



Improving Nutrition Through Multisectoral Approaches Health

Undernutrition and health linkages

Undernutrition is the single greatest cause of child deaths in most low-income and lower middle-income countries. Responsible for over 35% of all child deaths globally, undernutrition increases mortality rates from infectious disease.

Pregnant women and children from 0 to 24 months are the target population for nutrition interventions. This window of opportunity represents the crucial period in any individual's life when poor nutrition can result in largely irreversible deficits in cognitive development and linear growth, leading to reduced productivity as adults.

Including nutrition in health sector activities is central to meeting the health sector's goals, as well as Millennium Development Goals (MDGs) 4 and 5—reducing morbidity and mortality in women and children under five years. The relationship between poor nutrition and health status operates largely through a compromised immune system, due to micronutrient deficiencies and growth failure. The reverse linkage—from poor health to poor nutrition—operates primarily through changes in metabolism, malabsorption, and appetite loss, as well as behavioral changes affecting feeding practices (see Figure 1).

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Prioritizing interventions to reduce malnutrition through the health sector

The Lancet nutrition series (2008) identified 13 evidence-based high-impact nutrition interventions. Five interventions are strongly linked to child mortality and are therefore considered lifesaving (see Box 1). These thirteen direct nutrition interventions can be delivered most easily through existing health structures, systems, and platforms, depending on each country's context and capacity.

The total financing required to implement these 13 key interventions is estimated at US\$11.8 billion per year globally for 100% coverage of target groups, i.e., pregnant women and young children.

In 2008, the Copenhagen Consensus ranked 30 interventions that would best advance global welfare, especially that of developing countries based on the costs and benefits of the solutions. Five of the top ten interventions are nutrition related, and four of them can be delivered through the health sector. These four interventions are highlighted in Box 2 by ranking.

Box 1. The Health Sector's 13 Best Bets

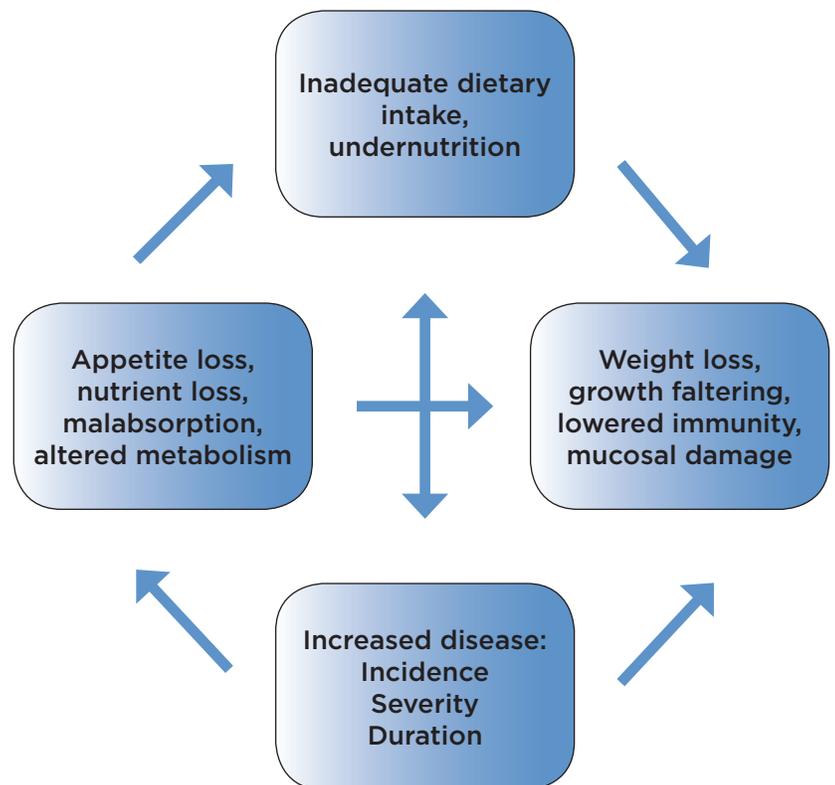
Five Lifesaving Nutrition Interventions

1. Breastfeeding promotion and support
2. Vitamin A supplementation
3. Therapeutic zinc supplements
4. Iron folic-acid supplementation for pregnant women
5. Treatment of severe acute malnutrition

High Priority Nutrition Interventions

6. Complementary feeding promotion
7. Handwashing and hygiene promotion
8. Provision of multiple micronutrient powders
9. Iron fortification of staple foods
10. Salt iodization
11. Iodine supplements
12. Prevention and treatment of moderate malnutrition in children 6-23 months
13. Deworming

Figure 1. The Undernutrition-Infection Cycle



Why does the health sector have an advantage in delivering nutrition interventions?

The delivery of nutrition interventions through the health sector is a familiar strategy given its ease of integration with existing health structures and platforms, e.g., community-based growth promotion, and integrated management of childhood illness. Various health delivery channels can be used to deliver interventions to improve nutrition, but their effectiveness depends heavily on context, such as disease burden, existing policies and systems, staff capacity, support from other local and international institutions, availability of supplies, presence and effectiveness of community-based models, and behavioral norms. Box 3 presents the various points where nutrition services can be integrated into health-related service delivery. These contact points primarily reach women and children during the “critical window of opportunity,” when malnutrition can and should be prevented. Table 2 presents indicators that can be integrated into health projects to measure the impact of nutrition interventions.



Which nutrition objectives can be met through partnering with the health system?

1. Reduce micronutrient deficiencies among the most vulnerable groups
2. Reduce the prevalence of anemia in pregnant and lactating women, and children 0-24 months
3. Promote good feeding and nutritional care practices for the most vulnerable groups—pregnant women and children 0-24 months
4. Treat and prevent illness
5. Reduce low birth weight
6. Improve reproductive health and family planning
7. Treat moderate and severe acute malnutrition in children

Box 2. Rank of nutrition interventions that can be delivered through the health sector, Copenhagen Consensus 2008

1. Micronutrient supplements for children: vitamin A and zinc
2. Micronutrient fortification: iron and salt iodization
3. Deworming and other nutrition programs at school
4. Community-based nutrition promotion

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How does nutrition fit into the renewed health system strengthening agenda?

Nutrition specific activities are particularly relevant to the health services and medical products, vaccines, and technologies building blocks of WHO's Health Systems Strengthening (HSS) Framework for Action (2007). The remaining four building blocks provide opportunities to improve nutrition and health outcomes indirectly through a high-performing workforce, a good health financing system, a well-functioning information system, and adequate leadership and governance of the health system (see Table 1).

Table 1. Nutrition in the WHO Health Systems Strengthening (HSS) framework

HSS Building Block	Where Nutrition Falls in the Building Block
Health Services Delivery of effective, safe, quality health interventions.	<ul style="list-style-type: none"> Integrate nutrition into health services at all levels of care, i.e., community, primary, secondary, and tertiary Use community systems to extend nutrition services and messages to the most vulnerable populations
Health Workforce Sufficient staff that are fairly distributed, competent, responsive, and productive.	<ul style="list-style-type: none"> Use community systems such as health worker networks to extend nutrition services and messages to the most vulnerable populations Build capacity of health staff to assess malnutrition and understand key nutrition messages and issues
Health Information The production, analysis, dissemination, and use of reliable and timely information on all aspects of health.	<ul style="list-style-type: none"> Implement nutrition surveillance activities, e.g., for acute malnutrition in high burden countries Regularly collect anthropometric indicators to inform policymaking and resource allocation
Medical products, vaccines, technologies Equitable access to essential medical products, vaccines, and technologies.	<ul style="list-style-type: none"> Ensure adequate procurement and stock of nutritional supplies and medicines across all types of health structures
Health Financing Adequate funding for health, while providing incentives for efficiency.	<ul style="list-style-type: none"> Include basic and essential nutrition services in insurance mechanisms Use external and unplanned events (crises) to increase funding for nutrition e.g., Horn of Africa drought leading to increased aid for nutrition activities
Leadership and governance Existence of strategic policy frameworks, combined with effective oversight, regulation, and accountability.	<ul style="list-style-type: none"> Develop and implement nutrition policies and guidelines, e.g., national nutrition policy, policy/guidelines for community management of acute malnutrition (CMAM), food fortification legislation, adherence to International Code for Marketing of Breastmilk Substitutes Implement quality assurance/monitoring and evaluation of national-level nutrition-specific guidelines and legislation, e.g., salt iodization

Health

Table 2. Indicators to measure the impact of nutrition interventions*

Nutrition Objective	Sample Nutrition Indicators
1. Reduce micronutrient deficiencies among the most vulnerable groups	<ul style="list-style-type: none"> • Proportion of children ages 6-23 months who have received a micronutrient supplement, e.g., vitamin A supplements/multiple micronutrient powders/iodized oil capsules • Proportion of health centers that have adequate stock levels of micronutrients as per micronutrients included in child/maternal insurance package
2. Reduce the prevalence of anemia in pregnant and lactating women, and children 0-24 months	<ul style="list-style-type: none"> • Proportion of pregnant women/children <59 months who are anemic • Proportion of health centers that have adequate stock levels of anemia-prevention supplies, e.g., iron folic acid supplements, multiple micronutrient powders, and insecticide treated bednets (ITN), intermittent preventive treatment (IPT), malaria drugs, etc.
3. Promote good feeding and nutritional care practices for the most vulnerable groups	<ul style="list-style-type: none"> • Existence of a national code for breastmilk substitutes/baby-friendly community initiative/ baby-friendly hospital initiative/baby-friendly hospital care/national code for breastmilk substitutes • Proportion of women who exclusively breastfed their child for 6 months/bring their child to attend monthly growth monitoring and promotion sessions/ provide an adequate complementary diet for their children 6-23 months
4. Treat and prevent illness	<ul style="list-style-type: none"> • Proportion of health care staff at ANC/PNC/well-child/routine, etc. contacts giving counseling on handwashing/breastfeeding/feeding during illness • Proportion of clinics with sufficient supply of ITNs/IPT/anti-malarials/ARVs/TB drugs/zinc supplements/ORT/child immunizations
5. Reduce low birth weight	<ul style="list-style-type: none"> • Proportion of pregnant women who received free or low-cost antenatal care services (through insurance or government provision mechanism) • Proportion of women with a live birth that received antenatal care at least 4 times by a health provider, and at least once by a skilled professional
6. Improve reproductive health and family planning	<ul style="list-style-type: none"> • Proportion of women of reproductive age who receive free or low-cost family planning services through insurance mechanism or government provision • Proportion of health clinics that have adequate stock levels of contraceptives
7. Treat moderate and severe acute malnutrition in children	<ul style="list-style-type: none"> • Proportion of children with severe acute malnutrition who have access to/are receiving appropriate treatment including therapeutic foods • Proportion of health facilities implementing/facility staff trained in CMAM

* Additional sample indicators are available in the full version of the Health guidance note.

Box 3. Delivery mechanisms for nutrition interventions

1. Public health campaigns, such as Child Health Days.
2. Routine health service contacts/ Well-child health contacts.
3. Sick child contacts.
4. Community outreach.
5. Antenatal care contact (ANC).
6. Intrapartum/ Postnatal care (PNC).
7. Emergency health services.



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Health projects integrating nutrition objectives

Timor-Leste: Integrating nutrition into the health sector strategic plan for improved coverage and quality.

The overall objective of this program is to improve the quality and coverage of preventive and curative health services for women and children to accelerate progress towards the MDGs in Timor-Leste. Activities in this project fell under four main components, which included not only the delivery of a basic healthcare package, but also accompanying support for capacity building, coordination, planning and monitoring, and financing for piloting innovative approaches. Under these components, indicators to measure success included mainly direct health indicators that have, however, an impact on nutrition. For example, indicators included child vaccination, births attended by skilled personnel, four or more prenatal visits, vitamin A supplementation for children 6-59 months, and contraceptive use.

Tanzania: Addressing micronutrient deficiencies through rural food fortification support. Tanzania is the first African country to legislate a mandatory food fortification law. The World Bank supported the process to produce, market, and find innovative solutions to reach the poorest and most vulnerable households that perhaps were not being reached by the national fortification program. This project, funded by a Japan Social Development Fund (JSDF) grant, focused on three main components to supplement national fortification efforts. First, investing in social marketing sensitized the population and created demand for the fortified food. Second, the viability and sustainability of fortifying foods was evaluated in areas that were not reached by the national fortification program, and consequently a mechanism was established to supply and distribute fortificants to rural hammer mills. Third, a monitoring and evaluation scheme was integrated to collect data and feedback regularly on the acceptability, utilization, reliability, and sustainability of fortified foods.

Box 4. Tools for TTLs to guide prioritization of nutrition investments

- **Improving Nutrition through Multisectoral Approaches, Module E: Estimated Costs, Benefits, Priority, and Feasibility of Scaling Up Selected Nutrition Interventions.** Key nutrition interventions with their cost, benefit:cost, cost effectiveness, contribution to mortality reduction, implementation feasibility, and public health threshold (see Table E-1).
- **Nutrition Country Profiles:** short, two-page documents that summarize the nutrition situation and key interventions needed for 68 of the highest nutrition burdened countries worldwide.
- **Annex E-2 of Improving Nutrition through Multisectoral Approaches, Module E,** which describe Box 3 in greater detail.
- **Annex E-6 of Improving Nutrition through Multisectoral Approaches, Module E,** which provides a listing of suggested nutrition resources.
- **The HNP Knowledge Exchange:** A website providing information about Bank nutrition staff and useful internal and external publications on nutrition.



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