



Annual Report 2014



*Cover Photo: Tewodros Emiru, Lilongwe, Malawi.
Nurses in the Maternity Ward of Kawale Health Center
in Lilongwe, Malawi display neonatal resuscitation
equipment in use. CHAI helped procure 1,722 bags,
masks, and resuscitation devices used to treat birth
asphyxia, a leading cause of neonatal deaths in Malawi.*



In Memoriam

Over the past year, the CHAI family has lost four members who will be sorely missed. We dedicate the 2014 Annual Report to each of them and the valuable contributions they made to the mission of CHAI.

Yermias Ayomi

Yermias Ayomi, known to most as “Om (uncle) Jerry,” died unexpectedly while hospitalized for malaria in the Yowari District Hospital, Jayapura District in May 2015. Om Jerry was a kind, gentle, quiet man who served as a driver for the CHAI Jayapura office in Indonesia. Om Jerry was always ready to lend a hand toward the success of clinical care activities. He is survived by his wife, Umi, and two adult sons.

Jefferson Kerkulah

Jefferson Kerkulah was CHAI Liberia’s first national staff driver, joining CHAI in 2007. Jeff supported logistics for the CHAI Liberia office for over seven years both safely and enthusiastically. He enjoyed spending time with his family and sitting on his front porch, enjoying the cool breeze. Jeff passed away in May 2015 and is survived by his wife, Nowah, and two children.

Chandra Sharma

Chandra Sharma, CHAI’s Senior Director of the Essential Medicines team in India, passed away suddenly in February 2015. Since joining CHAI in 2012, Mr. Sharma pioneered CHAI’s Zinc and Oral Rehydration Salts (ORS) program in India, a lifesaving initiative to reduce diarrhea-related child mortality. Mr. Sharma’s tenure in public health was largely influenced by nearly 40 years of service in the private sector, applying business principles and practices to public health. He is survived by his wife, Nalini, and two sons.

Prince Yorbe

Prince Yorbe joined CHAI Nigeria in March 2013 as a driver in the Abuja office and after a year was transferred to support the Kano office in the same capacity. He passed away in May 2015 after a brief illness. Prince was a dutiful and dependable member of the CHAI Nigeria team; he was committed to his work and well-liked by his colleagues. The team will always remember his kind and jovial personality. Prince is survived by his wife, Rosemary, and three children.

Acknowledgements

CHAI’s work is possible thanks to a committed network of donors and partners.

Absolute Return for Kids; AIDS Life Association (Life Ball); Alan Schwartz (Schwartz Family Foundation); Associates of Otolaryngology; The Australian Government; Barcelona Institute for Global Health (ISGlobal); Bill & Melinda Gates Foundation (BMGF); Cameroon Baptist Convention Health Board; Cameroon Comite National de lutte contre le SIDA; Centers for Disease Control and Prevention (CDC); Children’s Investment Fund Foundation; Chubb Federal Insurance Company; Cleveland Foundation (Sedgwick Family); Dale C. Rosenbloom (CGLC Charitable Trust); David Owain Ellis; Dolenz Productions; Domain Man; The ELMA Foundation; The ELMA Vaccines and Immunization Foundation; Edward Wood; Elton John AIDS Foundation; Government of Canada provided through the Department of Foreign Affairs, Trade, and Development (DFATD); The Global Fund to Fight AIDS, Tuberculosis and Malaria; Global Health Corps; Harry and Sandra Zimmerman; Harvard Community Gifts; Health Partners International; Hewlett-Packard Company; I Do Foundation; IKEA Foundation; Institute of Human Virology, Nigeria; International Initiative for Impact Evaluation; The Government of Ireland; Isdell Flowers Foundation; James J. Mossman; John and Sandra Ritchie; John H. Bride; Judith and

Morton Grosz; Krista Thompson; Leonard Levine MD and Beryl J. Levine; MAC AIDS Fund; Mala G. Gaonkar; Malaria No More; Medicines for Malaria Venture; Michele Sanders; Mitchell and Joleen Julis; National Emergency Response Council on HIV/AIDS, Swaziland; New Zealand Ministry of Foreign Affairs and Trade; Norwegian Ministry of Foreign Affairs; OAK Foundation; Olena Pinchuk Anti-AIDS Foundation; Ophelia Dahl and Paul Farmer; Pangaea Global AIDS Foundation; Population Services International; Raymond G. Chambers (MCJ Amelior Foundation); Results for Development Institute; Robert S. Kaplan Foundation; Robert Selander (The Selander Foundation); Save the Children; STOP AIDS NOW!; Swedish International Development Cooperation Agency; Todd and Christine Fisher; TRUiST on behalf of donors from workplace giving programs managed by TRUiST; UK Department for International Development (DFID); UNITAID; United Nations Children’s Fund; United Nations Foundation; The Regents of the University of California, San Francisco Campus; University of Malawi, College of Medicine; Wallis Annenberg (Annenberg Foundation); Wayne Thompson; William Shutzer; World Health Organization (WHO)

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Message from the CHAI Leadership Team

The Clinton Health Access Initiative, Inc. (CHAI) was founded in 2002 with the transformational goal of saving the lives of millions of people suffering from HIV/AIDS in the developing world by assisting governments to scale up care and treatment. Today, over 15 million people are in treatment up from only a few hundred thousand when CHAI began work. Most of these people now live healthy, productive lives, allowing their families to cherish their presence instead of grieve their death.

2014 was a financially successful year for CHAI as we grew our revenues by almost 30 percent and earned a small surplus for the fourth year in a row. But CHAI is not a business defined by our growth or financial success. CHAI is a mission-driven organization working with partner governments to save lives and reduce the burden of disease worldwide. Our success in this mission defines who we are.

Many governments and organizations are responsible for the successful scale-up of HIV/AIDS care and treatment, but we think most would agree that CHAI has played a significant role. While this is a great achievement, there are still too many people dying from AIDS, malaria, tuberculosis, and other treatable diseases. CHAI is committed to continue to improve health systems to save more lives.

Over the past few years, CHAI has undertaken efforts to help accomplish goals as ambitious and important as the initial successful scale-up of HIV/AIDS care and treatment. We are working to eliminate malaria in many countries that have been plagued by the disease for centuries and

to reduce mortality from the disease in high-prevalence areas. We are assisting governments to access affordable vaccines and improve the cold chain distribution systems for these vaccines to ensure that they reach as many children as possible. We are supporting governments in Africa to expand the number of well-trained healthcare professionals. We are helping to reduce deaths due to diarrhea in children and to provide better diagnosis and treatment for tuberculosis. We are empowering women and saving lives by increasing the availability and affordability of long-acting reversible contraceptives. We are assisting governments to develop more sustainable health financing systems and to use financial resources at their disposal more effectively. We have also recently initiated new programs to reduce maternal and newborn deaths resulting from childbirth, combat malnutrition in children, and lower mortality due to hepatitis. Collectively, these programs help governments build and sustain strong and accessible health systems.

Every human life is sacred. Every child, whether born into a wealthy family in the United States or Europe or a poor family in Africa or Asia, deserves a chance to fulfill his or her potential free from debilitating disease or premature death. A good quality health system is essential to any nation wishing to lift its people from poverty.

These are the beliefs that motivate CHAI and its people.

The CHAI Leadership Team

RESPONDING TO THE EBOLA CRISIS IN LIBERIA

In Liberia, a decade of conflict stretching into the early 2000s killed an estimated 270,000 people and decimated the nation's health infrastructure. It also devastated Liberia's capacity to deliver vital health and social services. In 2006, CHAI was the first international nongovernmental organization invited to support the Government of Liberia to help rebuild its health system. Although much progress has been made since the end of the war, the Ebola outbreak beginning in March 2014 highlighted lingering weaknesses within the still nascent health system.

At the onset of the outbreak, CHAI redirected all of its efforts and resources in the country to support the Ministry of Health and Social Welfare's (MOHSW) capacity to respond to the crisis. CHAI joined the newly-established National Task Force, which later transitioned to the Incident Management System.

Because of CHAI's close relationship with the government and nearly a decade of experience supporting the MOHSW, as the response grew in size and scope, the government asked CHAI to play a role in coordinating partners to streamline activities and ensure they aligned with the government's priorities.

CHAI helped develop the necessary systems to sustain a comprehensive, government-led response, with a particular focus in the areas of case management, including scaling up Ebola treatment units (ETUs), training both national and international health workers, and supporting supply chain management. Though it was an unprecedented outbreak, because of Liberia's swift and coordinated response the country averted the projected worst-case scenario.¹ At the end of December 2014, there were 8,115 cumulative (confirmed, probable, and suspected) cases, with 3,471 cumulative deaths.² In May 2015, Liberia was declared free of Ebola, having gone 42 days without a new infection. As of July 1st, 2015, a few additional isolated Ebola cases were confirmed in Liberia. CHAI remains committed to supporting the Liberian Government to address the crisis. CHAI's Ebola response efforts were financially supported by the Norwegian Ministry of Foreign Affairs and the UK Department for International Development (DFID).

CHAI has resumed working to help the Liberian Government build a more resilient and sustainable health system moving forward. In 2014, CHAI, with support from the ELMA Foundation, conducted significant analyses of the current health workforce including current workers, the pipeline of health workers being produced, the capacity of professional schools, and the investment required to improve the quality of education and increase the number of healthcare workers. This work demonstrated that the country would not meet its health workforce targets given the current rate of production and retention. As a result, CHAI helped the MOHSW develop a seven-year plan for education, hiring, and deployment of highly-qualified healthcare workers. These analyses have taken on even greater importance as the government rebuilds after the Ebola crisis, which both exposed and exacerbated critical health worker shortages in Liberia. During the Ebola outbreak, health workers were at 30 times higher risk of infection than the general population. By December 2014, 370 health workers had been infected, and 178 had died from the disease.³ CHAI is now assisting the government to secure funding for implementing this plan.

Ebola Response Highlights

Ebola treatment units (ETUs)

- *Negotiated with Médecins Sans Frontières to procure the first two Ebola treatment kits and continued to negotiate with international partners to manage ETUs.*
- *Developed case definition algorithm for Ebola diagnosis and care, standard operating procedures for laboratories, and clinical and non-clinical guidelines for ETUs.*
- *Expanded bed capacity at ETUs from 200 to 700 in two months; helped the government manage treatment of more than 8,000 patients.*
- *Helped open the first government-run ETU in Liberia through donation of supplies and helped the government direct clinical care.*

Health worker training and infection prevention control

- *With emergency assistance from the Norwegian Ministry of Foreign Affairs, brought thousands of protective garments to Liberia for health workers early in the epidemic.*
- *Coordinated integrated Ebola and infection prevention and control training with planned nationwide rollout for all 9,000 health workers (this work is ongoing).*
- *Developed and distributed nationally more than 5,000 triage flowcharts for health facilities at the onset of the outbreak.*
- *Spearheaded novel training opportunities including cold (classroom, mock ETU) and hot (real ETU) experiences to fully train 2,456 health workers.*

Procurement and supply chain

- *Opened and managed the Ebola warehouse at the MOHSW, trained daily hires and MOHSW staff, developed an inventory management system, and dispatched supplies.*
- *Developed a weekly stock status/pipeline tool to allow for better coordination among domestic and international partners.*

1. "Worst-Case Scenario Averted, But Fight to Contain Deadly Ebola Outbreak Far from Over, Special Representative Warns General Assembly," United Nations (2014): <http://www.un.org/press/en/2014/ga11854.doc.htm>.

2. "Liberia Ebola Daily Sitrep no. 230," Liberian Ministry of Health (December 31, 2014): <http://www.mohsw.gov.lr/documents/Sitrep%20230%20Dec%2031st%202014.pdf>.

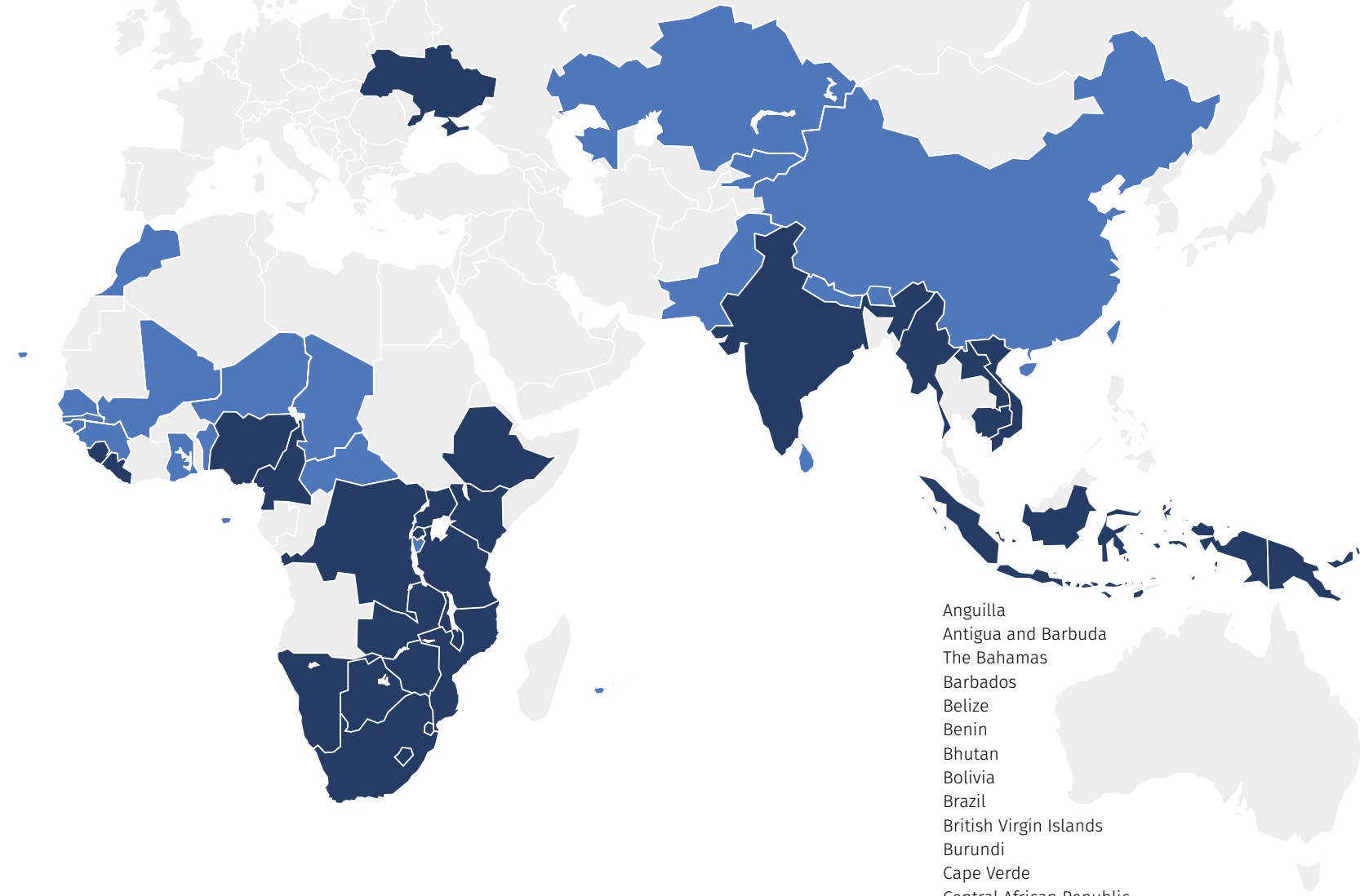
3. *Ibid.*

WHERE CHAI WORKS

In 2014, CHAI worked in 32 countries to expand access to treatment, strengthen management capacity, improve procurement and laboratory services, and train healthcare workers. CHAI seeks to expand care to marginalized populations, such as children and people living in rural areas.

Program and Procurement Consortium Countries

Botswana
Cambodia
Cameroon
Democratic Republic of Congo
Ethiopia
Guatemala
Haiti
Honduras
India
Indonesia
Jamaica
Kenya
Lao PDR
Lesotho
Liberia
Malawi
Mozambique
Myanmar
Namibia
Nigeria
Panama
Papua New Guinea
Rwanda
Sierra Leone
South Africa
Swaziland
Tanzania
Uganda
Ukraine
Vietnam
Zambia
Zimbabwe



Procurement Consortium Member Countries have access to CHAI-negotiated price reductions for key high-quality medicines and diagnostics.

Procurement Consortium Countries

Anguilla
Antigua and Barbuda
The Bahamas
Barbados
Belize
Benin
Bhutan
Bolivia
Brazil
British Virgin Islands
Burundi
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Commonwealth of Dominica
Dominican Republic
Ecuador
El Salvador
Gambia
Ghana
Grenada
Guinea
Guinea-Bissau
Guyana
Kazakhstan
Kyrgyz Republic
Mali
Mauritius
Montserrat
Morocco
Nepal
Niger
Pakistan
Paraguay
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
São Tomé and Príncipe
Senegal
Sri Lanka
Suriname

We are a mission-driven organization

We want people to work with us because they believe in our mission of saving lives, reducing the burden of disease, and strengthening health systems. CHAI employee satisfaction comes primarily from the fact that we collectively succeed in advancing our mission.

We have an entrepreneurial and action-oriented culture

We hire knowledgeable individuals and give them wide latitude to conceive of and execute programs. Some of our greatest accomplishments, large and small, were not planned centrally. We are willing to take risks and attempt to achieve goals that are substantial, challenging, and uncertain. We believe that the successes made possible by our risk-taking more than outweigh the failures.

While we are not perfect in living by these values, we strive to do so as fully as possible.

We operate with humility

We do not actively publicize our work, independent of the publicity that our government partners request. We try to foster a culture of respect for the people we serve and for our local government partners.

We work in cooperation with and at the service of partner governments

We believe that to make programs sustainable and scalable, we need to strengthen national health systems by working with ministries of health. As we work closely with partner governments, we aim to build capacity so that our role is eventually unnecessary and programs are completely transitioned to the leadership of local partners.

We are frugal

We feel that the donor money we raise should go as much as possible to saving lives directly rather than to compensating ourselves excessively, elaborate expenses, or high overheads.

We recognize our staff is our greatest asset

Primarily, the talent and hard work of the exceptional individuals who work for CHAI drive our successes. We strive to support and protect our well-performing staff to grow and thrive within the organization and to enable them to have a major impact in fulfilling the mission that causes them to work at CHAI.

A cold chain manager at the North Gondar zonal cold store in Amhara Region, Ethiopia packages vaccines for distribution to health centers. CHAI supports the Government of Ethiopia to strengthen the vaccine cold chain system, improve vaccine management, and introduce new lifesaving vaccines on an accelerated timeline. CHAI works with the Government of Ethiopia to introduce new technologies to monitor temperature of vaccines in storage as well as to increase vaccine storage capacity. In addition, CHAI supports efforts to improve cold chain maintenance in all regions of Ethiopia.

We operate based on trust and transparency

We expect employees and partners to make ethical decisions, to work hard, and to manage their own work. We try to minimize the internal bureaucracy by not overburdening our people with too many managerial constraints.

We work with urgency

People are dying unnecessarily from AIDS, malaria, tuberculosis, and other treatable diseases and the world often responds too slowly. We understand that the faster we act, the more lives can be saved.



CHAI History

Select Achievements

2002

In 2002 and 2003, CHAI initiated the first programs in Africa and the Caribbean that aimed to scale up HIV/AIDS care and treatment on the national level. Since then, CHAI has helped over 30 countries to do so.

2003

In 2003, CHAI negotiated a price reduction of over 60 percent for first-line HIV drugs. More than 60 countries have taken advantage of the CHAI-negotiated price reduction.

2004

In 2004, CHAI negotiated 50 to 90 percent reductions in the price of CD4 tests and other tests used for HIV worldwide. Coupled with CHAI's technical support, these price reductions enabled the nationwide scale-up of CD4 testing in over 40 countries.

2005

Starting in 2004 and 2005, CHAI launched a global effort to scale up treatment for children with HIV, increasing the number of children on treatment from 15,000 in 2004 to 600,000 in early 2015 in 34 countries. This was made possible by CHAI's partnership with UNITAID, formed under the leadership of the French Government with CHAI's assistance. Together, CHAI and UNITAID helped lower the price of first-line pediatric AIDS drugs from US\$600 per child per year to around US\$60 per child per year. CHAI also worked to scale up the deployment of specialized tests needed for small children from 50,000 to over 1 million tests per year.

2006

Since 2006, CHAI has worked to reduce the cost of and increase the availability of malaria drugs with the goal of no child dying of this treatable disease. In 2011, CHAI launched its efforts to increase access to more effective drugs for severe malaria that have the potential to avert 50,000 deaths annually in Nigeria alone.

2007

From 2005 to 2007, working with UNITAID, CHAI negotiated agreements to lower the price of second-line AIDS drugs by over 75 percent and subsequently accelerate the rollout of these drugs in over 30 countries to HIV patients whose treatments were failing on first-line drugs.

Between 2007 and 2013, with support from DFID and the Bill & Melinda Gates Foundation (BMGF), CHAI facilitated a 62 percent price reduction for the fixed-dose combination of tenofovir/lamivudine/efavirenz by developing a more efficient manufacturing process for key components and identifying lower-cost, high-quality raw materials. The regimen is now recommended by the World Health Organization (WHO) as the preferred first-line treatment for adults.

2008

Between 2008 and 2011, CHAI helped reduce mother-to-child transmission of HIV by 40 percent in high-burden areas of six countries by focusing on increasing demand for services at the community level and improving service delivery.

2009

Beginning in 2009, CHAI assisted the Government of South Africa, the nation with the highest HIV burden in the world, with the largest scale-up of HIV care and treatment ever attempted, from 800,000 people in 2009 to over 3 million people today. CHAI helped negotiate agreements to lower HIV and TB drug prices that have saved the South African Government almost US\$1 billion. These savings are now being reallocated to treat more people within existing budgets. With assistance from CHAI, South Africa scaled up its HIV/AIDS care and treatment facilities from less than 500 to over 3,300 to enable treatment expansion.

2010

Beginning in 2010, CHAI has been working to scale up access to rapid diagnostic tests in places where malaria cases are treated but where diagnosis is not currently available. Most recently, CHAI facilitated procurement of nearly 2 million low-cost tests across Kenya and Tanzania.

2011

In 2011, supported by BMGF, CHAI conducted a study that illustrated the facility-level cost of treatment for HIV/AIDS was significantly lower than previously understood, at US\$200 per patient per year in low- and middle-income countries. Larger than any study of its kind, the Multi-Country Analysis of Treatment Costs for HIV/AIDS (MATCH) Study was conducted with the Governments of Ethiopia, Malawi, Rwanda, South Africa, and Zambia. Analyses of the cost and impact of treatment scale-up provided governments the evidence needed to make close to 500,000 patients eligible for treatment. In 2014, CHAI began a follow-up study to understand how this patient scale-up has affected costs in Zambia and Malawi, and informed recommendations to improve efficiency and effectiveness of treatment.

Since 2011, with support from the Government of Canada provided through the department of Foreign Affairs, Trade, and Development (DFATD) and BMGF, CHAI has been pioneering strategies in Ethiopia, Kenya, Malawi, and Tanzania to roll out new vaccines, such as pneumococcal and rotavirus, more quickly and effectively. Working with BMGF and with the support of DFID, CHAI negotiated a landmark deal to lower the price of rotavirus vaccine by 67 percent from US\$15 per child to US\$5 per child, with estimated savings to the global community of US\$680 million from 2012 to 2016, and negotiated a 45 percent reduction in the price of pentavalent vaccine, saving an estimated US\$225 million from 2013 to 2017.

Since 2011, CHAI has helped the Government of Rwanda move toward establishing a world-class health system by implementing an unprecedented program to educate Rwandese doctors, nurses,

midwives, and health managers. With support from the ELMA Foundation, CHAI helped the government develop its human resource plan and facilitate a consortium of universities including 10 medical schools, six nursing schools, two schools of dentistry, and one school of public health, and to send more than 100 faculty members per year for seven years to Rwanda to work with their Rwandese colleagues to develop a world-class health education system. During this period, enough Rwandese medical education professionals will be educated to world-class standards to eliminate the need for foreign presence. In addition, CHAI is assisting the government to invest in equipment to upgrade its teaching hospitals and schools.

2012

In 2012, with the support of DFID, the Norwegian Ministry of Foreign Affairs, the Swedish International Development Cooperation Agency, the Children's Investment Fund Foundation (CIFF), and BMGF, CHAI negotiated an agreement to lower the price of two brands of contraceptive implants, both long-acting reversible contraceptives (LARCs), from US\$18 to US\$8.50 per implant and is now accelerating the rollout of these products. The Jadelle Access Program alone is on track to avert more than 31 million unintended pregnancies between 2013 and 2018, and will ultimately avert over 414,000 child deaths and 41,000 maternal deaths.

2013

In 2013, with support from IKEA Foundation, BMGF, the Norwegian Ministry of Foreign Affairs, and Absolute Return for Kids, CHAI worked to scale up access to and usage of zinc/ORS as the recommended treatment for diarrhea in India, Kenya, Nigeria, and Uganda by building demand and increasing availability in both the private and public sectors. CHAI supported governments to lower the cost of zinc/ORS products. As a result of these efforts, wholesale prices have been reduced by 60 percent.



HEALTH AREAS

A nurse records patient data in the pediatric ward of Mbagathi District Hospital in Nairobi, Kenya.

The following section provides an introduction to CHAI's core health programs and includes select highlights from 2014.

HIV/AIDS & TB

Despite advances in treatment, care, and prevention, HIV/AIDS continues to overwhelm communities and challenge health systems. Infection incidence is slowing, though there is still considerable unmet need to treat HIV-positive children and adults, with an acute disparity in the number of children receiving lifesaving antiretrovirals (ARVs) compared to adults.



Makhosonke, pictured here with his son, is living with HIV and a member of the Swaziland Network for People Living with HIV (SWANNEPHA). Swaziland's Ministry of Health, supported by CHAI and the MaxART partners, is implementing an Early Access to ART for All (EAAA) study to determine how best to utilize evidence that early initiation of ART not only has individual health benefits but also contributes to the prevention of HIV transmission. SWANNEPHA plays an essential role in the implementation of the study by ensuring the needs, realities, and human rights of people living with HIV are incorporated in the development of EAAA messages and materials. In addition, SWANNEPHA also engages support groups for people living with HIV for dissemination of the EAAA messages.

2014 HIV/AIDS Testing Highlights

With support from DFID, CHAI worked closely with the Government of South Africa, United Nations Program on AIDS (UNAIDS), the Diagnostic Access Initiative, President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and Roche to negotiate a global access price of US\$9.40 per viral load (VL) test, which will save more than US\$150 million over the next five years. Prior to this agreement some governments were paying between US\$40 and US\$80 per test. CHAI is now working closely with countries to increase patient access to the reduced price test, which will dramatically improve the quality of care that HIV patients receive. For over 15 years, VL has been the standard of care in high-income settings to confirm that patients respond to their medications, enabling early and accurate diagnosis of treatment failure and identifying the need to transition to second-line drugs. Access to VL testing has been limited in low- and middle-income countries primarily due to its high price, resulting in those countries using a non-optimal test to monitor treatment.

With support from DFID and UNITAID, CHAI facilitated a global expansion of POC CD4 testing, increasing patient access to on-site CD4 testing to 68 percent in focal countries including Ethiopia, India, Kenya, Lesotho, Malawi, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. CHAI's focal countries conducted a total of 1.4 million POC CD4 tests in 2014. CHAI also accelerated the market entry of a second POC supplier, BD FACS Presto, which will facilitate further price reductions for POC CD4 tests as it joins the existing supplier, Pima, in the marketplace.

Working with Hewlett Packard, Kenya's Ministry of Health (MOH), the local PEPFAR program, and Strathmore University, CHAI built data centers and an open source web-based software platform that captures program data and manages the laboratory workflow and testing of VL samples and early infant diagnosis (EID) samples from seven national laboratories that serve the entire country. This system has been responsible for the delivery of over 500,000 individual diagnoses in the past year with capacity for many more, hence making it possible, at national scale, to switch the monitoring of more than 750,000 HIV patients on ART from CD4 to VL, which is the preferred patient monitoring test.

In Swaziland, with support from DFID, CHAI supported the Central Medical Stores (CMS) and Swaziland Health Laboratory Services (SHLS) with their respective annual ARV and laboratory commodity forecasting by developing order and payment tracking tools, using key performance indicators to monitor performance of suppliers, and improving inventory management in the laboratory. As a result, the CMS and SHLS have shown significant improvement in their ordering practices; by Q2 of fiscal year 2014, the SHLS and CMS had both placed approximately 90 percent of their budgeted orders, compared to 25 percent and 75 percent respective total budget utilization in fiscal year 2013. To further strengthen Swaziland's laboratory systems, CHAI provided technical assistance to the SHLS to standardize chemistry equipment across the laboratory network, which was the MOH's first attempt to secure long-term leases for critical laboratory equipment. This is anticipated to lower costs by US\$100,000 for SHLS while increasing throughput and reliability of tests.

With the financial support of MAC AIDS Fund and Elton John AIDS Foundation (EJAF), CHAI supported the Government of Jamaica's National HIV/STI Program (NHP) to reduce the number of new adult HIV infections by scaling up HIV testing in 16 hospitals through provider-initiated testing and counseling (PITC). Data collected from two of the hospitals scaling up PITC demonstrated 62 percent of all patient admissions were tested for HIV, a dramatic increase from 22 percent of patients tested July 2013 through December 2013. Of the patients who tested positive, 90 percent were linked to care. CHAI, in collaboration with the NHP, developed a standard protocol for HIV referral and linkage to care to be used in all 16 facilities to help ensure patients are connected with appropriate treatment and monitored.

In 2014, CHAI helped Ukraine's national partners pilot local manufacturing of dried tube specimens (DTS), a cost-effective external quality control mechanism for HIV rapid testing, which adheres to the Centers for Disease Control and Prevention (CDC) and WHO standards for the first time. Availability of affordable and reliable external quality control materials is critical to ensuring practitioners are involved in the external quality control programs, thus enabling adequate diagnostic decisions and follow-up care for those tested for HIV. This example is one of the successes of the "Better access to better HIV/AIDS services in Ukraine" program, funded by Olena Pinchuk Anti-AIDS Foundation in 2014.

HIV/AIDS Testing

Access to reliable and high-quality HIV/AIDS testing closely linked to treatment services is critical. Late initiation of antiretroviral therapy (ART) leads to poorer health outcomes, potentially higher treatment costs, and further spread of the disease. Historically, one of the main barriers to timely initiation of treatment has been lengthy and cumbersome CD4 testing. CD4 tests indicate how an immune system is responding to the virus and informs course of treatment, so on-site testing is critical to minimizing time between testing and enrolling on treatment. With conventional lab systems, this test requires multiple visits and often results in patient loss to follow up (LTFU). The emergence of point-of-care (POC) CD4 tests, which provide same-day results, has the potential to significantly reduce patient LTFU between testing and treatment initiation. CHAI's work to accelerate the market entry of new POC products, reduce prices, and support rapid scale-up has helped patients initiate timely treatment.



A health worker at Area 18 Health Center in Lilongwe, Malawi collects blood for a POC CD4 test.

HIV/AIDS Treatment

Being on treatment for HIV is a lifelong commitment, and governments need long-term plans to sustain treatment levels while expanding access and accommodating new cases. In light of donor uncertainty and commitment in future years, CHAI's continued efforts to support governments to increase access to HIV/AIDS care through increasing decentralization and building strong referral networks are more critical than ever. CHAI focuses on scaling up effective treatment for all adults and children.

Treatment is not only life-changing for patients, but it also has preventative power, since people on treatment are less likely to transmit the disease to others. Treatment is a critical component to prevent mother-to-child transmission of the HIV virus through pregnancy and to achieve an AIDS-free generation.

In particular, CHAI renewed its commitment to combat pediatric HIV in 2014, focusing both on elimination and treatment, with support from a 2013 UNITAID grant. In the short term, CHAI aims to close the gap between adult and pediatric HIV treatment rates in countries with the highest gaps, with the long-term goal of eliminating pediatric HIV entirely. With support from the ELMA Foundation, CHAI began working with ministry partners in Malawi, Uganda, Zambia, and Zimbabwe to rapidly scale up pediatric treatment coverage, with the goal of achieving parity with adult coverage over the next three to five years.

CHAI began this work by coordinating with ministry partners to help identify geographic priority areas for expanding pediatric testing and treatment efforts. CHAI has supported ministries to revise relevant counseling and testing guidelines to ensure adequate emphasis on testing older children.



Two HIV-positive children, Basel and Charattana, play soccer at their home, New Hope for Cambodian Children (NHCC), in Kampong Speu Province, Cambodia. Basel was the youngest child in Cambodia to be put on antiretroviral therapy in 2006. These boys are among the 220 children who are thriving and leading healthy, active lives at NHCC where they are able to access lifesaving treatment procured with assistance from CHAI.

2014 HIV/AIDS Treatment Highlights

9.9 million people in more than 70 countries have access to CHAI-negotiated prices for HIV/AIDS medicines, up from 8.2 million in 2013.

CHAI helped to accelerate the availability of a generic formulation of dolutegravir (DTG), an exciting new ARV celebrated for its efficacy and tolerability, particularly for patients who have developed resistance to other HIV treatments. With the support of ViiV Healthcare and the generic partner, Aurobindo Pharma, DTG was filed for US Food and Drug Administration approval in early 2015. This work was made possible with financial support from DFID.

CHAI catalyzed and managed an innovative partnership between ViiV Healthcare and Mylan that resulted in the development of a new, low-cost drug formulation for the treatment of HIV in children called abacavir/lamivudine 120mg/60mg, available in dispersible and scored tablets. This new formulation is more palatable for children and will enable more accurate dosing by parents and caregivers. This work was supported by DFID and UNITAID.

In Swaziland, with funding from the Swedish International Development Cooperation Agency and the Norwegian Ministry of Foreign Affairs, CHAI supported the government to more regularly monitor health-related expenditures against its budget. Through this work, the government identified funds that were not being spent and could be re-programmed to address critical gaps, including US\$7 million that was reallocated to address critical gaps for ART.

With funding from DFID, CHAI provided evidence for donors and governments to successfully make the case for increasing the number of people

eligible for HIV treatment. CHAI conducted a four-country costing analysis, which illustrated that achieving universal access to treatment under more aggressive eligibility guidelines could be affordable if programs ran efficiently.

Under the leadership of the Government of Indonesia and with support from the Australian Government, CHAI helped to decentralize access to ARVs by establishing 79 new health centers as treatment sites in Papua and West Papua under the Rapidly Expanding Access to Care for HIV (REACH) Program. This will enable patients who do not live near the 13 ART referral hospitals and four satellite hospitals where ARVs were only available previously to more easily access high-quality treatment. Because the Continuum of Care also incorporates TB and sexually transmitted infection (STI) screening, decentralization of services increases access to essential health services for communities.

With financial support from the Global Fund, CHAI worked with the Government of Lao PDR to update the country's HIV treatment guidelines and optimize the ART formulary, which resulted in a 50 percent reduction in the number of products requiring management. Better management of products will allow for improved patient outcomes, improvements in forecasting and stock management, and annual savings equivalent to initiation of ART for nearly 70 percent of people living with HIV who are eligible for treatment but are not yet receiving it.

With funding from BMGF, CHAI supported the South African National Department of Health to implement a digital standardized ART monitoring system, which will provide data to inform quality improvement activities to strengthen patient

retention and the quality of care. The system collects data on patients enrolled on ART, attrition, and virological response to treatment, and incorporates this data with the health management information system (HMIS). By the end of October 2014, 1,800 health facilities had submitted program data to the HMIS, covering over 1.4 million adult patients.

In Cambodia, CHAI worked with the National Center for HIV/AIDS, Dermatology, and STD to establish an active case management strategy and tool to track newly diagnosed HIV-positive cases from initial testing to treatment initiation, including HIV-positive pregnant women and their exposed infants. Launched in 14 operational districts, this tool aims to help improve patient retention by making it easier for health workers to follow up with people who need services such as HIV confirmatory testing, CD4 testing, or treatment. Of those who screened positive for HIV in 2014, 51 percent received confirmatory HIV testing on the same day as their initial screening, and 27 percent of those who qualified for treatment were initiated on ART on the same day as they were diagnosed. This work was made possible by financial support from EJAF.

In India, CHAI is supporting the National AIDS Control Program (NACO) in streamlining the supply chain for HIV drugs and commodities through implementation of a web-based Inventory Management System. NACO currently has approximately 800,000 patients on treatment in approximately 500 ART centers across the country. The project, supported by DFID, MAC AIDS Fund, and Mala Gaonkar, provides end-to-end real-time visibility into the supply chain and supports significant savings by averting stockouts and preventing wastages.

With support from EJAF, CHAI and its implementing partner developed a scalable, community-based, and integrated HIV/intravenous drug user (IDU) service delivery model in the Nam Ma Tee village in Kachin State, Myanmar, where HIV prevalence among people who inject drugs (PWIDs) is approximately 30 percent. This one-stop drop-in center for PWIDs introduces PITC and strengthened referral pathways to public sector ART sites and methadone. There was a three-fold increase in the number of IDUs tested during the first two months of these outreach services. In 2015, CHAI plans to scale this approach to other states and regions where access to HIV testing and ART remains limited among PWIDs.

With Australian Government support, CHAI helped Vietnam's MOH to scale up pediatric care and treatment services. Under the leadership of the Vietnam Authority of HIV/AIDS Control, CHAI supported this scale-up by providing on-site clinical mentoring and trainings in over 20 provinces, launching and scaling up pediatric PITC and Isoniazid Preventative Therapy, developing and expanding SMS-delivered referral support messaging, and strengthening lab and procurement and supply chain management services, among other activities. In 2006, only 245, or 9 percent, of children with HIV were on ART. By December 2014, 4,522, or 86 percent, were on ART. Other key partners in this success include PEPFAR and WHO.

PMTCT and EID

Since 2011, with support from Life Ball, MAC AIDS Fund, and other donors, CHAI has been working closely with partner governments in Uganda, Zambia, and Nigeria to improve retention of mother-infant pairs in care, to increase the uptake of PMTCT and EID interventions, and to better link PMTCT and pediatric HIV services. CHAI firmly believes that an AIDS-free generation is possible with PMTCT programs.

EID represents a critical opportunity to determine if HIV-exposed infants test positive for the virus and a link to early treatment is critical to preventing morbidity and mortality. This is particularly true for infants. CHAI supports innovative efforts to prevent exposure to infants with robust PMTCT programs.

At the Village Cultural House in Nghia An commune, located in the Nghia Lo District of Yen Bai Province in Vietnam, Nguyen Ngoc Thang, nurse and head of Nghia AN Commune Health Station, leads a HIV testing educational event providing information and counseling on early HIV testing and pregnancy care for targeted populations including injection drug users, pregnant women, and families of people living with HIV/AIDS; HIV screening tests for targeted populations; and pre-and post-test counseling.



2014 PMTCT and EID Highlights

Option B+ is the most aggressive and comprehensive PMTCT regimen because it recommends that all pregnant HIV-positive women receive treatment. This helps to protect a woman's health while minimizing the risk the virus is transmitted to her infant. Since Option B+ increases the demand for treatment as more women are eligible to receive it, governments who decide to implement Option B+ must prepare the health system for the policy change. CHAI continues to support governments who wish to introduce and scale up access to Option B+.

- *Cameroon faces mother-to-child transmission rates of 20 percent⁴, and the country was committed to scaling up Option B+ services in the Center region, where Option B+ was only available at 33 sites. CHAI worked with the MOH and the National AIDS Control Committee to expand Option B+ to over 600 sites out of a possible 700 in under one year. This allowed the government to reach 86,789 pregnant women.*
- *With Australian Government support, CHAI helped Vietnam's MOH make the decision to progressively implement Option B+. Under the leadership of the Vietnam Authority of HIV/AIDS Control, CHAI led a national EID evaluation, which provided evidence to help justify implementing Option B+ and improving exposed infant management and PITC services. Such policy changes will be critical to ensuring that the number of HIV-positive pregnant women with access to lifesaving ARVs continues to grow from 40 percent in 2014.*

With support from DFID and BMGF, CHAI supported Ethiopia's efforts to expand the number of PMTCT sites from 1,300 to 2,542 by optimizing the country's national ARV Distribution System to ensure more sites are fully stocked with the appropriate ARVs. This work was completed in partnership with the Pharmaceutical Fund and Supply Agency. Ethiopia has set an ambitious goal of eliminating mother-to-child transmission; this expansion lays a strong foundation for that effort.

In Mozambique, thanks to funding from Flanders International Cooperation Agency (FICA), UNICEF, the Government of Ireland, and UNITAID, CHAI is working with the MOH to evaluate a new DNA polymerase chain reaction device that can test infants at birth, ultimately increasing the number of infants initiated on ART as early as possible.

In Papua New Guinea, working with the National Department of Health and the Central Public Health Laboratory, and with program funding from the Australian Government, CHAI helped the government educate, train, and mentor to support the expansion and improvement of the nation EID program. CHAI helped the Government of Papua New Guinea establish its first EID Quality Assurance program to allow for continuous system improvement. This means that 46 percent of babies born to HIV-positive mothers who gave birth in 2014 had an EID test within two months.

4. "2013 Progress Report on the Global Plan Towards the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive," Joint United Nations Program on HIV/AIDS (2013): 37, accessed May 20, 2015, http://www.unaids.org/sites/default/files/media_asset/20130625_progress_global_plan_en_0.pdf.

Tuberculosis (TB)

The toll of HIV stems from the virus' ability to weaken an individual's immune system, making a patient more vulnerable to other opportunistic infectious diseases, particularly TB. This in turn puts increased demand on the health system to effectively link people to the diagnostic and care services needed within the necessary timeframe for those services to deliver lifesaving treatment.

TB is second only to HIV/AIDS in infectious disease mortality worldwide, and HIV/TB co-infection causes approximately one-fourth of all HIV-related deaths. In 2013, the WHO estimated that 9 million people developed TB and 1.5 million died from the infection. Many millions who are infected do not receive timely diagnosis and treatment, resulting in far too many deaths and dangerous infections. TB remains a significant threat to health worldwide, and global progress to combat the infection has been slow, especially in children.

In 2014, CHAI began working to strengthen pediatric TB case management and treatment with the Governments of Malawi, Uganda, Zambia, and Zimbabwe, and conducted data collection and analysis on TB among miners in four Southern Africa countries, as well as a community-based case-finding pilot—the first work of its kind in the region. CHAI's TB work is supported globally by BMGF, DFID, the Government of Canada, the ELMA Foundation, and Life Ball.

2014 TB Highlights

Historically, in Lao PDR, external partners completed all quantifications of TB medicines without meaningful involvement or central coordination from the MOH. With financial support from the Global Fund, CHAI worked with the MOH's National Tuberculosis Center to execute the first ever MOH-led annual TB forecast to improve stock availability. Further, CHAI and the MOH were able to prevent the expiration of more than 19 medicines used for treating side effects. This helped to avoid continued losses of medicines due to expiries, which in the recent past have cost Lao PDR's MOH approximately US\$300,000 per year.

In Lesotho, with financial support from the Government of Ireland, CHAI led the effort to cost several important strategic plans, including the National Strategic Plan for TB and the National Operational Plan for HIV. This costing of resource needs was compared with resource mapping data to identify funding gaps. Evidence was used by the government to mobilize additional funding of up to US\$60 million from the Global Fund for initially underfunded, high-impact HIV interventions including adult treatment, male circumcision, and testing and counseling.



TB IN INDIA

India bears approximately one-fourth of the world's TB burden with approximately 2.1 million cases each year, according to WHO data.⁵ Prompt and accurate diagnosis and treatment of TB are key elements in the public health community's response to TB and the cornerstone of any TB control initiative. The large private sector plays a dominant role in health care service delivery in India. In order to address barriers to timely and accurate diagnosis, CHAI, in consultation with the Revised National TB Control Programme, partnered with a multitude of stakeholders and private sector laboratories to improve access to and affordability of TB testing in the private sector under the Initiative for Promoting Affordable Quality TB Tests (IPAQT).

CHAI has supported continued increased access through IPAQT, which now includes more than 100 accredited private sector laboratories that collectively operate through more than 3,000 collection centers covering approximately 80 percent of districts in India. Thanks to funding from BMGF and DFID, this initiative has not only accelerated uptake of quality TB testing in the private sector, but has also reduced by half the out-of-pocket expenses that patients had to incur for quality-assured TB diagnostic tests. CHAI's efforts have helped the IPAQT network establish itself as a one-of-a-kind ready platform for new technologies to enter the market successfully with affordable pricing for patients.

5. "India: Tuberculosis Profile," World Health Organization: accessed May 20, 2015, https://extranet.who.int/sree/Reports?op=Replet&name=%2FWHO_HQ_Reports%2F-G2%2FPROD%2FEXT%2FTBCountryProfile&ISO2=IN&LAN=EN&outtype=html.

MATERNAL, NEWBORN, AND CHILD HEALTH

Nearly 7 million children in low-income settings die before their fifth birthday each year. In 2013, 289,000 women and young girls⁶ and just over 2 million newborns⁷ died during delivery or within the week after childbirth.



6. "Current Status and Progress: Maternal mortality has declined steadily since 1990, but not quickly enough to meet the MDG target," UNICEF (June 2015): accessed June 25, 2015, <http://www.data.unicef.org/maternal-health/maternal-mortality>.

7. "Current Status and Progress: Neonatal mortality rates are declining in all regions, but more slowly in sub-Saharan Africa," UNICEF (May 2015): accessed June 25, 2015, <http://www.data.unicef.org/child-mortality/neonatal>.

A mother and her child visit Aaron Village Clinic in remote Dedza District, Malawi. As a part of a project running from 2013 to March 31, 2015, the clinic uses CHAI-procured medicines and diagnostics to treat malaria, pneumonia, and diarrhea in children.

Maternal and Newborn Health

The majority of maternal and neonatal deaths worldwide are caused by a handful of conditions. Three maternal complications (hemorrhage, sepsis, and eclampsia) account for half of all maternal deaths, and three causes of neonatal death (preterm birth complications, birth asphyxia, and neonatal infections) account for more than 80 percent of the total neonatal burden.⁸

These statistics are tragic, and many of these deaths can be prevented with straightforward and relatively affordable interventions. While significant progress has been made through the collective efforts of the global health community, challenges still persist for lack of a comprehensive approach.

CHAI has developed an integrated maternal and newborn health (MNH) strategy with the goal of significantly reducing maternal and newborn mortality by improving the quality of care received where a majority of the births and deaths occur. CHAI's approach focuses on averting the preventable deaths that can occur in the 24 to 48 hour window around the birth process by implementing the interventions necessary to:

- Prevent complications from becoming life-threatening through early identification;
- Apply simple interventions immediately to ensure survival; and
- Refer cases quickly to the appropriate health system level for proper treatment.

Central to this approach is establishing clear protocols for managing pregnancy, delivery, and newborn care; improving technical expertise of skilled birth attendants through a lengthy mentoring program; strengthening supply chains to equip and provide facilities with the required commodities and supplies; establishing emergency transport and communication systems to improve linkages between clients and providers and reduce delays in seeking care; and developing sustainable management systems to maximize efficiencies across all relevant aspects of a health system.

This comprehensive system will ensure that no birth is overlooked or undervalued. It means that birth attendants at all levels of the health system are empowered and equipped to stabilize and treat complications as they arise. It results in a majority of births being successfully delivered at the lowest levels of health systems, closest to where most pregnant women reside. Yet it ensures that a speedy and efficient referral is in place to link the most isolated and mobile communities to a hospital that is sufficiently equipped to handle emergencies.

CHAI's MNH work is currently supported by the Norwegian Ministry of Foreign Affairs.

2014 Maternal and Newborn Health Highlights

CHAI negotiated a price reduction for the Non-Pneumatic Anti-Shock Garment (NASG) and increased the device durability resulting in a reduction of cost per use by 80 percent to less than US\$0.30. NASG is a lightweight washable neoprene garment. It is an innovative lifesaving device that reverses hypovolemic shock and reduces blood loss in women experiencing postpartum hemorrhage.

In Nigeria, CHAI worked with two local manufacturers to facilitate the local production of Chlorhexidine and is currently working with six manufacturers to commence local production of Amoxicillin dispersible tablets. As a consequence, the price of Chlorhexidine (25g tube) declined by over 50 percent, from 215 to 110 Nigerian Naira between Q2 of 2014 and Q1 of 2015. Chlorhexidine can help prevent many maternal and neonatal infections and Amoxicillin dispersible tablets are a broad-spectrum antibiotic that can be used to treat bacterial infections.

- CHAI supported the Kano State Government to introduce and roll out the use of 4 percent Chlorhexidine gel across all the 25 secondary and 604 primary public healthcare facilities in the state, which is one of the most populous in Nigeria and accounts for approximately 7 percent of all the country's live births. By end of 2014, CHAI had trained a total of 1,222 public healthcare workers that provide antenatal care across 629 health facilities. Over 59,000 tubes of Chlorhexidine (25 grams) were distributed. As a result, reported rates of newborn sepsis began to drop significantly, including at Murtala Mohammed Specialist Hospital, where reported cases of neonatal sepsis declined by 62 percent.

Across 200 focus facilities in Ethiopia CHAI achieved a 79 percent reduction in stockout levels of the stockout-tracer drug, Oxytocin, with similar results achieved for other MNH commodities. Oxytocin is frequently used to manage bleeding after childbirth. In Tanzania, the stockout levels of three tracer MNH commodities in 100 facilities declined from 43 percent to 17 percent in 2014.

CHAI's Human Resources for Health (HRH) Program also supported Zambia's General Nursing Council to define a new curriculum for a combined nursing-midwifery program, which is launching in 2015. This program aims to produce well-rounded healthcare workers with a mix of nursing and midwifery skills. CHAI has supported Zambia's pioneering efforts to ensure its health workforce has the skills needed to serve its population. This includes introducing a new cadre of health workers, Community Health Assistants (CHAs), in 2010. CHAs serve as a link to the national health system for rural communities, and help increase access to basic healthcare services for these populations. With support from DFID, CHAI helped the government to establish its second CHA school in 2014.

8. L. Liu, H. Johnson, S. Cousens, et al., "Global, Regional and National Causes of Child Mortality: An Updated Systematic Analysis," *Lancet* 379 (2012): 2151–61.

Nutrition

Malnutrition has a devastating impact on children. Globally, an estimated 161 million children under 5 years old are chronically malnourished, and 51 million suffer from acute malnutrition, according to 2013 WHO data. Along with stunting a child's physical growth, chronic malnutrition constrains the development of a child's immune system and brain, preventing children from reaching their full potential. Acute malnutrition (or wasting) is a life-threatening condition requiring urgent treatment, and even those children who recover may experience life-long repercussions. In aggregate, undernutrition causes 45 percent of all child deaths, or 3.1 million deaths annually.⁹

CHAI supports partner governments to tackle malnutrition in a number of high-impact ways, thanks to a network of partners including DFID, the New Zealand Ministry of Foreign Affairs and Trade, and the ELMA Foundation.

In Nyagatare District, located in the Eastern Province of Rwanda, maize is harvested, dried, and sorted for delivery to Rwanda's capital city of Kigali. CHAI supports farmers in Rwanda with low-interest financing and technical assistance to improve yields and increase incomes, so that they can supply high-quality, affordable maize and soy to the upcoming nutritious infant food factory in Kigali.



2014 Nutrition Highlights

In Malawi, CHAI helped provide 33,000 vulnerable households with nutritional support across five districts. CHAI procured and distributed 25 percent of Malawi's annual ready-to-use therapeutic food requirements for the national Community Management of Acute Malnutrition (CMAM) program, treating over 12,944 cases of severe acute malnutrition. CHAI also helped strengthen the capacity of 13 districts to deliver CMAM services by training over 2,000 health workers and 4,000 community volunteers and ensuring they had the appropriate supplies to successfully support their communities. In high-volume districts, CHAI led efforts to renovate 20 Nutrition Rehabilitation Units in order to help children with severe acute malnutrition to recover more quickly.

In India, with funding from Mala Gaonkar, CHAI supported the Integrated Child Development Services (ICDS) program in partner states to improve the nutritional value of complementary foods and the supply chain necessary to deliver these foods to children in need. Working in collaboration with the Department of Women and Child Development and the National Institute of Nutrition, CHAI supported the development of a protein-rich recipe for take-home rations distributed through the ICDS program in Telanga State, which is now in use statewide to support approximately 2.9 million children. CHAI also worked with the Department of Women and Child Development and a technology solution provider in Madhya Pradesh to pilot a barcode-enabled inventory management system that will improve supply chain management of complementary food commodities, thereby improving allocation of program funds and increasing uptake.

In Ethiopia and Rwanda, CHAI is working with government and private sector partners to develop a new program to dramatically reduce the incidence of chronic malnutrition by filling dietary gaps within the critical first 1,000 days of life. In 2014, CHAI negotiated agreements that will lead to construction of the first high-quality food factories in Africa, based on local agricultural products. These factories will feed infants and pregnant and lactating women in Ethiopia and Rwanda and will also export food for use by the World Food Programme and to develop country markets.

9. R. Black, et al., "Maternal and Child Undernutrition and Overweight in Low-Income and Middle-Income Countries," *Lancet* 382 (2013): 427-51.



Vaccines

Immunization is one of the most successful and cost-effective public health interventions available, preventing up to 3 million deaths per year around the world. However, millions continue to die from vaccine-preventable diseases annually, most of them children. A majority of these deaths occur in low-income countries where poverty, weak health and immunization delivery systems, and a lack of affordable vaccines limit universal access to lifesaving vaccines.

To help reach more children and decrease vaccine-preventable deaths, CHAI focuses on four strategic objectives to accelerate uptake of vaccines in countries that need them: increase the speed and efficiency with which new vaccines are introduced in low- and middle-income countries; improve the performance and efficiency of vaccine cold chain and logistics systems; enhance planning, resourcing, and implementation activities around immunization; and negotiate the lowest prices possible for vaccines and associated supply chain equipment.

CHAI works at both the national and local levels in focal countries to ensure all children have timely access to high-quality immunizations, thanks to the support of BMGF, DFID, the ELMA Vaccines and Immunization Foundation, and the Government of Canada.

A 6-week old child receives the rotavirus vaccine at Kajiado Sub County Hospital in Kitengela, Kenya. CHAI has supported the introduction of the rotavirus vaccine to prevent cases of severe diarrhea caused by rotavirus. As of May 2015, over 850,000 children have been immunized in Kenya.

2014 Vaccines Highlights

CHAI supported negotiations led by BMGF that secured a 56 percent price reduction for inactivated polio vaccine (IPV). This deal will result in at least US\$150 million in savings from 2014 to 2018. This work was supported by DFID.

CHAI facilitated the introduction of the rotavirus vaccine in all counties in Kenya and Woredas (districts) in Ethiopia, which will ultimately save an estimated 21,500 lives in those two countries. CHAI provided intensified support to Ethiopia's Federal MOH to minimize delays to the rotavirus introduction in the Somali region of Ethiopia following polio outbreaks. This work was supported by the ELMA Vaccine and Immunization Foundation (Ethiopia) and BMGF (Kenya and Ethiopia).

With support from BMGF, CHAI helped Nigeria introduce the pneumococcal conjugate vaccine (PCV), applying critical lessons learned from previous introductions. Among others, CHAI worked with the WHO to secure pre-financing for healthcare worker training and GAVI to expedite distribution of vaccine-introduction grant funds.

CHAI also received funding from BMGF in April 2014 to support IPV introduction in Nigeria, Cameroon, Kenya, and Ethiopia, with lighter touch support for Uganda and Tanzania, to strengthen management systems capacity for new vaccine introductions and routine immunization services.

Improving cold chain equipment performance helps ensure vaccines remain safe and effective.

- *With Government of Canada support, CHAI led the effort to roll out novel remote temperature monitoring solution for vaccines stores in Tanzania, including deployment of this new technology in the national store, 27 regional level stores, and 40 district stores throughout the country.*
- *CHAI facilitated a large-scale training on cold chain equipment maintenance in Ethiopia, which covered compression refrigerators, solar direct drive refrigerators, and walk-in cold room technologies. CHAI's approach to equipment repair and maintenance in Ethiopia has contributed to the maintenance of 3,921 fridges (71 percent of all non-functional fridges in the country), adding over 196,000 liters of functional storage capacity to the cold chain system. This work was supported by the Government of Canada.*
- *With funding from DFID, CHAI supported the Uganda National Expanded Program for Immunization's efforts to identify alternate, optimal cold chain equipment, which led to the decision to move from gas to solar powered*

Essential Medicines

Diarrhea is the second leading killer of children worldwide, responsible for approximately 580,000 deaths each year despite the availability of a highly-effective and affordable treatment: zinc/ORS.¹⁰ The WHO-recommended combination of oral rehydration salts (ORS) (a formula that replaces fluids and essential salts lost to dehydration) and zinc (a micronutrient that reduces the duration and severity of diarrhea and protects the child from future episodes) can prevent over 90 percent of diarrhea-related deaths in children. However, health providers and consumers are often unaware of the recommended treatment for child diarrhea, resulting in low demand. Suppliers therefore have limited incentive to invest in distribution and promotion of the products, meaning that the most effective treatment for childhood diarrhea is both widely unknown and unavailable.

CHAI's Essential Medicines program launched in 2012 and works at both the global and national levels in four focal countries (Uganda, Kenya, India, and Nigeria) to transform a neglected market by simultaneously building demand for zinc/ORS and ensuring widespread availability and affordability in public and private facilities, particularly in rural areas. In its focal countries, CHAI helps create government-led national plans, which establish scale-up of zinc/ORS as a key priority for reducing diarrheal deaths.

CHAI's work in essential medicines is supported by Absolute Return for Kids (Uganda), BMGF (India), the Government of Canada (Nigeria), the Norwegian Ministry of Foreign Affairs (Nigeria), the ELMA Foundation (Uganda), IKEA Foundation (India and Kenya), and the International Zinc Association (India).

2014 Essential Medicines Highlights

Over 15 new high-quality, affordable, and optimal zinc/ORS co-pack products were introduced in local markets in CHAI's four focal countries. The increased market competition has led to reductions in wholesale prices by 40 to 75 percent and will enable many more children to access the lifesaving treatment.

Over-the-counter status for zinc has been secured in all focal countries, increasing product availability across retail outlets and improving patient access.

Last-mile distribution channels have been established to expand access of zinc/ORS beyond urban areas to remote villages in selected focal countries where the most children die from diarrhea.

In order to track impact and monitor progress in real-time, CHAI's zinc/ORS program in India established a web-based management information system that tracks supply of zinc/ORS among rural providers in the private sector. This not only helps prevent stockouts by ensuring consistent availability of the product but also allows for monitoring prescription behavior and program adjustments as needed. Such reliable information is a critical factor in sustaining growing demand in the rural market. With the support of BMGF and IKEA Foundation, by end of 2014 CHAI had successfully reached approximately 150,000 rural medical practitioners in three focal states of Uttar Pradesh, Madhya Pradesh, and Gujarat.

A dehydrated child receives oral rehydration salts (ORS) treatment at an oral rehydration therapy (ORT) corner at Huruma Lions Health Center in Mathare, Starehe Sub County in Nairobi, Kenya. The area experiences high rates of diarrhea and dehydration among children under 5. ORT corners serve as emergency centers for immediate rehydration, referral, counseling, and education. CHAI has supported the introduction of ORT corners in 684 health facilities in nine counties in Kenya. CHAI works to strengthen the integrated management of childhood illnesses (IMCI) through rigorous training of health workers and has donated 1 million zinc/ORS co-packs in the public sector for the management of diarrhea in young children.

10. "Current Status and Progress: Diarrhea remains a leading killer of young children, despite the availability of a simple treatment solution," UNICEF (June 2015); accessed June 25, 2015, <http://www.data.unicef.org/child-health/diarrhoeal-disease>.





At a "Contraceptive Day" event at Sasstown Clinic in Bomi County, Liberia, a woman chooses a two-rod contraceptive implant. CHAI is helping the Ministry of Health restart its family planning program following the Ebola epidemic, including holding special events with additional health workers, supplies, and community mobilization to quickly serve large numbers of women, while maintaining quality and choice. In Bomi County, CHAI helped the County Health Team provide contraceptives to over 1,500 women in just three "Contraceptive Days," and is replicating these efforts in other counties nationwide.

Family Planning

Access to voluntary contraception saves lives and improves health outcomes of women and infants, strengthens the financial well-being of families, and helps achieve national health and economic goals.¹¹ By allowing women to safely delay, space, and limit pregnancies, family planning reduces the risk of adverse maternal and infant outcomes and prevents unsafe abortions.

In 2012, an estimated 222 million women of reproductive age in low- and middle-income countries had an unmet need for a method of contraception.¹² A lack of channels to make contraceptive methods affordable and accessible in order to meet demand means families continue to suffer from the complications and challenges of poorly timed and spaced births.

With support from BMGF, Segal Family Foundation, and STOP AIDS NOW!, CHAI is helping to bridge the gap between availability, capacity, and demand by applying its expertise in market shaping to increase choice for women, with a focus on long-acting reversible contraceptives (LARCs). LARCs, such as implants and intrauterine devices (IUDs), are over 99 percent effective.

2014 Family Planning Highlights

CHAI worked with ministries of health and partners to improve accuracy of forecasting and timeliness of procurement, quantify and locate service delivery gaps and coordinate interventions to target the most underserved areas, and direct supplies to appropriate facilities. These efforts helped countries rapidly increase access to and consumption of implants. Total annual consumption of implants in Cameroon, Kenya, Nigeria, Tanzania, and Zambia increased by 70 percent, from 902,658 implants in 2013 to 1,532,400 implants in 2014. The average monthly consumption across these countries increased from 75,222 in Q1 of 2013 at the program's start to 127,000 by Q4 of 2014, an increase of 150 percent.

CHAI helped initiate the transition from Implanon Classic to Implanon NXT, an improved LARC product, by supporting ministries of health to develop and execute transition plans and providing country-level insights and coordination support to global stakeholders.

Working with the Coordinated Supply Planning group and particularly with United Nations Population Fund and USAID, CHAI helped Kenya alleviate a stockout of the two-rod implant known as Jadelle and helped Tanzania, Liberia, Malawi, and Cameroon avoid stockouts by securing sufficient Jadelle supplies to maintain desired stock levels which simultaneously worked to rapidly increase consumption.

11. R. Smith, L. Ashford, J. Gribble, and D. Clifton, "Family Planning Saves Lives: 4th Edition," Population Reference Bureau (2009): <http://www.prb.org/pdf09/familyplanning-saves-lives.pdf> and "Report of a WHO Technical Consultation on Birth Spacing," World Health Organization (2006): http://www.who.int/maternal_child_adolescent/documents/birth_spacing.pdf.

12. S. Singh and J.E. Darroch, "Adding It Up: Costs and Benefits of Contraceptive Services—Estimates for 2012," Guttmacher Institute and United Nations Population Fund (2012): <http://www.guttmacher.org/pubs/AIU-2012-estimates.pdf>.

MALARIA

Malaria continues to cause significant illness, death, and lost economic productivity each year, particularly across Sub-Saharan Africa. While the scale-up of control efforts has resulted in a 26 percent decline in cases and a 47 percent decline in deaths since 2000, malaria still claimed nearly 600,000 lives in 2014, the majority of which were children under 5.



A child with severe malaria in Malawi receives emergency lifesaving treatment. Malawi is one of six countries in Sub-Saharan Africa that CHAI has supported to switch to injectable artesunate, a superior treatment for severe malaria, which reduces mortality in children under 5 by over 20 percent.

CHAI's malaria program aims in the short term to avert the maximum number of malaria deaths possible by expanding access to high-quality commodities for prevention, diagnosis, and treatment, while sustainably eliminating transmission where possible in the long term. CHAI provides technical, management, and operational support to national malaria control programs to ensure their strategies are data-driven and tailored to their specific contexts.

2014 Malaria Highlights

CHAI supported the training of healthcare workers on how to treat severe malaria with injectable artesunate in over 1,000 health facilities across Nigeria, Cameroon, Uganda, Kenya, Malawi, and Zambia. Injectable artesunate has been shown to be a clinically superior alternative to quinine for the treatment of severe malaria, resulting in a significant reduction in mortality. CHAI also assisted with quantification and procurement that resulted in orders placed for over 6.8 million vials of injectable artesunate, enough to treat over 1 million severe malaria patients, and save more than 25,000 lives versus treatment with quinine across these six countries. This work was supported by Medicines for Malaria Venture, UNITAID, and DFID.

In 2014, CHAI started to help train 1,000 private sector healthcare workers to perform rapid malaria tests, with support from DFID. CHAI had previously negotiated with four high-quality rapid test manufacturers to lower the price to the private sector in Kenya and Tanzania by up to 75 percent to an average price of US\$0.27 per test, resulting in new orders for nearly 2 million rapid tests.

With support from DFID, the Demand-Driven Evaluations for Decisions (3DE) initiative compared the efficiency of mass distribution strategies of insecticide-treated bed nets (ITNs) as a form of protection against malaria in Zambia. Historically, the government distributed ITNs through a time- and resource-intensive door-to-door approach. 3DE conducted a randomized control trial in three rural zones, which revealed that an alternate approach, community fixed-point distribution, had comparable success rates, but significant time and cost savings. Because of these results, the Government of Zambia included the community fixed-point distribution approach as part of its 2014 mass ITN distribution in addition to the door-to-door strategy. Of the nearly 5 million ITNs distributed in 2014 after this guidance was released, approximately 30 percent were distributed using community fixed-point distribution.

Malawi switched to treating severe malaria with injectable artesunate, pictured here in stock at a pediatric ward at Kamuzu Central Hospital in Lilongwe, Malawi. CHAI supports the National Malaria Control Program (NMCP) with distribution plans of malaria commodities, including injectable artesunate, to all facilities in Malawi.



Malaria Elimination Work

The fight against malaria benefitted from a surge of interest from the international community between 2000 and 2013. Malaria funding increased eight-fold over that time, with funding available for anti-malaria efforts topping US\$2.7 billion in 2013. These resources have driven an unprecedented global scale-up of prevention, diagnostic testing, and treatment efforts. This expansion of malaria interventions helped to reduce malaria incidence by over 30 percent globally, and by close to 34 percent in Africa since 2000, according to the WHO. During the same period, malaria mortality rates decreased by an estimated 47 percent worldwide and by 54 percent in Africa. While these gains are impressive, they are also fragile. The previous decade's rapid growth in global funding has leveled off far short of the amount required to fully protect the 3.2 billion people still at risk globally, and the risk of a devastating disease resurgence is ever present. Historically, of 49 programs that tried but failed to eliminate malaria, 73 percent have had documented malaria resurgence. Of 50 programs that successfully eliminated the disease altogether, however, only four (8 percent) have ever seen it return.¹³ Elimination has not yet been achieved on mainland Sub-Saharan Africa.

Eliminating malaria is thus a tantalizing goal and the best way to ensure the gains achieved in the last 15 years can be sustained. Malaria elimination will require substantial investment in improving disease surveillance systems to identify where transmission is occurring, how parasites are moving across regions, and what

the most sustainable, cost-efficient packages of interventions are for specific contexts. Reaching this level of programmatic capacity requires substantial operational support, including regional coordination of activities to ensure neighboring countries collaborate. CHAI is helping governments make the substantial shift in program mindset, processes, and strategies required to catalyze sustainable malaria elimination.

Given today's highly effective tools, CHAI views malaria elimination as more of an operational and financial challenge than a technical one: it requires determined political commitment to support national programs year after year; sustained financial resources to ensure commodities are continuously available for prevention and treatment; and managerial expertise to verify that no households are missed by vector control teams, that every fever is tested, and that active efforts are made to find every last pocket of infection even if they occur in the most remote corners of the country. Without financial resources, managerial devotion, and strong community support, elimination will remain only an aspiration. Along with our partners, CHAI is helping to build these capacities in Haiti, Central America, Southern Africa, and Southeast Asia.

CHAI has supported Southern Africa since 2008 to accelerate regional progress toward malaria elimination.

Here is a closer look at some of CHAI's regional malaria elimination work:

In partnership with the Global Health Group at University of California San Francisco, and with support from BMGF, CHAI is supporting Swaziland's efforts to become the first country in mainland Sub-Saharan Africa to eliminate malaria by the end of 2015. This includes the provision of targeted support to scale up and strengthen a robust active surveillance program. The impact of this support has resulted in Swaziland identifying only 685 cases from the 2013 and 2014 malaria season, of which all but 188 were imported from outside the borders of the country. In 2014, CHAI also provided technical assistance to Swaziland to secure US\$4.02 million from the Global Fund, successfully closing the funding gap for malaria elimination implementation.

In Namibia, with support from Malaria No More UK, and in partnership with the University of Namibia, CHAI supported the development and adoption of a new malaria case management policy including injectable artesunate for treatment of severe malaria and national standards for malaria case management training. The policy was informed by a CHAI-led operational research project that identified strategies to improve uptake and adherence to rapid tests. The CHAI-designed enhanced malaria case management training curriculum, developed in 2012, continues to serve as the standard curriculum for the Namibia MOH and Social Services, and has led to a reduction in reported malaria cases due to higher rates of confirmatory testing.

CHAI supported the design and implementation of a rapid surveillance system for malaria elimination in the southern part of Zimbabwe with support from BMGF. The new system is now being used as a model for national scale-up of elimination activities. CHAI also successfully supported resource mobilization efforts of the national malarial control program, helping Zimbabwe secure over US\$59 million from the Global Fund for malaria prevention, including earmarked funding for elimination activities.

In the Greater Mekong Subregion of Southeast Asia, artemisinin resistance threatens the regional malaria elimination efforts and significant progress made on reducing the malaria burden over the past few years. In Cambodia, one of four countries CHAI supports in the region, CHAI helped the national malaria program shift its operational planning from an unsuccessful focus on drug resistance containment toward a plan for national elimination by 2020 with support from BMGF. CHAI and partners supported the Cambodian Government to secure a US\$30 million grant from the Global Fund to accelerate elimination over the next three years, complete a landscape assessment of current case management practices, develop operational plans to scale up the Village Health Worker program, and strengthen private sector diagnosis, treatment, and reporting.

CHAI expanded its global presence in 2014 by providing elimination support, including the development of malaria risk maps, for Haiti, Guatemala, Honduras, and Panama. Central America and Hispaniola are working toward elimination by 2020, and CHAI's support will help countries make the paradigm shift from seeking to reduce disease burden generally to adopting an elimination mindset of identifying and attacking specific reservoirs of parasites.

In 2015, CHAI will continue to work toward increasing the number of malaria-free areas around the world by supporting the development of coordinated, evidence-based plans and providing management support to help national malaria programs operate more efficiently and achieve greater impact.

13. D.L. Smith, J.M. Cohen, et al., "A Sticky Situation: The Unexpected Stability Of Malaria Elimination," *Philosophical Transactions of the Royal Society B: Biological Science* (2013): 1-15.



CHAI GLOBAL WORK

A CHAI staff member leads a "Fast Track" launch meeting in Mpholonjeni Inkudla, Swaziland. "Fast Track" is a problem-solving approach in which community members are empowered to identify problems within their communities, develop measurable goals, and allocate focus and resources to achieve goals on a strict timeline. In partnership with the Swaziland Ministry of Health, CHAI has supported "Fast Track" activities in 35 Inkhundlas out of 55 in Swaziland with the goal of maximizing access to HIV testing and treatment specifically among men and adolescents. From 2011 to 2014, 33,921 people were tested for HIV across all target groups as compared to 9,093 people tested during the three months prior to "Fast Track", representing a 273 percent increase over baseline.

Though CHAI works across a range of disease areas, CHAI's aim is to strengthen the overall health system of a country, rather than supporting one health area at the expense of another. CHAI has established certain areas of expertise to support the strengthening of health systems.

Access to Health Products

Inequitable access to lifesaving medicines, vaccines, and commodities leads to preventable death and suffering. Historically, many important health products have not been available in most low- and middle-income countries and if available, they are often prohibitively expensive. CHAI was founded on the belief that there is a fundamental need to restructure the global health market so that it will more equitably serve the global demand for these items, ultimately saving more lives and reducing the burden of disease.

CHAI works to make the highest quality medicines, vaccines, and diagnostic testing and monitoring equipment available and affordable in markets throughout the world.

On the demand side, CHAI helps governments identify optimal products based on efficacy, formulation, quality, and price, subsequently consolidating demand around those products and using this demand to negotiate favorable access and pricing. Simultaneously, on the supply side, CHAI works with manufacturers and regulators to reduce the cost of production, increase competition, improve quality standards, optimize product design, and accelerate market entry.

CHAI also supports partner governments to ensure that robust and efficient procurement and supply chain processes are in place at the national and sub-national levels to receive and distribute these goods and the funding for this service delivery is available.

Health Financing

CHAI supports governments to establish a clear understanding of health spending and to develop evidence-based policies, plans, and systems to secure sustainable funding and improve management of existing funding. CHAI works with governments to set ambitious but prioritized national targets and determine the cost implications of reaching those targets over time. CHAI also supports governments to increase visibility of their available resource base and more efficiently allocate resources to high-impact priority interventions. In eight countries, CHAI works with governments to conduct resource

mapping, a government-driven planning exercise that collects data on domestic and donor funding flows to help identify critical gaps and inefficiencies.

With this evidence, CHAI supports ministries of health to address resource gaps, including advocating for more funds for under-resourced priorities with ministries of finance and donors such as the Global Fund.

At the same time, CHAI works with governments to reduce dependency on foreign aid by building capacity to generate and manage an increased proportion of domestic and donor resources for health over time. This includes improving national and sub-national budgeting and ensuring budgeted resources are spent efficiently. In Ethiopia, with funding from the Norwegian Ministry of Foreign Affairs and the Swedish International Development Cooperation Agency, CHAI is supporting the government to successfully roll out health insurance to ensure people have consistent, affordable access to healthcare services. In 2014, to support the rollout of health insurance in Ethiopia, CHAI supported the development of a claims management system that will enable the insurance agency to receive claims, make payments, and collect the necessary information from providers to monitor and continuously meet health care needs.

In 2014, at the request of government partners, CHAI's health financing work expanded to two new countries, with staff now supporting ministries of health in Cameroon, Ethiopia, Lesotho, Malawi, Rwanda, South Africa, Swaziland, Zambia, and Zimbabwe, with financial support from DFID, the Government of Ireland, the Norwegian Ministry of Foreign Affairs, and the Swedish International Development Cooperation Agency.

Human Resources for Health

The provision of health care is only possible with qualified health workers equitably distributed throughout a country's health system. Yet there is a vast global shortage of health workers, which the WHO estimated to be 7.2 million in 2013.¹⁴ The burden is acutely felt in Africa, which faces a skilled health worker shortage of 1.8 million people—25 percent of the global total.¹⁵

CHAI is working in several countries to help educate doctors, nurses, midwives, and community health workers.

Among existing health workers, a range of challenges impede their efficacy, including uneven distribution, weak management systems, and poor training and retention mechanisms. Numerous strategies have been established to mitigate these obstacles in the short term, but chronic low levels of adequately trained workers remains a major barrier and will continue to severely hinder a government's ability to meet the health needs of its citizens, particularly those who live in rural areas. **CHAI helps governments design strategic, evidence-based programs to prioritize investments in the education of new health workers while maximizing the efficiency of**

the existing health workforce through improved health worker distribution programs targeted at increasing skill diversity. CHAI's approach prioritizes multilevel capacity building to ensure that partner governments are well-positioned to effectively and sustainably manage their health workforces, leading to increased access to care and improved population health.

Applied Analytics

CHAI also helps governments institutionalize the use of existing datasets to monitor and evaluate programs and subsequently improve program performance. Where existing data systems are not sufficient to inform policy decisions, CHAI works with key ministry partners as a co-investigator to support a government-centered research agenda that provides results governments can apply in real time to improve health outcomes. CHAI uses rigorous analytical methods based in epidemiology, economics, mathematical modeling, and program monitoring and evaluation, and works to build capacity within governments to interpret and apply results from these methods.

A CHAI staff member conducts a physical stock count at Phin District Hospital Pharmacy in Lao PDR. This health facility is one of five selected by the Ministry of Health to be a part of an electronic Logistics Management Information System (eLMIS) pilot to increase stock visibility.



14. "Global Health Workforce Shortage to Reach 12.9 Million in Coming Decades," World Health Organization (November 11, 2013): accessed May 20, 2015, <http://www.who.int/mediacentre/news/releases/2013/health-workforce-shortage/en/>.

15. Jim Campbell (ICS Integrate), Gilles Dussault (Istituto de Higiene e Medicina Tropical (IHMT), James Buchan (Queen Margaret University), Francisco Pozo-Martin (ICS Integrate), Maria Guerra Arias (ICS Integrate), Claudia Leone (IHMT), Amani Siyam (WHO), Giorgio Cometto (GHWA), "A Universal Truth: No Health without a Workforce," World Health Organization (2014): 36, accessed May 20, 2015, http://www.who.int/workforcealliance/knowledge/resources/GHWA-a_universal_truth_report.pdf?ua=1.

CHAI Leadership Team

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Vice Chairman and Chief Executive Officer

Mustapha “Staph” Leavenworth Bakali
President and Chief Operating Officer

Julie Feder
Chief Financial Officer

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Executive Vice President of Vaccines, Human Resources for Health, and Family Planning

Kelly McCrystal
Executive Vice President of New Initiatives, Nutrition, and Maternal, Newborn, and Child Health

Dr. Mphu Ramatlapeng
Executive Vice President of HIV/AIDS, TB, and Global Health Spending

Dr. David Ripin
Executive Vice President of Access to Medicines and Malaria; Chief Science Officer

Dr. Yigeremu Abebe
Vice President and Country Director – Ethiopia

Gerald Macharia
Vice President, Regional Director – East and Southern Africa and Country Director – Kenya

Dr. Owens Wiwa
Executive Vice President, Regional Director – West Africa and Country Director – Nigeria

Joshua Chu
Senior Regional Program Director – Asia

Prescott Chow
Senior Regional Director – Indonesia and Papua New Guinea

Cathleen Creedon
Director of Development

Harkesh Dabas
Managing Director – India

Maura A. Daley
Senior Director – Communications

Corrie Martin
Senior Director – Operations

Linda Michalopoulos
Senior Director – Human Resources

Joan Muasa
Senior Director – Institutional Relations and Program Review

Dang Ngo
Senior Regional Director – Greater Mekong and Country Director – Vietnam

Geoffrey Weber
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Financials

Clinton Health Access Initiative, Inc. and Subsidiaries
Consolidated Statement of Financial Position

Years Ended December 31, **2014, 2013, and 2012**

Amounts in Thousands of Dollars (\$000's)

	2014	2013	2012
REVENUES AND SUPPORT			
Contributions	\$49,426	\$47,245	\$35,160
Grants	91,622	61,412	43,041
In-kind contributions	405	562	744
Other	81	168	247
Total revenues, gains, and other support	141,534	109,387	79,191
EXPENSES			
East Africa	15,950	10,316	6,424
Caribbean	347	1,281	1,509
Southeast Asia and Ukraine	14,407	13,220	12,515
Southern African Development Community	26,847	20,105	11,418
West Africa	20,004	11,869	6,133
Ethiopia	8,247	5,990	4,538
India	7,672	5,286	1,094
South Africa	2,391	3,779	3,233
Direct Country Team Expenses	95,866	71,845	46,863
Global Access	16,803	13,861	10,631
Global AIDS & Health Systems	3,470	2,941	2,920
Other Global Programs	10,517	8,433	6,467
Direct Global Team Expenses	30,789	25,235	20,019
In-Country Indirect Cost	1,553	1,418	1,929
Executive & Program Management	1,892	1,654	1,707
General and Administrative	7,891	6,606	6,640
Overhead	11,336	9,678	10,276
Management Study			629
Finance System	760	448	80
Total expenses	138,752	107,207	77,867
Surplus	\$2,783	\$2,180	\$1,324

	2014	2013	2012
ASSETS			
Cash and cash equivalents	\$10,403	\$10,524	\$9,249
Assets limited as to use	60,369	61,567	55,140
Accounts receivable	1,732	975	438
Contributions receivable	3,393	4,944	1,968
Grants receivable	7,641	4,387	961
Prepaid expenses	1,527	638	726
Property and equipment, net of accumulated depreciation	184	211	356
Total assets	85,250	83,247	68,838
Liabilities and Net Assets			
Accounts payable	2,395	3,171	6,151
Accrued expenses	4,211	2,226	2,130
Deferred revenue	36,029	38,118	21,527
Obligations associated with assets held for commodities purchases	3,128	3,513	13,606
Total liabilities	45,762	47,028	43,414
Net assets	39,487	36,219	25,424
Total liabilities and net assets	\$85,250	\$83,247	\$68,838

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