

NUTRITION POLICY PRIMER

The Untapped Path to Global Health, Economic Growth, and Human Security

By Amy R. Beaudreault¹

Making Global Nutrition a Priority

The strength and stability of a country hinges on the health of its people. Malnutrition affects one in three humans, yet nutrition continues to be underfunded globally. U.S. political and financial prioritization are critical and necessary. Evidence-based nutrition programs benefit lives at home and abroad by serving as a critical foreign policy tool in global health, economic growth, and human security. As a foundational building block in development, investments in nutrition also benefit other U.S. government foreign assistance programs.

Despite continued bipartisan congressional support, nutrition never has been prioritized independently within global health investments, as evidenced by the inadequate portion of U.S. foreign assistance allocated to nutrition-specific initiatives. Nutrition is one of the most cost-effective public health approaches, with a \$16 return on every \$1 invested.² Yet, only 0.003 percent of the total U.S. federal budget is allocated to global nutrition efforts within global health programs.

Malnutrition is described by three forms: underweight, overweight or obese, and/or micronutrient deficiency. All three forms may have dire health consequences, including reduced early child cognitive development, stunting and/or wasting, and greater risk for infectious diseases like malaria and noncommunicable diseases (NCDs), such as cardiovascular diseases and type 2 diabetes. Because health plays a vital role in economic progress, human capital, and disease morbidity and mortality, the economic toll of malnutrition costs the global economy an estimated \$3.5 trillion yearly, with overweight- and obesity-related NCDs adding \$2 trillion.^{3,4}

KEY DEFINITIONS & STATISTICS

DEFINITIONS

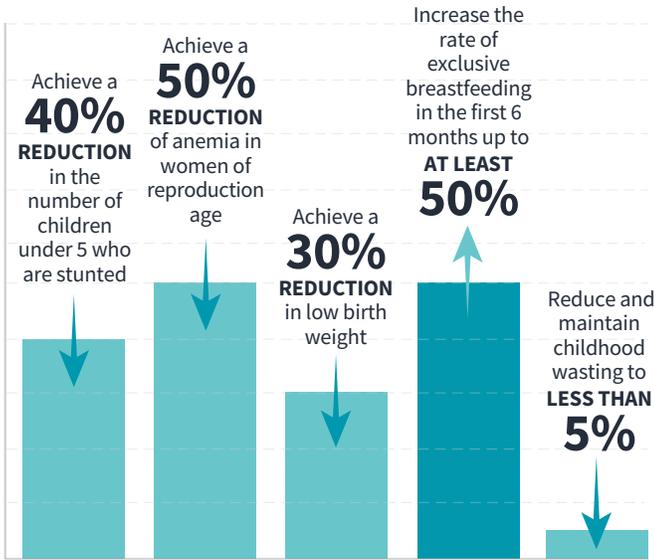
- **Malnutrition:** *poor nutrition, including underweight, overweight or obese, and micronutrient deficiencies*
- **Noncommunicable diseases (NCDs):** *chronic diseases that are mostly not contagious*
- **Stunting:** *low height for age*
- **Wasting:** *low weight for height*
- **Gray matter:** *brain area linked to intelligence*
- **Nutrition-specific:** *initiatives targeting immediate causes of malnutrition such as exclusive breastfeeding and vitamin supplementation*
- **Nutrition-sensitive:** *initiatives targeting underlying causes of malnutrition such as inadequate food access and affordability, water, sanitation, and hygiene, and social protection*

PREVALENCE AND IMPACT

- **3 billion people experience malnutrition**
 - 821 million are undernourished
 - 1.9 billion are overweight or obese
 - 2 billion are micronutrient deficient
- **Children Under Age 5**
 - 150.8 million are stunted (1 in 4)
 - 50.5 million are wasted (7.5 percent)
 - 41 million children are overweight
 - 8.23 million children are affected by both stunting and overweight
 - 20 million newborns are low birth weight
 - Malnutrition contributes to 45 percent of all child deaths
- **More than 71 percent of all stunted children under 5 live in either Africa or Southeast Asia**
- **Anemia among pregnant girls and women is 40.1 percent**
- **9.7 percent of women (aged 20–49) and 5.7 percent of adolescent girls (aged 15–19) are underweight and 15.1 percent are obese**

The U.S. government is the leader in global health funding and programs. Global nutrition investments are channeled primarily through the United States Agency for International Development (USAID) Bureaus for Global Health and Food Security and seven additional federal agencies that implement global nutrition activities. U.S. nutrition-specific appropriated

2025 WHA GLOBAL NUTRITION TARGETS



The U.S. government is only one of many diverse institutions and philanthropic donors working toward global nutrition goals and is the second-highest donor, second to the United Kingdom.⁷ Momentous calls to action have included the World Health Assembly’s six nutrition targets for 2025 and the UN Sustainable Development Goals (SDGs), which recognized the crucial and cross-cutting role nutrition plays across development priorities. Reducing malnutrition is a theme of SDG goal 2 and nutrition is an indicator in 12 of the total 17 SDGs.⁸ Other large-scale initiatives include the Scaling Up Nutrition (SUN) Movement and the World Bank Group’s Human Capital Project.

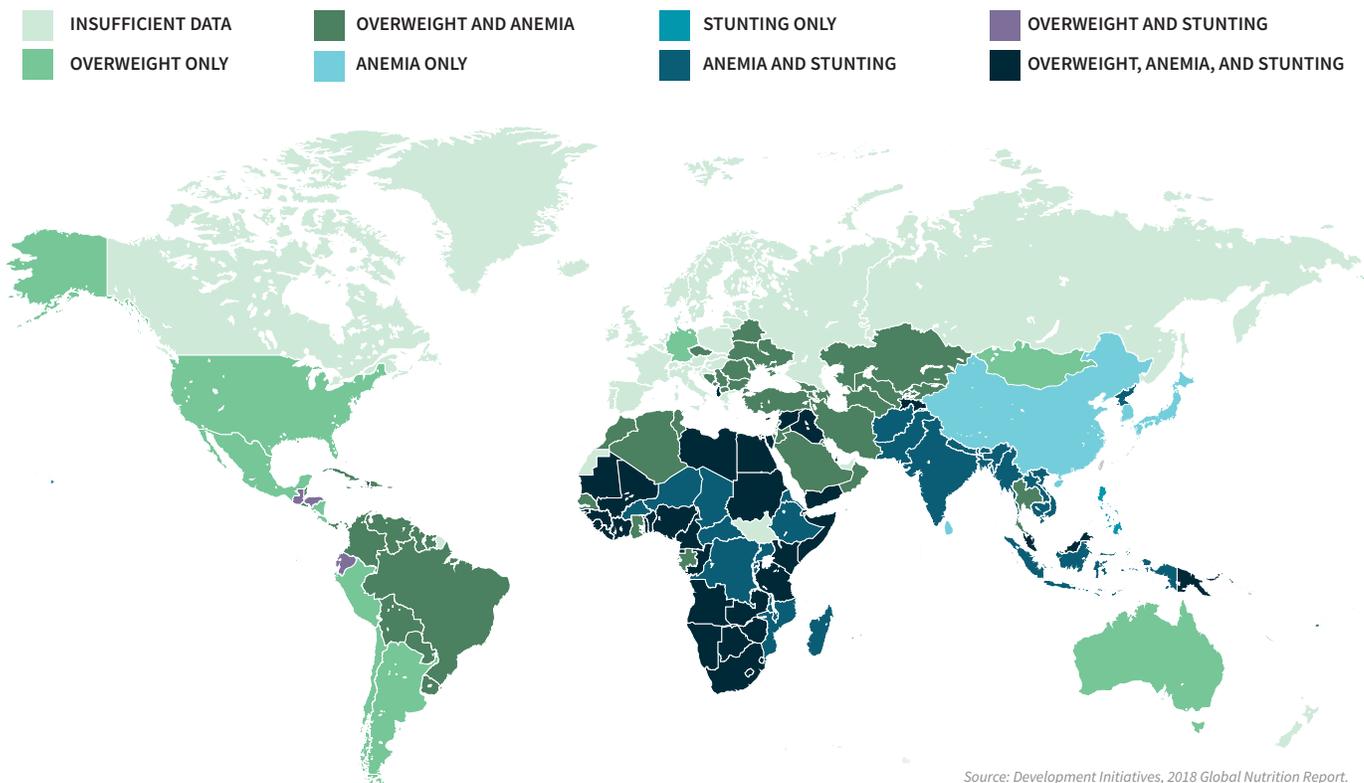
Malnutrition across the Life Cycle

Like poverty, the negative outcomes of poor diets are constant and cyclical, affecting generation after generation. Many believe nutrition is common-sense rather than science: consume nutrient-dense food and limit sugar, sodium, and saturated fat. However, nutritional status is dependent on many factors, such as human

funding within USAID’s global health programs remained stagnant at \$125 million from 2016 to 2018, with a slight bump to \$145 million in 2019, despite both the Obama and Trump administrations’ continuous requested budget cuts ranging from approximately 12 percent (2016) to 37 percent (2019), which Congress rejected.^{5,6}

Triple Burden of Malnutrition

The map shows the overlapping forms of stunting in children younger than 5 $\geq 20\%$; anemia in women of reproductive age $\geq 20\%$; overweight (body mass index ≥ 25) in adult women aged ≥ 18 years $\geq 35\%$, 2017 and 2018



Source: Development Initiatives, 2018 Global Nutrition Report.

biology, food supply and safety, access to and affordability of healthy food, clean water and sanitation, poverty, education, and gender.

Malnutrition is defined as poor nutrition and commonly described as the double-burden: those who weigh too little (undernutrition) and those who weigh too much (overweight or obese). But, a third form of malnutrition occurs—micronutrient deficiency—which can occur alone or in tandem with one of the other two forms. Global estimates vary and are approximate since many who are micronutrient deficient are unaware, causing the status to be described as “hidden hunger.”

Micronutrients are vitamins and minerals required for health. Micronutrient deficiencies are not about the quantity of food but the quality. Although adequate micronutrient intake is most critical during periods of growth, micronutrient deficiencies can have grave consequences throughout the lifespan. Across all ages and countries, common micronutrient deficiencies are caused by low intake of iodine, iron, and vitamin A.⁹

All forms of malnutrition negatively affect health and one form is no less of a scourge than another. Approximately 821 million are undernourished, 1.9 billion are overweight or obese, and 2 billion do not meet the minimum requirements for imperative micronutrients. One in three people experience a minimum of one form of malnutrition, 88 percent of countries have two forms of malnutrition, and 29 percent have all three forms.¹⁰

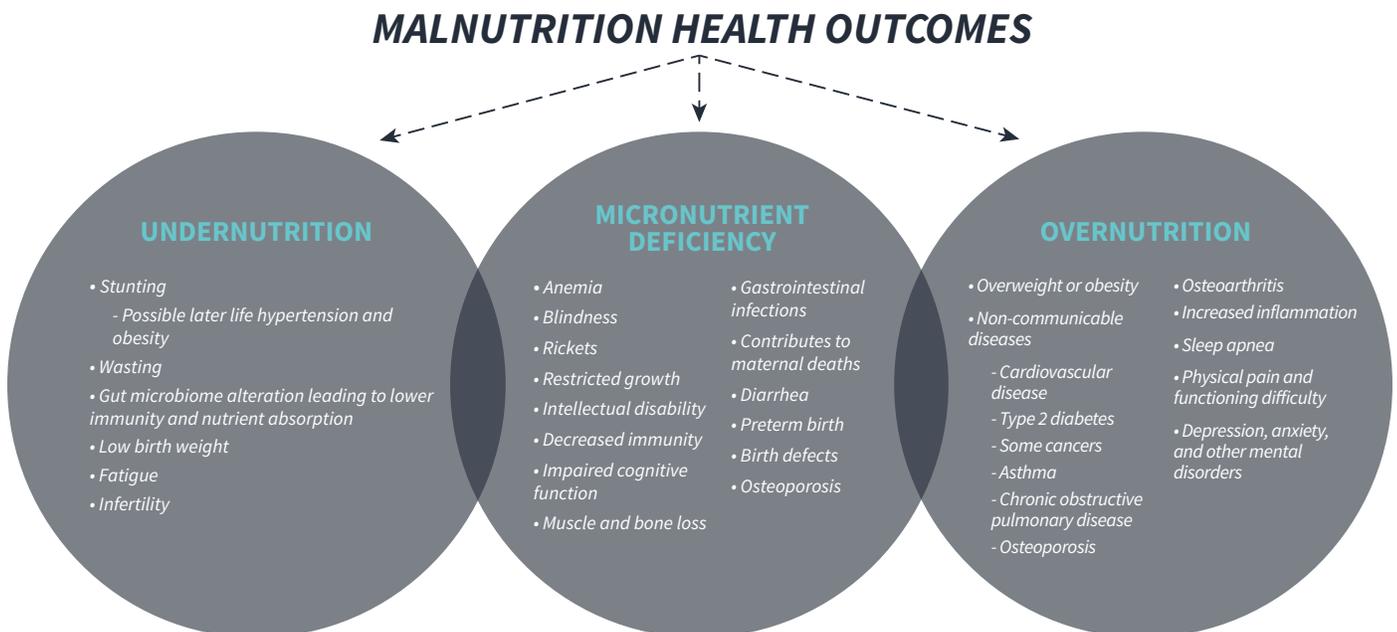
After years of decline, undernourishment has increased since 2015 because of conflicts and food insecurity.

One in nine were undernourished globally during this period.¹¹ Concurrently, overweight and obesity increased at a faster rate, with 39 percent of adults defined as overweight and 13 percent obese.¹² Forty-one million children under 5 were overweight.¹³ Possible outcomes of malnutrition may overlap, and micronutrient deficiencies can stand alone and coexist.

FIRST 1,000 DAYS AND ADOLESCENCE ARE PIVOTAL

Decades of research have identified the first 1,000 days of a child’s life—from conception to 2 years of age—as the window of opportunity for a pathway to health, growth, and brain development. Undernutrition and micronutrient deficiencies during pregnancy result in low gestational weight gain, heightened risk for pregnancy complications and mortality, growth restriction, and increased risk of NCDs later in life.¹⁴ During early life, brain neurons form new connections at a rate of 1,000 and upward per second.¹⁵ Nutritional requirements are high during the first 1,000 days for the mother and child.

Twenty percent of growth failure begins in the womb because of many factors including micronutrient deficiencies of the mother and inadequate water, sanitation, and hygiene (WASH).¹⁶ Stunting (low height for age) occurs within the first five years of life and can continue throughout the lifespan and wasting (low weight for height) may occur at any age. Stunting and wasting can coexist as can stunting and obesity as children age.¹⁷ Almost 25 million children are stunted and overweight or stunted and wasted.¹⁸ Stunting is a primary outcome of early age social inequalities



and often goes unrecognized in low-income and food insecure geographic areas where linear growth is not routinely monitored: in these areas, short height for age has become the norm.¹⁹

Critical nutrients during pregnancy include (but are not limited to) iron, zinc, vitamin A, iodine, folate, vitamin D, and calcium.²⁰ Low iron is the most common micronutrient deficiency among pregnant women because of its use in fetal growth and is a cause of anemia. Anemia increases the risk for preterm delivery, small-for-gestational-age, and neonatal mortality.²¹ Severe anemia during pregnancy or postpartum doubled the risk of maternal death.²²

Many nutrition interventions have focused on the first 1,000 days. Adolescents have largely been neglected in services and research, but they are also a critical population given that, second to childhood, adolescence is a time of rapid growth. Adolescent girls, in particular, are often more vulnerable to malnutrition as females are more likely to be food insecure than males.²³ Each year, approximately 16 million girls 15 to 19 years of age and 2 million girls under age 15 become pregnant, yet many girls in low-income countries enter adolescence stunted, under-

weight, and/or malnourished.^{24,25} Research is expanding to learn the ways in which adolescent pre-conception nutrition may affect the health of future children, but adequate micronutrients during adolescence are imperative not only for the long-term success of the woman but also her children as stunting is linked within generations.²⁶

Types of Nutritional Interventions

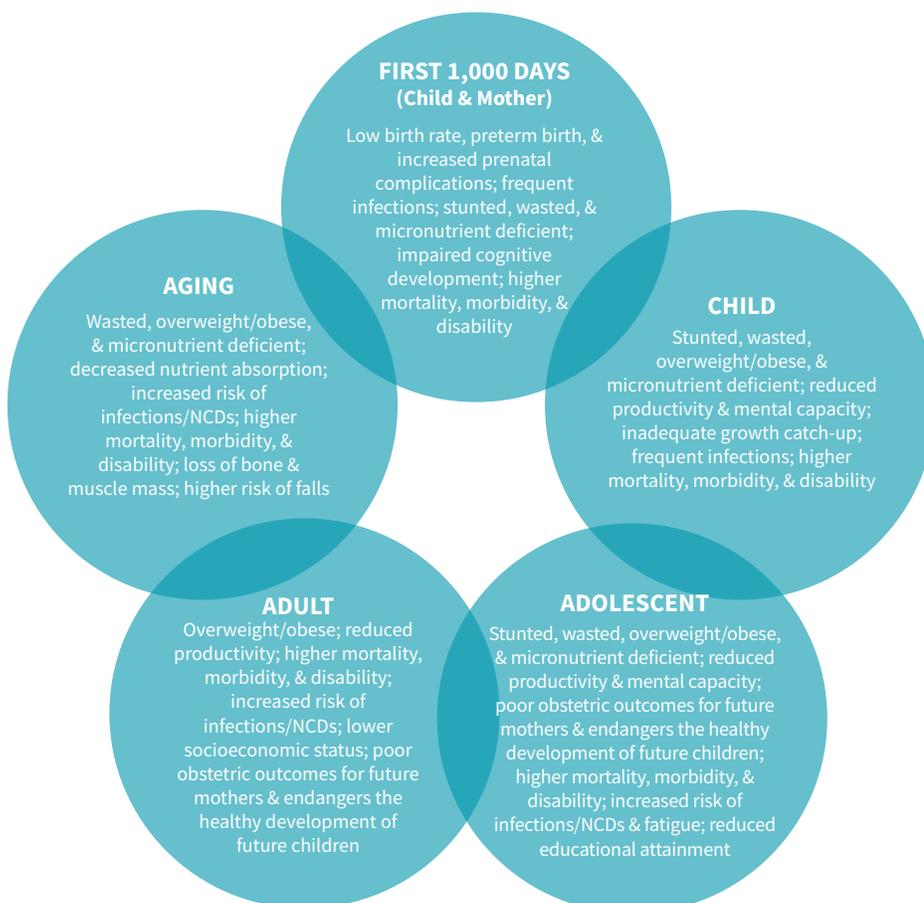
Nutrition interventions and subsequent investments are divided into two categories: nutrition-specific and -sensitive. Nutrition-specific investments address the immediate causes of malnutrition and support interventions such as vitamin supplementation and exclusive breastfeeding. Nutrition-sensitive investments in areas such as fortification and biofortification, food access and affordability, WASH, and social protection address the underlying causes of malnutrition. Most country- and donor-funded interventions focus on iron and vitamin A supplementation for both children and pregnant women and breastfeeding best practices programs.

Breastfeeding, a nutrition-specific intervention, is considered the single most preventative intervention

for child survival and long-term health. Optimal practices include starting within the first hour of life and continuing to 2 years of age. Increasing breastfeeding rates could prevent 820,000 child deaths as well as the development of breast and ovarian cancer, type 2 diabetes, and metabolic syndrome in mothers.^{27,28} Breastfeeding also is considered a child's first immunization against respiratory infections and diarrheal disease.²⁹ In spite of the immense health benefits, only 41 percent of infants (under six months of age) worldwide are exclusively breastfed.³⁰

Biofortification is a nutrition-sensitive intervention that increases the concentration of vitamins and minerals in crops through plant breeding, agronomic practices, or biotechnology. The biofortification of vitamin A

Possible Effects of Malnutrition across the Life Cycle



in the orange sweet potato has reduced the prevalence and duration of diarrhea in children younger than 5 and increased vitamin A stores across age groups.^{31,32}

Nutrition in Global Health, Economies, and Human Security

Investments in health, such as in preventing and mitigating infectious and chronic diseases, have the capacity to transform nations by increasing human capital and security, decreasing mortality, and lowering the costs associated with ill health. Optimal nutrition is difficult to obtain and sustain because of the multidimensional inter-relationships among diet, disease, and the food system.

NUTRITION IS FOUNDATIONAL TO LIFELONG SOUND HEALTH

Nutrition has the power to prevent disease, increase lifespan and quality of life, aid disease therapies to work optimally, and promote overall health. However, malnutrition and disease are intertwined in a vicious cycle. Undernutrition and micronutrient deficiencies contribute to both the risk and severity of infectious diseases and hinder treatment responses. Conversely, malnutrition can result from disease progression not only because of the damaging health effects but also because of the socio-economic impacts of disease on livelihoods. Infections, which are frequent within the first two years of life, avert key nutrients for growth. A common outcome of infectious diseases is diarrhea, which may increase the risk of stunting and occurs approximately five times yearly in children ages 6 to 11 months.^{33,34} Diarrheal disease is the second leading cause of death in children younger than 5.³⁵

“A stunted child is going to be an overweight adolescent and is going to be an adult with diabetes and hypertension.”

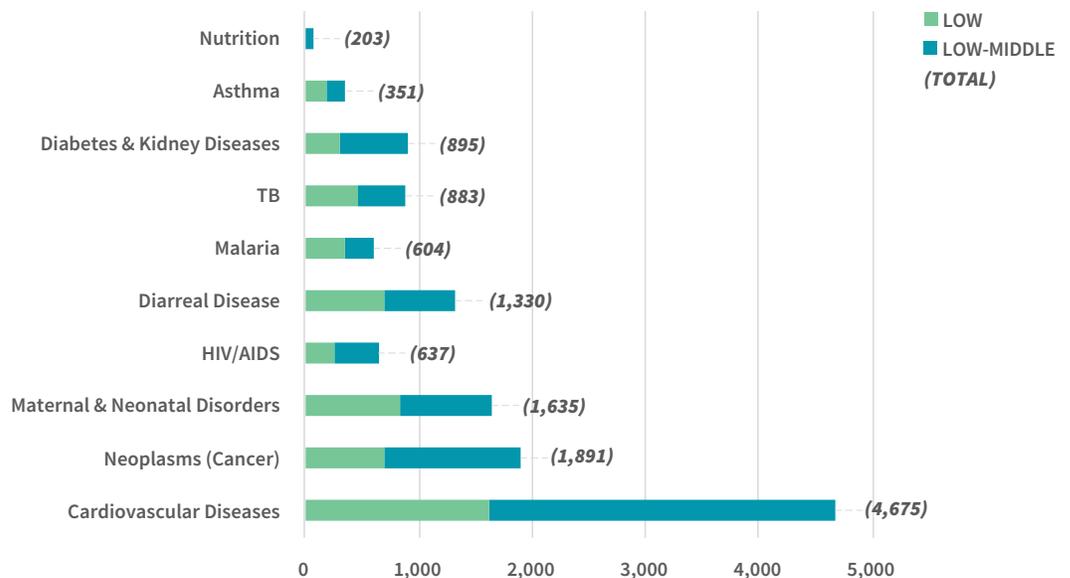
Francesco Branca, Director of Nutrition for Health and Development, World Health Organization, 2018

Nutrition is foundational to the success of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), which has invested more than \$80 billion over the past 15 years and provides life-sustaining treatment for more than 14.6 million persons living with HIV.³⁶ Adequate nutrition promotes adherence to HIV medication where side effects can be exacerbated by low food intake.³⁷ Nutrition is also fundamental to the success of the President’s Malaria Initiative in that adequate nutrition lowers the morbidity and mortality of malaria.³⁸

NCDs are often chronic and most are not contagious; the leading five are cardiovascular disease, chronic respiratory disease, cancers, diabetes, and mental illness. Overweight and obesity are now the primary risk factors of NCDs, outpacing unsafe sex and alcohol, drug, and tobacco use combined.³⁹ The World Health Organization (WHO) included NCDs in its *2019 10 Threats to Global Health*.⁴⁰

All countries are experiencing infectious diseases and NCDs simultaneously. Although acute macro- and

Cause of Death in Low- and Low-Middle Sociodemographic Index Countries, 2017
(in thousands)



Source: Institute for Health Metrics and Evaluation (IHME) Global Burden of Disease Results Tool

m micronutrient deficiencies and/or undernutrition can cause death, malnutrition is the leading risk factor of NCDs; it increases the risk and progression of infectious diseases and is a critical factor in healthy pregnancies for both mother and child. The three leading causes of death in low- and low-middle-income countries—cardiovascular diseases, neoplasms (cancers), and maternal and neonatal disorders—caused 8.2 million deaths in 2017. Malaria, HIV/AIDS, and tuberculosis (TB) caused 2.1 million deaths and diarrheal diseases and nutrition caused an additional 1.5 million.

STUNTED CHILDREN ARE A HUGE DRAG ON ECONOMIES

The economic consequences of ill health affect all aspects of life, and the current global food and health systems will not be able to sustainably support the projected human population of 9.7 billion by 2050. From 2017 to 2050, half of the world's population growth will be concentrated in just nine countries: India, Nigeria, Democratic Republic of the Congo, Pakistan, Ethiopia, the United Republic of Tanzania, the United States, Uganda, and Indonesia (ordered by their expected contribution to total growth).⁴¹ Low-income countries continue to experience high fertility coupled with success in lowering infant mortality rates, creating a “youth bulge”—a demographic trend where the percent of the population aged 15–24 increases significantly more than other age groups. Approximately 50 percent of Africa's population is under age 18.⁴²

“When malnutrition strikes children in the first 5 years of their lives, it permanently stunts their bodies, their minds, and their potential to fully contribute to their country's economy.”

Jim Yong Kim, Former President, World Bank Group, August 2014

More than 71 percent of all stunted children under 5 live in either Africa (38 percent) or Southeast Asia (33 percent).⁴³ The economic development of entire countries is impeded because of the severe lifelong impact stunting has on brain development. As the global workforce transitions to less physical labor and more science and technology employment (i.e., gray matter infrastructure), a country's path to future prosperity is dependent on the education and health of its workforce. Stunted children

“I've heard more mothers tell me, ‘Mr. Beasley, my husband didn't want to join Al Qaeda, but we didn't have any food for our little girl, what were we to do?’ When the United States steps up and provides (food) relief, the WFP is the first line of offense and defense to Boko Haram, Al-Shabab, Al-Qaeda, ISIS, and I could go on, from country to country.”

David Beasley, Executive Director, World Food Programme, December 2018

experience reduced productivity because of fewer years of schooling and less learning per year in school.⁴⁴ A 1 percent loss in adult height because of childhood stunting is associated with a 1.4 percent loss in economic productivity.⁴⁵ Undernutrition can cost countries up to 11 percent in lost gross domestic product.⁴⁶

The cumulative output loss from the five major NCDs in the two decades since 2011 is projected to reach \$47 trillion.⁴⁷ NCDs are responsible for 60 percent of global deaths and 80 percent of the 15 million premature deaths (30 to 60 years) that occur in low- and middle-income countries.⁴⁸ The burden of NCDs is soaring across income levels because of the growing overweight and obesity rates and the association among nutrition-related NCDs and in-utero, infant, and young child undernutrition.⁴⁹ Nigeria, the United Republic of Tanzania, the Democratic Republic of the Congo, Niger, Uganda, Ethiopia, Kenya, Ghana, Madagascar, Mali, Mozambique, and Malawi are projected to double their rates of type 2 diabetes from 2011 to 2030.⁵⁰

NUTRITION REMAINS A KEY FACTOR IN CONFLICT AND POLITICAL INSTABILITY

Nutrition as a primary factor of food security should not be ignored. Undernourishment and acute food insecurity are causes and consequences of conflict that affect human security. The National Intelligence Council reported that the risk of food insecurity in many countries of strategic importance to the United States will increase from 2015 to 2025.⁵¹ Sixty percent of undernourished and 79 percent of stunted children under 5 live in countries affected by conflict.⁵²

ACTIVE NUTRITION ORGANIZATIONS

INTERGOVERNMENTAL ORGANIZATIONS

United Nations (Food and Agriculture Organization, UNICEF, United Nations Development Programme, Standing Committee on Nutrition, World Food Programme, World Health Organization), World Bank Group, Pan American Health Organization, African Development Bank, European Union

NONGOVERNMENTAL ORGANIZATIONS

1,000 Days, Action Against Hunger, Bread for the World, Catholic Relief Services, CARE, EAT, FHI360,

Food Fortification Initiative, Heifer International, Helen Keller International, International Food Policy Research Institute, Global Alliance for Improved Nutrition, Micronutrient Forum, Nutrition International, PATH, Population Services International, Results for Development, Save the Children, Scaling Up Nutrition, World Vision International

DONORS

Bill & Melinda Gates Foundation, Children's Investment Fund Foundation, Eleanor Crook Foundation, Sight and Life Foundation, Wellcome Trust

Acute food insecurity is classified into five categories; famine, the end state, is described as catastrophic. Famine is defined when one in five households (20 percent) experience extreme food insecurity resulting in two deaths per 10,000 adults and four deaths per 10,000 children.⁵³

Conflicts destroy agricultural infrastructure and health-care resources, which increases infectious diseases, food insecurity, inadequate sanitation, violence, and ultimately refugees and migration.⁵⁴ A 2015 global estimate of international migrants put the number at 244 million, which is 40 percent more than in 2000.^{55,56} Food insecure countries with armed conflict have the highest outward migration of refugees.⁵⁷ The Venezuelan economic crisis has resulted in tremendous food insecurity: a 2017 survey showed that 64 percent of Venezuelans reported losing an average of 24 pounds and 90 percent of migrants to Colombia named lack of food as a reason for migrating.^{58,59} The health of adolescent women and children is at particular risk from conflict-induced migration, since unsafe journeys reduce access to nutrition and health services and pose opportunities for human trafficking.⁶⁰

The Nutrition Global Landscape

Nutrition did not gain global momentum as a health priority until 2008, when spiking food prices caused the UN Secretary-General to establish the High-Level Task Force on Food and Nutrition Security. During the same year, the first *Lancet* series on “Maternal and Child Un-

dernutrition” provided the world with the evidence and consensus necessary to implement nutrition interventions. Then in 2012, the World Health Assembly (WHA) endorsed a set of six global nutrition targets for 2025. A movement started across governments, multilateral organizations, nongovernmental organizations (NGOs), donors, advocacy organizations, and academia.

The nutrition efforts and activities throughout the past decade cultivated global awareness and political leaders paid attention. The development of the Scaling Up Nutrition Framework was a collaborative and pivotal

LEADERSHIP EXAMPLE

AFRICAN LEADERS FOR NUTRITION (ALN) INITIATIVE

A platform for high-level political engagement to advance nutrition in Africa as part of eight flagship programs launched under the African Development Bank.

The Assembly of Heads of State and governments of the African Union endorsed ALN in January 2018.

“ALN Champions” comprise the initiative and include current and former heads of state, finance ministers, and eminent leaders with the power to catalyze and sustain high-level political leadership and commitment.

Focused on the first 1,000 days, the goal is to influence and generate innovative investments in nutrition and food security that will build a foundation for productive human capital in Africa.

GLOBAL NUTRITION TIMELINE

- 1974** *First World Food Conference*
- 1980s** *Hunger organizations respond to famines*
- 1992** *First UN International Conference on Nutrition*
- 2000** *UN Millennium Development Goals*
- 2002** *The Global Fund to Fight AIDS, TB, and Malaria*
- 2003** *U.S. President's Emergency Plan for AIDS Relief (PEPFAR)*
- 2004** *Millennium Challenge Corporation*
- 2005** *President's Malaria Initiative*
- 2008** *UN High-Level Task Force on Food and Nutrition Security, The Lancet Series on "Maternal and Child Undernutrition," and Copenhagen Consensus II*
- 2009** *U.S. Global Health Initiative, World Summit on Food Security, and G8 Summit at L'Aquila*
- 2010** *Scaling Up Nutrition Movement and USAID Feed the Future Initiative*
- 2012** *G8 Summit at Camp David, Copenhagen Consensus III, Zero Hunger Challenge, and World Health Assembly nutrition targets*
- 2013** *First Nutrition for Growth summit and The Lancet Series on "Maternal and Child Nutrition"*
- 2014** *First Global Nutrition Report, second International Conference on Nutrition, and USAID Multi-Sectoral Nutrition Strategy 2014–25*
- 2015** *UN Sustainable Development Goals*
- 2016** *UN Decade of Nutrition, U.S. Government Global Nutrition Coordination Plan 2016–2021, U.S. Global Food Security Act of 2016, U.S. National Nutrition Research Roadmap 2016–2021*
- 2017** *Second Nutrition for Growth summit*
- 2018** *U.S. Global Food Security Act reauthorization, World Bank Human Capital Project, and proposed USAID reorganization*

movement for global political will. Launched in 2010 at the World Bank Group and endorsed by more than 100 institutions, the Framework provided key principles and priorities for action to address undernutrition and rally investments. The SUN Movement has evolved into a voluntary effort of 60 member countries supported by a secretariat and five networks that bring together governments, donors, UN agencies, civil society, and the private sector.

A unique advantage of the SUN Movement is country leadership and country-level commitment to a multi-sectoral and multi-stakeholder approach. The pathway to self-reliance is marked by political commitments and

actions at the country level and countries are stepping up. The past decade showed that low- and low-middle-income countries are prioritizing nutrition through new policies, programs, and domestic spending. Even though more investment and leadership are required, 25 countries reported nutrition spending increases of 33.3 percent in nutrition initiatives.⁶¹ Country governments finance approximately 1 percent of their annual health budgets on nutrition-specific programs.⁶²

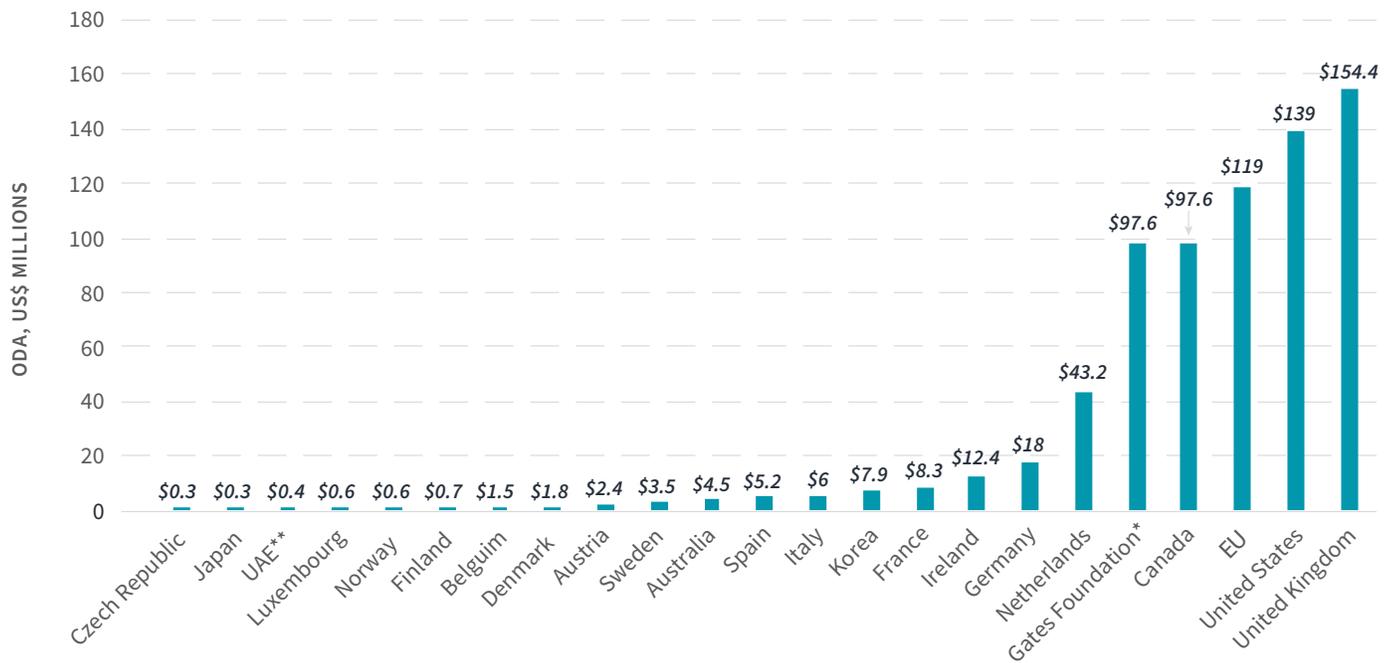
GLOBAL NUTRITION FINANCING

The momentum nutrition experienced globally also aided in financing. In 2009, the G8 Summit in L'Aquila, Italy launched the L'Aquila Food Security Initiative.⁶³ Former president Barack Obama announced the U.S. investment of \$3.5 billion over three years in global food security, which was the launch of USAID's Feed the Future initiative. This initial U.S. commitment encouraged other G8 governments and donors to promote food security and nutrition worldwide. Global leaders agreed to prioritize investment in agriculture to improve food security. Donors committed to an initial \$22.24 billion pledge.

The first Nutrition for Growth summit (N4G) in 2013 gathered heads of state of undernutrition-burdened countries, donor countries, philanthropic leaders, and industry executives. Donor countries and philanthropic organizations pledged \$4.15 billion towards nutrition-specific interventions and more than \$19.6 billion to nutrition-sensitive sectors through 2020.⁶⁴ The 2018 *Global Nutrition Report* tracked progress towards the N4G commitments, and although donors reached the \$19.6 billion nutrition-sensitive pledge, nutrition-specific spending is low.⁶⁵ The United States committed \$1.096 billion for nutrition-specific and \$8.919 billion for nutrition-sensitive activities between 2012 and 2014.

An additional estimated \$70 billion over 10 years is needed to continue progress and achieve just four of the WHA targets—reduce stunting by 40 percent, wasting to less than 5 percent, anemia among women of reproductive age by 50 percent, and increase the rate of breastfeeding in the first six months to at least 50 percent.⁶⁶ This increased investment would prevent at least 3.7 million child deaths, 265 million cases of anemia in women, and 65 million cases of stunting while 91 million children under 5 affected by acute wasting would receive treatment by 2025 compared to the 2015 baseline.⁶⁷ The total economic benefit in low- and middle-income countries over 10 years for women and children by goal would be: \$417 billion for stunting,

Basic Nutrition Official Development Assistance Disbursements by Donor, 2016



Source: Development Initiatives, 2018 Global Nutrition Report, based on OECD DAC Creditor Reporting System (CRS).

\$295 billion for breastfeeding, \$110 billion for anemia, and \$25 billion for wasting.⁶⁸

U.S. Leadership in Global Nutrition

The U.S. government, primarily through USAID, has included nutrition as a component of global health and food security since 1965.⁶⁹ Nutrition support occurs mainly through three USAID arms: the nutrition-specific subaccount and related health priorities funded through the Bureau for Global Health; democracy,

conflict, and humanitarian assistance through the Office of Food for Peace; and most recently, food security through the Feed the Future initiative. An additional seven U.S. agencies and departments work in global nutrition outside of USAID.⁷⁰

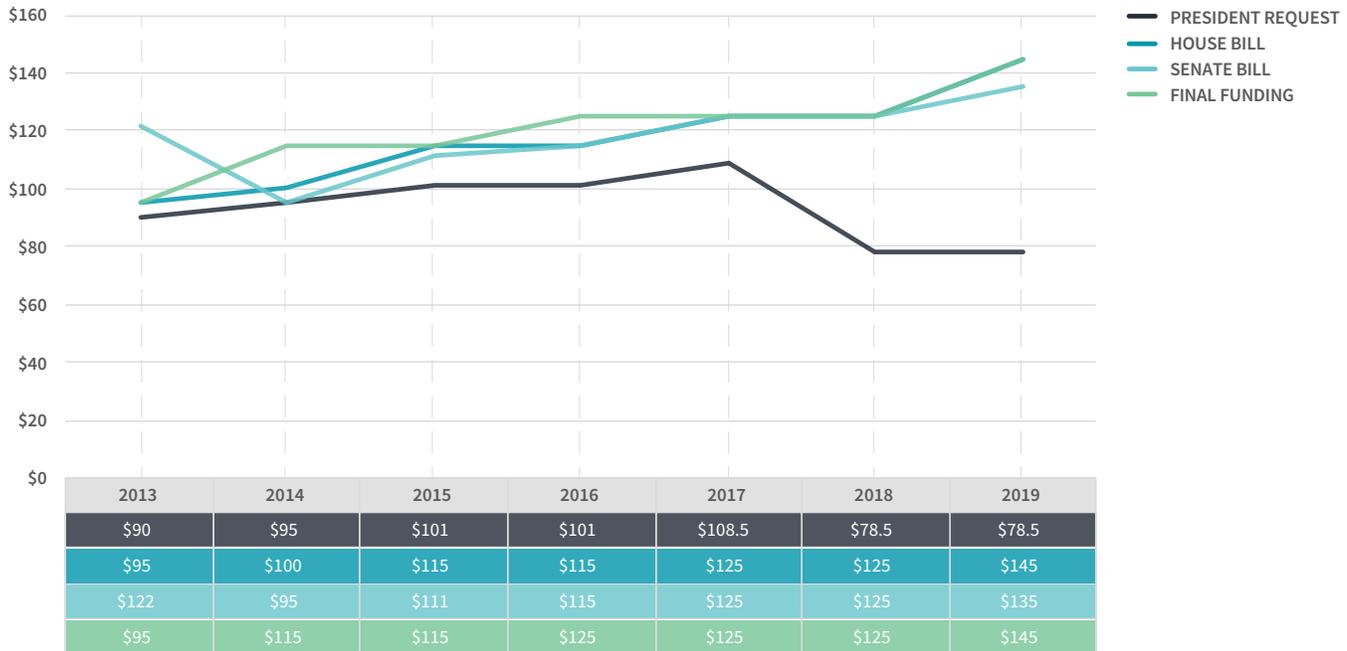
The U.S. government declared a “war on hunger” in 1966 and in 1969 introduced the concept of food fortification, specifications for low-cost food supplements, and supplements.⁷¹ The 1970s and ’80s brought awareness of the food security effects of nutrition with the Consumption Effects of Agricultural Policies program (which was implemented for more than 15 years); the need for research funding targeting nutritional deficiencies that resulted in an evidence base for the imperative role nutrition plays in growth, cognitive development, and school and work performance; and international awareness of breastfeeding with the Child Survival Revolution.⁷² After 30 years of nutrition research and program implementation, USAID developed the operational framework for the management and delivery of an integrated package of preventative nutrition interventions in the *Essential Nutrition Actions*. Food for Peace reframed its strategy by focusing on preventing malnutrition rather than treatment in 1995, and the 2000s brought nutrition integration to HIV/AIDS prevention and treatment.⁷³

Identifying the dire need for cross-collaboration within USAID nutrition efforts, USAID developed the *Multi-Sec-*

U.S. GOVERNMENT AGENCIES AND DEPARTMENTS THAT ENGAGE IN OR IMPLEMENT GLOBAL NUTRITION ACTIVITIES

1. Agency for International Development
2. Department of Agriculture
3. Department of Health and Human Services
4. Department of State
5. Department of the Treasury
6. Millennium Challenge Corporation
7. Peace Corps
8. White House Office of Science and Technology Policy

USAID Global Health Programs Nutrition-Specific Subaccount Funding, 2013-2019 (in millions)



Source: USAID Congressional Budget Justifications; House and Senate Department of State, Foreign Operations, and Related Programs Congressional Reports; and www.foreignassistance.gov

toral Nutrition Strategy 2014–2025 and subsequently the Strategy’s Monitoring and Learning Plan in 2018.^{74,75} The Strategy addresses both nutrition-specific and -sensitive interventions to improve nutrition globally and contribute to the WHA 2025 nutrition targets, with a goal of reducing chronic malnutrition, measured by stunting, by 20 percent in areas where USAID works. In response to acute undernutrition during humanitarian crises, USAID aims to mitigate wasting with the goal of maintaining Global Acute Malnutrition (GAM) below the emergency threshold of 15 percent.

Further institutionalizing collaboration across agencies and departments, an interagency working group led the development of the *U.S. Government Global Nutrition Coordination Plan*, launched in 2016.⁷⁶ In an era of fiscal responsibility, the *Plan* recognized the opportunity to better communicate, collaborate, and implement research in practice. The primary goal was an interagency effort to emphasize the role of nutrition across initiatives to improve outcomes and fiscal oversight.

The *Plan* used three approaches to improve coordination: 1) support country-led nutrition efforts; 2) promote leadership and partnership at the global level; and 3) generate, share, and apply knowledge and evidence in a systematic fashion. Eight opportunities for collaboration were identified: food fortification, nutrition information systems, food safety, the first 1,000 days, nutrition-related NCDs,

infectious diseases and nutrition, global food security strategy, and implementation science.

The U.S. Department of Agriculture’s Interagency Committee on Human Nutrition Research (ICHNR) also should be noted because of the essential role continued research plays in improving nutrition. This interagency committee focuses on improving planning, coordination, and communication among federal agencies engaged in nutrition research. Comprised of members from 11 federal agencies, the Committee published the *National Nutrition Research Roadmap 2016–2021: Advancing Nutrition Research to Improve and Sustain Health* to identify nutrition research gaps.

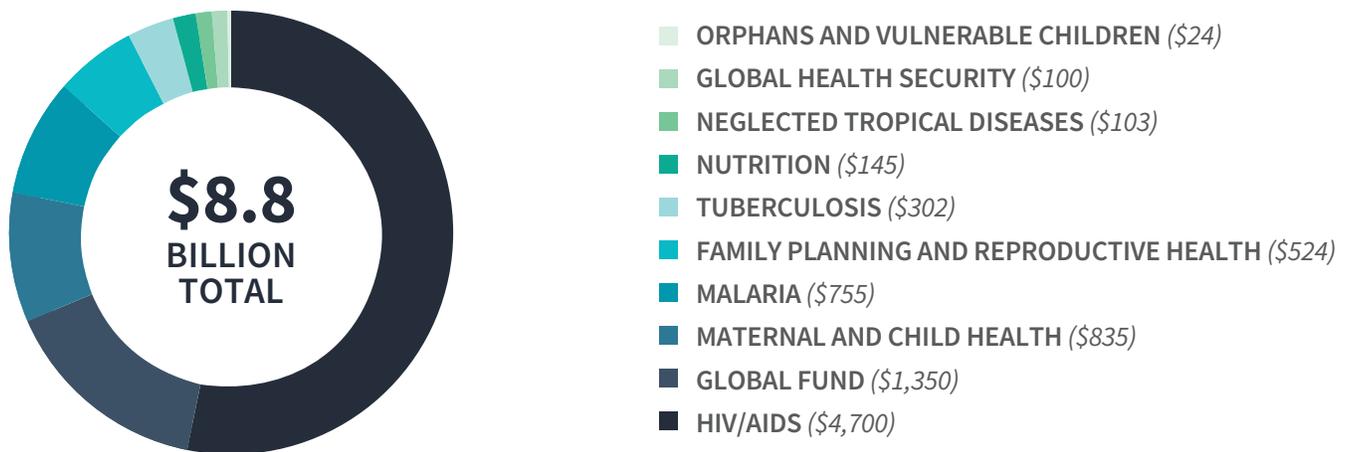
UNDERSTANDING U.S. GLOBAL NUTRITION FUNDING

The U.S. government is the second-highest global donor of nutrition investments.⁷⁷ U.S. nutrition-specific funding consistently remained at approximately 1 percent of the annual USAID global health programs appropriation, or approximately 0.003 percent of the total federal budget; the appropriation proportion increased to 1.6 percent in 2019. Presidential requests have been lower than the House and Senate bills and final funding since 2013.

Global Health is the only USAID bureau with a publicly reported subaccount dedicated to nutrition-specific funding under the global health programs account. How-

U.S. Global Health Programs Funding FY2019 (State Department and USAID)

(in millions)



Source: Henry J. Kaiser Family Foundation

ever, that subaccount is fairly new: prior to 2009 nutrition funding was subsumed in the maternal and child health subaccount.⁷⁸ Additional nutrition funding is determined at the agency level across numerous appropriations and may be provided from the Economic Support Fund, Development Assistance, and Food for Peace.

Nutrition-Specific Funding within Global Health Programs

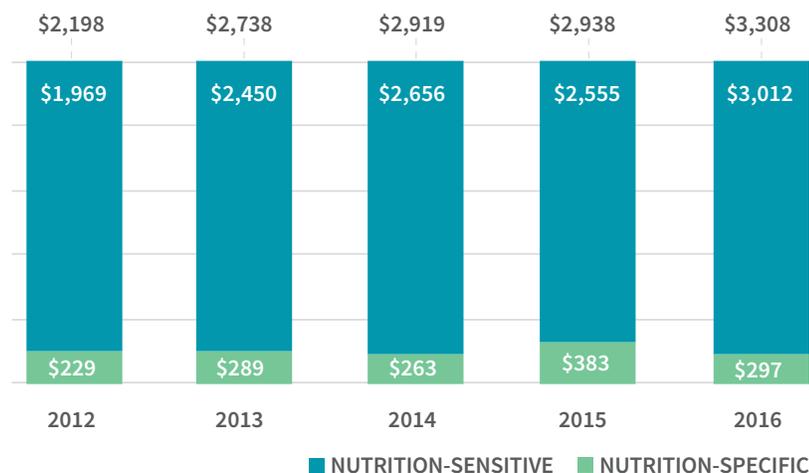
Optimal nutrition is an integral component of health across the lifespan and specific disease states. Therefore, nutrition is foundational to the success of many U.S. global health investments, including initiatives

focused on HIV/AIDS, malaria, TB, maternal and child health, and family planning and reproductive health.

Although the global health programs budget has a nutrition-specific subaccount, many subaccounts fund nutrition programming that may not be captured as nutrition spending. For example, the 2016 PEPFAR budget was \$6.8 billion, with \$8.2 million allocated to food and nutrition—equaling 0.0012 percent of the PEPFAR budget.^{79,80} Additional nutrition-related programming within the global health programs account includes capacity building of healthcare services and the promotion of zinc and oral rehydration salts for the treatment of childhood diarrhea. From 2014 to 2018, the Maternal and Child Survival Program reported nutrition allocations of 5 percent of its \$560 million budget.⁸¹

U.S. Global Nutrition Funding (Specific and Sensitive across Budgets), 2012-2016

(in thousands)



Source: Development Initiatives, 2018 Global Nutrition Report.

Nutrition-Specific and -Sensitive Funding across the U.S. Government

The United States does not systematically capture or publicly report nutrition-sensitive investments, which adds to the nutrition budget complexities. Therefore, funding that affects the underlying causes of nutritional status, like biofortification or WASH interventions, is difficult to approximate. Currently, USAID funds nutrition programs in 27 countries across its bureaus. The *Global Nutrition Report* collects investment data on both nutrition-specific and -sensitive funding provided by donors yearly. However, this reporting may include

funds from the McGovern-Dole International Food for Education and Child Nutrition Program, which primarily provides school feeding assistance. For example, when disaggregated by sector, the U.S. 2015-16 average disbursements that targeted the WHA 2025 goals was \$184 million.⁸²

The Outcomes of U.S.-Funded Interventions

Measuring the impact of U.S. government nutrition investments is challenging because of the multitude of variables in play and the lack of coordination and integration across nutrition-related programs. USAID primarily tracks nutrition-related program outputs as illustrated by the example of Ethiopia below. From 2014 to 2017, Ethiopia received the most U.S. investment towards nutrition-specific activities within the global health programs subaccount, totaling \$42.5 million across four years. Ethiopia is a country plagued by malnutrition with children under age 5 afflicted by stunting (38 percent), underweight (23 percent), and wasting (10 percent).⁸³ Anemia affected 57 percent of infants and children (from 6 to 59 months) and 24 percent of women.⁸⁴

While the metrics captured across USAID are not mid-to-long-term outcomes, the data do provide evidence of the reach of the program. USAID communicates aggregated outcome summaries in yearly reporting. A snapshot of reported nutrition outcomes from USAID includes the following:

- USAID integrated programs reached 22.6 million children with nutrition interventions in 2017.⁸⁵
- In areas where Feed the Future operated:⁸⁶
 - A projected 3.4 million children are living without stunting and 5.2 million more families are not hungry.

- There was an estimated 32 percent reduction in child stunting.

However, long-term outcomes are limited and the public data currently available is not systematic. Most notably, indicators are not the same for each country and are not reported consistently through time. One reason for this may be that USAID does not require missions to report results for every disbursement.⁸⁷ USAID has made efforts to tighten reporting requirements by including defined criteria described in reference guidelines. These guidelines, developed alongside field staff, include new indicators and are disseminated at country and regional meetings and through other communication modes. Outcome data can be found on the USAID Dollars to Results website, in country profiles, and in Feed the Future country summaries.

Improving U.S. Global Nutrition Impact

The U.S. government can expand its leadership role by addressing significant gaps and challenges. These gaps include funding to expand multisectoral implementation, research, and operations. Increasing funding within the global health programs nutrition subaccount from \$145 million to \$290 million would help fill these gaps allowing programs to utilize a systems-based approach.

The populations and interventions that would provide the most cost benefit are adolescent girls and young women, pregnant women, and children during their first

ETHIOPIA NUTRITION OUTPUTS

INDICATOR	2014	2015	2016	2017
Children <5 received vitamin A supplements	5,066,236	7,679,867	7,560,461	--
Children <5 reached by nutrition programs	6,575,677	6,898,356	--	--
Children <5 reached by nutrition-specific interventions	--	--	6,087,397	148,690
Children <2 reached with community-level nutrition interventions	--	--	--	8,190
Individuals received nutrition-related professional training	--	--	--	5,655
People trained in child health and nutrition	20,975	128,783	94,062	--
Pregnant women reached by nutrition-specific interventions	--	--	--	3,042

*Dash indicates data not available

1,000 days of life, with interventions focusing on the global reduction targets of lowering stunting by 40 percent, wasting to less than 5 percent, and anemia among women of reproductive age by 50 percent.

The first two years of additional funding would serve as a start-up and pilot phase, which could target a purposeful sample of geographic locations that are priorities for U.S. Global Health, Feed the Future, and Food for Peace funding. An analysis of countries should be conducted to identify current nutrition-specific and -sensitive programming where coordinated efforts are possible across HIV/AIDS, maternal and child health, family planning, malaria, food security, WASH, humanitarian, education, gender equality, and social protection initiatives. An overarching evidence-based plan for the additional funding should be developed that includes a detailed implementation strategy for each pilot location, measures and indicators that are suitable for the intervention, and a monitoring and evaluation strategy linked to other global health and development goals. Ideal pilot characteristics include the capacity to execute the similar interventions and evaluation protocol so comparisons can be made across locations and coordinated programs. This information will be critical to make improvements learned from the pilot and for future funding requests necessary to scale up successful interventions.

ILLUSTRATIVE ALLOCATIONS AND POSSIBLE IMPACT OF \$145 MILLION

Implementation: At least 80 percent of the budget increase (\$116 million) is suggested for the USAID pilot of new interventions targeting the 1,000 days period and adolescent girls, the populations that provide the most cost benefit. The funding could reach an estimated additional 25.8 million children, increase the likelihood of undernutrition-related child survival by more than 396,000 children, and potentially reduce anemia by 25 percent among 10- to 24-year-old adolescent girls and young women through iron and folic acid supplementation and increase nutrition education and counseling to at least 75 percent of this population.^{88,89}

Research: A suggested 10 percent of additional funds (\$14.5 million) would support monitoring and evaluation of the pilot and implementation science of the new interventions. Data is needed at the U.S. federal government and local community levels to improve coordination, cost-effectiveness, and health outcomes across nutrition-related programs. Because of the gaps in nutrition and implementation research, this data

would be a public good and therefore should be shared in a systematic and timely fashion.

Operations: Approximately 10 percent of the additional funds (\$14.5 million) should support USAID headquarters and country mission staff to fully execute the USAID *Multi-Sectoral Nutrition Strategy 2014–2025*, the *Strategy's Monitoring and Learning Plan*, and the *U.S. Government Global Nutrition Coordination Plan 2016–2021*. Without leadership and funding, these plans will not successfully move forward with proposed goals or reporting. This funding also would support the planning, identification of new strategies, and start-up phase of the pilot and the public dissemination of outcomes and reporting.

By allocating an additional \$145 million to the global health programs nutrition subaccount, USAID would have the resources to pilot and evaluate a new multisectoral approach. The pilot has the potential to provide an evidence base to U.S. policymakers and bilateral institutions on the cost-effectiveness of multisectoral nutrition programs; provide data to assist in the identification of the best approach to scale up services that work and better understand interventions that are not successful; and identify new pathways to integrate nutrition across U.S. government initiatives while not diluting nutrition as a priority.

Acknowledgments

This primer draws on stakeholder meetings, a literature review, and independent analysis of available data. Many thanks to those who participated in stakeholder meetings: Porter Delaney (Kyle House Group), Andi Fristedt and Osaremen Fortune Okolo (Senate Committee on Health, Education, Labor and Pensions), Kedar Mankad (Bill & Melinda Gates Foundation), Charlotte Oldham-Moore (Senate Foreign Relations Committee), Mary Olive (CARE), and Mike Wakefield (Senator Susan Collins [R-ME]).

Gratitude is also expressed to those who participated in external reviewers and stakeholder meetings for the primer and/or accompanying fact sheet: Cindy Buhl (Representative James P. McGovern [D-MA 3rd]); Anne Knapke (Bill & Melinda Gates Foundation); Asma Lateef and Tanuja Rastogi (Bread for the World); William Moore (Eleanor Crook Foundation); Anne Peniston, Sally Abbott, Elizabeth Bontrager, Elizabeth L. Brown, Katherine Consavage, Elaine Gray, and Melanie Vant (USAID); Mannik Sakayan (1,000 Days); and Peg Willingham (HarvestPlus). Lastly, a sincere thank you to the Henry J. Kaiser Family Foundation team who provided guidance on the U.S. government nutrition budget: Jennifer Kates, Stephani Oum, and Adam Wexler.

This primer would not have been possible without the support and thoughtful reviews of CSIS colleagues including Sara M. Allinder, Kimberly Flowers, Gillian Locke, and J. Stephen Morrison. In addition, Eilish Zembilci provided excellent data collection. Lastly, Michaela Simoneau played an integral role throughout the development of this work.

This primer was made possible by the generous support of the Bill & Melinda Gates Foundation.

ENDNOTES

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