



CrossMark

The syndemic threat of food insecurity and HIV

According to the 2019 UN Food and Agriculture Organization *State of Food Security and Nutrition in the World* report, more than 820 million people were undernourished globally in 2018, and 704 million were severely food insecure. Food insecurity and undernourishment affect people in all regions, but the problem is particularly acute in sub-Saharan Africa, where the burden of HIV disease is also greatest. From 2015 to 2018 the region had a consistent rise in food insecurity and undernourishment. And in 2018, an estimated 258 million people (24.6% of the population) were severely food insecure with 605.8 million (57.7%) being moderately or severely food insecure.

Food insecurity has been associated with increased HIV transmission risk, poor clinic attendance, poor antiretroviral therapy (ART) uptake and adherence, poor immunological and virological responses, lower efficacy of ART, and high mortality. A meta-analysis by Abibula and colleagues has shown 29% lower odds of achieving complete viral suppression among people with HIV who experienced food insecurity. A study of 232 pregnant women in Ghana showed that being both HIV-positive and persistently food insecure increased the risk for maternal perceived stress. Chop and colleagues, in a systematic review, showed that food insecurity is associated with transactional sex and inconsistent condom use. Another study showed that infants born to 8790 women in Zimbabwe were more likely to be HIV-infected if mothers reported severe household food insecurity than those born into food-secure households.

The Food Security Information Network's *Global Report on Food Crises 2019* estimated that 1.1 million people in Malawi were expected to be in a food crisis state, or worse, from October 2019 to March 2020 because of floods, drought, and high food prices. Recent increases in HIV cases have been linked to poor adherence to antiretrovirals as a result of severe food shortages. Malawi has a successful HIV programme and about 79% of the 1 million people with HIV were on ART in 2018. However, for those experiencing food shortages and faced with the decision either to take ART without food and experience side-effects or simply to stop treatment, many are choosing the latter. In one district alone, up to 6400 of 14200 people on ART are reported to have stopped therapy.

Zimbabwe, where HIV prevalence is estimated to be 12.7%, has also been affected by food shortages as a result of its economic crisis, erratic rainfalls, and cyclone Idai. The severe economic situation has left the health-care system in a dire state, and spiralling inflation has left many without the money to pay for food let alone basic health services. Reports suggest 7.7 million of the 14 million population are acutely food insecure with 90% of children aged 6–24 months receiving inadequate nutrition.

Interventions to tackle food insecurity and malnutrition include individual nutrition supplementation for people with HIV, food and cash transfers to affected households, and livelihood programmes for those affected by long-term food insecurity. Although these interventions can be very successful, the underlying reasons for food insecurity need to be addressed. Conflict and security issues are major drivers for food insecurity in central and east Africa. In southern Africa, acute food insecurity has mostly been a result of severe drought and cyclones, resulting in crop failures, increased food prices, and lower incomes. High HIV disease burden can hinder efforts to anticipate, respond to, and mitigate the effects of food insecurity.

The weather extremes that are jeopardising food security in sub-Saharan Africa are symptoms of emerging global catastrophic climate change. A recent report from the Intergovernmental Panel on Climate Change highlights how climate change is already affecting food security in terms of food availability, access, and nutrition. Adapting to the current and future effects of climate change will be difficult, but better land management, enhancing resilience to extreme events, reducing inequalities, and a focus on sustainability will be important mitigation strategies. In countries with high HIV burden, these strategies will not be possible if people at risk of or living with HIV are unable to access prevention and treatment.

Current trends in food insecurity and undernourishment do not bode well for the sustainable development goals (SDGs) of ending hunger and ensuring access to food by all (SDG 2.1) and of eliminating all forms of malnutrition (SDG 2.2) by 2030. Failure to achieve these goals will hamper progress in achieving SDGs relating to HIV. The enormous advances in the fight against HIV in the worst hit areas must not be undermined by something so fundamental as a lack of food. ■ *The Lancet HIV*

For more on the **Lancet Series on malnutrition** see <https://www.thelancet.com/series/double-burden-malnutrition>

For **The State of Food Security and Nutrition in the World 2019 report** see https://docs.wfp.org/api/documents/WFP-0000106760/download/?_

For the **study by Abibula and colleagues** see *AIDS Behav* 2017; **21**: 754–65

For the **study on maternal stress** see *BMC Public Health* 2013; **13**: 215

For the **systematic review by Chop and colleagues** see *Health Care Woman Int* 2017; **38**: 927–44

For the **study on infants in Zimbabwe** see *BMC Public Health* 2015; **15**: 420

For the **2019 Global Report on Food Crises** see <http://www.fsplatform.org/sites/default/files/resources/files/GRFC%20UPDATE%20SEPT%202019%20FINAL.pdf>

For more on **Malawi** see <https://www.telegraph.co.uk/global-health/science-and-disease/food-insecurity-threatens-malawis-hiv-progress/>

For more on **Zimbabwe** see <https://www.nytimes.com/2019/12/25/world/africa/zimbabwe-hunger-famine.html>, <https://reliefweb.int/report/zimbabwe/2019-zimbabwe-flash-appeal-january-june-2019>, and <https://www.theguardian.com/global-development/2019/nov/29/zimbabwe-on-verge-of-manmade-starvation-warns-un-encyoga=2.28917429.821263126.1579109170-1919395204.1579109170>

For the **Climate Change and Land** report see <https://www.ipcc.ch/srccl/>