

The Role of Nutrition in the Fight Against HIV, TB and Malaria



Community health worker Amina holds 3-year-old Zeinabou during a seasonal malaria chemoprevention campaign in Niamey, Niger. Most Global Fund-supported seasonal malaria chemoprevention campaigns include screening for malnutrition. Zeinabou was found to be well nourished for her age.

The Global Fund/Sarah Hoibak

The challenge

Malnutrition is a widespread global health issue: It weakens the immune system, makes people more vulnerable to infectious diseases like HIV, tuberculosis (TB) and malaria and increases the risk of developing serious health conditions.

Lack of adequate nutrition is a leading risk factor for TB infection, and this is particularly an issue in countries with a high burden of TB. At the same time, TB can cause or exacerbate malnutrition. Malnourished patients are twice as likely to die from TB compared with non-malnourished patients. Malnutrition also affects people living with HIV by weakening

their immune system and making them more vulnerable to opportunistic infections.

A lack of adequate nutrition not only increases susceptibility to disease, but also leads to worse health outcomes, particularly for children. In the case of HIV, malnutrition can accelerate progression to AIDS as the HIV virus attacks the immune system. Advanced HIV is itself associated with wasting, and adequate nutrition is important for effective HIV treatment. Malnutrition can also undermine treatment effectiveness for people with TB, particularly those with drug-resistant TB. Poor nutrition can impair drug absorption, leading to longer

recovery times and increased treatment failure, making drug-resistant TB even harder to treat.

In addition, malnutrition can reduce the effectiveness of antimalarial treatment in children under 5. Research shows that acute malnourishment can nearly double the risk of malaria treatment failure, and that even children with mild levels of wasting are more likely to suffer from treatment failure and carry the malaria parasites in their bloodstream for longer. Adequate nutrition plays a vital role in recovery and overall health.

The Global Fund's response

The Global Fund invests over US\$5 billion a year in integrated prevention, treatment and care programs for HIV, TB and malaria, and in strengthening health and community systems. Our partnership supports essential interventions – including nutritional support – when they are needed for effective care and recovery.

Nutritional support in emergencies



Health officials in Sudan dispatch emergency supplies from the country's National Medical Supplies Fund – a key recipient of Global Fund support.

In crisis and humanitarian settings, the Global Fund invests in emergency interventions to help sustain HIV, TB and malaria responses. In exceptional cases and based on the context, we have approved emergency funding for essential nutrition-related supplies, such as sanitation kits, living support packages, nutritional aid and water purification. This support aims to reduce poor treatment outcomes caused by food insecurity and malnutrition.

TB and HIV

The Global Fund supports interventions that integrate nutritional support into TB programming. This includes direct food and nutritional supplements support for people with TB and drug-resistant TB. Nutritional support is embedded within broader TB care strategies, such as psychosocial assistance and management of comorbidities, to incentivize treatment adherence and eliminate barriers to treatment success. By addressing malnutrition as a key driver of TB and poor recovery, the Global Fund supports efforts to improve success rates and ensure that all people with TB receive the comprehensive care they need to successfully complete their treatment.

Removing barriers to care is crucial for improving access to and ensuring treatment continuity for key and vulnerable populations who are disproportionately affected by TB. One effective approach is linking these groups to social protection programs, which may include food or nutritional support, to help them stay on lifesaving TB treatment. Since TB particularly affects people living in poverty, for whom access to adequate nutrition can be challenging, the Global Fund encourages countries to integrate support for TB patients into social protection schemes, particularly for undernourished and marginalized communities. This approach is also critical to the long-term sustainability of disease responses.

For HIV, we support national programs to include nutrition education as part of counseling services for people living with HIV, and therapeutic feeding as part of palliative care for people living with HIV who are clinically malnourished.

Malaria

In some countries where the Global Fund invests, areas with high rates of malaria transmission also experience high levels of severe and moderate acute malnutrition. To address this, most seasonal malaria chemoprevention campaigns supported by the Global Fund now include a malnutrition screening component. People who are found to be malnourished are referred to services for nutritional and medical care. The data gathered during these campaigns helps health authorities to understand the extent of malnutrition in these communities and develop appropriate response strategies.

In several countries, including Burkina Faso and Nigeria, vitamin A supplementation has been added to seasonal malaria chemoprevention campaigns. Vitamin A deficiency affects millions of children under 5, particularly in sub-Saharan Africa. It is linked to severe acute malnutrition and weakens the body's ability to fight infections. By integrating vitamin A supplementation with seasonal malaria chemoprevention campaigns, the coverage of this proven, low-cost intervention can be significantly increased, helping to reduce mortality rates.

Working in partnership

Through collaboration with national health programs, social welfare agencies, the private sector and humanitarian agencies, the Global Fund supports access to nutritional interventions, particularly for vulnerable, marginalized or undernourished people who face significant barriers to care.

In crisis situations of drought and famine, the Global Fund works with partners like Catholic Relief Services and Malaria Consortium to integrate HIV, TB and malaria support into nutritional interventions. For example, malaria screening and treatment is often included as part of a package of services provided at therapeutic feeding centers. In some contexts, the Global Fund invests in the disease component of the response, while partners fund food and supplements. In recent years, this partnership arrangement has been successfully implemented in countries such as Somalia, South Sudan and Sudan.

We also partner with the World Food Programme in innovative ways to reach the most vulnerable people. In recent years, the World Food Programme has provided logistical and supply chain expertise through the storage of medications and other supplies and has ensured last mile delivery of lifesaving commodities like long-lasting insecticidal nets. This approach has been used in countries like Burundi, Cameroon, the Central African Republic and South Sudan.

Case study

Strengthening health and nutrition services in Lao PDR

In the Lao People's Democratic Republic (Lao PDR), malnutrition is a major challenge, especially among children and vulnerable populations. Since 2020, the Health and Nutrition Services Access Project (HANSA), co-funded by the Global Fund, the World Bank, Gavi, the Vaccine Alliance (Gavi) and the government of Australia, has supported the nation's efforts to expand health and nutrition services in remote villages.

HANSA's second phase, which began in 2024, provides up to US\$62 million to scale up a range of interventions. These include delivering integrated social and behavior change communication in villages to improve health and nutrition behavior, working with communities to improve diets and feeding practices to address low nutrition rates among children, and providing nutrition commodities. The project also integrates nutrition into HIV and TB responses, which helps to address the impact of malnutrition on disease outcomes.



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A health worker measures a child's arm with a tape used to detect severe malnutrition at a health center in Luang Prabang, Lao PDR. The Global Fund, the World Bank, Gavi and the government of Australia are co-funding the expansion of health and nutrition services in some areas of the country to reduce malnutrition among remote communities and lessen its impact on HIV, TB and malaria outcomes.

About the Global Fund

The Global Fund is a worldwide partnership to defeat HIV, TB and malaria and ensure a healthier, safer, more equitable future for all. We raise and invest more than US\$5 billion a year to fight the deadliest infectious diseases, challenge the injustice that fuels them, and strengthen health systems and pandemic preparedness in more than 100 of the hardest hit countries. We unite world leaders, communities, civil society, health workers and the private sector to find solutions that have the most impact, and we take them to scale worldwide. Since 2002, the Global Fund partnership has saved 65 million lives.