

The **lower** the incidence of
sick and **hungry** children,
the **higher** the **IQ** of an
ENTIRE COUNTRY.



**12 Essential Services
proven to
eradicate hunger,
improve health,
and raise cognition.**

Executive Summary

The power of volunteers changes everything.

When children are provided sufficient food and nutrition and protected from infectious disease, their brains can fully develop. If those children are educated, they can realize their full potential and make significant contributions to society.¹ Global Volunteers mobilizes and engages short-term volunteers to help developing communities deliver all the essential services every child needs to realize the fullness of their potential.

United Nations agencies have been cooperating for many years in an effort to address the fundamental issues that prevent children from developing fully. Global Volunteers extracted the 12 Essential Services model from the innovative work of the World Food Program (WFP), United Nations Children's Fund (UNICEF), World Health Organization (WHO) and the Food and Agriculture Organization (FAO).²

We have organized these essential services³ into three broad categories: Hunger, Health and Cognition. Hunger and Health, as foundational interventions on behalf of children, directly support the development of IQ.

Sometimes these services are based on simple ideas and readily available technologies, yet they can have a dramatic impact on what may otherwise seem to be intractable problems. We have found that, with the help of short-term volunteers, local people in developing communities can ensure their children receive these 12 Essential Services.

HUNGER

- School and Household Gardens
- Child Nutrition
- Micronutrient Supplementation
- Improved Stoves

HEALTH

- Health, Nutrition and Hygiene Education
- Malaria and Dengue Fever Prevention
- Deworming
- HIV AIDS Education

COGNITION

- General Education
- Promoting Girls' Education
- Potable Water and Sanitation Facilities
- Psychosocial Support



The 12 Essential Services are interdependent – inextricably interrelated: the effectiveness of one depends upon the delivery of the others. The greatest probability of success comes from a comprehensive strategy that embraces all of the essential services. Although Global Volunteers helps local communities deliver all essential services, most volunteers work on three: School and Household Gardens using EarthBox® technology (for educational purposes and as a source of vital micronutrients); Hygiene Education focusing on hand washing with soap and water (the most cost effective health intervention); and General Education tutoring math, science and computer literacy and teaching conversational English (the international language of commerce, technology and opportunity).

For nearly three decades, Global Volunteers has helped provide essential services to children in communities throughout the world, although not all of them in any one community. In 2011, we began offering every partner community comprehensive support in delivering all 12 Essential Services. In doing so, we honor the basic principle that local people are in charge of their own human and economic development. This is foundational to effective development because local people understand their own communities and their challenges and opportunities in ways outsiders do not. Consequently, Global Volunteers only provides services which local people request. However, when one community asks us to assist with a particular effort, we advise other communities of that request. That has resulted in many communities asking for assistance with all 12 services.

Global Volunteers delivers the 12 Essential Services within our “Philosophy of Service.”⁴

Volunteers:

- Only serve where invited.
- Always work under the direction of local leaders.
- Work on community-based projects.
- Only do what they are asked to do.
- Work hand-in-hand with local people.
- Provide financial assistance as appropriate.

Global Volunteers’ development assistance is unique in several significant ways:

- 1 Local community leaders determine what we do and how we can best be of assistance.
- 2 Community partnerships last for 10 to 20 years or more, which is substantially longer than many other development programs.
- 3 We engage recurring teams of short-term volunteers, focusing their energy, skills, knowledge, good intentions and desire to make a genuine difference into effective and constructive action on behalf of local people.

“A development strategy, which is based upon outside government agencies, religious organizations, or NGOs doing the job for, or attempting to impose solutions on, local people is doomed to failure. It is only when local people decide to act that positive change will occur. It is only when local people decide to implement development plans, that those plans have any currency. And it is only when local people take a leadership role in the creation of those plans, that they have any chance of success.”

*-Global Volunteers’ Philosophy
of Service*

Public policy is rightly viewed from “30,000 feet” because it must envision the big picture. Short-term volunteers are able to take public policy to ground zero – to the one foot level where crops are planted, disease is prevented and children learn. When all children are provided the 12 Essential Services, the positive global consequences will be enormous.

Hungry students
cannot learn.

The Essential Services

HUNGER

Our world is home to hundreds of millions of hungry children – kids who may not have eaten today, and have no idea where their meal might come from tomorrow. Hunger⁵ is a two-fold assailant. It strikes in the form of insufficient calories, energy and protein (macronutrients) and too few vitamins and minerals (micronutrients – sometimes called “hidden hunger”).⁶ Hunger is debilitating in every sense. It viciously attacks the physical, social, intellectual, and spiritual development of all who suffer.

The first 1,000 days of life – from conception to age two – are the most vital. Children born of malnourished⁷ women have smaller head circumference and lower brain weight than healthy newborns, adversely affecting brain development by as much as 25 percent. Every year, more than 20 million newborns suffer from insufficient nutrition resulting in learning disabilities, poor health, blindness and premature death. More than half the kids who die before their fifth birthday suffer from undernutrition.⁸ And when kids go to school hungry, its assault continues, because hungry students cannot learn.

Malnutrition is rooted in rural villages where 75 percent of hungry kids live and families struggle day-to-day on subsistence agriculture.⁹ As malnourished children grow, their IQs may be lowered by as much as 20 points. Children who endure under-nutrition have diminished ability to fight infectious and parasitic diseases – further undermining normal brain development.¹⁰ Additionally, malnutrition in the first few years of life can lead to antisocial and aggressive behavior throughout childhood and late adolescence – especially devastating in impoverished communities.

“Hunger is also a cause of poverty, and thus of hunger. By causing poor health, low levels of energy, and even mental impairment, hunger can lead to even greater poverty by reducing people’s ability to work and learn, thus leading to even greater hunger.”

-2011 World Hunger and Poverty Facts and Statistics

There are many reasons for widespread hunger, but hunger is not inevitable.¹¹ All the necessary tools and agricultural technology to ensure that nearly every hungry family can grow their own food to feed themselves and their children are available. There are highly productive seeds, water-conservation irrigation systems, rainwater harvesting systems, practical soil science, cost-effective and environmentally friendly fertilizers, natural pest controls, and tools to reduce postharvest waste. Many of these methods and technologies are appropriate for smallholder and subsistence farmers – those who farm on extremely small plots and often have limited education. The major problem is that these practices – the tools, technology and training – have not been extended evenly throughout the developing world, leaving vast populations to struggle with their very survival.

There may always be a small percentage of the world’s population that cannot grow food for themselves because of drought, famine, war, land use and ownership, tsunamis, or earthquakes. However, the World Food Program, United States Agency for International Development (USAID), United States Department of Agriculture (USDA), and other national and multilateral organizations are fully capable of delivering food aid and food assistance to this fraction of hungry people, provided governments muster the political will to do so. With appropriate agricultural technology and know-how, the remaining hundreds of millions who are hungry and malnourished could grow their own food.

1. School and Household Gardens

One of the first improvements U.S. Secretary of Agriculture Tom Vilsack initiated at the United States Department of Agriculture was to create a “People’s Garden” right on the grounds of USDA’s executive office building in Washington DC. He then challenged government employees to establish gardens at USDA facilities across the country and around the world. Shortly thereafter, First Lady Michelle Obama started a household garden at the White House and people across the U.S. did the same.

School and household gardens offer a simple solution to local people to help alleviate hunger, improve food security and address micronutrient deficiencies.¹² Gardens make education relevant, by promoting active, applied learning, and are an effective means for transferring agricultural technology and skills. This is important because agriculture is foundational to economic growth in developing countries.

School Gardens offer several significant benefits. First, they are a hands-on teaching tool, providing students and teachers knowledge, skills and experience necessary to increase sustainable agricultural practices and productivity. Students learn to grow fruits and vegetables. They also learn biology, ecology, nutrition and effective small-scale agriculture technology. Gardens can help change negative attitudes about farming and village life, and offer a different viewpoint on the value of environmental education.¹³

Second, the produce from the gardens can help supplement school meals, improve child nutrition by adding variety and increasing micronutrients, and improve overall food security. School gardens can also decrease the costs of school feeding programs.

Third, school gardens can increase school attendance by providing the means for improved nutrition, which helps students fight off infectious disease.

Fourth, school gardens can be an effective means to transfer appropriate agriculture technology to community members outside of the school environment. If the school garden produces more corn or larger tomatoes per plant, the early adopters in the community will take notice, and eventually experiment with the new technologies employed at the school garden. Small-holder farmers are naturally risk adverse, but seeing what is possible at the local school can inspire them to try new technologies which may lead to others doing the same. Meanwhile, students will take household gardening lessons home to their parents and older siblings.

Members of the community who effectively employ new technologies in household gardens also benefit from increased household nutrition and food security.¹⁴ They can improve household food security by providing necessary nutrition for pregnant women, micronutrients for infants and toddlers, and fruits and vegetables for kids when they are not in school. In addition, gardens can enhance a family's economic situation through savings on food bills and income generated from sales of surplus garden products.¹⁵

The United Nations Food and Agriculture Organization (FAO) and USDA promote school and household gardens as a proven effective tool that make an enormous positive difference in the lives of children.¹⁶ Yet, only one percent of schools in food insecure areas have gardens.¹⁷

There are three major obstacles to widespread adoption of school and household gardens. First, students cannot grow a school garden on their own. Successful gardens require an adult champion – someone who is involved and provides supervision. Local teachers would seem to be the first choice; however, many of them are already overburdened and do not have the time necessary to manage a garden. Local farmers are also strong candidates, but subsistence farmers, almost by definition, have neither the time nor knowledge to help, and they are naturally risk-averse. In economically impoverished communities, most adults already are doing all they can to keep their families safe and alive.

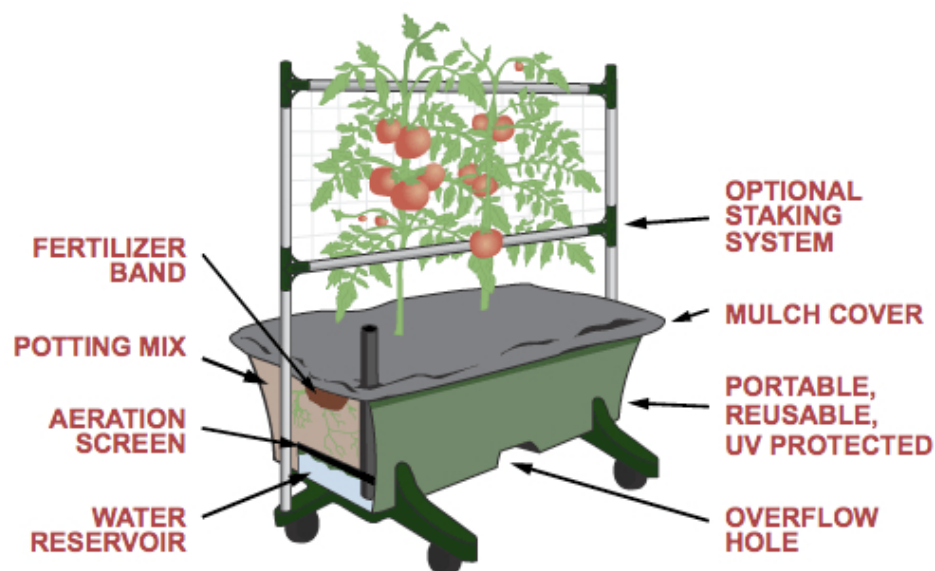
Second, financing is a barrier. Depending upon the size of the garden and the local economy, starting a traditional “shovel-in-the-dirt” garden will cost between \$300 and \$500 USD in the first year. Maintaining the garden costs an additional \$200 to \$300 USD per year thereafter, a major burden in economically impoverished communities.

Third, agriculture extension services are scarce in food insecure areas. If there is no source of technical advice for the inevitable problems that are certain to arise, local people will be reluctant to move forward, even if there is a local champion and a source of revenue. When there are no resources to turn to when difficulties arise, it is nearly impossible to maintain a thriving garden.

“School gardens are cultivated areas around or near to primary and/or secondary schools, which can be used mainly for learning purposes but could also generate some food and income for the school. School garden activities usually comprise horticultural crops but may include small-scale animal husbandry and fishery, beekeeping, fruit trees, ornamental plants and shading, as well as small-scale staple food production.”

-Food & Agriculture Organization

These overwhelming challenges have given rise to innovative solutions. FAO and The Growing Connection (TGC) promote the EarthBox® as a fairly simple, yet appropriate, garden technology.¹⁸ The EarthBox® is a self-contained, relatively maintenance-free, gradient-gardening system that more than doubles the average yield with half the fertilizer, and substantially less water and less effort than conventional shovel-in-the-dirt gardens. The EarthBox® is also portable, reusable, UV-protected and recyclable, so it can bring gardening to schools and households on a year-round basis.



“The EarthBox is a highly efficient, highly productive growing system. Its ease of use and flexibility build confidence (especially among students), reward users, and lead people to the joys of sustainable food production. The EarthBox uses capillary action to facilitate the movement of water and nutrients, easing the plant’s efforts and resulting in a hearty yield. The EarthBox is highly portable, and allows the production of high-value produce in non-traditional settings.

“In TGC, the EarthBox provides a common platform for all participants to engage in identical, productive food growing activities, regardless of location. The Growing Connection makes it possible for people anywhere to have access to fresh nutritious vegetables, to learn innovative gardening techniques, share and compare documentation, and become citizen scientists who are part of the solution to malnutrition (hunger and obesity) and poverty.

“The EarthBox vastly increases the yield per area over a conventional garden – with less fertilizer and much less water. The EarthBox is a flexible system that enables more diverse crop options, extending growing seasons & reducing maturation times.

“In many poor countries, the dry season lasts six months or more. Women & children walk an average distance of 6 kilometers a day in search of water. Simple yet effective, the EarthBox system uses 80% less water than an in-ground, drip irrigation system.

“The EarthBox is low-maintenance, requires minimal training & greatly reduces labor inputs. Fresh food can be grown at the doorstep, without having to prepare land, with no weeding and minimal water use.”

Global Volunteers is partnering with FAO and TGC to make this technology and education accessible worldwide. We offer EarthBox® technology to local schools, orphanages, children's homes and, in some cases, households as a means to establish thriving gardens. The EarthBox® is advantageous for school and household gardens because it:

- Is simple to learn how to use and to use.
- Is low maintenance (after preparing the box and planting, only daily watering is required).
- Requires reduced labor (land preparation and weeding are not necessary; and boxes placed on tables or platforms significantly reduce bending).
- Produces high success rates, enabling students to learn from their accomplishments, the sources and varieties of food, and how to improve their nutrition.
- Is water-efficient.
- Produces high-value, high-quality produce, supplying needed micronutrients.
- Increases productivity over "shovel-in-the-dirt" gardens.
- Permits food production where space and arable land are limited, e.g., school grounds, rooftops, patios, etc.
- Prevents fertilizer run-off and water-table contamination.
- Extends growing season and number of croppings.
- Expands crop options including local varieties.
- Is affordable & durable.

"85% of all farm holdings worldwide are less than two hectares (5 acres) in size, and 500 million smallholders produce 80% of the food consumed in the developing world. These farming households make up fully one third of humanity. Our future is in their hands. Who else will feed the world in 2020, in 2030, or in 2050 – by which time we will have added another 3 billion people to our population?"

-Dr. Kanayo F. Nwanze, President, International Fund For Agricultural Development

What Volunteers Do

Short-term volunteers help overcome the obstacles to establishing gardens and provide support to ensure the garden's success.

At each school, children's home and orphanage in partnership with Global Volunteers, one local staff person is assigned primary responsibility for managing the garden. A continuous stream of short-term volunteers offers a catalytic effect that encourages the local garden champion and inspires parents to establish their own household gardens. Volunteers with agriculture, gardening, science, nutrition, business and home economics backgrounds are particularly helpful.

Volunteers:

- *Help the local manager plan and organize the work and the garden area.*
- *Offer training to teachers, school cooks and care-takers.*
- *Promote garden-based learning using the EarthBox® Teaching Guide.*
- *Provide praise, rewards, and prizes for students, teachers and garden helpers.*
- *Help build garden sheds and fences, and lend a hand planting and harvesting.*
- *Teach orphans agricultural skills which they might otherwise have received from parents.*
- *Promote competitions encouraging students to create the best gardens.*
- *Help establish household gardens using the EarthBox®, which increases micronutrients for pregnant women, infants and toddlers.*
- *Teach young farmers how to manage marketing associations, and identify and utilize accurate market data.*
- *Help get any surplus produce to markets where it can be purchased by neighboring communities and/or retailers.*
- *Encourage young people to consider farming as a viable occupation.*

The second barrier – “lack of money” – diminishes when short-term volunteers become fully engaged.

Global Volunteers:

- *Provides a portion of the funds necessary to start and maintain gardens, including materials to get started, e.g., the EarthBox®, growing medium, etc.*
- *Encourages volunteers to contribute money for school and household gardens in the community where they served.*
- *Offers graduating students who actively participate in their school garden the opportunity to take one or more EarthBox® home for their own and family use, and hopefully be able to produce for the local market.*

The third obstacle – insufficient technical assistance – can also be overcome through partnerships with U.S. and Canadian agriculture specialists, and FAO and TGC. Technical support is also solicited from local national health and agricultural ministries and universities.

Global Volunteers helps ensure:

- *Every school that wants a garden can have a thriving school garden.*
- *Families can establish household gardens to produce food for their use and to sell in the marketplace.*



High yield earth boxes produce nutritious vegetables.

2. Child Nutrition

Adequate child nutrition promotes healthier bodies and stronger minds. Combined with hygiene education and infectious disease prevention, child nutrition translates directly into life-long opportunities for children, their families and their communities. Ensuring sufficient nutrition to pregnant women and new moms dramatically magnifies these benefits.

The United Nations World Food Program advises that school feeding programs – meals and snacks provided at school (the earlier in the day the better), and “take-home rations” offered to parents to encourage their children’s regular school attendance – are cost-effective strategies that help ensure adequate child nutrition. School-based feeding programs also alleviate short-term hunger, improve school attendance, reduce drop-out rates, increase learning ability and academic performance, contribute to children’s psychological well-being, and improve household food security.²⁰

School gardens and “homegrown” feeding programs offer additional benefits. When schools purchase food from local farmers, the farmers are provided a steady demand which helps generate revenue for investments in increased agricultural productivity, school fees for their own children, and a wider variety of food for their family.²¹ And school gardening can complement school feeding programs while providing educational advantages.

However, school feeding is not enough. School programs must be accompanied by deworming, micronutrient supplementation, teacher training, curriculum reform, and health, nutrition and hygiene education.²²

“Producing from the local market whenever feasible, is key to achieving sustainability while encouraging agricultural growth. School meals programmes should include an action plan for local sourcing. Connecting small-scale farmers to markets and ensuring that a deliberate, incremental strategy is in place to tie supply to school feeding demand is important. School meals that respond to community needs, are locally owned, and incorporate some form of parental or community contribution tend to be the strongest programmes most likely to graduate successfully from donor assistance.”

-World Food Program

What Volunteers Do

Kathleen Kurz, Senior Nutrition and Food Security Specialist at the Academy for Educational Development states, "We know it is possible to improve nutrition outcomes in small programs occurring in isolated situations. The challenge is bringing nutrition programming up to scale."²³ Recurring teams of short-term volunteers can help meet this challenge. Volunteers with backgrounds in nutrition, food preparation, agriculture and business play an important role in encouraging and enabling successful and sustainable maternal, child and school nutrition programs.



Volunteer feeding a child in a Failure-To-Thrive clinic in Romania.

Volunteers:

- *Help serve school breakfast and midday meals.*
- *Teach students and school staff about nutrition and the value of different foods.*
- *Demonstrate effective food preparation and cooking methods.*
- *Help maintain gardens which produce fruits and vegetables for school feeding programs.*
- *Encourage parental and community involvement in nutrition programs.*
- *Encourage household gardens and "take-home-rations" so pregnant and lactating women have sufficient nutrition for themselves and their babies during the critical first 1,000 days.²⁴*
- *Transfer appropriate agriculture technology to local small-scale farmers.*

Global Volunteers initiates and manages sponsorship programs which raise money from volunteers to help ensure funding for sustainable child nutrition.

3. Micronutrient Supplementation

Every healthy body requires macronutrients (energy and protein) and micronutrients (vitamins and minerals such as iron, iodine, zinc and vitamins A, B, C, D and E). Hunger is sometimes discussed only in the context of macronutrients and the aching sensation caused by an empty stomach. However, micronutrients, required by the body every day, are equally important because they orchestrate a range of physiological functions.²⁵ Even when poor people have enough food to eat, they can suffer from micronutrient malnutrition due to insufficient fruits, vegetables, and dairy.²⁶

“Whether the primary focus... is agriculture, health, or education, nutrition is the common thread because it’s an issue that cuts across every sector... Nutrition plays the most critical role in a person’s life during a narrow window of time – the 1,000 days that begin at the start of pregnancy and continue through the second year of life. Quality of nutrition during those 1,000 days can help determine whether a mother and child survive pregnancy and whether a child will contract a common childhood disease, experience enough brain development to go to school and hold a job as an adult.”

*Hillary Rodham Clinton, U.S.
Secretary of State*

The World Health Organization advises that micronutrient malnutrition – diets lacking essential vitamins and minerals – is a serious public health problem in developing countries, and is compounded by high rates of infectious diseases.²⁷ Over two billion people experience micronutrient deficiencies.²⁸ Diets poor in micronutrients cause illness, blindness, premature death, impaired mental development, and susceptibility to infectious diseases, particularly among children. School-age children who do not consume sufficient micronutrients perform poorly when compared with children who eat enough fruits and vegetables. They also have lower productivity later in life.²⁹

Micronutrient supplementation is one successful method of addressing this issue. Properly administered, one daily serving of a balanced powdered mixture provides all the micronutrients a child needs. Sprinkles, developed by the Sprinkles Global Health Initiative (SGHI), is one brand that effectively counters micronutrient deficiencies in children.³⁰ The World Food Program provides micronutrient fortified foods to help ensure schoolchildren’s adequate nutrition.³¹ However, WFP has insufficient resources to provide necessary micronutrients for all the needy children everywhere in the world.

What Volunteers Do



Micronutrients being added to children's meals in Ecuador.

Where Global Volunteers' community partners manage school and household gardens, conduct school/child feeding programs, and participate in other essential services, short-term volunteers can make a significant difference.

Volunteers:

- *Help purchase and dispense blends of micronutrients served at school.*
- *Teach nutritional values to improve the health of micronutrient-deficient children.*
- *Assist small scale farmers increase production of locally grown fruits and vegetables for the local market, including mother, child and school feeding programs.*
- *Establish and maintain school and household gardens using EarthBox® technology.*

4. Improved Stoves

The cooking methods used to prepare meals at school and home in developing communities too often result in unintended negative consequences – deforestation, hazardous smoke, undercooked food, and increased greenhouse gases. The most typical stove used in the developing world is an open wood fire with three large rocks or boulders. These stoves use large amounts of scarce firewood, often fill the rooms with dangerous fumes, and significantly add to greenhouse gasses. WHO estimates that smoke from indoor cooking stoves kills two million people annually (that's more than tuberculosis or malaria) and causes devastating health issues for tens of millions more.³² USAID's Environmental Health Program reports that acute lower respiratory infections, the leading cause of death among children under 5, are "closely associated with exposure to indoor smoke from cooking with biomass fuels."³³ Moreover, cooking with wood contributes to deforestation and deforestation is among the leading causes of food insecurity.³⁴ Compounding the problem, when sufficient wood is not available or too expensive, some cooks tend to undercook food.³⁵

Energy-efficient stoves, especially those that employ local materials, can deliver several benefits:³⁶

- 1 Decreased firewood consumption (up to 50 percent of traditional open-fire stoves) when the stoves are used correctly.
- 2 Reduced labor to collect fuel, typically performed by overburdened women.
- 3 Improved health due to decreased kitchen smoke and outdoor air pollution.
- 4 New jobs created by locally manufacturing stoves.
- 5 Reduced deforestation, soil erosion and drought, which in turn improves local agriculture.

"Safe, fuel-efficient stoves enable women to be the frontline champions in the battle against climate change and hunger and empower communities with immediate, practical, adaptation solutions."

*-Josette Sheeran,
Executive Director, World
Food Programme*

Several fuel-efficient stoves are available for family and/or institutional use in developing communities. Examples include the large-scale version of the Upesi stove (upesi means "quick" in Kiswahili),³⁷ the Rocket Stove promoted by CarbonZero^{®38}, and the Jiko (meaning "stove" in Kiswahili). All three were developed in Kenya, but may be produced virtually anywhere. Toyola is a household stove manufactured in Ghana which uses standard charcoal and is 40 percent more energy efficient than open-fire stoves.³⁹ UGASTOVE is manufactured in Uganda for residential and commercial use and is featured in Design Revolution – 100 Products That Empower People.⁴⁰

The United Nations, through WFP and UNDP, and private foundations encourage schools to utilize fuel-efficient stoves by paying for a portion of their cost.

What Volunteers Do

Short-term volunteers work with and learn from and about local people in the communities they serve. These can be enriching and life changing experiences for the volunteers as they encounter the realities of life in a different economic setting.

Volunteers:

- *Identify funding sources for stoves and help raise matching requirements.*
- *Help purchase and assemble/construct school stoves.*
- *Train local people to manage and maintain energy-efficient stoves.*
- *Help establish nurseries and plant wood lots.*

Global Volunteers initiates and manages sponsorship programs which raise money from volunteers to help ensure funding for fuel-efficient stoves.



New stove built by volunteers and villagers in Costa Rica.

**If worms get the food
before the child,
it doesn't matter if
the food is nutritious.**

The Essential Services

HEALTH

Infectious diseases are reliable predictors of a country's average national intelligence.

Studies show the higher the incidence of infectious disease, the lower the average national IQ. The reverse is also true – lowering the incidence of infectious disease, especially among very young children, can over time increase average IQ.⁴¹

Untold numbers of children suffer from infectious diseases, e.g., diarrhea, malaria, HIV AIDS, tetanus, tuberculosis, and hepatitis. Diarrhea, one of the most dangerous and common diseases in the world, is a case in point. Diarrhea can prevent the body from accessing nutrients, damage mental and physical health, and lower IQ.⁴² If exposed to diarrheal diseases during the first five years of life, children may experience lifelong detrimental effects to their brain development, and thus intelligence.⁴³ This disease also prevents children from attending school; hundreds of millions of school days are lost each year as a result of diarrhea.⁴⁴

Diarrhea is a prominent killer of children around the world. Every year, more than two million children die before their fifth birthday due to diarrhea, and the disease puts millions more at significant risk. Diarrhea is second only to respiratory infection as the most lethal threat to children leading to arrested brain development and lower IQ.⁴⁵

Diarrheal diseases are “excreta related” – the pathogens come from fecal matter – and unclean hands are the leading cause of its transmission.⁴⁶ *Feces on hands, and hands to mouth* is the primary avenue for pathogens to enter the body. When children need to relieve themselves where there are no adequate facilities, *the feces to hands, and hands to mouth* cycle is the inevitable result. Dirty hands cause illness, impairing children’s growth, keeping youngsters out of school, and increasing infections. Most tragically, dirty hands can kill.

Diarrhea is spread at home and at school. More than 50 percent of schools in developing countries have ineffective sanitation facilities or unsafe drinking water which contribute to diarrhea.⁴⁷ Nearly half the children in developing communities live in households without adequate sanitation.⁴⁸

The four Essential Services in the Health vertex are important in assuring that each child can achieve the promise of their IQ. Any comprehensive effort must emphasize the importance of educating students, families, teachers, and health workers about personal hygiene, nutrition, healthy living, AIDS and HIV, malaria and dengue fever, and treating parasitic worms.

5. Health, Nutrition and Hygiene Education

Diarrhea is preventable. Washing hands with soap after going to the toilet and before eating is the most effective approach to curbing diarrhea⁴⁹ – reducing the disease by nearly half and cutting acute respiratory infections by 25 percent. Nearly every culture and many religions promote hand washing, and most people do wash their hands. Unfortunately, many use only water. Washing with water is not enough. Handwashing with soap is essential.⁵⁰

There are very few “easy solutions” in human and economic development. But washing hands with soap and water is the most cost-effective preventative health measure readily available to virtually everyone. From a cost-benefit perspective, washing with soap is three times more effective than building latrines, nearly 60 times as effective as providing clean running water, and more than 300 times as effective as any single immunization. In addition to preventing diarrhea, handwashing significantly reduces the risk of cholera and dysentery.⁵¹

Latrines, clean water, and immunizations are all important and necessary health initiatives. However, washing hands with soap will save more lives than any single vaccine or other medical intervention. The scientific evidence is indisputable: **Clean Hands Save Lives.**

It’s clear that broadcasting scientific evidence through health education messages are rarely enough to motivate people to change their behavior. Well-informed people indulge in unhealthy eating, sleep habits and sedentary living. Changing human behavior is difficult and changing handwashing habits is no exception. Studies show that even physicians in developed nations do not always wash with soap between seeing patients.⁵²

“While the impact of poor sanitation and hygiene is known to be disastrous for infants and young children, it also has an important impact on the health of school-age children, including adolescents. Hygiene promotion is now seen as an intrinsic element of any water and sanitation initiative and, in the context of school health, is now a central focus for school sanitation and hygiene programmes.”

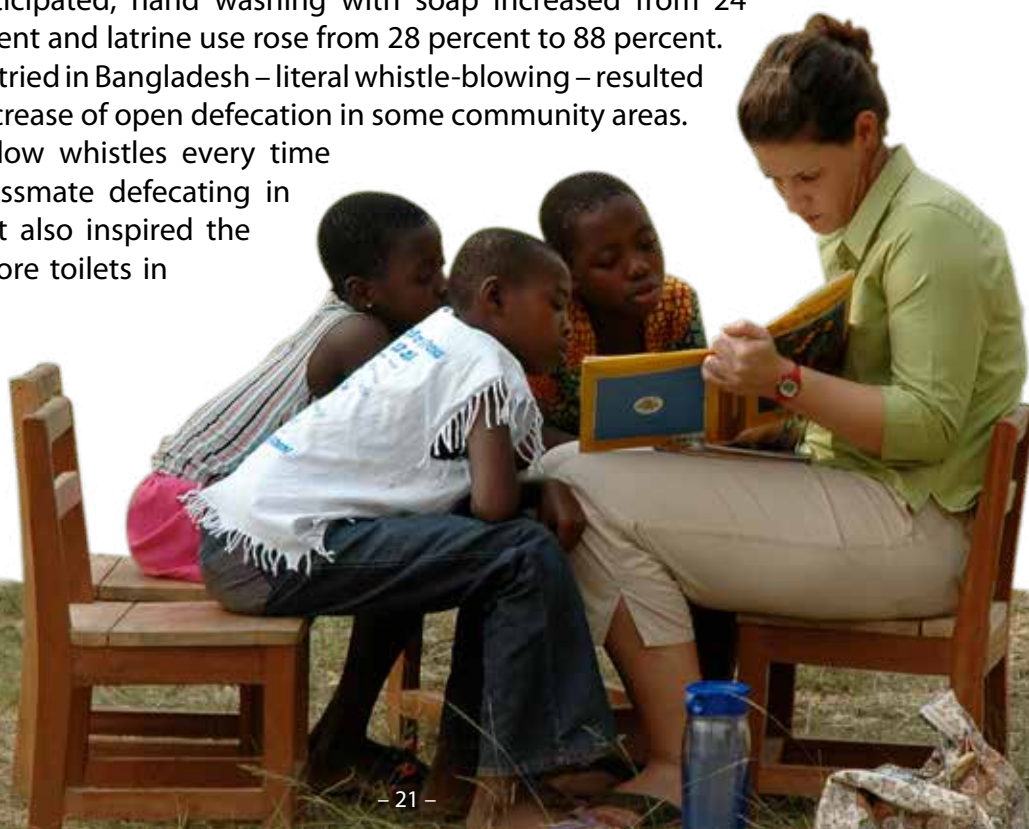
The Essential Package

The Global Public-Private Partnership for Handwashing reports that, in order to change hand washing habits, it is necessary to develop an effective marketing campaign based on people's hopes and desires. Successful handwashing campaigns envision potential hand washers as consumers and recognize that although people the world over are far more alike than different, individual groups of people are motivated by and value different things. Winning campaigns structure marketing efforts in four relatively simple steps.

- 1 Understanding the consumers' current hand washing habits – when and where do people wash their hands, do they use soap, what is the water source, etc.
- 2 Identifying incentives that might persuade people to adopt new hand-washing habits – stressing values that relate to their health.
- 3 Designing a message that appeals to the consumer's needs, wishes and values.
- 4 Employing a variety of methods to convey the message.⁵³

Children, as “agents of change,” play a vital role in successful handwashing campaigns. Often the most open, and energetic adopters of new ideas, children can exert tremendous influence on their parents and siblings.⁵⁴ They also represent the greatest need because they suffer the most from diarrheal and respiratory diseases, thus constituting the most appropriate objective of a handwashing campaign.

Children can be engaged in several ways. For example, an initiative conducted by Plan International USA included a life-size version of the Snakes and Ladders board game that incorporated health and hygiene messages for school children. Among the kids that participated, hand washing with soap increased from 24 percent to 96 percent and latrine use rose from 28 percent to 88 percent. Another approach tried in Bangladesh – literal whistle-blowing – resulted in a 90 percent decrease of open defecation in some community areas. Children would blow whistles every time they caught a classmate defecating in a field. This effort also inspired the construction of more toilets in the community.⁵⁵



In order for handwashing campaigns to be effective, children need facilities for washing their hands with soap and water. In far too many schools and homes, neither is readily available. One simple and low-cost technology is the Tippy Tap, a “low-tech” but highly effective foot-operated can-and-string water tap that can be constructed with local materials and easily maintained. Such locally appropriate solutions promote immediate adoption.⁵⁶

Global Handwashing Day is one effective effort that promotes the importance of handwashing with soap and water. A public-private collaboration of UNICEF, USAID, Colgate-Palmolive, Procter & Gamble, Unilever and several other partners initiated this effort to change handwashing behavior in 2008. Celebrated in mid-October each year, the focus is on children and schools. The objectives are threefold:

- 1 Foster and support a global and local culture of handwashing with soap and water.
- 2 Shine a spotlight on the state of handwashing in each country.
- 3 Raise awareness about the benefits of handwashing with soap.⁵⁷





Global Handwashing Day is endorsed and supported by multilateral institutions, governments, NGOs, corporations and local people all over the world. The United States government endorses Global Handwashing Day as a part of its foreign assistance policy to increase access to safe water and sanitation in developing countries.⁵⁸

Another effective tool is the book “Where There Is No Doctor.” Intended primarily for village health workers in developing countries, this widely used health education text addresses a wide range of health issues including diarrhea, malaria, dengue fever, parasitic worms, and HIV AIDS, while emphasizing hygiene, diet and vaccinations. The book explains what people can do themselves, and how to prevent, recognize and treat many common illnesses. It also demonstrates how to distinguish problems with which local health aids are unable to cope and that should be referred to more highly trained health workers.⁵⁹ Global Volunteers provides copies of “Where There Is No Doctor” to local health care volunteers and medical aids. The book is printed in numerous languages.

Every child deserves access to clean water, adequate sanitation, and nutrition and hygiene education. Adequate school facilities, along with appropriate classroom instruction, deworming, school feeding and micronutrient supplementation can have a dramatic effect on preventing childhood illness and death, and result in a higher level of student motivation and children’s readiness to learn.

What Volunteers Do

Perhaps the most important health contribution volunteers make is to model handwashing with soap and water at school and home. This practice can reduce infectious disease and save lives. Global Volunteers focuses attention on this health initiative in the same communities multiple times a year.

Volunteers with marketing backgrounds know how to capitalize on people's desires and translate them into messages that encourage washing hands with soap and water. Research shows that appealing to personal desires is far more effective than just focusing on health and scientific evidence. People all over the world want to nurture their family, be personally more attractive, and emulate those they admire and respect.⁶¹ Marketing volunteers can help local campaign leaders utilize this knowledge. Although the message is always the same, the methods of delivering the message are as creative as the volunteers who serve. Short-term volunteers promote Global Handwashing Day every day they are in a community.

Volunteers with health care, nutrition and health science backgrounds teach public health education and make disease, hygiene, and diet relevant to teachers, students and their parents.

Volunteers:

- *Help local leaders conduct effective handwashing campaigns.*
- *Increase students' awareness of the benefits of washing with soap and water.*
- *Engage students as participants in the marketing campaign through:*
 - *School competitions – best handwashing practices, relay races requiring runners to wash their hands at handwashing stations; creative essay, song, rhyme, poetry, and photo contests.*
 - *Handwashing learning events emphasizing the message, “visibly clean is not really clean” using a special lotion to simulate germs on hands and battery operated ultraviolet lights.⁶²*
 - *School plays, skits, story-telling, and songs presented to parents and community leaders conveying the importance of washing hands with soap; parents enjoy watching their children perform and pick up the valuable message of handwashing.*
- *Work with students and teachers to create promotional materials and photographs of good handwashing practices.*
- *Explain to parents that diarrhea stunts children's growth, brain development, and futures; and handwashing with soap dramatically reduces diarrhea.*
- *Instruct teachers that washing with soap decreases absenteeism caused by diarrheal diseases.*

Volunteers:

- *Show how to include handwashing with soap in every subject so that the handwashing habits taught today stay with students for a lifetime.*
- *Inform religious leaders that their congregants' health is jeopardized if they do not use soap, and that "one million lives could be saved each year through handwashing with soap."⁶³*
- *Remind policy makers that diarrhea and pneumonia consume health budgets, and that handwashing with soap reduces diarrheal disease by half and pneumonia by 25 percent.⁶⁴*
- *Help construct latrines and handwashing stations using Tippy Taps.*
- *Demonstrate the scientific evidence that handwashing with soap is a successful and cost-effective health intervention.*
- *Conduct classes around the techniques described in "Where There Is No Doctor."*
- *Explain germ theory of disease to older students and teachers, facilitating a better understanding of how to prevent the spread of infectious disease.*
- *Demonstrate what foods contribute to, and how to prevent, diabetes.*
- *Perform blood pressure checks and help with well-baby checkups.*
- *Construct health clinics, develop clean water supplies and build waste disposal systems.*
- *Provide eye exams and offer prescription glasses for children who need them.*



PHOTO CREDIT: TIPPYTAP.ORG

The Tippy Tap hand washing system in action in India.

6. Systematic Deworming

UNICEF estimates one third of all school-aged children suffer from parasitic worms.⁶⁴

Parasites consume much of the nutritive value of the food and micronutrients children eat. Parasitic infections cause devastating effects including anemia, impaired physical growth, diminished intellectual development, damaged cognitive function, increased school absenteeism, reduced educational achievement, reduced literacy and lower IQ.⁶⁵ *The average IQ loss per worm infestation is 3.75 points.*⁶⁶ If worms get the food before the child, it doesn't matter if the food is nutritious.

Parasitic worms were once a common malady among children in today's high income countries. Public health programs eradicated the disease. The same is possible in developing communities. Deworming tablets are remarkably effective, safe, and easily administered – required just once or twice a year. This is a relatively easy and inexpensive essential service when addressed in cooperation with local schools for these reasons:⁶⁸

- Schools are cost-effective centers for delivering deworming programs.
- There is no requirement to perform individual diagnosis or assessment.
- Deworming drugs can be purchased in bulk, with a shelf life of up to four years, and are safe for all children, including those not infected.
- Teachers can safely and effectively deliver the drugs.⁶⁹

WHO identifies four remedial tactics, each of which reduces worm infestation.⁷⁰

- 1 "Increasing health and nutrition services in schools. Schools are an ideal place to screen children for health problems and for teachers to give simple medications and treatments, such as micronutrient supplements and deworming tablets.
- 2 "Increasing access to safe water and sanitation in schools. Lack of clean water and latrines in schools means that infections have every chance of spreading easily. Children cannot wash their hands if there is no water, and latrines rapidly become a source of infection if there are only a few for a whole school. Installing these facilities is a priority.
- 3 "Encouraging healthy behaviours. Using special programmes and learning tools, children can be taught to adopt healthy behaviours (e.g. washing food before eating it) and avoid risky behaviours (e.g. urinating and defecating in a nearby water source).
- 4 "Promoting school health-related policies. Schools need health policies, which can range from the simple delivery of deworming tablets to creative incentives to keep young mothers in school."

Ridding children of parasitic worms is among the most cost-effective public health services available, especially when programs are administered through schools.⁷¹

What Volunteers Do

Volunteers and our staff assist partner communities with their deworming programs.

Volunteers:

- *Help determine whether a school is at risk of infection using WHO's simple, low cost survey techniques. If a school is located in one of WHO's targeted areas, then mass treatment is recommended.*
- *Inform the community, including parents, community leaders and local health professionals about the advantages and objectives of a school deworming program.*
- *Train teachers about the benefits of deworming, how to distribute tablets and keep records.*
- *Encourage local health services to properly store and deliver the drugs to schools.*
- *Distribute the tablets and help treat children.*
- *Record the number of children treated and the amount of drugs used.*

Global Volunteers can help raise the money to purchase drugs and materials from local national pharmacies.



Checkup performed by volunteer in Peru.

"Worms infect more than one third of the world's population, with the most intense infections in children and the poor. In the poorest countries, children are likely to be infected from the time they stop breast-feeding, and to be continually infected and re-infected for the rest of their lives. ...The infection is long-term and chronic, and can negatively affect all aspects of a child's development: health, nutrition, cognitive development, learning and educational access and achievement."

The World Bank

7. HIV and AIDS Education

The world is well aware of the enormous negative impacts of HIV AIDS. Perhaps most devastating, this disease robs children of their parents, and undermines national and local efforts to educate those children. UNICEF reports that, “For too long, children have been the missing face in the HIV and AIDS response and their needs have often been overlooked. Yet, they are the ones who offer the greatest hope for defeating the epidemic.”⁷¹

Early, effective and useful education is necessary to reverse this pandemic. HIV AIDS can be prevented, but students need to know how it is contracted and how to prevent it. The text, “Where There Is No Doctor” is an effective tool in this effort.



What Volunteers Do

Global Volunteers works in cooperation with community leaders and health care practitioners to help prevent HIV AIDS through education.

Volunteers:

- Offer HIV AIDS education to students using the text “Where There Is No Doctor.”
- Work in clinics where anti-retroviral drugs are available and assist with their distribution.
- Help ensure patients have sufficient food and nutrition because hunger and undernutrition reduce anti-retrovirals effectiveness.⁷³

“Research shows that sexual and reproductive health education is likely to be more effective if started before children become sexually active and have acquired attitudes and practices that are often counter-productive to positive sexual behaviours and attitudes. Young people, especially those between 6 and 14 years, offer a window of hope in stopping the spread of HIV and AIDS if life skills programmes have reached them. They need support and skills to postpone starting sexual activity. In the absence of a cure, the best way to deal with HIV and AIDS is through prevention by developing and/or changing behaviour and attitudes. Life skills programmes are one way to offer the information and skills that young people need to protect themselves.”

The Essential Package



8. Malaria and Dengue Fever Prevention

Malaria affects 40 percent of the world's population. In most of Sub-Saharan Africa, southern Asia including India, parts of Central America and the northern half of South America, malaria remains a debilitating disease and in many places is increasingly drug resistant.⁷³ Malaria in children is especially devastating – ending lives, promoting the spread of other illnesses, adversely affecting cognitive and learning ability, resulting in iron deficiency anemia, and increasing school absenteeism.⁷⁴ Hunger exacerbates malaria's harm.⁷⁵

More than a third of the world live in areas that are at risk for dengue fever. Dengue fever infects 100 million people annually and is a major cause of illness and death. Early identification and treatment can substantially reduce the risk of serious disease. Dengue fever is a significant problem in Africa, Asia, South America, Central America, the Pacific, and the Caribbean.⁷⁶

Malaria and dengue fever are both preventable.⁷⁷ Because these diseases are transmitted by mosquitoes, the most effective preventative measure is avoiding mosquito bites.⁷⁸ Sleeping under insecticide-treated bed nets may be the simplest solution. The nets are hung over the bed, and when the nocturnal mosquito comes in contact with the net, it is killed by the insecticide. World health experts report that when properly used, the nets can reduce child mortality in malarial regions by 20 percent. Treated bed nets last up to three years and provide twice the protection of untreated nets. The best nets block insects without stifling ventilation.⁷⁹ The most effective programs employ nets made in the country where they are used because they then have a positive economic effect as well – creating jobs making the nets.

“Skills-based health education can give children the ability to recognize the signs and symptoms of malaria and to recognize the need to seek treatment. Skills-based health education through schools can also help promote a community-wide understanding of malaria with particular emphasis on the need for community-based control measures such as the use of impregnated bed nets”

-The Essential Package.

Indoor Residual Spraying (IRS) is another preventative measure. This involves spraying insecticide on the inside walls of schools, dormitories and homes killing mosquitoes that alight on the walls.^{81,82} To successfully rid a community of malarial mosquitoes, 80 percent of schools, homes, barns, and other buildings must be sprayed.⁸³

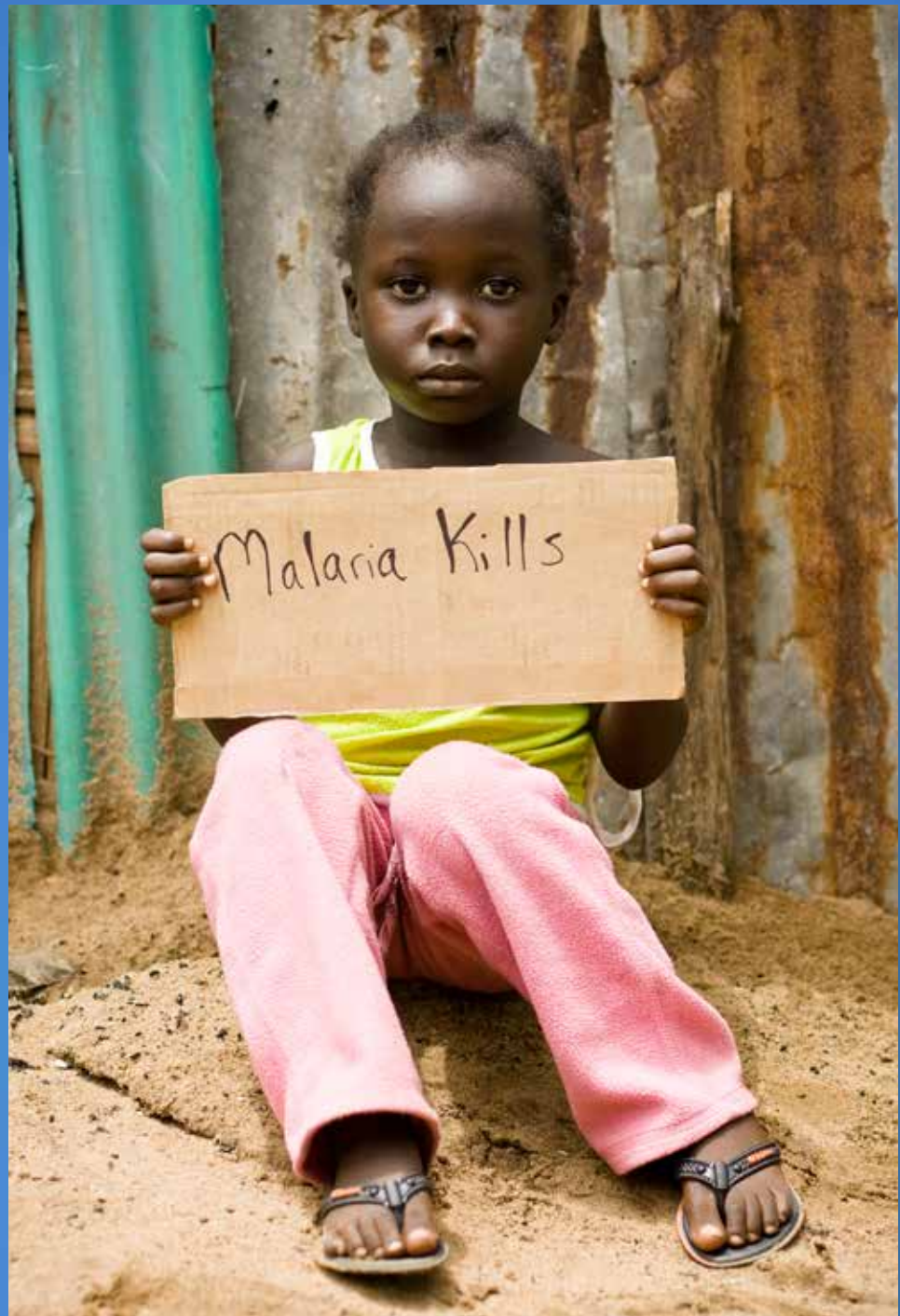
Using mosquito repellent, wearing long-sleeved shirts, long pants, socks, and shoes, putting screens on windows and doors, keeping unscreened windows and doors closed, and eliminating mosquito breeding areas are other effective preventative measures.⁸⁴

What Volunteers Do

Global Volunteers does not provide invasive medical procedures. However, volunteers with health care backgrounds offer training and resources to help local communities manage infectious diseases.

Volunteers:

- *Teach schoolchildren and teachers about malaria and dengue fever: how they are contracted, how to prevent the diseases, and their signs, symptoms and ramifications.*
- *Encourage students to advise their teacher and seek treatment if infected.*
- *Provide treated bed nets, explain their use and value, and promote their usage.*
- *Help community leaders expand the safe use of Indoor Residual Spraying.*



**Two thirds of the
world's illiterate
adults are women.**

The Essential Services

COGNITION

The lower the incidence of hungry and sick children, the higher the IQ of an entire country.

This describes the inextricable relationship between the cognitive abilities of populations, as measured by average IQ, and the nutrition and disease prevention afforded its children. When children have sufficient nutrition and are educated about and protected from infectious disease, their brains can develop fully. When provided adequate and effective education, they are able to engage their full intelligence. When a country's children can realize their inherent intelligence, the entire nation benefits, and the world by extension.

There is unlimited positive and constructive power in education. Perhaps more than any other human activity, education stimulates the advancement of entire societies. H. G. Wells wrote, "Civilization is a race between education and catastrophe." President John F. Kennedy added that it is up to each generation to determine the winner of that race. Ensuring that children have access to adequate and effective education is a prime responsibility of every generation. But this obligation is not geographically delimited. While parents have the principal duty to educate their children, it is in the interest of the global society as a whole to ensure that all parents have the ability to fulfill that duty.



Well-educated, trained and dedicated teachers, functional school buildings, adequately furnished classrooms, current textbooks, adequate school supplies, safe play areas, and stimulating classes are all necessary for effective education. In many developing communities, many of these basic requirements are not available. Both boys and girls must be educated at the elementary, secondary and university levels given the considerable contribution both genders make to a nation's economy and culture, and their roles as future parents.

School facilities providing clean water and gender separated bathrooms, generally considered health issues, are significantly related to education. In many developing countries, less than half the primary schools have adequate water facilities and more than 60 percent have inadequate sanitation. Schools that do not have clean water and private toilets have substantially fewer girls attending, especially once girls reach puberty.⁸⁵ That is why the UN has determined, "The goal is for every primary school in the world to be equipped with separate sanitary facilities for boys and girls, and to have a source of clean and safe drinking water."⁸⁶ Developing countries cannot advance effectively if they do not educate their sons and their daughters, and girls are less likely to attend school when there are no private sanitary facilities.

"Human intelligence is puzzling. It is higher, on average, in some places than in others. It seems to have been rising in recent decades. Why these two things should be true is controversial."

-The Economist



Safe and welcoming learning environments are also vital. Psychosocial support is an education issue because children must have safe places to learn. Physical punishment is a fundamental concern in many developing country schools. "Caning" continues to be a common form of school discipline, even though outlawed in most countries. Student attendance and learning increases where there is a welcoming academic environment and kids are protected from physical abuse.⁸⁷

9. General Education

Countries that promote universal and quality education benefit from stronger economies, enjoy better healthcare, produce a more stable workforce, generate greater innovation, and experience increased longevity. While all levels of education are important, effective basic education is crucial. Primary school attendance ranges from 61 to 83 percent in developing countries, while only 49 percent of secondary school age children attend secondary school.⁸⁸

Parents, teachers and school administrators are generally motivated to provide the best education possible to children. However, several factors complicate or completely frustrate efforts to afford students quality education:

- Insufficient textbooks, supplies and materials
- Inadequate teacher pay and training
- Decrepit school buildings
- Lack of clean water, sanitary facilities and healthcare at schools
- Nonexistent or dangerous playground equipment
- Tuition and required uniforms beyond the means of poor families
- Inadequate school feeding
- Absenteeism due to infectious disease

Although every subject is important, learning the English language is fundamental to life-long success, because English has become the international language of commerce, technology and opportunity. English can be a passport out of poverty through

employment for many young people in developing countries, especially in a time of increasing globalization. Community leaders know that the ability to speak English provides new learning channels both online and on-site, opens doors to higher education, leads to better employment opportunities, provides access to improved healthcare, and reduces the likelihood of exploitation, especially among vulnerable populations.⁸⁸

“The brain is the most complex and costly organ in the human body. In human newborns, the brain demands 87 percent of the body’s metabolic budget, 44 percent at age five, 34 percent at age ten, and 23 percent and 27 percent for adult males and females, respectively. Presumably, if an individual cannot meet these energetic demands while the brain is growing and developing, the brain’s growth and developmental stability will suffer.”

-Christopher Eppig, et al.

Global Volunteers has engaged short-term volunteers to teach conversational English for more than 20 years, serving in 21 countries on five continents. We have found local English teachers in most communities are excellent grammarians. However, they often struggle with speaking the language, especially pronunciation, idioms, etc. Native English speakers provide students the opportunity to listen to and speak the language in ways they otherwise are not able.



Using Global Volunteers' Conversational English Teaching Guide, native English speaking volunteers become part of a process that inspires children to learn English. A steady stream of volunteers results in a cumulative measurable effect. The continuous flow ensures continuity and an ongoing opportunity for students to learn. Each volunteer becomes an important link in a long chain of volunteers making a significant difference.

The emphasis is on improving real-life conversational skills, not formal rules of grammar. Volunteers teach four hours a day, Monday through Friday, and dedicate another four hours each day collaborating with teammates and preparing for class. They use a variety of methodologies and lesson plans to help expand vocabularies and develop speaking, reading, writing, and listening skills.

Some communities ask for assistance in conducting conversational English language camps. One of the unique aspects of a camp program is that it incorporates experiential learning through field trips, presentations, walks, sports, arts & crafts, cooking, etc. The goal is to involve the students in fun activities where they can practice conversational English in several different contexts.

At the university and professional level, conversations involve subjects ranging from politics and government to religion, athletics, economics, celebrities and culture. By intensive and on-going exposure to native English speakers, students can make remarkable strides in their confidence and comfort level with the language. For example, some local teachers have told us that participation in a two-week intensive English language camp can be equivalent to spending many months learning English in a classroom. Science and math, history and sociology, literature and music, and agriculture and computer literacy are also necessary disciplines.

What Volunteers Do

Since 1984, Global Volunteers has engaged short-term volunteers in building and repairing schools and libraries, and teaching conversational English and other subjects. Local communities involve volunteers in a variety of ways and in a wide range of subjects and activities. Volunteers serve in diverse environments including elementary, middle and high schools, universities, businesses, government agencies, and intensive conversational English language camps. They teach what they know by sharing experiences from a job, profession, school or hobbies, always work under the direction of headmasters, principals, and rectors, and fully cooperate with local teachers and staff.

Volunteers:

- *Teach conversational English to elementary, middle, high school and university students.*
- *Teach math, science, computer literacy, geography, agriculture, health, nutrition and hygiene.*
- *Reinforce study skills.*
- *Help coordinate field trips.*
- *Provide school supplies.*
- *Train teachers in pedagogy, English and other subjects.*
- *Construct new classrooms, libraries, kitchens and bathrooms.*
- *Paint and furnish classrooms.*
- *Build playground equipment, athletic facilities, and health care clinics.*
- *Rehabilitate and maintain existing school buildings.*
- *Help improve academic curriculum.*
- *Develop school record keeping systems.*



Building a new library in Ghana.

Global Volunteers helps raise money for scholarships so children who otherwise are unable to attend, can go to school and learn.

10. Promoting Girls' Education

Two thirds of the world's illiterate adults are women.⁸⁹ Although gender gaps in primary school attendance have nearly closed globally, too often in developing communities parents do not send girls to middle or high school. Further, school is often withheld if parents are required to pay tuition or provide school uniforms. This practice denies society the critical development resources from its entire people – boys and girls alike. UNICEF and the World Food Program are among the strongest supporters of girls' education. The "Go Girls!" Education for Every Child campaign raises awareness, generates public support and mobilizes resources so that an ever-increasing percentage of girls are able to attend school.⁹⁰



What Volunteers Do

Global Volunteers strongly supports girls' education. Because two-thirds of our volunteers are women, and the majority of our volunteers have taught in the classroom, Global Volunteers are natural role models for the equitable treatment of girls. All our volunteers promote girls' education.

Volunteers:

- *Demonstrate that women and men can perform any job and can be successful in any career.*
- *Support UNICEF's "Go Girls!" campaign and WFP's program that encourages parents to release their daughters from household responsibilities to attend school.*
- *Participate in curriculum development to help ensure appropriateness for female students.*
- *Sponsor female students through Global Volunteers fundraising efforts that pay for tuition, uniforms, books and other educational materials.*

"Educating girls is critical for development. Educating girls raises economic productivity, it reduces poverty and it reduces infant and maternal mortality. It helps improves nutritional status and health."

*-Ann M. Veneman
Former Executive Director UNICEF*

11. Potable Water and Sanitary Latrines

Most people in the developed world cannot imagine children attending schools where there is neither potable water nor clean bathrooms, not to mention no bathroom, no clean water to wash hands, and no private latrines for girls or boys. UNICEF estimates more than 50% of schools in developing countries are without safe drinking water or adequate sanitation facilities.⁹¹ Some schools have no facilities at all; others are completely unacceptable: dilapidated toilets, germ-laden, not separated by gender, and havens for infectious disease. All too often, administrators, teachers, and parents in impoverished communities simply do not have sufficient financial resources to provide better facilities.



What Volunteers Do

Global Volunteers works with local school officials to identify potential funders through private and corporate foundations, and individual donors to support construction of clean water and sanitation facilities. Volunteers with backgrounds in architecture, sanitation, water systems, wells, and construction serve under the direction of, and hand-in-hand with, community and school leaders in these efforts.

Volunteers:

- *Provide technical expertise in the design of sanitation facilities and waste disposal systems.*
- *Develop wells and water systems.*
- *Construct private, separate sanitary facilities near schools but at a safe distance from the community's water supply.*



Volunteer helping construct bathroom facility at a child care facility in Ecuador.

12. Psychosocial Support

The psychosocial dimensions of schools, orphanages and children's homes are vitally important in children's lives and to their healthy development. Yet data from developing countries shows that more than 65 percent of children are subject to physical punishment.⁹³ Children require nurturing, affection, support, social interaction, recreation, and mentoring from stable, caring adults in schools and other institutions that care for children. Caregivers must be sensitive to, and understand the requirement for, the basic psychosocial needs of the children whom they serve.



What Volunteers Do

Global Volunteers serves children at orphanages, children's homes, clinics, and schools, always ensuring psychosocial support.

Volunteers:

- *Offer children love, nurturing, and affection.*
- *Provide social stimulation and support.*
- *Encourage schools and orphanages to have a positive, caring environment.*
- *Feed, bathe, and diaper infants and toddlers.*
- *Supply toys, athletic equipment and recreational kits.*
- *Support community involvement in local schools.*
- *Discourage caning and other forms of physical punishment.*

“A school’s environment can enhance social and emotional well-being and learning when it:

- *Is warm, friendly and rewards learning.*
- *Promotes cooperation rather than competition.*
- *Facilitates supportive, open communications.*
- *Prevents physical punishment, bullying, harassment and violence.*
- *Promotes the right of boys and girls through equal opportunities and democratic procedures.”*

The Essential Package

Conclusion

Volunteers are Essential to Deliver the Essential Services.

Amazingly, if only one to two percent of the population volunteered, we could deliver the essential services to every child on the planet who needs them. The rationale is compelling. If children are provided sufficient food and nutrition and protected from infectious disease, they can exercise their full intellectual capability through education. There are 12 proven essential services, that when integrated, ensure sufficient nutrition, prevent disease, and provide education. Short term volunteers are a vital component to helping local communities deliver these essential services.



Volunteers leave their mark on the world.

Most caring people would agree that dramatically improving the opportunity for children to realize the fullness of their potential is a necessary and sufficient result in and of itself. Why? Because we are talking about children. Because children are innocents. Because children have nothing to do with the tragic and difficult circumstances they're in. Because children are the future. Because adults have the responsibility to care for children and ensure that they have the opportunity to realize the fullness of their God-given potential. Because each generation has a seminal duty to ensure the success of the next generation.

However, there are added benefits that arise from ensuring every child receives all 12 Essential Services:

- **Stronger Families:** When children are healthy and parents are confident they can provide sufficient food and education for their children and prevent infectious disease, the entire family benefits.
- **Decreased Violence:** There is strong evidence that when children's brains fully develop and children are constructively occupied at school, they are less likely to be influenced by those who encourage violence or terrorism.
- **Additional Wealth:** The World Bank reports that when a country's population is appropriately nourished, the gross domestic product is enhanced.
- **Reduced Population:** Improved nutrition and protection from infectious diseases reduces deaths during pregnancy, childbirth and early childhood. When fewer children die, parents are less inclined to conceive more children. The long-term result is a slower rate of population growth.
- **Increased Trade:** Well-nourished, educated and healthy children become healthy and prosperous adults who become new customers for life-enriching products. Decreasing hunger, improving health and advancing IQ results in increased export and import opportunities for all countries.

During the past three decades, Global Volunteers has demonstrated that short-term volunteers, serving at the invitation and under the direction of community leaders, make an important contribution helping deliver essential services to children. Volunteers become catalysts – motivating local communities to collaborate to take advantage of the resources offered. Because Global Volunteers’ development philosophy requires community partners to provide local participants in a number equal to or greater than the number of volunteers invited, the resulting human resources available to help meet the needs of children are magnified. Ultimately, the positive, constructive results of this interchange, when sustained through volunteer teams serving several times a year, for many years, in hundreds of partner communities worldwide are exponential.

However, in order to deliver the 12 Essential Services to every at-risk child, hundreds of thousands of additional volunteers are required. This valuable resource is readily available in the developed world. If just one to two percent of those living in the developed world volunteered for only two to three weeks a year, helping communities in the developing world deliver the Essential Services to their children, the vast majority of needy children would be served. This would benefit all humanity as many of the world’s most pressing challenges could be resolved within a generation or two.

Hundreds of millions of adults care about children who live in life-constraining circumstances. But caring is not enough. Children need concrete action on the part of volunteers from the developed world and on the part of community leaders in the developing world. Every person and community who participates in this endeavor will reap tremendous benefits due to two basic truths: Give and you shall receive; Teach and you shall learn.

But first you must act.

We invite you to collaborate with us on behalf of children all over the world.

“Caring alone is not enough. I wish it were. I wish it were so self-evident that all we had to do was to say to one another, ‘Well, we care about this,’ and action would somehow burst forth. But we need to be the actors. We need to channel our care into concrete actions.”

-Hillary Rodham Clinton, U.S. Secretary of State

End Notes

- 1 See Daley, Tamara C., Shannon E. Whaley, Marian D. Sigman, Michael P. Espinosa and Charlotte Neumann. "IQ on the Rise: The Flynn Effect in Rural Kenyan Children." *Research Science, Psychological Science*. Vol. 14, No. 3 (May, 2003). 215-219; Grabtgan-McGregor, S. M., S.P. Walker and S. Chang. "Nutritional Deficiencies and Later Behavior Development". *Proceedings of the Nutrition Society*. (2000):59, 47-54; Lozoff, B., Elias Jimenez, and Julia B. Smith. *Double Burden of Iron Deficiency in Infancy and Low Socioeconomic Status*. *Arch Pediatr Adolesc Med*. (2006):160. 1108-1113.
- 2 World Food Programme and UNICEF. *The Essential Package*. (2005). <http://www.un.org/esa/socdev/poverty/PovertyForum/Documents/The%20Essential%20Package.pdf>.
- 3 The Essential Package uses the term "interventions" to describe these 12 actions. However, because Global Volunteers typically is not asked to make interventions, but rather to provide services, we call these "Essential Services."
- 4 Global Volunteers. *Strategy for Development: A Philosophy of Service*. (1987). <http://www.globalvolunteers.org/organization/philosophy/PhilOfSvc061218.pdf>.
- 5 Hunger is defined as "a condition in which people lacked sufficient macronutrients (energy and protein) and micronutrients (vitamins and minerals) for fully productive, active, and healthy lives. Hunger can be a short- or long-term problem with many causes and a range of effects ranging from mild to severe." See *Our Common Interest: Ending Hunger and Malnutrition, The 2011 Hunger Report*. 13 Published by Bread for the World Institute. <http://www.hungerreport.org/2011>.
- 6 The World Federation of Neurology reports that "Malnutrition can be subdivided into two types of constituents: protein-energy malnutrition and micronutrient deficiencies." *World Federation of Neurology – Neurologic Consequences of Malnutrition*, p 3. http://www.wfneurology.org/pdfs/WFNreports/wfn_demos_malnutrition.pdf. June 9, 2007
- 7 Malnutrition and undernutrition are used interchangeably in this document. The term "undernutrition" is defined by UNICEF as "the outcome of insufficient food intake (hunger) and repeated infectious diseases. Undernutrition includes being underweight for one's age, too short for one's age (stunted), dangerously thin (wasted), and deficient in vitamins and minerals (micronutrient malnutrition)." Malnutrition is described in the 2001 *Hunger Report* as occurring "when people's diets do not provide adequate nutrients for growth and maintenance of health, or their bodies cannot fully utilize the food they eat due to illness. Malnutrition includes being underweight for one's age, too short for one's age (stunting), dangerously thin for one's height (wasting), and deficit in vitamins and minerals (micronutrient deficiencies)." See *Our Common Interest: Ending Hunger and Malnutrition, The 2011 Hunger Report*. 13 Published by Bread for the World Institute. <http://www.hungerreport.org/2011>.
- 8 "Undernutrition among pregnant women in developing countries leads to 1 out of 6 infants born with low birth weight and is an underlying cause of an estimated 53 percent of all under-five deaths." See *Progress for Children: a Report Card on Nutrition*. UNICEF and United for Children. (2006) May Number 4. http://www.unicef.org/media/files/PFC_Nutrition.pdf. 3.
- 9 *Ibid*. 31.
- 10 Eppig, Christopher, Corey Fincher, and Randy Thornhill. "Parasite Prevalence and the Worldwide Distribution of Cognitive Ability". *Proceedings of the Royal Society*, published online 30 June 2010. doi: 10.1098/rspb.2010.0973
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- 12 Food and Agriculture Organization of United Nations. *Household Food Security and Community Nutrition. Improving Nutrition through Home Gardening*. http://www.fao.org/ag/agn/nutrition/household_gardens_en.stm
- 13 World Food Programme and UNICEF. *The Essential Package*. 17.
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Global Volunteers is a private, non-profit, non-sectarian international human and economic development organization that focuses on improving the lives of children. Founded in 1984, Global Volunteers sends teams of short-term volunteers to work on long-term development projects. Nearly 30,000 volunteers have served in more than 30 countries on six continents. From all backgrounds and of all ages, volunteers become “servant-learners,” working with and learning from and about local people. Work projects are determined by the host communities and directed by local leaders. Service-learning programs are led by Global Volunteers’ local national country managers and U. S. team leaders.

Global Volunteers is in consultative status with the United Nations ECOSOC and UNICEF and partners with more than 200 international, national, and local organizations worldwide. Facilitating community-driven development that addresses hunger, health and cognition, Global Volunteers mission is to wage peace and promote justice through mutual international understanding.

Global Volunteers Board of Trustees protects the financial integrity of the organization and ensures faithfulness to its vision and mission. Each trustee has been involved with Global Volunteers from the beginning in 1984 and has played a significant role as the corporation has learned and grown. The five members of the board of trustees meet annually and elect the board of directors.

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