



CENTER FOR
**GLOBAL
HEALTH**

Making an impact through global partnerships



CDC's

75 YEARS

in Public Health

Since it was established more than 75 years ago, the Centers for Disease Control and Prevention (CDC) has focused on issues of global health significance.

Founded as part of the U.S. Public Health Service in 1942, CDC's predecessor, the Office of Malaria Control in War Areas, focused on malaria control in the southeastern United States, a major health problem in the region at the time. Since its inception in 1946, CDC carried the work of malaria prevention forward, and by 1951

when malaria was eliminated in the U.S., CDC's mission had expanded. Though 2021 marked 70 years since malaria was eliminated from the U.S., CDC continues to monitor malaria in the U.S., where there are still approximately 2,000 cases each year, mostly related to international travel. Today, CDC

also helps health care providers promptly and correctly diagnose and treat malaria in the U.S. and educates U.S. citizens traveling abroad about malaria prevention. As with other infectious diseases, continued vigilance at home and abroad is needed as long as malaria remains present in the world.



1942

CDC's predecessor—the Office of Malaria Control in War Areas (MCWA)—was created to control malaria around military bases in the Southeastern U.S.



1951

Malaria was eliminated in the U.S.

CDC established the Center for Global Health (CGH) in 2010 to focus on important synergies across the global health portfolio, drawing on CDC's unique expertise in global health security, epidemiology, surveillance, laboratory systems, emergency response, and workforce development. The Center for Global Health leads CDC efforts to work with U.S. government agencies, multilateral partners, and ministries of health in Africa, Asia, Latin America, Europe, and other regions. The Center is a steward of the agency's domestic and global malaria and parasitic disease activities that date back to CDC's origins, is a co-implementer of the President's Malaria Initiative (PMI), along with the United States Agency for International Development (USAID), and is a key implementer of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). In addition, the Center for Global Health oversees the implementation of programs to address leading causes of death worldwide, including tuberculosis, and implements prevention and vaccination activities across the globe. Through leveraging CDC's longstanding partnerships and the agency's unique scientific and technical capacities, CDC's Center for Global Health works closely with ministries of health and other partners to implement programs and tackle profound health threats, including COVID-19.

True global health security requires equity in public health across the globe.

No community, district, or province within a nation will be truly safe and healthy until all are. No nation, including the United States can be truly safe until all nations have the core public health capabilities and the health systems in place to protect the most marginalized. This is why the Center for Global Health works on behalf of the American people to save lives around the world, partnering with other nations to prevent, prepare for, and respond to infectious disease threats. This work is integral to the CDC's mission to protect Americans from health, safety, and security threats.

CDC's Center For Global Health

In 2010, CDC established the Center for Global Health, recognizing that domestic and global health are indivisible and that no country can protect the health of its citizens in isolation from the rest of the world.

CGH's Organization



Division of Global Health Protection

Division of Global HIV and TB

Division of Parasitic Diseases and Malaria

Global Immunization Division

CDC's Global Health Mission



CDC improves the health, safety, and security of Americans while reducing morbidity and mortality worldwide.

CDC's Global Health Priorities



Health Impact: Save lives, improve health outcomes, and foster healthy populations

Health Security: Strengthen global public health prevention, detection, and response to protect Americans and populations worldwide

Public Health Science Leadership:

Lead and influence the advancement of global public health science and practice



1958

CDC sent a team of Epidemic Intelligence Service Officers to Southeast Asia to work on smallpox and cholera outbreaks. This was CDC's first technical support mission to Southeast Asia.



1967

The Foreign Quarantine Service joined CDC.

CDC's Technical Expertise and Partnerships Promote Health Security and Global Good

CDC's Center for Global Health works through CDC Country Offices in more than 60 countries, and with CDC experts from across the agency to provide specialized scientific and program support to bilateral country partners, the World Health Organization and other multilateral institutions, and to other U.S. government agencies.



CDC supports Mozambique laboratory capacity for TB diagnosis. Credit: Ricardo Franco/CDC

As the nation's lead public health agency, CDC is uniquely positioned and leads many critical aspects of the U.S. Government-wide effort to address the world's leading global health challenges. Drawing on the CDC's skilled workforce, and the decades of experience and lessons learned from addressing some of the world's toughest global health challenges, CGH uses data-driven, locally appropriate approaches that are constantly informed by and adapted based on the latest innovations and the best science available.

From its inception, CGH has supported infectious disease outbreak response, elimination, and eradication efforts in the U.S. and across the globe. Through partnerships, CDC enhances country capacity in key areas—addressing the

leading causes of death and disease worldwide, including HIV, TB, malaria, and vaccine preventable diseases, and working with countries to respond to and better prepare for outbreaks and pandemic threats.

In all aspects of our global work, CGH proactively partners with ministries of health, local implementing organizations, and multilateral partners. Today, CGH has more than 1,700 in-country staff around the world working directly with ministries of health, local partners, WHO, and others to maximize global health impact—saving lives, improving health, and addressing disease outbreaks at their source.

All of CDC's global work prioritizes country ownership, and CGH deliberately works to strengthen core public health capabilities and services around the world. Led by

country offices, CGH provides peer-to-peer support to ministries of health and others on the ground, strengthening governments' public health systems and response to health threats. CDC also provides support from headquarters to partner countries on a wide range of shared priorities.

CDC's country-focused technical assistance is:

- Driven by science, data, and what works
- Done by working closely with in-country partners who can own the capacity gains achieved
- Designed to address needs identified by collaborators and in-country partners



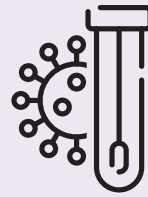
1973

CDC began regularly responding to public health crises abroad by providing famine assistance in sub-Saharan Africa.



1976

CDC sent disease detectives to investigate two large outbreaks of an unknown, deadly hemorrhagic fever in Zaire (DRC) and Sudan. This disease is now known as Ebola.



CDC Experts Hunt for COVID-19 in the Rain Forest of Brazil

CDC launched an agency-wide response to the COVID-19 pandemic on January 21, 2020. Since the earliest days of the pandemic, CDC has been supporting prevention, preparedness, and response efforts globally, in partnership with public health agencies, ministries of health, and multilateral and non-governmental organizations worldwide. CDC's work helps frontline healthcare workers, communities, and the public protect themselves and save lives. CDC has supported well over 60 countries in their efforts to prevent, detect, and respond to COVID-19 in collaboration with other U.S. government agencies and international partners. CDC activities are designed to enhance COVID-19 response capabilities, while simultaneously building longer-term, sustainable capacity for countries' response to highly communicable diseases that we know will continue to threaten health outcomes well into the future.

The first wave of COVID-19 in early 2020 overwhelmed the health system in Manaus, the capital of Amazonas, Brazil's largest state. The second wave, which started in December 2020, was even worse. By January 2021, there were not enough hospital beds, medicine, or oxygen for those who needed it. To support the Ministry of Health's efforts in Brazil, CDC, sent a team of Portuguese-speaking epidemiologists and laboratory experts to work with local partners there. Their goal was to learn what was fueling the rapid spread of COVID-19 and conduct a public health investigation.

Initially, the CDC team faced many challenges, including getting personal protective equipment and testing supplies and getting into the community where they could begin the investigation. After meeting with local health officials, the team planned a journey to the remote city of Parintins, located on an island in the middle of the Amazon rain forest.

In Parintins, the team went to the houses of recently diagnosed people to interview and test their families to find out whether a new strain of coronavirus (referred to as P.1.) was fueling the new outbreak. In less than **72** hours, CDC and local partners talked to and tested **90** people. Fifty-four tested positive for SARS CoV-2, the virus that causes COVID-19. Of the **45** samples that underwent genetic sequencing, **31** (69%) had P.1.

Analyses of the investigation in Parintins is ongoing as of January 2022, but through this work, CDC helped to establish that the P.1. variant spread rapidly there.

“My global work with the U.S. President’s Emergency Plan for AIDS Relief prepared me to deal with the nuances and sensitivities of scientific and international collaborations. Building relationships and trust with local partners and authorities, who ultimately have ownership of the situation, is essential to be welcomed and successful.”

-Dr. Juliana de Fatima da Silva, CGH Division of Global HIV and TB



Drs. Juliana de Fatima da Silva, CGH Division of Global HIV and TB, (left) and Roberto Jorge Freire Esteves, CDC Regional Office in Brazil, (right) stand near a U.S. Air Force plane used during a COVID-19 outbreak investigation in remote parts of Brazil. Credit: Juliana de Fatima da Silva/CDC



1979

CDC established the WHO Lassa fever Collaborating Center in Sierra Leone.



1980

CDC supported the launch of the Field Epidemiology Training Program (FETP) in Thailand, the first one outside of North America.

Global Programs Help Countries Adapt to COVID-19

CDC's decades old collaborations with WHO and partner countries on global health security and other shared priorities have helped to build strong foundations for COVID-19 pandemic response efforts around the world.



Three female students at the Juba Primary School in Dagahaley camp, inside Kenya's Dadaab refugee camp, wash their hands at a washing station built with support from CDC and CARE International. Proper hand hygiene was a key recommendation early in the COVID-19 pandemic when masks were not always available and vaccines had not been developed. Credit: Peter Mndanyi/CARE Kenya

Since the earliest days of the pandemic in 2020, CDC country offices have pivoted available personnel, existing relationships, and critical resources and on-the-ground assets to support partner countries' COVID-19 responses in a variety of ways. CDC's country offices rapidly and effectively leveraged investments to respond to the pandemic, most notably from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), Global Health Security, as

well as polio, measles and influenza relationships and platforms that were already in place before the pandemic. CDC's long-standing partnerships and investments in supporting enhanced global surveillance systems, improving disease detection capacity, expanding adaptable laboratory networks, strengthening emergency management, and developing a well-trained workforce are key cornerstones of the global pandemic response.

PARTNERSHIP IN ACTION: HAITI

Healthcare access challenges and the recent earthquake resulted in decreased COVID-19 testing throughout Haiti. To address this issue, CDC developed additional COVID-19 testing sites, using the same model as the HIV and tuberculosis programs. As a result of this technical assistance to the Ministry of public Health and Population (MSPP), citizens can get tested for COVID-19 at pharmacies, private sector labs, and at both international airports. CDC also facilitated the donation of 500,000 Moderna COVID-19 vaccine doses a week in July. CDC continues to support the MSPP in identifying ways to increase vaccine uptake in the population.



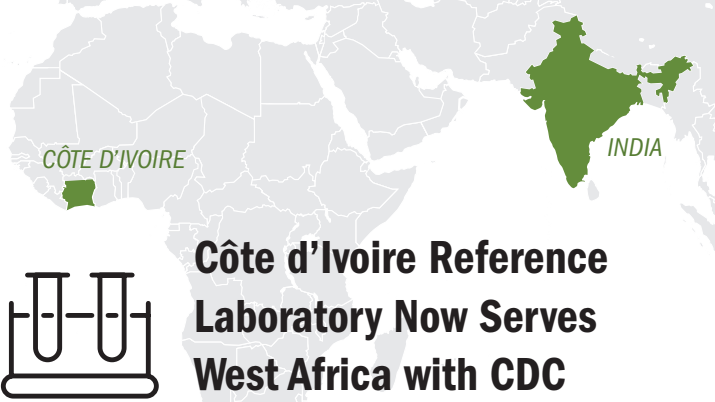
1980

CDC joined the global campaign to eradicate Guinea worm disease.



1980

The 33rd World Health Assembly declared the world free of smallpox, marking a landmark achievement in global health.



Côte d'Ivoire Reference Laboratory Now Serves West Africa with CDC Support

One of CDC's accomplishments in Côte d'Ivoire was the establishment of the Retro-Côte d'Ivoire (Retro-CI) laboratory in Abidjan with collaboration from the Ministry of Health and Public Hygiene (MSHP) and the Pasteur Institute of Côte d'Ivoire.

In November 2021, Retro-CI was designated by WHO as a prequalification site for HIV serology and nucleic acid testing. It is one of only 14 such laboratories worldwide, and the first in West Africa. Retro-CI's international accreditation allows it to serve as a reference center for the West African region.

Before this designation, Retro-CI was already a recognized reference center for the country's laboratory network. Retro-CI is a leader providing life-saving HIV diagnostics support to hundreds of thousands of people in Côte d'Ivoire each year.

In 2019, with support from PEPFAR and a goal of long-term sustainability, CDC initiated a five-year transition process for the Retro-CI laboratory. During this period, MSHP will gradually assume operational responsibilities for routine activities, and CDC will continue to provide support for more complex work.

Retro-CI works on COVID-19

Leveraging the gains and experience from the PEPFAR program to support the national COVID-19 response illustrates the adaptive and innovative approach that CDC uses to support national public health programs. In countries around the world, CDC's support for a specific disease serves as a foundation for broader gains across the public health spectrum.

Retro-CI supported COVID-19 response activities in Côte d'Ivoire at the start of the pandemic. In March 2020, when the Pasteur Institute diagnosed the country's first COVID-19 case, Retro-CI performed COVID-19 testing.

CDC and Retro-CI staff provided technical assistance to the broader laboratory network across the region on testing protocols and international guidance for biosafety and waste management.

The work CDC began in Côte d'Ivoire in 1988 has developed critical laboratory capacity in response to the HIV epidemic and emergent infectious diseases.



CDC supported EIS officers at COVID-19 first-line treatment centre at Poonthura, Kerala, 2020. This site used to be a school before it was converted into a treatment centre during COVID-19 outbreak investigation. Credit: CDC India Office



CDC Country Offices respond to COVID-19 around the world

Decades of collaboration between CDC and the Government of India have built strong foundations for India's response to COVID-19. The Government of India reported its first case on the same day that WHO first declared COVID-19 a Public Health Emergency of International Concern. CDC's country office in India mobilized immediately, establishing teams that aligned closely with Government of India response efforts across the country. CDC efforts helped to control cases and deaths by leveraging existing collaborations that strengthened India's core public health capabilities such as disease surveillance, infection prevention and control, emergency response, public health laboratories, and a well-trained public health workforce. CDC supported efforts to establish a fully functioning Government of India Incident Management System and assisted with response and mitigation efforts, including COVID-19 clinical management, risk communication, hospital and community mitigation activities, and a tiered training program to establish a specialized cadre of epidemiologists in India.

Through CDC's field epidemiology training program and in close collaboration with India's Epidemic Intelligence Service program, CDC-trained public health experts are fully incorporated into the Government of India's public health workforce, including many who have had critical roles in outbreak investigation and overall response efforts throughout the pandemic. CDC supports pandemic response efforts at the national and subnational level, providing direct support to some of the highest priority, hard-to-reach, and most vulnerable states identified by the Government of India. In addition, throughout the pandemic, CDC has provided critical support for outbreak response and contact tracing efforts within the U.S. Embassy.



1981

CDC MMWR published a report of *Pneumocystis carinii* pneumonia in five previously healthy young men in Los Angeles, California. This would later become known as the first published scientific account of human immunodeficiency virus (HIV).



1988

The worldwide Polio Eradication Initiative launched, spearheaded by WHO, Rotary International, CDC, and UNICEF.

CDC Provides Technical Assistance to COVID-19 Vaccine Rollout

CDC's global COVID-19 activities enhance response capabilities and simultaneously build longer-term, sustainable capacity for response to future highly communicable diseases, including the vaccine rollout for COVID-19.



Colombia FETP COVID-19 field investigation with the Amazonas State Department of Health in San Juan de Atacuari on the Brazilian border. Credit CDC Global

CDC's country offices have been critical to supporting the COVID-19 vaccine rollout, leveraging existing relationships, preparedness, response, and capacity investments, and ensuring quick access to response funds in country.

CDC collaborates with ministries of health, partner organizations, and multinational entities, including WHO and COVID-19 Vaccines Global Access (COVAX), the global collaboration to accelerate progress towards the development, production, and equitable access to COVID-19 tests, treatments, and vaccines. These collaborations work to plan, implement, and evaluate national COVID-19 vaccination programs.

CDC works with partners to:

- **Ensure** low and middle-income countries (LMIC) are ready to deploy and evaluate COVID-19 vaccines.
- **Reduce** disease burden and transmission in LMIC, which in turn reduces the threat of COVID-19 globally and the threat of new variants.
- **Participate** in safety monitoring guidance development, and works to ensure appropriate vaccine safety monitoring is established and maintained.
- **Provide** technical expertise to gather and synthesize evidence to support new policy and global guidance.
- **Develop** strategies for responding to public concerns about vaccines and guidance on countering common myths and rumors.
- **Ensure** the rapid distribution and administration of COVID-19 vaccines is taking place with appropriate health equity considerations wherever feasible.

CDC works to help ensure that LMIC can implement and evaluate the available COVID-19 vaccine campaigns. The broader aim of this effort is to establish and strengthen sustainable immunizations programs.



1999

CDC established the Stop Transmission of Polio (STOP) program to train and deploy international public health field staff to assist national immunization programs with polio investigation, surveillance, and planning of vaccination activities.

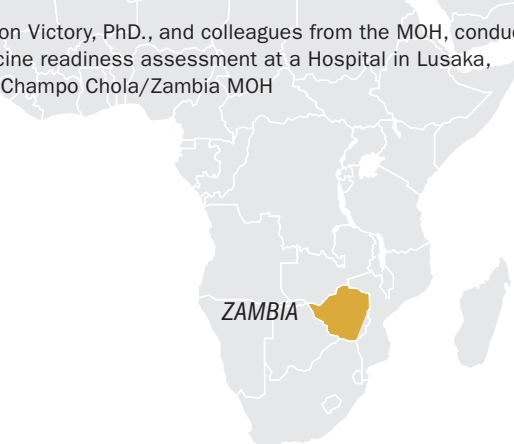


2000

CDC established the Global AIDS Program.

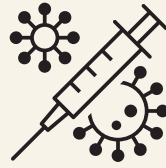


U.S. CDC's Kerton Victory, PhD., and colleagues from the MOH, conducted a COVID-19 vaccine readiness assessment at a Hospital in Lusaka, Zambia. Credit: Champo Chola/Zambia MOH



PARTNERSHIP IN ACTION: ZAMBIA

CDC established an office in Zambia in 2000. CDC works with the Ministry of Health and provincial health offices to address HIV, tuberculosis, malaria, and other infectious diseases. CDC supports international and local organizations that help build the capacity of the ministry of health and to provide health services at the national and community level. CDC also supports national program efforts in workforce development and health systems strengthening.



Taking on COVID-19 in Zambia

CDC's Global Rapid Response Team (GRRT) is a unique resource that can rapidly respond to global public health concerns, both within the U.S. and abroad.

Since its inception in 2015 and through 2020, GRRT staff have spent more than 61,800 person-days deployed in over 1,450 total mobilizations.

GRRT has responded to multiple emergencies including cholera outbreaks, COVID-19, dengue, Ebola, hepatitis A, measles, polio, yellow fever, Zika, famine, mass gatherings, and natural disasters.

In April 2021, Kerton Victory, PhD, joined the CDC team in the southern African nation of Zambia for a 90-day assignment through CGH's GRRT program. Kerton is a senior CDC epidemiologist working in the Center for Global Health's Division of Global Health Protection; he is a disease detective and a member of CDC's Global Rapid Response Team.

CDC Zambia works with the Ministry of Health (MOH) to support the country's efforts to contain the spread of COVID-19.

"We are currently working with the MOH and local health officials to develop a national tracking system so that we can see if people have any adverse reactions to the COVID-19 vaccine and how we can go about documenting that," Dr. Victory explained while he was in Zambia.

"CDC Zambia and I worked with the Ministry of Health to create messages and communication strategies to explain the benefits of vaccines," Dr. Victory said.

CDC Zambia and local health officials also set up focus groups in different communities to learn more about how to increase COVID-19 vaccine demand. Social media was used as a strategy to convey and reinforce prevention messages. Showing people getting vaccinated could help encourage others to get the vaccine, too.

"We worked with religious leaders and people who are famous, like movie stars and local celebrities, to get the message out about the importance of getting the vaccine," Dr. Victory said.



2000

CDC launched DPDx—an online resource for diagnostic assistance and training in laboratory identification of parasites.



2000s

H5N1 influenza started spreading among humans in the late 1990's, with several outbreaks occurring around the world throughout the 2000's.

Global Partnerships Save Lives

CDC has over 60 country offices that work with ministries of health and other partners on the front lines. Although CDC's overseas offices include staff assigned to the country office from CDC Headquarters in Atlanta, most of its overseas workforce are locally employed staff from the countries in which it works. CDC only works in countries that request our technical assistance and collaboration. CDC's capacity development work is uniquely designed to be owned by partner countries.

 CDC's Global Presence



United States

Chagas disease is an underrecognized parasitic infection that affects approximately 300,000 people in the United States. The disease can be passed from mother to baby, with as many as 300 babies born with Chagas disease every year. Tragically, most of these infections are undiagnosed. When left untreated, Chagas disease can cause heart failure, stroke, and even death. The key to preventing these outcomes is to educate healthcare providers to diagnose and prescribe treatment before patients develop problems with their hearts. Since 2015, CDC has funded partners to develop new strategies, educational tools, materials, and guidelines to improve awareness and prevention of Chagas disease. CDC improves diagnosis and treatment of Chagas disease through continuing medical education materials and patient and provider educational information.



Central America

Acute Febrile Illness (AFI) is an acute fever that can be caused by multiple pathogens. Substantial knowledge gaps exist regarding underlying etiologies and causes and patterns of AFI, particularly in lower and middle income countries. CDC Central America Region (CAR) works with countries to better understand causes of fever, to strengthen surveillance and laboratory capacities, to develop prevention and control measures, and to inform clinical management. CDC CAR helped to create a network to develop the first multi-country platform that identifies causes of illness not previously recognized in the region. CDC's AFI work extends beyond CAR to more than 20 countries worldwide.





Pakistan

CDC supported polio, measles, and rubella campaigns, reaching over 90 million children in Nov. 2021. Pakistan and partners delivered the multi-antigen campaign to close gaps widened by the COVID-19 pandemic.



Philippines

At the end of 2020, Philippines ensured that over 9 million at-risk children received protection against measles and rubella, and nearly 7 million children received protection against polio. CDC supported this national, two-phased integrated campaign by providing remote technical assistance from CDC headquarters. CDC also deployed 12 Stop Transmission of Polio (STOP) program experts to assist with vaccine campaign implementation, monitoring and evaluation, and to strengthen routine immunization.



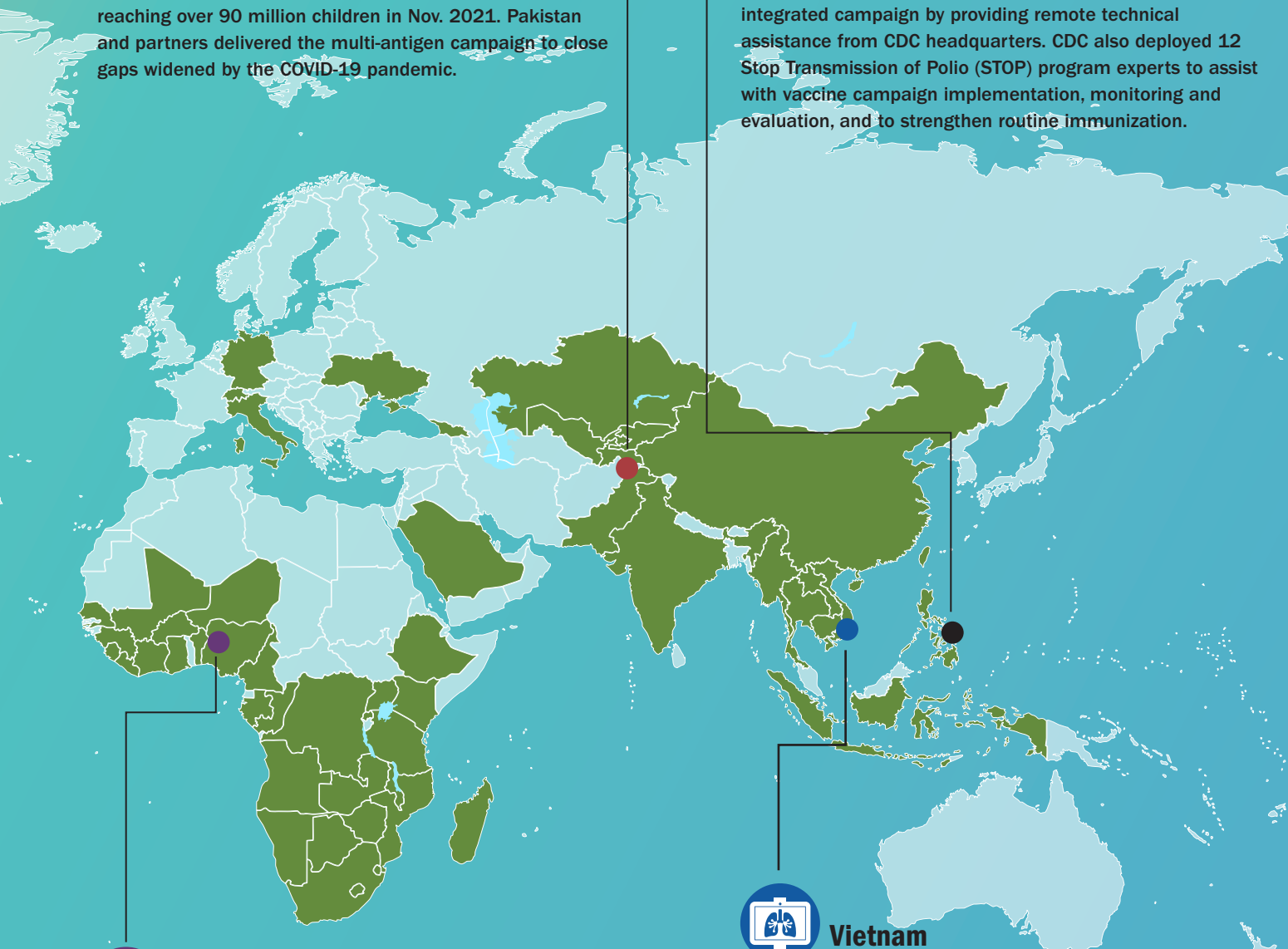
Vietnam

CDC Vietnam and partners implemented the Double X diagnostic strategy and tripled tuberculosis (TB) diagnoses and improved access to TB treatment for people living with HIV (PLHIV). The proportion of antiretroviral therapy (ART) patients who received TB treatment increased from 0.2% to 0.7%. The results helped inform the revision of Vietnam's national guidelines for diagnosing and treating TB among PLHIV. The Double X strategy enhances case finding by using both a chest X-ray and a rapid molecular diagnostic test. The Double X diagnostic strategy was implemented in three provinces from July to September 2020. A total of 6,389 PLHIV were screened for TB symptoms. Of the PLHIV screened, 1,479 (23%) had a TB-like symptom.



West Africa

CDC Nigeria's remote COVID-19 training success led to an expansion of the Extension for Community Healthcare Outcomes (ECHO) concept. In February 2021, the University of New Mexico, U.S.CDC, CDC Nigeria, and the Nigerian government launched the West Africa Regional ECHO knowledge sharing platform for the COVID-19 Response. By mid-July 2021, thousands of West Africa healthcare workers had received COVID-19 case management and vaccination training. The West Africa Regional ECHO also serves as a platform for addressing misinformation across the region.



Progress in Addressing Leading Causes of Death and Disability



CDC's Central America Regional office partners with ministries of health to build a sustainable, high-impact national HIV response programs funded by PEPFAR. Pictured are staff of Colectivo Amigos Contra el SIDA (CAS), a free HIV and sexually transmitted disease prevention clinic in Guatemala City, Guatemala. Credit: Nicholas Tenorio/CDC

CDC draws on an extensive network of international partnerships and its technical capacities in infectious diseases, program implementation, public health surveillance and laboratory, workforce development, and emergency response, to address infectious disease outbreaks (like Ebola or COVID-19) and naturally occurring crises (like earthquakes and hurricanes) that can disrupt public health systems. CGH's global health portfolio also focuses on long-standing global health challenges such as HIV, tuberculosis, malaria, parasitic diseases, and vaccine-preventable diseases including measles and polio. CGH's global programs work with countries to prepare for and respond to disease outbreaks, saving lives in the countries where CDC works and contributing to a safer global community.

Center for Global Health Key Accomplishments:

Global Health Protection

Workforce Development: Since 1980, there have been over 19,148 graduates of CDC's Field Epidemiology Training Program, and CDC has supported more than 80 countries across Frontline, Intermediate, and Advanced program tiers.

Response to Outbreaks: Since 2005, there have been over 6,050 emergency outbreaks investigated by CDC-trained disease detectives across the globe.

HIV & TB

Provide Antiretroviral Treatment (ART): By the end of 2021, 11.7 million people were on ART as a result of CDC's support of HIV care and treatment, through the U.S. President's Emergency Plan for AIDS Response.

Preventing a Leading Cause of Death: TB Preventive Treatment (TPT) significantly reduces (up to 70%) the chance of PLHIV from getting TB, a leading cause of death for PLHIV. Between 2018 and 2021 quarter 1, CDC supported 4.5million of the 7.2 million PLHIV who received TPT globally, surpassing the global target of 6 million two years ahead of schedule.



2001

CDC, with American Red Cross, UNICEF, UNF and WHO, founded the Measles Initiative (expanded to include rubella elimination in 2011), becoming M&RI.



2002

Endemic measles eliminated in the Region of the Americas.



GUINEA



An FETP resident in Guinea looking for Ebola contacts in the community during the 2021 Ebola outbreak. Credit: Salomon Corvil/CDC

Parasitic Diseases and Malaria

Eliminating Parasitic Diseases: Scale up of proven interventions has led to:

- 649 million people no longer requiring treatment for lymphatic filariasis
- Just 27 human cases of Guinea worm disease in 2020
- 1.38 billion people no longer requiring treatment for trachoma

Reducing Malaria Deaths: CDC and global partners have helped save more than seven million lives and prevented more than one billion cases of malaria since 2000.

Polio and Other Vaccine Preventable Diseases

Eradicating Polio: Polio cases have dropped more than 99% since 1988.

Measles and Rubella Elimination: Since the launch of the Measles & Rubella Initiative (M&RI) and during the period 2000-2019, more than 31.7 million measles deaths have been prevented through vaccination.



The Impacts of Disease Detection and FETP Workforce in Guinea

The Field Epidemiology Training Program (FETP) educates international field epidemiologists, or “disease detectives” to be “boots on the ground” on the front lines when and where infectious disease events occur. Epidemiologists trained through FETP focus on investigating, containing, and eliminating outbreaks before they become larger threats. Since 2015, CDC has focused on expanding access to the FETP program to include more than 80 countries and trained more than 19,000 graduates.

Guinea, along with other countries in the region, had a shortage of experienced field epidemiologists during the 2014-2016 West Africa Ebola epidemic. To address this shortage, and as part of preparedness planning done in partnership with the Government of Guinea following the 2014-2016 Ebola outbreak there, CDC worked with the Ministry of Health to establish an FETP program in 2017. Since that time, Guinea’s FETP has trained nearly 200 disease detectives. Today, Guinea is better prepared to respond to outbreaks, conduct disease investigations, and manage and analyze data thanks in part to the FETP program.

For example, during the recent 2021 Ebola outbreak in Guinea, FETP-trained disease detectives held key surveillance and response positions. They were among those who responded to the first Ebola case, helping to quickly contain the spread of the disease. These epidemiologists isolated suspect cases and identified contacts to help keep others from becoming sick. They also led data management and Ebola vaccination activities. FETP graduates improved response timeliness and quality. Equipped with new tools including a vaccine, FETP graduates contributed to a significant reduction of geographic spread, duration, cases, and deaths when compared to the previous Ebola outbreak.



2003

SARS-associated coronavirus is first discovered in Asia. CDC responded by providing guidance for surveillance, clinical and laboratory evaluation, and reporting.



2003

CDC plays a leading role in the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), largest commitment by any nation to address one disease.

AEROPORT INTERNATIONAL DE N'DJILI



Africa CDC, based in Addis Ababa, Ethiopia, with five regional collaborating centers, coordinates continent-wide response outbreak efforts including responses to Ebola and COVID-19. Credit: Africa CDC



CDC Partners with Countries to Strengthen National Public Health Institutes

Since 2011, CDC has worked to develop and strengthen National Public Health Institutes (NPHI) in more than 30 countries. Similar to the role that CDC plays in the United States, NPHIs are government-based agencies that organize and link a country's public health activities providing coordinated national leadership for public health. CDC's NPHI Program provides technical assistance, guidance, and support to countries developing new NPHIs or strengthening existing ones. Over the past decade, the program has worked with more than 30 countries, linking with critical organizations such as PEPFAR, the World Bank, WHO, Africa CDC, and many others.

PARTNERSHIP IN ACTION: BURKINA FASO

CDC first began collaborating with the Ministry of Health of Burkina Faso in 1991. The initial technical support for polio eradication expanded to include other vaccine preventable diseases such as measles and meningitis. With the launch of the Global Health Security Agenda, CDC established an office in Burkina Faso in 2016 focused on strengthening the country's ability to prevent, detect, and respond to public health threats, and to strengthen the country's capacity in surveillance, laboratory systems, workforce development, and emergency management.



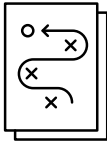
2005

The U.S. President's Malaria Initiative (PMI) was created. Led by USAID and co-implemented with CDC, PMI aims to reduce malaria deaths and morbidity, with a long-term goal of eliminating malaria in 24 countries in Africa as well as three in the Greater Mekong Sub-region.



2007

CDC launched the Global Disease Detection Operations Center in Atlanta, Georgia.



Years of NPHI Work Help Burkina Faso Prepare for COVID-19

The COVID-19 pandemic has overloaded public health systems worldwide. Countries without a centralized coordination point for scientific expertise and public health systems tend to be less effective and efficient during a public health emergency.

Burkina Faso did not hesitate in its COVID-19 response, even though its National Public Health Institute (NPHI), or L'Institut National de Santé Publique (INSP), and the Emergency Operations Center (EOC) were still in their infancy at the start of the pandemic. Established

in 2018 with support from the U.S. CDC, INSP and its EOC have played an essential role in tackling the outbreak. As the virus continued to spread worldwide, Burkina Faso activated its EOC, developed a COVID-19 management plan, and created a pandemic taskforce.

The country's effective management of the COVID-19 response is due to several factors, including capacity building that was initiated prior to the current crisis and a focus on public health emergency management through INSP.



Dr. Kader Ilboudo working with the National Influenza Reference Laboratory collecting a COVID-19 specimen sample during the early stages of the outbreak in Burkina Faso. Credit: Emilie Thérèse Dama/CDC Burkina Faso



Operation Allies Welcome (OAW) Response

The Global Emergency Alert and Response Service (GEARS) combines the critical functions of the Global Disease Detection Operations Center (GDDOC) and the Global Rapid Response Team (GRRT) into a "one stop shop" that allows for a seamless transition between disease detection and response activities. During a response, GRRT identifies and deploys expert CDC staff within 72 hours of receiving a deployment request.

To support the response to President Biden's Operation Allies Welcome (OAW) Initiative, GRRT identified and deployed 12 skilled CDC staff

to the eight facilities established by the Department of Homeland Security. Deployed staff collaborated with other U.S. agencies to set-up COVID-19 testing and vaccination clinics and systems to monitor and track potential spread of infectious diseases, including measles. GRRT provided immediate support to the operation while also continuing to support CDC's response to the earthquake in Haiti, deployments for COVID-19 International Task Force, and recurring outbreaks of vaccine derived poliovirus and Ebola around the world.

Mary Claire Worrell (left) and Christine Atherstone (right) deployed to Joint Base McGuire, Dix, and Lakehurst (JB-MDL), where they established a disease surveillance system in early September in response to a case of measles confirmed in a person who evacuated from Afghanistan. Credit: Dr. Patricia Walker/International SOS



2010

CDC established the Center for Global Health.



2011

CDC launched its National Public Health Institutes (NPHI) program in partnership with the International Association of National Public Health Institutes and The Bill & Melinda Gates Foundation.



CDC Experts Support Surge Towards HIV Epidemic Control in Nigeria

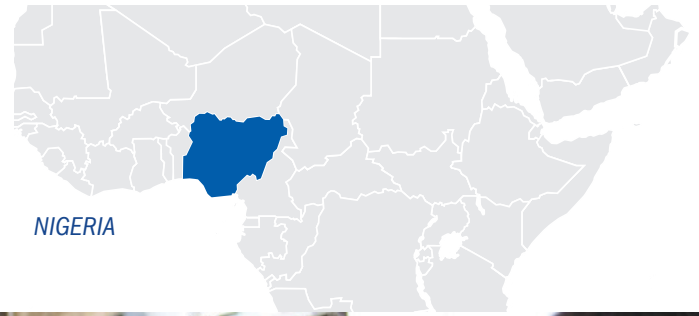
CDC, as part of PEPFAR, works in collaboration with host country governments and with Columbia University and the University of Maryland to develop and implement population-based HIV household surveys. These surveys provide data for focusing HIV program resources and tracking progress. The survey in Nigeria found that less than half of the 1.9 million people living with HIV were receiving lifesaving HIV treatment. Using this data, CDC and partners focused on a dramatic, targeted scale up of HIV treatment to put Nigeria on the path to epidemic control.

Efforts focused on rolling out an HIV anti-retroviral therapy (ART) surge in the nine Nigerian states with the largest numbers of individuals with HIV not receiving treatment. CDC efforts also included expanded testing. CDC and partners established incident command structures in each state and used a CDC-designed strategic operational platform to facilitate efforts. Experts collected and analyzed site-level data each week. They used the data to adapt approaches in the hard-hit communities.

The first 18-months of the Nigeria HIV treatment Surge resulted in an eight-fold increase in the weekly number of newly identified people with HIV who started treatment in the nine focal states, even amid the COVID-19 pandemic.

The total number of people diagnosed with HIV who are now receiving treatment in those states also saw a 65 percent increase in a year and a half. Based on this initial success, CDC worked with partners to expand efforts to nine additional states. As of 2021, the Nigeria HIV treatment surge is now serving 903,000 PLHIV in 18 states, compared to 454,000 in 2019.

While these gains are significant, work remains. In Nigeria and other places throughout the world, many people remain unaware of their HIV status. To reach epidemic control, efforts to find people living with HIV, link them to treatment, retain them on HIV treatment, and help them sustain viral suppression are essential. In order for the program to continue, it counts on the integral skills of community health workers and the potential to be replicated in other settings.



NIGERIA



A young person gets an HIV test at an open-air testing site in the Rivers State, Nigeria. Credit: CDC Nigeria Country Team



RTS,S: A Historic New Malaria Vaccine

Malaria has killed billions of people globally over the centuries. Several decades after endemic malaria transmission was eliminated in the United States, nearly half the world's population still lives in areas at risk of malaria transmission. In 2020, malaria was responsible for the deaths of an estimated 627,000 people—mostly children under the age of five in sub-Saharan Africa.

CDC is a global leader in providing scientific expertise to endemic countries and partners to improve surveillance, laboratory systems, and management of malaria cases. CDC co-implements the President's Malaria Initiative (PMI) with USAID in 24 African countries and three programs in the Greater Mekong sub-Region. CDC provides technical leadership and advice to the U.S. Global



2011

CDC activated its Emergency Operations Center (EOC) to respond to polio.



2014

CDC activated its Emergency Operations Center to coordinate assistance and disease control activities related to the largest Ebola virus disease outbreak in West Africa.

Malaria Coordinator on surveillance, monitoring and evaluation, and operational research, to drive progress toward malaria elimination.

One of the most important and exciting public health developments of the year 2021 was the approval of the first malaria vaccine. On October 6th, the WHO recommended the RTS,S malaria vaccine for broader use among children in sub-Saharan Africa and other regions with moderate to high malaria transmission. CDC's parasitic diseases and malaria program was instrumental in accomplishing this milestone.

CDC's years of collaborative work, including with the RTS,S pilot introduction in Kenya, contributed to the WHO recommendation and helped pave the way for wide scale implementation of this promising new intervention.

"RTS,S is the first malaria vaccine to reach this stage and is likely the best new widely implementable tool to combat malaria since artemisinin-based combination therapy and bed nets," says Dr. Aaron Samuels, CDC's Kenya Malaria Program Director, and principal investigator for the evaluation in Kenya.

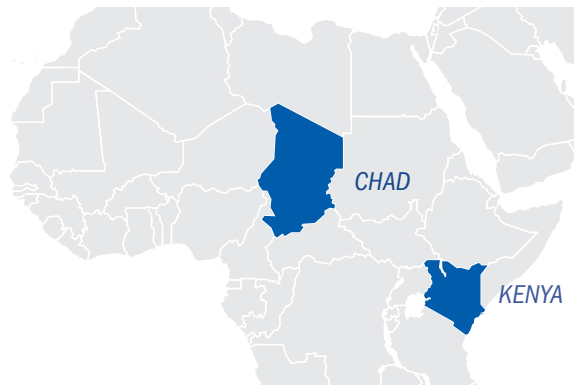
In Kenya, where malaria is still one of the leading killers of young children, the new vaccine has the potential to save thousands of lives.

CDC's role in helping to co-implement PMI across Africa and the Mekong Delta region is saving lives, while helping to increase understanding of how to safely deliver malaria control interventions. CDC provides specific technical guidance to Health Ministries and WHO, to maintain essential services for malaria in low-resource countries, and to inform the global malaria community on the provision of safe and accessible malaria care and tools in the most affected countries.

Over decades, CDC-supported or tested malaria interventions such as bed nets, indoor residual spraying, and rapid diagnostics tests, paired with the improved availability of antimalarial drugs have helped drive down malaria cases and deaths. Since 2000, 1.5 billion cases of malaria and 7.6 million deaths have been averted, but much work still remains to eliminate malaria as a perennial public health threat that continues to sicken and take the lives of so many across the world.



A household survey team heading out to a study village on an island in Lake Victoria, Kenya to assess the feasibility, coverage, uptake of the malaria vaccine and the effect of vaccine introduction on other child health interventions. Credit: Eunice Radiro/KEMRI/CDC



CDC-led Measles Risk Assessment Spearheads a Vaccination Campaign to Protect Children in Chad

In early 2020, CDC's global immunization program partnered with WHO to conduct measles risk assessments for high-risk countries. In Chad, the results showed that 1.2 million children under the age of five were at risk of measles. The assessment estimated that a mass vaccination campaign could close the dangerous immunity gap and mitigate the risk of a serious measles outbreak in Chad.

Based on the compelling data, presentation, and partner outreach,

in September of 2020 the Chad Ministry of Health approved to move forward with a nationwide measles vaccination campaign. After a readiness assessment to ensure that adequate measures were in place to mitigate the spread of COVID-19, the campaign took place in January and March of 2021.

To build awareness about the campaign and vaccine confidence, CDC partnered with the International Federation of Red Cross and the Chad Red Cross to conduct social mobilization activities

that engaged parents, caregivers, and trusted community leaders. The successful campaign administered over 3.7 million measles doses, including full vaccination of over 43,000 children who had never received a single vaccine, known as zero-dose children. In 2021, Chad reported 2,348 measles cases – a sharp decline from previous years, further highlighting the campaign's success.



2015

CDC launched the Global Rapid Response Team (GRRT) to rapidly respond to global public health concerns, both within the United States and around the world.



2016

CDC's Emergency Operations Center was activated for Zika virus disease.



Partnering to Fight Lymphatic Filariasis in American Samoa

CDC works with global partners to control, eliminate,

and eradicate neglected tropical diseases (NTDs). CDC works to reduce the substantial illnesses and disability caused by neglected tropical diseases, with a focus on those that can be controlled through mass drug administration or other low-cost interventions. CDC's program focuses on diseases including lymphatic filariasis (LF or elephantiasis), onchocerciasis (river blindness), blinding trachoma, schistosomiasis, three soil-transmitted helminths (intestinal worms), and Guinea worm disease.

Lymphatic filariasis is a leading cause of permanent disability worldwide. Over 50 million people across 72 countries are afflicted with LF. In addition to causing extreme physical disfigurement, LF results in stigmatization and socio-economic challenges. Affected people frequently cannot work or conduct normal daily activities, crippling both their families and their communities.

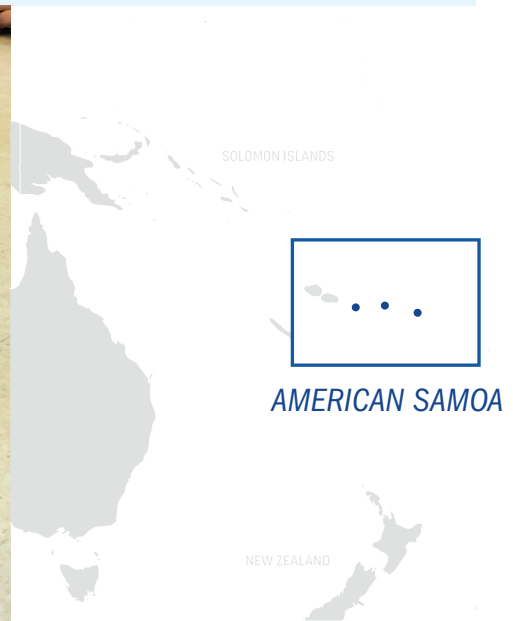
American Samoa is the last remaining known American territory with ongoing LF transmission. CDC works with partners, particularly the American Samoa Department of Public Health, to carry out LF elimination strategies recommended by WHO. These include distributing preventative medicines to communities through mass drug administration campaigns and regularly assessing the impact of disease transmission.

CDC and its partners assisted the American Samoa Department of Health to conduct one such campaign in the fall of 2019. However, when the COVID-19 pandemic was declared, CDC was not able to travel to American Samoa to assess its impact. Without a follow-up impact assessment, it is difficult to know how effective the mass drug administration was—or was not—in preventing LF infections. “If you miss an assessment, you delay reaching the endpoint: validation of elimination,” said CDC health scientist Kimberly Won. “It’s crucial to stick to the established timeline. Any deviation from the timeline of planned activities can cause delays in

implementation of key program activities, risking falling short of LF elimination targets.”

So, CDC scientists innovated their approach, working remotely and training partners on the ground on key steps to conducting an assessment. “From CDC headquarters in Atlanta, we were able to train teams on how to move around villages in a systematically randomized way, how to administer questionnaires, how to collect blood samples, and how to treat discovered cases,” said epidemiologist Tara Brant describing how CDC worked with American Samoa Department of Public Health and the Pacific Island Health Officers Association to train American Samoa colleagues during the pandemic.

In October 2021, American Samoa Department of Health kicked off a third round of mass drug administration for LF using the WHO-recommended triple-drug regimen with remote technical support from CDC staff. CDC is planning a follow-up coverage survey that will occur in early 2022.



CDC works closely with the American Samoa Department of Public Health and other partners to eliminate lymphatic filariasis in American Samoa, the last U.S. territory with known transmission of the neglected tropical disease. In this photo, school children check in to take preventive medicines during a round of mass drug administration. Credit: Kimberly Won/CDC



2018

CDC worked closely with the Ministry of Public Health of the Democratic Republic of the Congo (DRC) and additional partners to respond to multiple Ebola outbreaks.



2020

The WHO African Region was certified free of all wild poliovirus.

Looking Forward

In December 2021, WHO released a report, “The State of Health Equity: HIV, Tuberculosis, and Malaria.” In that report, the authors note that, “... although remarkable progress has been made in reducing the overall burden of each disease, particularly in the past decade, certain groups still have persistently higher disease mortality and morbidity, and lower access to life-saving interventions.”



Healthcare workers gather for training at the regional public health office in Quetzaltenango, Guatemala. CDC supports local and national health departments through indigenous partners to help Guatemala respond to public health threats and prevent the spread of disease regionally and globally. Credit: Nicholas Tenorio/CDC

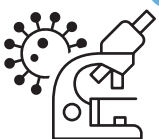
The report reminds us that while progress is possible, much work remains. Among that work, global health programs must do more to assess and address the impact of the world’s leading health challenges among those with fewer resources.

True global health security requires strong public health systems, partnership, and collaboration. Tackling the challenges of the world’s leading causes of death and disease, responding to the on-going COVID-19 crisis, and working with countries to be better prepared for and respond to the next infectious disease threat are inseparable from health equity. Long-term, comprehensive strengthening of public health systems is the foundation of equity in global health and is the foundation for health security.

CDC’s close work with countries focuses on developing integrated, functional, and flexible public health systems that are country-owned and that can be sustained over time. These include public health systems needed to identify and track infectious diseases as well as response capabilities and a skilled workforce that can mobilize an effective response—all critical assets in the current global fight against COVID-19. In the coming year, CDC will continue to partner with other countries to address COVID-19 and long-standing global health challenges, and CDC’s Center for Global Health will:

- **Build preparedness and response capacity and collaboration** from global and domestic efforts across the agency to prepare for the next global health emergency.
- **Provide leadership for CDC’s Global COVID-19 response efforts** by building on relationships with country partners to implement key strategies including vaccine roll out, distribution, and surveillance.

- **Strengthen global preparedness** by supporting the further development of National Public Health Institutes. Creating National Public Health Institutes overseas brings together professionals, disease monitoring, and laboratories so that countries are better prepared to detect and diagnose diseases with a ready, trained workforce.
- **Strengthen CGH’s capacity to advance health equity in science, programs, policy and communications** by building evidence-based programs to advance global health equity and by implementing strategies to measure progress in closing global health equity gaps.
- **Continue to fortify linkages between CDC and partners working overseas** through on-going collaborations on COVID-19, efforts to address long-standing global health challenges, and opportunities to implement new global health tools, such as the roll out of the recently approved malaria vaccine.
- **Intensify, innovate, sustain, and adapt proven interventions** to advance the science base and develop public health tools to further the fight against HIV, TB, malaria, neglected tropical diseases, and vaccine-preventable diseases, including measles and polio as well as COVID-19.
- **Support efforts to extend CDC’s global reach** to ensure coverage in vulnerable regions of the world, including expansion of regional platforms and integration of global health program activities such as FETR, to increase efficacy of disease control prevention efforts.



2020

WHO declared COVID-19 as a pandemic on March 11th, 2020. CDC is responding to COVID-19 and building on decades of global collaboration by deploying the GRRT domestically and serving as credible scientific and technical experts with international partners and partner country governments for COVID-19 science and public health practice.



2021

WHO recommended the new RTS,S malaria vaccine for broader use. CDC’s years of collaboration—including most recently with the RTS,S pilot introduction in Kenya—contributed to the WHO recommendation and helped pave the way for wide scale implementation of this promising new intervention.

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Cover Photo: Community Adherence and Support Groups reduce number of visits to health facilities that patients need for ART pick-ups. Maputo, Mozambique. Credit: Ricardo Franco/CDC, July 9, 2019