2 billion people globally and can lead to reduced growth and cognitive development, birth defects, blindness, and overall poor health. Vitamin A deficiency, iron deficiency anaemia and iodine deficiency disorders are among the most common forms of micronutrient malnutrition[7, 8] (Figure 1). Iron deficiency anaemia is particularly acute among women and children in developing countries, with approximately 40% of preschool children and 1 out of every 2 pregnant women estimated to be anaemic.[9] Anaemia (often associated with underlying conditions, such as malaria) causes disability and can delay normal infant motor and mental function and contributes to 20% of all maternal deaths.[10]

Overnutrition

Alongside undernutrition, a 'double burden' of malnutrition is emerging with rates of obesity and related chronic diseases associated with urbanisation, aging populations, technological development and globalisation of food supplies and industry.[11] Billions of dollars are spent annually by the food industry to promote the consumption of highly refined, high-calorie foods with little or no nutritional value.[12] A 'nutrition transition' is thus taking place, where disease patterns are shifting away from infectious illnesses towards a higher rate of noncommunicable diseases, such as heart disease, diabetes and some types of cancer.[5, 13, 14]

Box 1 – Definitions

Nutrition refers to the appropriate intake of nutritionally adequate food in relation to the body's dietary needs.

Malnutrition refers to all forms of poor nutrition caused by a complex array of factors including dietary inadequacy (deficiencies, excesses or imbalances in energy, protein and micronutrients) and includes both undernutrition and overnutrition.

Undernutrition includes being underweight for age, too short for age (stunted), too thin relative to height (wasted) and functionally deficient in vitamins and minerals (micronutrient malnutrition).

Complementary Feeding refers to the transition from breastfeeding to family foods and generally covers the period from 6 to 18-24 months of age.

Micronutrient malnutrition or 'hidden hunger' refers to diseases caused by a dietary deficiency of vitamins or minerals.

Stunting, or low height for age, is defined as the percentage of children under five whose heights are less than two standard deviations below the median height for age of the standard reference population.

Overnutrition results in overweight and obesity, and is defined as abnormal or excessive fat accumulation that may impair health.

Underweight children are those under five whose weight for age is less than two standard deviations below the median weight for age of the international reference population.

Wasting, or low weight for height, is defined as weight for height less than two standard deviations below the WHO child growth standards mean weight for height and is often associated with acute starvation or severe disease.

Sources: 8, 22, 23

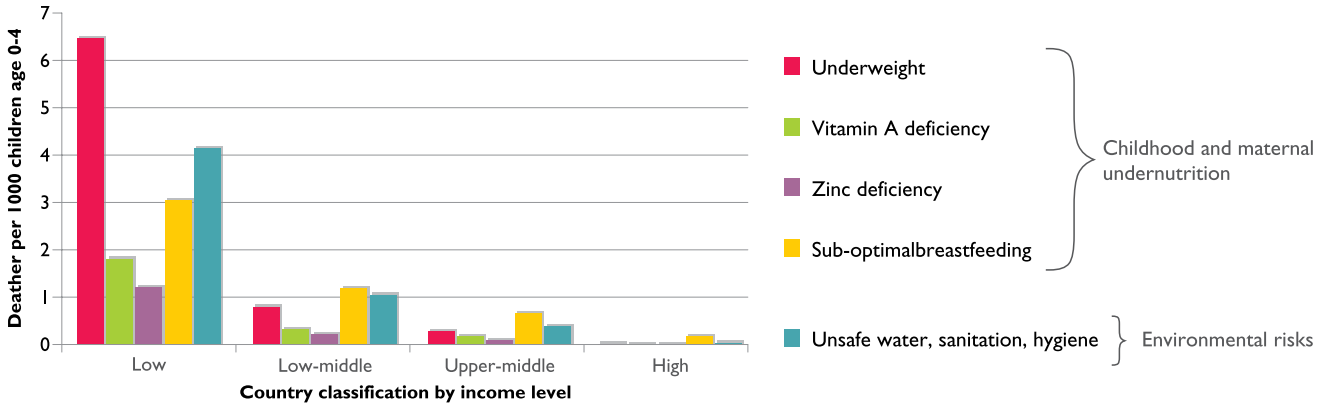
At least 35 million overweight children are living in developing countries and 8 million in developed countries.[15] Children are increasingly exposed to high-fat, high-sugar, high-salt, energy-dense, micronutrient-poor foods which tend to be cheaper than healthy foods.[15, 16] There is a general imbalance in energy intake compared to physical activity levels which is driving the obesity epidemic.[17] In industrialised countries, child obesity risk is associated with lower household income, women with less education, and single parent households.[18]

Obesity is increasingly prevalent among adolescent girls and women (particularly in low-income and rapidly evolving economies such as Brazil, China and Egypt), as access to a greater quantity of inexpensive, tasty, and convenient foods

increases. For pregnant women, overweight and obesity increase the risk of Gestational Diabetes (GDM) (a form of diabetes with onset during pregnancy), pre-eclampsia, pregnancy-induced hypertension, and large babies, which in turn raises the chance for induced labour, caesarean sections, stillbirths and preterm births as well as development of type II diabetes for the mother.[19, 20] Renewed attention to maternal nutrition is urgently needed, not only to turn the intergenerational cycle of growth failure into a virtuous one, but also for the woman's own health and development.[21]

Figure 1

Attributable deaths for children (age 0-4) by risk factor (2008)



Data for other nutrition related risks not available/applicable for children age 0-4
Sources: WHO, Global Health Risks, 2004 (updated 2008), http://www.who.int/reproductivehealth/publications/monitoring/9789241503631/en/index.html; World Bank country classifications, http://data.worldbank.org/about/country-classifications.

What works

Undernutrition

Nutrition interventions that are well integrated into the healthcare system and are a routine part of care have proven particularly effective in promoting maternal and child health. Such interventions include the promotion of exclusive breastfeeding for 6 months and continued breastfeeding up to two years of age and beyond, micronutrient supplements for women and children, home-fortificants, optimal complementary feeding, and the promotion of hand washing with soap.[14, 24] Complementary food interventions that are age, energy and nutrient appropriate can be particularly effective when foods are prepared in a hygienic environment and are suited to the local context.[25] In low-income settings, preventive programmes around food production, storage and preparation, education, and healthcare are particularly successful.[18] To address these issues, partners, for example through the Scaling Up Nutrition Movement (SUN), have agreed on the need for Nutrition-sensitive development strategies with nutritional outcomes specified as key goals, including mainstreaming initiatives into education, social protection, water and sanitation and hygiene, as well as agricultural investments and campaigns that promote a varied supply of food at affordable prices and recognise the social significance of the food and agricultural sector for supporting rural livelihoods.[14, 26, 27] The SUN framework focuses on the 1000 day window of opportunity between pregnancy and the child's second birthday and recognises that investing in well-tested, low-cost nutrition interventions is one of the most effective ways to save lives and enhance the intellectual, physical and social growth of children.

Overnutrition

There is increasing evidence that taxation on high-calorie, low-nutrition foods can play a significant role in reducing the consumption of such products.[6, 24, 28] Population-wide weight-control campaigns that raise awareness among medical staff, policy-makers and the public at large can also help to reduce obesity.[29] Particularly important is the promotion of health literacy, capacity building, and empowerment to increase awareness around risk factors of obesity.[30] Additional measures include restrictions on the marketing of unhealthy foods and sugary drinks to children, and controls on the use of misleading health and nutrition claims; mandatory front-of-pack food labelling helps consumers to identify healthier options. Likewise, built environment and urban planning policies can help to ensure a health-enhancing setting, including the provision of green spaces and opportunities for physical activity.[31] A holistic approach to nutrition encompasses all aspects of one's lifestyle and nutritional requirements and, if started early on, adopting measures that promote physiological as well as mental and social wellbeing all help to reduce diet-related illness and disease later in life.[27]

Conclusions

Premature deaths and lifelong morbidity resulting from malnutrition can be avoided through coordinated efforts across sectors. Evidence has shown reliance on income growth alone (higher GDP) may not translate into improved nutritional status and the benefits of targeted, nutrition-sensitive interventions far outweigh the costs. Better nutrition leads to higher lifetime earnings and thus economic growth through improved productivity.[32]

Nutrition-sensitive programming delivered during the key window of the first 1000 days between conception and the child's second birthday is essential and requires the successful scaling-up of proven, cost-effective interventions.[24, 26] To achieve this, sector-wide engagement of all stakeholders is needed, including private businesses. Strong and transparent political leadership and community participation is required, and alignment and tracking of donor assistance needs to be addressed. Innovative ways in which governments can incentivise and adequately train public health and community workers to provide services across the continuum of care for Reproductive, Maternal and Newborn and Child Health need to be implemented, evaluated, and scaled-up.[21]

All actors, including global partnerships, must prioritise women's and children's health and nutrition and actively promote accountability for progress around MDGs 4 and 5 by working to ensure the tracking and oversight of resources, and by improving health information systems to better understand and account for challenges.[33] Funding of country-owned nutrition plans and programmes must be equitable, adequate, timely, sustained, and aligned in order to reflect and respond to the severity and burden of malnutrition.

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