

Early Childhood Malnutrition and Humanitarian Emergencies



Malnutrition Around the World

The number of hungry people on the planet

has been slowly on the rise since 2014. Today, at least 690 million people around the world face chronic hungerⁱ, which means that each day, they do not have enough food to eat (Figure 1). Of those 690 million people, 149 million suffer from acute (crisis) levels of hungerⁱⁱ. They are on the brink of starvation – typically pushed there by sudden shocks like conflict, displacement, natural disaster and economic collapse.

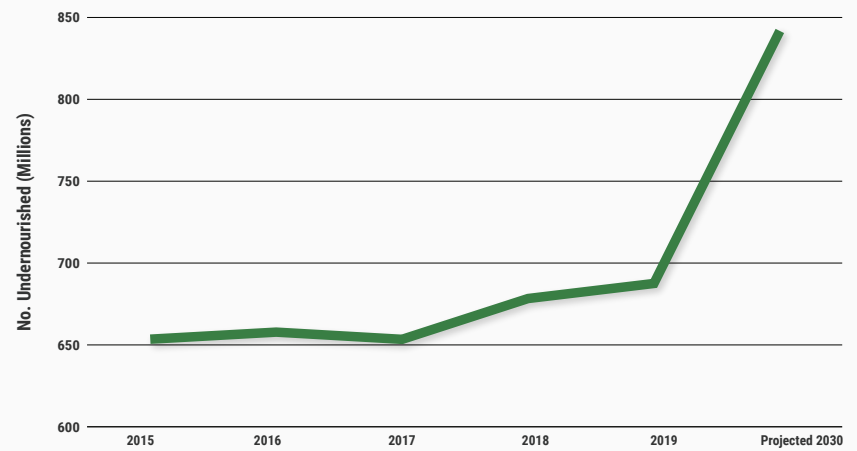


People have described the pain of starvation as being beyond what they can bear. But even when their stomachs are full, many people still suffer from hunger. Food security is more than just getting enough calories, it's about getting enough of the right kind of calories — nutrition matters greatly. It is estimated that more than 2 billion people around the planet suffer from so-called “hidden hunger,” a condition caused by not receiving a

sufficient or balanced diet of micronutrients. Another 3 billion people around the planet are at risk of hidden hunger, as they cannot afford a healthy diet. This includes 57 percent of all people living in Sub-Saharan Africa and southern Asia, traditional hunger hotspotsⁱⁱⁱ.

With 1 in 3 people affected by malnutrition, it imposes great economic and social costs. It is estimated that undernutrition of all types reduces global GDP by \$3.5 trillion each year^{iv}. As hunger rises and humanitarian crises grow, so will the impacts of hidden hunger—especially because they disproportionately affect children. With children at risk, the world is at risk of intergenerational losses that will linger long after disasters cede.

Figure 1. Number of Undernourished



Childhood Malnutrition

Malnutrition hurts everyone, but it is devastating for children. It threatens their lives and if they survive, can lead to lifelong consequences. Not receiving a balanced diet when they are young inhibits a child's mental and physical development and their chances of reaching their full potential.

A balanced diet is made up of a combination of micro and macronutrients. Macronutrients are things our bodies use in large amounts like proteins, carbohydrates and fats. Vitamins and minerals—micronutrients—are required in smaller amounts but are no less important to bodily health. Our bodies cannot synthesize these nutrients by themselves, so eating a balanced diet is the only way to get enough.

A child who does not receive a balanced diet in sufficient quantity will suffer from malnourishment. Micronutrients like vitamin-A, iodine, iron and zinc are especially important to a child's development. Vitamin A deficiency can result in visual impairment and blindness; Iodine deficiency in severe mental impairment; Iron deficiency in anemia (insufficient healthy red blood cells to deliver oxygen to their body); and zinc deficiency in major organ system failures including the gastrointestinal track, which leads to severe diarrhea.

In many places where the United Nations World Food Programme (WFP) works, diets consist predominantly of grain crops, rich in carbohydrates but limited in vitamins



and minerals. These diets fill stomachs, but do not supply enough of the micronutrients that children need.

Young children and infants, especially, rely on caregivers to meet their needs and their bodies are in critical phases of growth. Children require nutrient-dense foods for proper growth and development and the ability to fight off infection and disease. But in low-income countries, nutritious foods are often out-of-reach for parents, either too costly or simply not available. In other cases, a lack of nutrition literacy means that parents are not properly equipped to make informed decisions about what to feed their children or how to best prepare foods.

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As a result, malnourishment in children is far too common. In 2019, 47 million children suffered from wasting (severe malnutrition) and 144 million from stunting. It leaves children much more vulnerable to disease and increases their risk of death. In fact, malnourishment is the leading cause of death among children under 5 years of age. It is responsible for 45 percent of such deaths globally – some 3 million each year^v.

For children who survive, the consequences are still great. Malnutrition permanently affects brain development, immunity and health. Undernutrition at a young age increases the likelihood of developing

non-communicable diseases later in life – including diabetes, elevated blood pressure and heart disease, among others^{vi}. Poor diet is increasingly associated with overweight or obesity, which are becoming more prevalent in the developing world (creating a “dual burden” of simultaneous under and overnutrition) due to the availability of cheap, processed foods that are heavy in carbohydrates and fats.

Additionally, malnourished kids are more likely to struggle socially and achieve less in school – reducing their chance of reaching their full potential.

NUTRITION KEY TERMS

Stunting (chronic malnutrition): A child experiencing low height for age. Chronic malnutrition causes impaired physical and mental development with sometimes irreversible damage to children's bodies. Unlike wasting, stunting develops over a long period of time, a slow, cumulative process resulting from inadequate nutrition.

Wasting (acute malnutrition): A child experiencing low weight for height. Inadequate nutrition, especially following a shock event, can lead to rapid weight loss or “wasting.” Wasting is often assessed through mid-upper arm circumference (MUAC) measurements in children.

Hidden Hunger: Also known as “micronutrient deficiency,” hidden hunger refers to the insufficient intake of micronutrients (vitamins and minerals) in one's diet. Unlike under- and overnutrition, the effects of hidden hunger can be less outwardly visible.



WFP / Inger Marie Vennize

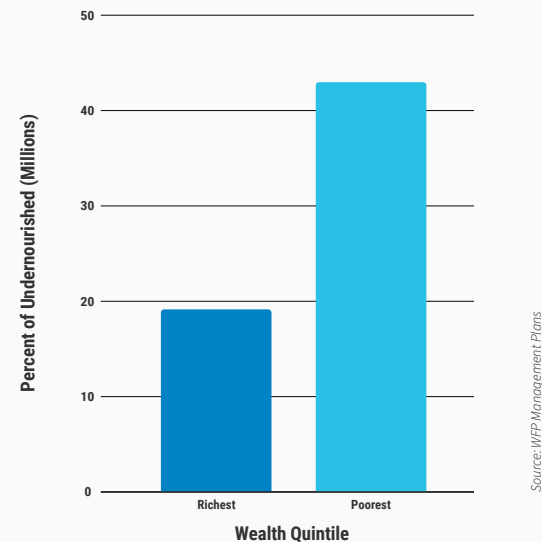
Global Trends

Today, countries often experience overlapping forms of childhood malnutrition. For example, in the 15 countries universally considered “extremely fragile,” at least seven are simultaneously fighting overweight, anemia and stunting among children – and 14 are facing more than one malnutrition emergency^{vii}. More children globally are underweight than overweight or obese, but as previously noted, overweight and obesity are growing concerns in the developing world.

Some progress on stunting has been made over the past decade, but it remains chronic in certain regions. Today, 9 out of every 10 cases are located in Africa and Asia^{viii}. Stunting is highly correlated with poverty. The more unaffordable healthy food is to a population, the higher the likelihood of child stunting. Children in the poorest wealth quintile globally, for example, are twice as likely to be stunted as those living in the richest quintile

(Figure 2). Physical and mental impairment from a lack of access to healthy foods is a disease of the poor and underprivileged.

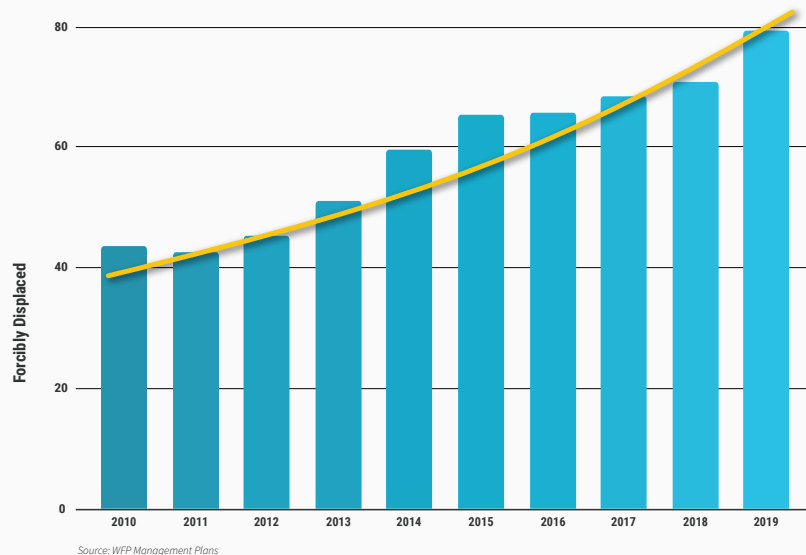
Figure 2. Prevalence of Stunting by Wealth Level



Conflict and Child Malnutrition

Children in conflict are the definition of underprivileged. They are among the most vulnerable groups in humanitarian emergencies and sadly, among the most numerous. Relying on caregivers and with their bodies less able to fight off disease, children are disproportionately affected by the scourges of war. A child living in a conflict zone is more than twice as likely to suffer from malnourishment than a child living in a peaceful setting. In fact, 4 out of every 5 stunted children today live in countries affected by conflict^{ix}.

Figure 3. Global Forced Displacement



Conflict is the single largest driver of hunger today. Approximately 60 percent of the world's chronically hungry people live in countries affected by violence and conflict^x. Conflict disrupts markets, destroys critical infrastructure and forces families from their homes. Children in conflict-affected countries are also more than twice as likely to be out of school than those in stable contexts.

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Conflict and displacement go hand-in-hand. Today, 79.5 million people are displaced from their homes because of violence, conflict and persecution—a full 1 percent of humanity and more than any other time in recorded history. This represents a more than doubling of forced displacement in just the last decade. An estimated 40

percent of all displaced people are children below the age of 18^{xi}. Many are fleeing to countries with existing development deficits and pervasive poverty—places least able to cope with an influx of refugees and tend to the needs of vulnerable children.



YEMEN Yemen is the world's worst humanitarian crisis. Even before fighting broke out there in 2015, Yemen was among the poorest countries in the Arab world. Since then, civil war has pushed the country to the brink, with 20 million of the country's roughly 30 million inhabitants in need of humanitarian assistance. Millions have been displaced from their homes and at least 10 million people in the country are acutely food insecure. Malnutrition rates among children and women are among the highest in the world—at least 360,00 children are at risk of dying without intervention. The U.N. World Food Programme is now reaching nearly 13 million people in Yemen with food assistance, including 1.6 million women and children with nutrition treatment for acute malnutrition and 900,000 women and children each month with preventative nutrition support. This also includes another million school-aged children who are receiving date bars and high-energy biscuits.

The Importance of the First 1,000 Days

Not receiving the right nutrition in the first 1,000 days of life is another key driver of childhood malnutrition.

Malnutrition at any age is harmful, but malnutrition in the first 1,000 days from pregnancy to a child's second birthday can have particularly devastating lifetime impacts on health and prosperity. Lacking proper nutrition in this period can permanently damage physical growth (including brain development), leading to a diminished capacity to learn and a greater susceptibility to infection. In this way, the first 1,000 days shape a child's destiny.

Journalist and author Roger Thurow famously referred to stunting as “a life sentence of underachievement,” that prevents children, economies and nations from reaching their full potential. Studies have shown that children who receive proper nutrition in their first 1,000 days are ten times more likely to survive life-threatening illnesses, attend almost five more grades of schooling than their malnourished peers, earn 20 percent more in wages as adults, and can increase a country's GDP by over 10 percent annually^{xii}. Stunted children produce stunted economies.

In 2008 and 2011, The Lancet academic journal featured a series on maternal and child undernutrition that highlighted the importance of the first 1,000 days. The



humanitarian community took note, and ever since, global nutrition interventions have increasingly focused not only on children, but also maternal health.

Early childhood malnutrition is, at its core, about mothers; good nutrition starts in the womb. There is a direct relationship between gender equality and

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nutritional outcomes for women and children^{xiii}. Proper nutrition for women of reproductive age—including pregnant and lactating women—is critical for the fetal and early development of a child. Yet 1 in 4 adolescent girls are involved in “childhood marriages.”^{xiv} These early marriages reduce a girl’s access to employment, educational attainment and financial autonomy, and increase her risk of experiencing gender-based violence.

The need for proper nutrition, however, does not end when a child reaches their second year of life. Increasingly, research is pointing to the critical importance of the first 7,000 days (20 years) of a child’s journey to adulthood. This broader window is critical given what we know about the impacts of adolescent

education, health and nutrition on adults later in life. This is why school feeding is an especially important part of this equation. School feeding programs provide a transformative link between education and food security. Often the only meal a child receives that day, the promise of a nutritious meal has been shown to increase school enrollment and attendance (especially for girls in low-income countries) and improve academic performance. School meal programs can be leveraged to quickly ramp-up food assistance in an emergency by sending additional food rations home with students. And ones that purchase food locally from smallholder farmers—so-called “home grown school meals”—can be especially transformative for students and communities alike.



WFP / Bruno Djoyo

WEST AND CENTRAL AFRICA

In West and Central Africa, conflict and armed violence have led to massive population displacements and drastically limited access to basic social services. And the novel coronavirus is exacerbating food insecurity and malnutrition in a region that was already on the edge.

The U.N. World Food Programme and UNICEF predict that 15.4 million cases of acute malnutrition in children under age five are expected in 2020 in West and Central Africa – one-third of them in the most severe form – if adequate measures are not put in place. This represents a 20 percent increase from estimates projected before COVID-19 hit.

Child Malnutrition and COVID-19

In remarks to the United Nations Security Council in April 2020, U.N. World Food Programme

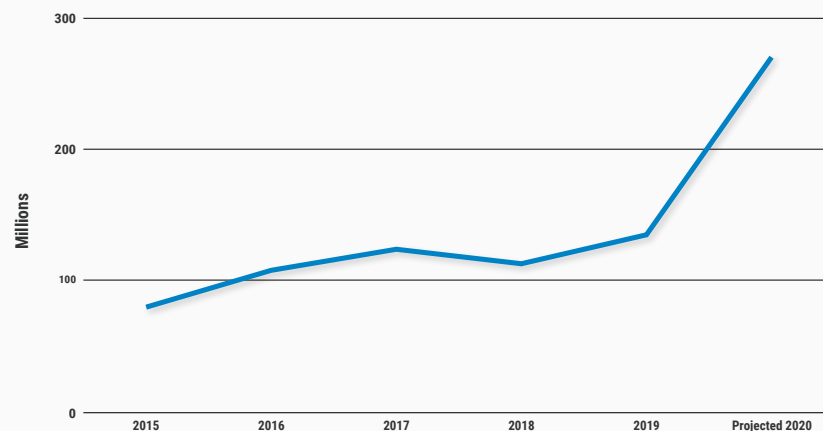
Executive Director David Beasley said the following: “I want to stress that we are not only facing a global health pandemic but also a global humanitarian catastrophe. Millions of civilians living in conflict-scarred nations, including many women and children, face being pushed to the brink of starvation, with the specter of famine a very real and dangerous possibility.” Every major outbreak in recent memory—Ebola, SARS, MERS—has had both direct and indirect negative impacts on food security. COVID-19 is no exception.

The U.N. World Food Programme estimates that the pandemic will increase the number of acutely food insecure people in the world by 80 percent—to 270 million before the end of 2020^{xv} (Figure 4). This is largely due to its socio-economic impact, especially rising

unemployment and a loss of income from remittances. COVID-19 is making the poor poorer and the hungry hungrier. It has been devastating for groups that were already vulnerable prior to the crisis – including children. The U.N. World Food Programme estimates that malnutrition as a consequence of COVID-19 will push an additional 6.7 million children into severe malnutrition (wasting) and lead to an additional 10,000 child deaths each month^{xvi}.

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Figure 4. Global Acute Hunger and COVID-19



Source: WFP Management Plans



WFP / Damilola Onafuwa

Despite the fact that children have generally presented milder COVID-19 symptoms than adults, children suffering from severe malnourishment are not properly equipped to fight the virus. Prior research suggests that children^{xvi} who are malnourished are more than nine times more likely to die from infectious diseases than healthy children. In the aftermath of the Ebola virus, for example, researchers determined that, “preceding nutritional health” played a considerable role in virus survivability for children and adults alike^{xvii}. Similarly, HIV patients burn at least 10 percent more calorie energy than healthy individuals fighting off the virus and have lower rates of nutrient absorption^{xviii}.

The pandemic is also preventing many children from accessing school meals. At the peak of the outbreak, more than 1.6 billion children were affected by school closures in over 190 countries. Some 370 million of these children relied on school meals as a critical lifeline. For many poor families, the value of a meal in school is equivalent to about 10 percent of a household’s monthly income—a considerable blow to many families living on the edge.

Additionally, children may face separation from their primary caregivers in quarantine from COVID-19 and women and children are often responsible for fetching water and food, putting them at greater risk of virus transmission. Because of increased pressures from the pandemic, an additional 6,000 children could die each day from preventable disease related to weak health systems and disruptions to routine health services, according to researchers at Johns Hopkins^{xix}.



The United Nations World Food Programme's Nutrition Support

The U.N. World Food Programme is working to end malnutrition in all its forms,

which often stem from the same root causes of poverty, inequality and insufficient diets. As the leading humanitarian organization providing food assistance to the world's most vulnerable – including young children, pregnant and nursing mothers and people living with TB or HIV—improving nutrition is a core element of the U.N. World Food Programme's work. We work to ensure that people have access to nutritious diets, no matter their circumstances, by supporting families directly and working with governments and partners to meet their malnutrition commitments.

In emergency settings, the U.N. World Food Programme provides specialized nutritious foods – products specifically formulated to provide the right nutrition to people at risk of malnutrition. Last year, the U.N. World Food Programme reached 10.3 million children with programs designed to prevent and treat malnutrition as well as 6.3 million women of reproductive age.

This includes distribution of so-called Ready-to-Use Supplementary and Therapeutic Foods (RUSF/RUTF), micronutrient powders, fortified foods and promoting access to fresh fruits and vegetables and dietary diversity.

The U.N. World Food Programme has six decades of experience supporting school nutrition and health. It is the largest humanitarian organization implementing school feeding, providing school meals to 17.3 million children in 59 countries around the world in 2019. Throughout its history, the U.N. World Food Programme has worked with more than 100 countries on national school feeding programs, transitioning ownership of these programs to national governments in at least 44 countries.





Conclusion

If current trends continue, the number of chronically hungry people around the world will reach 840 million by 2030, the deadline for the Sustainable Development Goals and the eradication of hunger. To get to Zero Hunger, current trends must be reversed, and food is not enough. Proper nutrition changes lives and can break the cycle of poverty.

This is a goal worth investing in. Research demonstrates that every \$1 spent preventing malnutrition yields \$16 in immediate and downstream benefits. In some studies, the rate of return on nutrition spending is as high as \$138 when lifelong health and productivity benefits are considered.

Because of their disproportionate impact on infants and children, today's humanitarian crises threaten to cast shadows that will last for generations. It is critical that organizations across the globe – including governments, non-governmental organizations, businesses and individuals – come together to address childhood malnutrition. For reaching vulnerable mothers and children with lifesaving and life-changing assistance now is key to shaping our own collective destiny for a better world.

References

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^{xi}Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), United Nations Children’s Fund (UNICEF), World Food Programme (WFP), and World Health Organization (WHO), *The State of Food Security and Nutrition in the World: Building Climate Resilience for Food Security and Nutrition* (Rome: FAO, 2018), <http://www.fao.org/3/i9553en/i9553en.pdf>

^{xii}United Nations High Commissioner for Refugees (UNHCR), *Global Trends in Forced Displacement in 2018* (UNHCR, 2020), <https://www.unhcr.org/globaltrends2019/>

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