
AfDB Sector Brief: Health and Nutrition



Human Capital, Youth
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This technical brief provides guidance to African Development Bank (AfDB) team members and decision-makers in integrating evidence-based and high-impact nutrition interventions into health projects to ultimately increase impact on nutrition outcomes. It also complements the implementation of the AfDB Multi-Sectoral Nutrition Action Plan 2018-2025 and provides guidance on integrating nutrition smart actions into relevant pillars of Country Strategy Papers (CSPs) and Regional Integration Strategy Papers (RISPs) in order to catalyse nutrition smart investments to support a 40% stunting reduction in Africa by 2025.

This is one brief in a five-part series on the importance of multi-sectoral approaches to nutrition. To read the other briefs, contact nutrition@afdb.org.

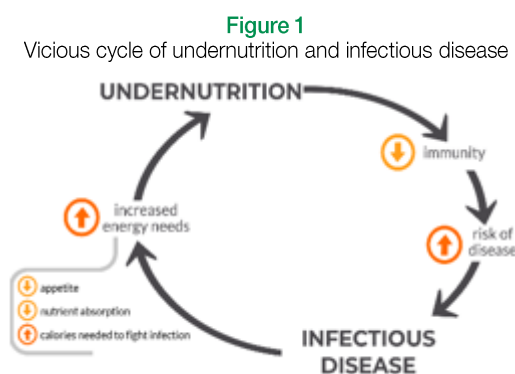
The Relationship between Health and Nutrition



Public health and nutrition are interdependent. Poor nutrition compromises the immune system resulting in vulnerability to infectious diseases. Conversely, frequent illness often weakens nutritional status, which is critical to life-long health and development. By harnessing the power of this synergistic relationship, we can improve the overall nutrition of vulnerable populations by delivering public health interventions—like access to health, clean water, improved sanitation services, and disease control and prevention — with nutrition elements like micronutrient supplementation and promotion of optimal infant and young child feeding.

Poor nutrition increases vulnerability to infectious diseases and is linked to nearly half of the deaths in children under the age of five years. Nutrition has a significant impact on rates and severity of disease. Inadequate dietary intake can lead to micronutrient deficiencies that depress the immune system and increase the risk of morbidity and mortality, including maternal mortality and low birthweights. Pneumonia, diarrhoea and malaria are three of the leading causes of death in African children under five years in Africa. Yet, child deaths from pneumonia and diarrhoea are largely preventable through adequate nutrition, handwashing with soap, safe drinking water and basic sanitation, vaccinations, and other measures.

Diseases have a cyclical relationship with nutrition. Undernutrition exacerbates diarrhoea and results in increased mortality rates. Conversely, diarrhoeal diseases, especially in children less than five years, can perpetuate undernutrition, as those suffering are more likely to also suffer from other forms of malnutrition and have a reduced appetite (see Figure 1 below).



Source: Value of Immunization Compendium of Evidence (VoICE)¹

¹ VoICE © 2019, Value of Immunization Compendium of Evidence (VoICE) The International Vaccine Access Center, Johns Hopkins University Bloomberg School of Public Health. https://immunizationevidence.org/featured_issues/undernutrition-and-infectious-disease/

Impact Pathways from Health Programmes to Nutrition

Integrating nutrition with public health initiatives maximises impact and supports life-long health. This is achieved through four principal approaches outlined below:

A: Direct Nutrition Interventions

Breastfeeding and complementary feeding practices include early initiation of breastfeeding within the first hour of life, exclusive breastfeeding for the first six months of life (without giving the infant water), and the introduction of age-appropriate complementary foods and feeding practices for children 6-24 months of age along with continued breastfeeding. Interventions that promote, protect and support early and exclusive breastfeeding are among the most effective interventions for preventing child deaths worldwide, saving the lives of 1.4 million children under the age of 5 every year globally.² Similarly, intensive efforts to improve complementary feeding behaviours at the household level and other supportive strategies at scale could reduce stunting by 17% in countries with the highest burden of undernutrition.³

Preventative health sector interventions delivered through the public health system and integrating good nutrition counselling within existing health services, namely:

- Training antenatal care providers, skilled birth attendants, and infant and young child healthcare providers on how to counsel pregnant women on adequate weight gain, rest, intention to breastfeed, their own nutrition and that of their infant and optimal infant and young child feeding (IYCF) practices.
- Ensuring availability of the appropriate set of job aids and monitoring tools, effective monitoring systems, and guidelines for the certification of baby-friendly hospitals.
- Support for improved and effective growth monitoring services and efforts to increase demand from the community for quality growth monitoring and promotion (GMP) until the child reaches the age of two. This provides the opportunity for child-centred nutrition counselling for the caregiver relative to the child's progress on the growth chart.
- Collaborating with reproductive health and family planning services, which play a role in improving optimal birth intervals. Pregnancy intervals of two years or less have been associated with neonatal, infant, and under-five mortality and low birthweight. In addition, short pregnancy intervals have negative impact on the ability of the mother to exclusively breastfeed her child to six months of age and continue to breastfeed to two years.
- Training skilled birth attendants on delayed cord clamping, which has been shown to reduce the risk of anaemia after birth by 80%, and by 47% at 2-4 months.⁴

Preventative community-based nutrition interventions delivered through relevant delivery platforms, including health centres, schools, community-based platforms, open market or social marketing.

Micronutrient interventions through the health system delivery platforms that reach specific target groups provide an opportunity to ensure at-risk populations have access to micronutrient supplements and micronutrient-rich foods that are critical to growth and development, including:

- **Delivery of micronutrient supplements through antenatal care services:** Delivery of micronutrient supplements can reduce maternal deaths and improve birth outcomes. For example, iron-folate or multiple micronutrient supplementation during pregnancy reduces anaemia and low birthweight. Calcium supplementation in pregnancy can prevent gestational hypertensive disorders like pre-eclampsia, a leading cause of maternal death.⁵
- **Monthly GMP, Expanded Programme on Immunisation (EPI) days, or nutritional screening for children under five:** Any routine, preventative health service that requires caregivers to bring their child(ren) to the facility offers an opportunity for nutrition counselling, and ensures the child is up-to-date with their twice-yearly vitamin A supplementation and/or deworming. It can also be used to distribute multiple micronutrient powders (MNP) to caregivers of children 6-23 months of age for home-based food fortification. Directly adding MNPs, which are encapsulated micronutrients in powder form, to food consumed by the child 6-23 months helps boost their vitamin and mineral intake.
- **Child Health Days and other community outreach:** Outreach, organised by the health facility and carried out by Community Health Workers or volunteers, optimally packages essential health and nutrition interventions together, to be delivered to children under five, with a focus on children under two, either directly at the household or in the community. This is another opportunity to reach children with deworming, vitamin A supplementation (VAS), MNPs, and in some targeted cases, fortified foods for the household.
- **Community-based platforms:** Platforms like mother-to-mother support groups play a crucial role in supporting caregivers in adopting healthy behaviour, as well as caring and feeding practices for infants and young children.

² United Nations Children's Fund. Improving Exclusive Breast Feeding Practices by using Communication for Development in Infant and young Child Feeding Programs. United Nations Children's Fund; 2010

³ The 2008 Lancet Series on Maternal and Child Undernutrition

⁴ World Bank, 2012: Accelerating progress in reducing maternal and child undernutrition in Nepal.

⁵ WHO, 2011b: Recommendations for the prevention and treatment of pre-eclampsia and eclampsia, Geneva, Switzerland

These can be a good platform for delivering standardised messages and social and behaviour change communication.

- **Integrated nutrition intervention in school health initiatives:** These could include water, sanitation and hygiene (WASH), agriculture (school gardens) involving the use of grey water in water scarce situations, school feeding (to focus on health and nutritious meals, and where possible, including fortified foods) and nutrition surveillance and monitoring in schools. This could also be an opportunity for AfDB nutrition smart investments to address malnutrition in humanitarian emergencies. An AfDB project—Post Cyclone Idai and Kenneth Emergency Recovery and Resilience Programme (PCIREP, 2019)—adopted a multi-sectoral intervention approach including nutrition education through selected school clubs.
- **Supplementary food for at-risk pregnant women and young children:** In food-insecure areas, providing pregnant women with supplementary food comprising a balanced mix of energy and protein has been shown to produce modest increases in maternal weight gain and in mean birthweight, reducing the risk for small for gestational age (SGA) births. These programmes provide an excellent opportunity to include fortified foods, and/or MNP.

Management of acute malnutrition:

- **Integrated management of acute malnutrition (IMAM):** Provides caregivers with an opportunity for counselling and support on infant and young child nutrition. Examples include on-going community screenings to help identify children suffering from severe acute malnutrition (SAM) without medical complications early enough, and enables treatment from home, which includes ready-to-use therapeutic foods (RUTF). IMAM also includes establishing a small number of in-patient units to accommodate children with severe wasting and medical complications.
- **Community based management of acute malnutrition (CMAM):** Provides care to the majority of children in the community with uncomplicated SAM as outpatients to address the limitations inherent in facility-based care including low access, low coverage and high costs associated with in-patient management of SAM.⁶ Although the Bank's action plan focuses on stunting, the Bank can also support CMAM if there is a clear need and link with the overall project objective (e.g. reducing under-five child mortality).
- **Management of moderate acute malnutrition (MAM):** Can be provided in either health facilities or at community level. Nutrition counselling is an integral part of the management of MAM.

B: Disease Control and Prevention

- **Presumptive treatment for malaria and bed net use for pregnant women and children under two** leads to improved maternal and infant protection from malaria. This results in higher birthweights, decreased risk of low birthweight and a reduction in maternal anaemia.
- **Deworming in pregnant women and children under five years** is recommended for regions with high prevalence of helminth infestation. Deworming interventions have shown improved haemoglobin status, reductions in anaemia in children, and increases in foetal growth and maternal weight gain during pregnancy. Interventions such as deworming, and vitamin A supplementation have important linkages with community-based programmes (e.g. Child Health Days/Weeks).
- **Zinc and ORS for treatment and management of diarrhoea** is effective to reduce the duration of diarrhoea and reoccurrence of subsequent episodes as a component of **integrated management of common illnesses (IMCI)**. IMCI in public health facilities includes improving the case management skills of health staff through the development and promotion of locally adapted IMCI guidelines, building the capacity of the health system to support effective management of childhood illness, and addressing family and community practices.

C: Improved Hygiene and Sanitation Environment

- **WASH programmes** that incorporate proper handwashing practices help protect a child's nutritional status by reducing the number of faecal-oral pathogens that are ingested and cause infections (see AfDB sector brief on WASH and Nutrition). Proper handwashing with soap at critical times, and especially before preparing food and feeding a child, is one of the most effective and cost-efficient ways to prevent pneumonia and diarrhoea. In addition, education regarding food safety (storage, preparation and feeding practices) as well as behaviour change communication to reinforce the necessity for keeping animal faeces away from child play areas and sensitisation on zero open defecation promotes good health and nutrition.

⁶ Community based Therapeutic Care. A field manual first edition. Valid International. Oxford: UK; 2006

D: Integrated Nutrition Outcomes within the Planning, Monitoring and Reporting System of the Ministry of Health

The Ministry of Health should lead initiatives to integrate nutrition in public health programmes such as:

- **Incorporate nutrition indicators in health programmes** along the continuum of care (e.g. antenatal care, postnatal care, family planning, immunization, etc.).
- **Design robust monitoring systems on nutrition interventions** from the beginning of each programme. Integrate key nutrition indicators in health management information systems.

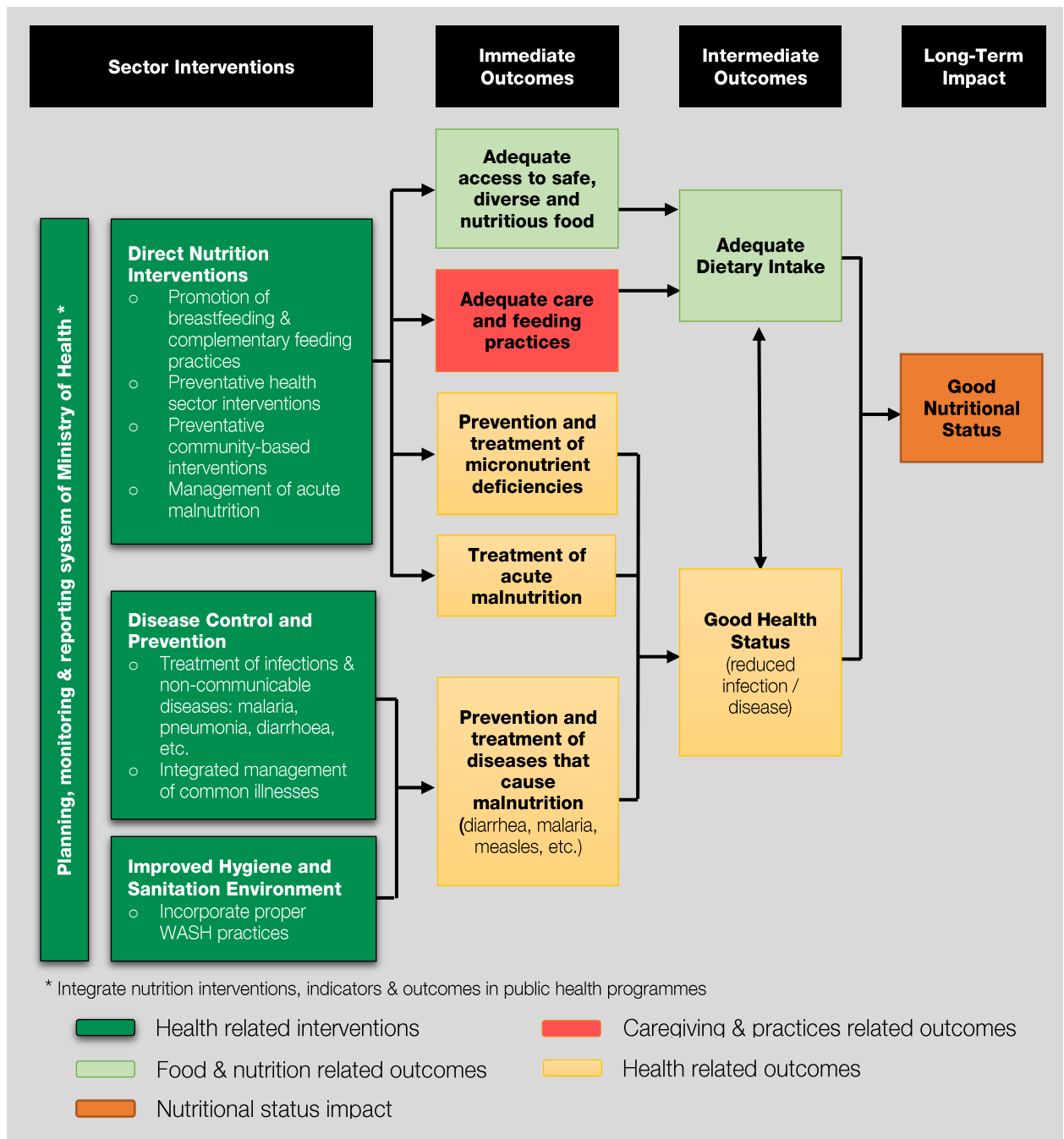
Regional and district health offices should align nutrition outcomes with those of Ministry of Health and the Ministry responsible for water supply in order to:

- **Strengthen public health programmes and infrastructure** for water and sanitation systems and regulate water providers to meet quality and equity standards.
- **Train and build capacity among health staff** at the district, sub-district, and regional levels in delivering nutrition messages and services, including maternal nutrition, IYCF counselling in difficult circumstances, such as HIV and during emergencies.
- **Integrate promotion of childcare practices**, including proper hygiene, breastfeeding, complementary feeding, and deworming practices into the health promotion activities carried out in primary, secondary and tertiary healthcare systems.
- **Strengthen supply chains** to ensure access to supplements and nutritional products to treat and prevent micronutrient deficiencies and severe acute malnutrition are integrated into the essential medicines supply chain for other health supplies.

Public health policy- and decision-makers can take immediate action to address undernutrition and improve public health outcomes by:

- **Making optimal nutrition a public health goal.** Integrate nutrition smart activities into health programmes, national strategies, planning documents, and WASH programmes, ensuring multi-sectoral inputs.
- **Integrating nutrition into WASH programmes.** WASH programmes should highlight the importance of washing hands before preparing food and feeding a child. Handwashing messages with soap at critical times need to be linked with illnesses, such as pneumonia and diarrhoea, which contribute to undernutrition.
- **Enhancing public health staff training:** Integrate public health nutrition in medical and nursing curricula. Expand coverage to rural and marginalized areas with high levels of undernutrition.
- **Supporting collaboration across agencies:** Planning should include explicit roles and responsibilities for departments with reciprocal resources so that nutrition is addressed along the continuum of care and across different platforms (health facilities, outreach services, and community care). Work with other sectors, like agriculture, food security, and social welfare, to develop an effective multi-sectoral plan to address undernutrition. Better coordination and strengthening multi-sectoral nutrition actions is an effort to jointly make the case for more resources in the context of enhanced value for money.

Figure 2
Impact pathways from health programmes to nutrition



Source: Created for AfDB Nutrition Smart Health Systems Projects (Nutrition International, 2019)
(Adapted from the UNICEF Conceptual Framework of Child Malnutrition, 1997)

Priority Actions for AfDB Health Sector Programmes

- 1. Health facilities in regional member countries should be supported to provide a standard package of nutrition services,** including:
 - Assessment of nutritional status, including anthropometric measurements (i.e. height, weight, mid-upper arm circumference), dietary assessments, biochemical and clinical assessments of nutrition status. This could also include support to procure anthropometric materials and monitoring tools.
 - Breastfeeding and dietary counselling services targeted at pregnant and lactating women, and caregivers of children under two. This should also include education on hygiene and sanitation as well as maternal nutrition and micronutrient supplementation during pregnancy.
 - Integrated management of acute malnutrition and supplementary feeding programmes for pregnant women and young children.
 - Clinical management for chronic infections and non-communicable diseases.
 - Antenatal, delivery and postnatal care services, covering the critical window of opportunity—the first 1,000 days from conception until the age of two—that lays a crucial foundation for productivity later in life.
 - Child growth monitoring, which is accompanied by targeted nutrition counselling and follow up as well as biannual deworming and vitamin A supplementation, until the age of five years.
- 2. Support the roll-out and scaling up of the Baby Friendly Hospital Initiative which aims to support breastfeeding through 10 steps:**
 - **Step 1:** A comprehensive, evidence-based infant feeding policy, incorporating the “10 Steps to Successful Breastfeeding” has been shown to improve overall breastfeeding success.
 - **Step 2:** Educate all staff in skills to implement this policy.
 - **Step 3:** Inform all pregnant women about the benefits and management of breastfeeding.
 - **Step 4:** Help mothers initiate breastfeeding within one hour of birth.
 - **Step 5:** Show mothers how to breastfeed and how to maintain lactation if they should be separated from their infants.
 - **Step 6:** Give newborns no food or drink other than breastmilk unless medically indicated.
 - **Step 7:** Practice “rooming in”—allow mothers and infants to remain together 24 hours a day.
 - **Step 8:** Encourage breastfeeding on demand.
 - **Step 9:** No pacifiers or artificial nipples provided to breastfeeding infants.
 - **Step 10:** Foster establishment of breastfeeding support groups (at community level) and refer mothers to them on discharge from the hospital.

The support can include the training of health staff for the implementation of the initiative, as well as support at central level for monitoring and certification.

Enhancing the Nutritional Impact of Health Systems

Ensuring that health systems contribute to the prevention and treatment of all forms of malnutrition requires adopting a whole health systems approach. Nutrition should not be addressed as a stand-alone issue but rather within a wider health system in a country because the achievement of health outcomes is a factor of several contributing factors. As such, three issues should always be considered:

- 1. Health system strengthening:** especially capacity development for health workers and strengthening of health system processes.
- 2. Supporting health infrastructure:** including building facilities and procuring hospital equipment, as well as transportation to allow for both outreach of services and supervision.
- 3. Health services and supplies:** The AfDB nutrition smart investments should consider support to regional member countries (RMC) in developing appropriate health and nutrition policies and guidelines, strengthening country dialogue between RMCs and development partners (DP) for effective implementation of the above issues, as well as strengthening country ownership and community involvement.

Table 1 below describes how health systems can be redesigned and supported to integrate nutrition in the six building blocks of a health system that has been defined by the World Health Organization (WHO).⁷

Table 1
How to Integrate Nutrition into the Six Building Blocks of a Health System

Building block	Nutrition Component
Health services	Ensure good nutrition services (e.g. counselling services) are integrated into the regular health system and delivered at the point of need.
Health workforce	Establish a well-performing nutrition workforce by equipping health professionals (e.g. doctors, midwives, nurses, and Community Health Workers) with the appropriate nutrition capacity.
Health information system	Ensure key nutrition-related information is collected, analysed and used to inform decision-making as part of the health information system.
Access to essential medical products, vaccines and technologies	Ensure that a package of essential nutrition-related products is incorporated into the national basic medical supplies. These include anthropometric measurement tools, micronutrient supplements, therapeutic and supplementary feeding products for management of severe and moderate acute malnutrition.
Health financing system	Ensure that essential nutrition services and value for money are covered in health financing arrangements.
Leadership and governance	Ensure that there is strong multi-sectoral nutrition leadership and governance in regional member countries and that countries are supported to develop and implement nutrition policy frameworks with adequate accountability mechanisms.

⁷ WHO, 2007: Framework for action: Everybody's business - Strengthening health systems to improve health outcomes

Case study of AfDB's Nutrition Smart Health Project

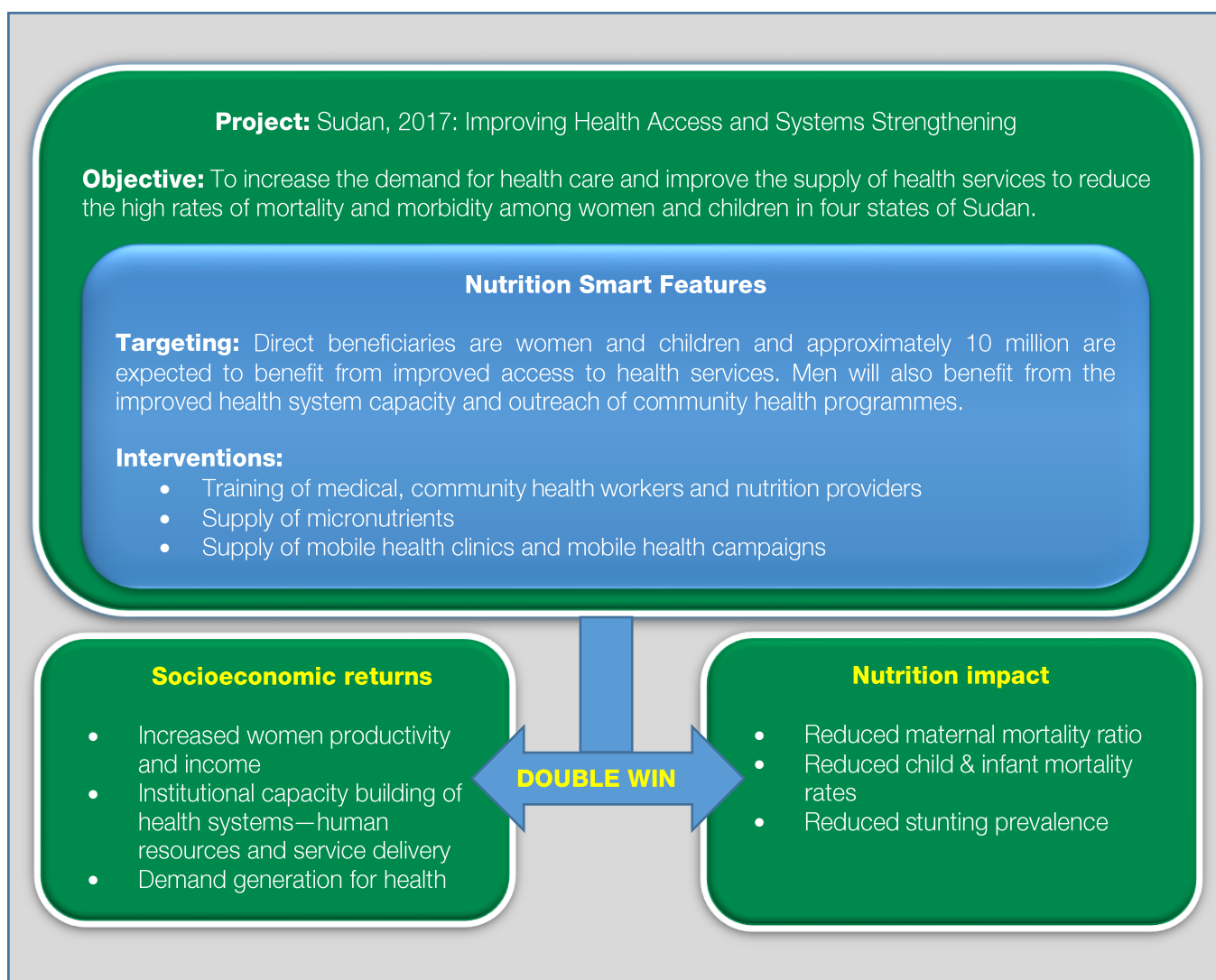


Sudan, 2017: Improving Health Access and Systems Strengthening Project

Considerable progress has been made in improving health in Sudan, but several challenges remain. Maternal and child mortality rates remain high despite recent declines from 1990 to 2015. High fertility rates (4.5 children per woman) have a detrimental impact on women's health and survival prospects. The country is also confronted with high rates of malnutrition with about one-third (33 percent) of children under age five underweight, 38.2 percent stunted, and 16.5 percent suffer from moderate to severe wasting. Malnutrition during infancy and childhood is associated with poor growth, cognitive development deficits and an increased risk of mortality.

Disease patterns are undergoing a shift, signalling an epidemiological transition with decreasing prevalence of communicable diseases while that of non-communicable diseases such as cancer is on the rise. Non-communicable diseases account for 34% of all deaths, with cardiovascular disease and cancer contributing the largest number of deaths. The increasing rates of overweight and obesity constitute major drivers of cancer along with tobacco consumption and changes in reproductive patterns.

Weak health system capacity, low levels of health care utilisation, deficiencies in the quality of care and high rates of health workforce attrition contribute to poor health and survival outcomes. Only about 46.3 percent of the population is covered by the National Health Insurance Fund, out-of-pocket expenditure on health is high at 70 percent and with about 4.1 percent of households suffering catastrophic health expenditures. Progress on health indicators has been uneven and sustaining the progress made in recent decades remains a major challenge. Improving health and nutritional outcomes of the population was considered a high priority and fundamental to achieving the country's developmental goals in line with the SDGs. This informed the need for increased investments in expanding access to health services, empowering the workforce and increasing productivity for economic growth via this project.



Monitoring and Evaluation Indicators

Examples of Core Sector Indicators:

- Exclusive breastfeeding under 6 months (%):
 - Proportion of infants 0-5 months of age who are exclusively fed breastmilk
- Minimum dietary diversity for children (%):
 - Proportion of children 6-23 months of age who consume foods from four or more food groups
- Minimum dietary diversity for women (%):
 - Proportion of women 15-49 years of age who consume foods from at least five out of 10 defined food groups

Examples of Custom Project Coverage Indicators:

- Vitamin A supplementation coverage:
 - Percent of children aged 6-59 months who received two age-appropriate doses of vitamin A in the past 12 months
- MNP coverage:
 - Percentage of caregivers of children 6-23 months of age who received a six-month supply of MNPs in the first semester of the year
 - Percentage of caregivers of children 6-23 months of age who received a six-month supply of MNPs in the second semester of the year
- Iron and folic acid supplementation:
 - Percentage of pregnant women who received 180 iron and folic acid supplements during their last pregnancy

Examples of Custom Project Process Indicators:

- Iron and folic acid supplementation:
 - Number of pregnant women receiving iron and folic acid supplements at health facilities
- Breastfeeding counselling and support:
 - Number of pregnant and lactating women who have received counselling, support or messages on optimal breastfeeding at least once in the previous 12 months
- Acute malnutrition referrals:
 - Number of acute malnutrition cases in children 6-59 months of age who are detected and referred for treatment

Note: For more details, please refer to the AfDB Nutrition Learning Resources at nutrition@afdb.org.

Collaborating Partners

Collaborating partners will be country and context specific but will always include the Ministry of Health. Others may also include:

- Ministries of Water, Local Development, Public Works, etc.
- Relevant United Nations agencies especially United Nations Children Fund (UNICEF), UNICEF, United Nations Population Fund (UNFPA), World Health Organization (WHO), World Food Programme (WFP), United Nations Development Programme (UNDP), and Food and Agricultural Organization of the United Nations (FAO).
- Non-governmental organizations (NGOs) and Community Based Organizations (CBOs) working in the areas of health, WASH, and nutrition
- Research institutions (especially medical and public health research institutes)

Suggested Resources

1. British Medical Journal (BMJ) 2015; 351: h4173 – Women’s, Children’s, and Adolescent Health – Nutrition and Health in women, children, and adolescent girls.
2. UNICEF, June 2015: UNICEF’s Approach to Scaling Up Nutrition for Mothers and their Children.
3. European Union, May 2018: Strengthening Integration of Nutrition within Health Sector Programmes – An Evidence-based Planning Resource.
4. Maternal and Child Nutrition, 2016: The costs of stunting in South Asia and the benefits of public investments in nutrition – Meera Shekar, Julia Dayton Eberwein, and Jakub Kakiytek.
5. The World Health Report 2000 – Health systems: improving performance.
6. WHO 2018: Ten steps to successful breastfeeding (revised, 2018).
7. WHO, 2007. Framework for action: Everybody’s business- Strengthening health systems to improve health outcomes.

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