Every year, close to 10 million children in developing countries die before the age of 5. Many of these child deaths could be avoided if already proven interventions could be delivered to and used by families of all the children in need. Undernutrition contributes to 60 percent of these deaths either directly or indirectly, which means that once every 6 seconds a child dies from a cause linked to malnutrition. Undernutrition itself is not necessarily killing these children; rather, proper nutrition is essential for the immune system to function, and without it children die of diseases such as pneumonia, diarrhea, and measles that would not normally be fatal if the children were well nourished.

As a result of undernutrition, close to a third of children under age 5 in Africa and Asia are stunted. Although these trends have improved over time in Asia, there has been next to no improvement in Sub-Saharan Africa. In addition to growth deficits due to undernutrition, there are widespread vitamin and mineral deficiencies that have devastating consequences for child survival and development. This chapter focuses on vitamin A deficiency (VAD), which affects an estimated 127 million preschool-aged children, putting them at increased risk of death, mainly from diarrhea, measles, and malaria. It has been shown that improving vitamin A status can reduce child mortality by 23–34 percent.

Approaches to combating VAD in children include breastfeeding; fortification of foods such as cooking oil, sugar, wheat flour, and soy sauce; biofortification of staple foods; for children aged 6–59 months, supplementation twice a year with
high-dosage vitamin A capsules; and production and consumption of a diversified diet rich in vitamin A. The challenge is to effectively deliver these solutions at a large scale to the populations most in need and to ensure that the programs delivering these solutions are used. Both delivery and use are crucial; it is not enough to have supply unless it is accompanied by demand for these solutions.

This chapter describes three experiences with scaling-up interventions. In all cases, Helen Keller International (HKI) served as a catalyst to initiate sustainable large-scale programs with broad networks of development partners, including nongovernmental organizations, universities, the food industry, and ministries of health, agriculture, and education.

**Broad-Scale Fortification of Cooking Oil with Vitamin A in West Africa**

The goal in West Africa was to reduce maternal and child morbidity and mortality by reaching 70 percent of the population in the eight countries of the Monetary and Economic Union of West Africa (UEMOA) with vitamin A–fortified cooking oil. This goal was achieved through a private–public partnership working through the professional association of cooking oil producers to secure their commitment to fortify all cooking oil products with vitamin A. The program was rolled out according to plan and now forms the basis of a new initiative to fortify wheat flour with iron.

HKI began the program in individual countries, working with local people to identify the food vehicles that would lend themselves to fortification and have the highest consumption rates. HKI then assessed the local industries that manufactured these products, looked at the legal framework, and started slowly and on a small scale, with two different products (cooking oil and flour) in three different countries. Based on the success in those three countries, the assembly of health ministers of the West African Health Organization adopted a resolution in favor of mandatory fortification of cooking oil for the entire region. HKI convened private and public sector leaders for a formal dialogue, and these leaders called for an acceleration of mandatory fortification.

The scale-up of this program was successful owing to a number of factors, including HKI’s presence at the country and regional levels, the existence of a strong technical professional association of cooking oil industries and a common monetary zone, and regional political will. In addition, a premium was placed on regular and open communication and on keeping participants focused on the message.

In addition to lack of funding, obstacles included the complexity of dealing with a large number of partners and the lack of an existing regulatory framework for fortification and quality control. With its on-the-ground field presence, HKI was able to act as a broker to bring partners together to address these complexities and
challenges, including facilitating dialogue and development of the program approach and its technical aspects. The project had to develop regional quality control norms that were widely accepted for mandatory fortification, work with the industries to strengthen their capacity for quality assurance, and identify and strengthen the reference laboratories that would work with industries to ensure quality control.

Monitoring and evaluation are important aspects of this regional fortification initiative. To date, monitoring has focused on the production of fortified foods at the factory level. In addition, a system for monitoring amounts of imported cooking oil, in addition to monitoring volumes at the retail level, is being put in place. Finally, although it is still too early to fully assess the impact of this initiative, especially in terms of coverage, HKI and its partners are putting in place plans for doing so.

Studies do show, however, that cooking oil reaches the targeted population. Fortification Rapid Assessment Tool studies in several countries in West Africa have shown high levels of penetration of cooking oil among all population groups. For example, in Senegal, the percentage of children 6–59 months of age who had consumed oil in the preceding 24 hours varied from 88.1 percent in secondary cities to 55.2 percent in the rural South. A recent study in Côte d’Ivoire that sampled actual servings of food estimated that vitamin A–fortified cooking oil provides 15 percent of children’s vitamin A needs.

Fortification costs less than 3 CFA francs per liter of cooking oil—less than 0.4 percent of the price of the commodity and well within the margin of seasonal fluctuations—so even if passed on to the consumer, the cost would be imperceptible. So far fortification has not resulted in increased prices, but other factors are currently having an impact on prices of oil and other staples in West Africa.

Vitamin A Supplementation in Niger
The goal of the program in Niger was to help meet the country’s child survival objectives through twice-yearly vitamin A supplementation (VAS) reaching at least 80 percent of children 6–59 months of age. This goal was achieved in partnership with the Ministry of Health and the United Nations Children’s Fund by building on the existing structure of National Immunization Days and then, as these were phased out, developing Africa’s first-ever National Micronutrient Day. Niger has now provided the model for other countries in the region to follow.

Successful scale-up and coverage of more than 80 percent of children aged 6–59 months were facilitated by the fact that there were data showing that VAD was a serious public health problem, which translated into a powerful key message that VAD control could avert more than 25,000 child deaths a year in Niger. In addition, reduction of child mortality was a high-priority objective of the government and donor partners.
The process of scaling up also faced key challenges, including a high level of
dependence on external funding. Initially a major United Nations agency was not
on board with the strategy, a situation that required enhanced advocacy and the
intervention of the local Ministry of Health. The Ministry of Health also had a
number of mass distribution programs for immunizations, malaria, and nutrition,
none of which communicated with each other, so HKI created a core group to
bring these agencies together in dialogue. An essential part of the success of the VAS
program in Niger, as in many countries, was the collection of postevent monitor-
ing data that all partners could review to identify coverage levels and gaps requiring
remedial action. To ensure that the monitoring data provided a reasonably accurate
reflection of the coverage achieved, population-based postevent coverage surveys
were also conducted.

Scaling Up Homestead Food Production
in Four Asian Countries

The program in Asia aimed to improve the nutritional status of vulnerable members
of low-income households in Bangladesh, Cambodia, Nepal, and the Philippines
through increased small-scale production and consumption of micronutrient-rich
crops and small animals. This goal was achieved by working through broad networks
of more than 250 local NGOs as well as local government offices in health and agri-
culture. The current coverage is close to 1 million households, with studies showing
positive impacts on micronutrient status, food consumption, and income.

The reliance on a broad network of NGOs to fast-track the program and reach
more areas of the countries was key to its success, as was encouraging local NGO
ownership through participatory decisionmaking and cost sharing. In addition to
baseline and endline surveys to assess different aspects of program impact on various
indicators, an ongoing monitoring system developed with the NGOs allowed for
implementation problems to be identified and corrected immediately.

Challenges included obtaining adequate funding and coordinating so many
different NGOs and partners. To improve coordination, HKI involved the NGOs
from the start to make sure everyone was on the same page, developed a flexible
project model that could easily be adapted to different NGOs’ ways of working,
and provided strong overall management support. Some donors were impatient to
see positive outcomes, but this kind of program takes time to show results.

More work is needed to further study this intervention, particularly to iden-
tify areas in which refinement of program inputs (such as strengthening activities
designed to change nutrition behavior) could further enhance outcomes, as well as
to better document the program model for advocacy and fundraising purposes.
Summary
Successful scale-up of such programs depends on a range of factors both political and organizational. There must be political will on the part of local government, and supportive policies and guidelines must be in place. Adequate time and funding must be provided into the future, and partners must agree on all objectives. Chief among organizational success factors is leadership: someone or some organization must lead the charge and be responsible. Partnership is also vital, because networks of partners allow further reach, quicker roll-out, and greater leveraging of resources. Ownership is essential, and partners must be involved from day one in program design, implementation, and monitoring and evaluation. Time must be invested up front to define the partnership, clarify roles and responsibilities, and ensure harmonization of messages and goals. It is important to be opportunistic and use existing structures and programs to the extent possible. Outcome indicators must be part of the monitoring and evaluation targets of all partners, and implementers must be willing to make course corrections if outcomes are not being achieved.

Common obstacles and challenges include lack of financing and sometimes unrealistic donor expectations of quick results. Involving lots of partners, although valuable, adds complexity and may lead to competition if resources are scarce. Also, changing development trends may lead to a change of focus midway through the project.

Two misperceptions are common. The first is that once results have been achieved, nothing more remains to be done. This is not the case; support is often needed at critical points in time to maintain sustainability. For example, once food fortification initiatives are up and running, a local manufacturer may try to cut costs by using a slightly lower-grade premix ingredient. Program partners need to ensure that this does not happen. Another common misperception is that successful scale-up has been achieved once the interventions (the “supply”) are available. Once again, this is not the case; there must be “demand” for the interventions. Target groups must be using them as originally planned, and social marketing must be ongoing to encourage target populations to continue to purchase and use the product or continue the new behaviors.

I close with a quote from Helen Keller, the founder of HKI: “Alone we can do so little; together we can do so much.”

For Further Reading


