**2020 IMPACT REPORT** 

# Transforming Global Health in the Time of COVID-19



# experience as our guide, lessons learned from the first pandemic can help

**Letter From** the Director

> The year 2020 was one we won't soon forget. Never before has the world experienced the spread of a new virus to all corners of the world, killing tens of thousands of people each month, overwhelming health systems, decimating the global economy and impacting the social fabric of communities. In the year since the World Health Organization declared COVID-19 a pandemic, more than 2.5 million people have died, and even with a light at the end of the tunnel in sight, the toll continues to rise.

> Without question, we have been living through a global tragedy. Yet we need to acknowledge the remarkable mobilization and caring by so many, the rapid pace of scientific discoveries, and the resilience manifested by health systems around the

> With the identification of COVID-19 as a global health threat, we realized that we had to quickly pivot to respond to the rapidly worsening crisis. After nearly two decades building longstanding relationships in more than 30 countries, we were compelled to reach out to partner with the countries where we work and support efforts to mitigate the threats of this pandemic.

> Working in partnership, we responded rapidly to provide training to frontline health workers leveraging remote training platforms, to support the diagnosis and management of COVID-19, to rapidly communicate with the public about how to stay safe, to build SARS-COV-2 diagnostic capacity, to support the conduct of surveys to define the status of the pandemic, to fortify under-resourced health systems, to strengthen surveillance systems and to jump-start research for the prevention and treatment of COVID-19.

At the same time, we feared that the COVID-19 pandemic would threaten the hard-won health gains already achieved. Working diligently with partners, we mobilized efforts to rapidly adopt differentiated service delivery models to ensure that recipients of care could continue to receive services.

This annual report highlights some of the work accomplished in 2020, a year like no other. I want to express my pride in the dedication and expertise of ICAP's global teams and to commend the tireless work of our in-county partners, governmental, non-governmental organizations and civil society groups. And I applaud the government agencies and funders who fully and rapidly appreciated the urgent needs for strategic investment to rapidly scale-up a global response to the COVID-19 pandemic, based on science, safety, and health equity.

The challenges of January 2020, remain with us today. We are keenly aware that the pandemic is far from over. Our knowledge of the virus and the disease it causes has exponentially grown. New vaccines offer hope, but they need to reach all those who need them. Much remains to be done. With our partners and colleagues we will continue to work at full pitch and will not rest in our efforts to stem the tide of this pandemic and to support the communities in its path. Above all, we take with us the lessons from this extraordinary moment in history—that viruses know no borders and that, where global health is concerned, we are all in this together.

Wafaa El-Sadr, MD, MPH, MPA

Director, ICAP at Columbia University Director, Columbia World Projects University Professor of Epidemiology and Medicine Mathilde Krim-amfAR Chair of Global Health



"With a generation of

I am hopeful that the

bring the second one

far fewer lives lost."

Wafaa El-Sadr.

under control and with

Director, ICAP at Columbia University

# ICAP's Global Impact in 2020

October 2019 - September 2020

2,733,609

People tested for HIV

1,49

Laboratories supported

4,238,977

People screened for COVID-19

ICAP mobilized to support the COVID-19 response in **24** countries

ICAP conducted **15** COVID-19 research studies







### Pivoting to Protect Vulnerable Populations

Collaborative. Proactive. Flexible

s news of the discovery of a new coronavirus broke, the outbreak in China was rapidly followed by devastating impact in Italy, France and other countries in Europe. The first reported infections in the United States on the West Coast in Washington State and California were quickly followed by alarming surges of illness and death in New York and the East Coast. With the pandemic raging in Asia, Europe and North America, for Africa it was only a matter of time. With creative and determined actions, large and small, Kenya was committed to meeting the threat head on. Building on a 15-year relationship with the Government of Kenya, ICAP was ready to provide support.

Kenya has only 200 intensive care beds for its entire population of 50 million people – compared to the United States, which has 34 beds for every 100,000 people – so the threat of COVID-19 loomed large. Infection prevention and control was of the upmost urgency to limit the spread of the virus while facilities were readied for what was sure to come.

ICAP in Kenya had a strong foundation to build on. Since 2015, ICAP has supported the Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) in Kisumu City. ICAP has provided technical support for care and treatment for people living with HIV as well as for JOOTRH's Gender Violence Center and its new Methadone Replacement Center and Comprehensive Care Center for people who inject drugs. By partnering with JOOTRH leadership and providing technical collaboration, capacity building

and training support, ICAP had already contributed to JOOTRH serving as a center of excellence.

In March 2020, when only 83 COVID-19 cases had been identified in Kenya, ICAP and JOOTRH leadership took the proactive step of establishing a screening and triage center in anticipation of a coming surge. This would build on prior installation of several hand-washing sinks at the JOORTH main gate where incoming patients and staff could wash their hands. Now, ICAP added a series of tents where staff and incoming patients and visitors could be screened for COVID-19 as they passed through triage checkpoints to test for symptoms, record travel history and determine if the person should be admitted for further assessment. As the crisis unfolded, ICAP developed a screening app in order to more efficiently collect data on client demographics, travel history, and symptoms.

By year's end, nearly 120,000 people had passed through the screening center. While working to control infection and identify people with the coronavirus, ICAP also helped set up a COVID-19 isolation ward inside the hospital, installed washing machines so that bedding, towels and hospital gowns could be laundered within the ward, and established a kitchen so that patient and staff meals could be prepared on-site. ICAP also arranged for patient treatment in this new isolation unit, creating a system for remote care, installing CCTV and setting up an Internet-based system so senior health care professionals could consult with patients face-to-face through tablets.



The COVID-19 training needed to be practical and focused. Fortunately ICAP had already established a training platform using Zoom technology to provide HIV training for regional government health care workers. The ICAP team, together with specialists in the hospital, quickly set up a parallel internet-based training program on COVID epidemiology, diagnosis and treatment. The hospital staff, with technical assistance from ICAP, recorded the training videos for each module, serving as trainers for their peers. Through this partnership and collaboration with government leaders, COVID-19 training was efficiently disseminated to health care workers throughout the county as well as to

university medical students.

### Dr. Gregory Ganda

discharge - prevented a lot of mortality."

Medical Director, Government of Kisumu

### **FUNDED BY**

The President's Emergency Plan for AIDS Relief (CDC) through the Centers for Disease Control and Prevention (CDC) and Zhao Public Health Fund



# From Conflict to a Responsive Health System

he COVID-19 pandemic arrived in South Sudan less than two months after the establishment of a national unity government on February 20, 2020 after more than six years of civil war that resulted in an estimated 400,00 people losing their lives and displacement of millions.

ICAP's established partnership with South Sudan's Ministry of Health and the US Centers for Disease Control and Prevention (CDC) positioned it to pivot rapidly to contribute to a comprehensive COVID-19 response. Two weeks before the first COVID-19 case was reported, ICAP had already conducted the first COVID-19 training for health facility teams, using the Project ECHO® platform. Once COVID-19 cases appeared, ICAP's teams engaged rapidly at every level, providing Infection Prevention and Control (IPC), diagnostic equipment, and, most importantly, technical assistance to stand up multiple emergency operations centers. ICAP also provided monitoring equipment so that relevant data could be collected, analyzed, and shared with South Sudan's National Public Health Emergency Operation Center at the Ministry of Health and the various working groups enabling the coordination of their response.

ICAP also supported development of national training materials on COVID-19 and national case management guidelines, oversight of data management teams, and setup of COVID-19 laboratory systems, including integration with the existing HIV diagnostic systems.

As part of a multi-country partnership with Resolve to Save Lives (RTSL), ICAP also led skill-based in-person trainings on Infection Prevention and Control (IPC) for 43 master trainers and 765 frontline health care workers in the country. The RTSL partnership trained frontline workers who were facing a serious risk of COVID-19 in 13 countries throughout sub-Saharan Africa. In a matter of weeks, ICAP ramped up training efforts to familiarize doctors, nurses, and community health workers on infection prevention and control protective measures as well as providing up-to-date information on the diagnosis and management of COVID-19 cases.

In addition, ICAP is supporting COVID-19 contact tracing activities in Juba County, the capital and epicenter of the pandemic in the country, providing tablets to capture data from the field, and training and deploying 200 contact tracers, and integrating IPC into the contract tracing efforts. As with all of ICAP's work, the South Sudan model for contact tracing is a community-based, partnership approach. Contact tracers are trained to work with grass roots community structures, including traditional and religious leaders, to build trust with people so they will share personal information about their health and activities, all with the singular goal of helping the entire community stay safer and healthier during the pandemic.

### FUNDED BY

Resolve to Save Lives, Centers for Disease Control and Prevention (CDC)



# Training Frontline Health Care Workers

Trusted. Empowering. Supportive

s the COVID-19 pandemic arrived in Sierra Leone, ICAP's experience in health care worker training, mentoring and supportive supervision proved to be a critical asset. Before the coronavirus crisis emerged, a group of 24 health workers had just completed ICAP's six-month advanced certification program in Infection Prevention and Control (IPC). Celebrating their accomplishment at the February graduation ceremony in Freetown, Dr. Thomas Samba, the country's chief medical officer, presciently said, "The newly evolving landscape of infectious diseases across the world is a stronger justification for developing a pool of IPC experts in all countries, especially in developing countries such as Sierra Leone."

In 2014, Western Africa had faced the largest health emergency in its history with the rapid community spread of Ebola, a deadly disease. During the epidemic, Sierra Leonean health workers were 21-32 times more likely to be develop Ebola Virus Disease compared to the rest of the population, and it is estimated that one in five members of the health workforce died from this disease. A lack of IPC resources and critical knowledge—including how to use personal protective equipment and practice of other measures—had been recognized as a driving force for the rapid spread of Ebola among health workers.

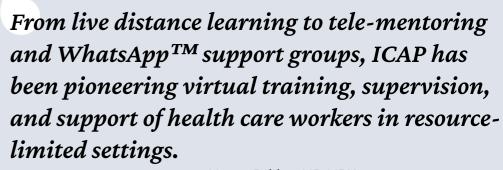
Now, six years after the Ebola outbreak, ICAP continues to spearhead a series of projects to strengthen the national health system's IPC practices to detect, prevent, and respond to the country's recurring natural disasters and public health emergencies. Under Sierra Leone's government's leadership, ICAP's health care worker quality improvement evidence-based training initiative, designed to establish a cadre of IPC specialists

across the country, has significantly increased the health system resiliency and responsiveness to new health threats. The first cohort's graduation came just in time for their deployment into leadership positions for the COVID-19 IPC preparedness and response activities throughout the country.

Mame Toure, MD, MsC, the country director of ICAP in Sierra Leone, said, "These trainings, which engaged hundreds of health care workers at our high-volume health facilities, have been critical to protecting our precious health workforce and their patients from COVID-19."

### FUNDED BY

U.S. Centers for Disease Control and Prevention (CDC) and in partnership with the Ministry of Health and Sanitation (MoHS) and the World Health Organization (WHO).



Miriam Rabkin, MD,MPH, ICAP director for Health Systems Strategies





### **Supporting Nurses** and Midwives Globally

urses and midwives are the main providers of health care in the countries where ICAP works. In ordinary times, they provide upwards of 90 percent of health services, frequently serving as the primary touchpoint between patients and the health care system.

The onset of the COVID-19 pandemic put these invaluable frontline workers at risk and required new training protocols to enable them to care for themselves and their patients. ICAP quickly rose to the challenge in 15 countries supporting innovative virtual training on COVID-19 disease diagnostics, infection prevention and control, triage care and communication strategies. To protect the safety of frontline health workers, ICAP supported the procurement hundreds of thousands of pieces Personal Protective Equipment (PPE), thermometers, and hand wash stations, across more than a dozen countries.

ICAP's nimble response to COVID-19 leveraged its long-time commitment to training frontline health care workers and deep partnerships with ministries of health. Since 2006, a strategic pillar of ICAP's approach to capacity-building for health systems in resource-limited countries has been to ensure that nurses and midwives have the training, equipment and respect they need and deserve, with ongoing professional education and robust professional networks. Because a strong nursing force leads to improved health and wellbeing for patients, ICAP has advocated that every initiative to strengthen a health system should support nurses as a critical component.

> "The wisdom and experience of nurses is fundamental to building health systems able to achieve universal health coverage rooted in strong models of primary health care. By building more resilient and more in the course of normal operations, but more





### **Honoring Nurses** and Midwives

2020, ICAP joined the global Celebration of the International Year of the Nurse and the Midwife, commemorating the bicentennial of the birth of Florence Nightingale at a time when the importance of nurses has never been clearer.

Among its activities, on October 15, 2020, ICAP convened Courage to Care, a half-day virtual conference exploring the roles of nurses as leaders in health and how their unique contributions can enhance health care systems around the world. During a keynote session, supermodel and registered nurse Maggie Rawlins cited the nursing profession's longstanding reputation for "stepping up" during previous health crises. "During a crisis, nurses are always the first ones to step up whether they are giving direct patient care in the hospital or organizing large-scale health organizations," she said. "Throughout history, nurses have always run to the front lines."

During the conference, ICAP also honored health workers on the frontlines of the COVID response. The new Courage to Care Award was awarded jointly to John Katala, a community outreach volunteer in Tanzania who selflessly brought ART prescription refills directly to patients' homes during the pandemic, and to the team at the Rwanda Biomedical Center, which worked tirelessly to safeguard the health of the Rwandan people and to protect the public health system at large.



# Researching Biomedical Responses to COVID-19

Science-driven. Community-based. Equitable

ecognizing the urgency of developing prevention and treatment responses to COVID-19, ICAP rapidly mobilized efforts at its two longstanding research sites in New York City, the Bronx Prevention Center and Harlem Prevention Center. Their decades of experience in conducting research in their resource-challenged New York City communities have positioned these centers to ensure their clinical trials include the diverse study populations critical for mounting a robust and equitable public health response.

At the Harlem Prevention Center, ICAP participated in the ENSEMBLE study, involving over 50,000 volunteers over age 18, with significant representation of people over the age of 60, testing a single-dose vaccine by Janssen, a division of Johnson & Johnson, which would eventually become the third vaccine approved for emergency use in the US.

In the adjacent community of the Bronx, ICAP participated in a Phase III trial to assess the safety, efficacy, and immunogenicity of the Oxford-AstraZeneca vaccine, which would go on to be put into use in countries around the world.

Both centers have also participated in the Community Prevalence of SARS-CoV-2 Study – also known as COMPASS – a nationwide initiative led by the National Institute of Allergy and Infectious Diseases, involving approximately 16 communities across the United States

Among the questions the study is investigating are the role of children in community transmission, what demographic and social risk factors contribute to infection rates, and which medical co-morbidities are associated with seroprevalence. The study is also investigating important factors that can affect the spread of the virus including racial and ethnic disparities in access to testing and health resources, and community attitudes around efforts to contain transmission.

"The data collected through this population-based survey will give us a greater understanding of the extent of current and prior COVID-19 and will therefore help us project future disease risk," said Jessica Justman, MD, ICAP's senior technical director and principal investigator of the study for ICAP.

Against the backdrop of the pandemic, ICAP has also undertaken two studies to assess the burden of COVID-19 on key vulnerable populations in New York City:

The Silver Study set out to garner a deeper understanding of the physical, emotional and economic impacts of COVID-19 on elderly populations most impacted by COVID-19 in NYC by conducting surveillance of their present experiences and insights during the pandemic with the goal of shaping an effective response to their needs.

The LEXICON (LGBTQ+ Experience In COVID-19 NYC Study) is designed to explore the toll of COVID-19 on the LGBTQ+ population in New York City, through a survey to measure

uptake of testing, interventions such as social distancing and masking, and vaccination, with additional questions to measure knowledge, attitudes, prevalence, and the burden of COVID-19 symptoms.

Both of these novel surveys seek to provide much-needed, actionable data to support New York City's ability to respond to the needs of these communities.

### **FUNDED BY**

Funding for research at the Harlem Prevention Center includes: National Institutes of Health/National Institute of Allergy and Infectious Diseases (NIH/NIAID), Department of Health and Human Services (DHHS), Family Health International (FHI), Janssen, Fred Hutchinson Cancer Research Center

Funding for research at the Bronx Prevention Center includes: National Institutes of Health/ National Institute of Allergy and Infectious Diseases (NIH/NIAID), Department of Health and Human Services (DHHS), Family Health International (FHI), AstraZeneca, Merck, Evofem, Gilead Biosciences, Fred Hutchinson Cancer Research Center

Funding for the Silver Study: New York Community Trust and the Samuels Foundation

Funding for the LEXICON Study: The Rockefeller Foundation Opinion

# The World Is Desperate for More Covid Vaccines

Two decades ago, the U.S. launched a program to help supply the world with H.I.V. medication. It should take a similar approach to Covid.

By James Krellenstein, Peter Staley and Wafaa M. El-Sadr

Mr. Krellenstein and Mr. Staley are AIDS activists and co-founders of PrEP4AII. Dr. El-Sadr is a professor of epidemiology and medicine at Columbia.

Jan. 12, 2021

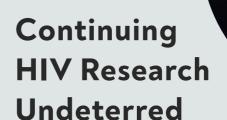
## Advocating for Vaccine Equity

n advocate for global health equity for decades, ICAP Global Director Wafaa El-Sadr joined two colleagues to write a New York Times Op-Ed to point out that unless vaccines with high efficacy can be quickly manufactured and made available broadly, we are at risk of failing to control the COVID-19 pandemic.

El-Sadr calls for aggressive government action in the United States to increase manufacturing capacity of the high-quality vaccines that are already proven and to provide support for global distribution. Reminding government leaders of the success of PEPFAR, created by President George W. Bush with guidance from NIAID director Anthony Fauci, which is estimated to have saved 19 million lives, El-Sadr and her colleagues suggest that the Biden Administration should once again demonstrate what can be accomplished with generosity and partnership.

"Viruses know no borders. Protecting Americans from COVID-19 requires protecting all people from COVID-19. We cannot end the COVID-19 pandemic until everyone, across the world, can access highly effective vaccines."

Wafaa El-Sadr, MD, MPH, MPA, founder and director of ICAP, *The New York Times*, Jan. 12, 2021



While engaging with urgent research to tackle COVID-19, **ICAP's Harlem Prevention Center** (HPC) and Bronx Prevention Center (BPC) have continued their vital research to prevent HIV infection and work they are doing under the auspices of the HIV Prevention Trials Network (HPTN) - a worldwide collaborative for clinical trials that brings together investigators, ethicists, community members and other partners to develop and test the safety and efficacy of HIV interventions. Because of deep roots in the Bronx and Harlem communities, which have been among the hardest hit by the HIV epidemic in the United States, HPC and BPC's participation in the trials helps to ensure that key populations that are part of these local communities are represented in global research efforts.

Rates of infection have been dropping worldwide, and these hopeful studies are designed to identify additional science-based strategies that can help to halt further transmission in marginalized populations both through new approaches to pre-exposure prophylaxis (PrEP) as well as by creating a vaccine. HPTN 083, a PrEP study concluded in spring 2020 concluded that an injectable form of PrEP is far superior to daily oral medication in lowering HIV incidence among both

cisgender men and transgender women who have sex with men. Another PrEP study, HPTN 091 – also known as the I AM study – is assessing how to increase PrEP uptake among transgender women by combing PrEP with essential support services such as providing genderaffirming hormone therapy and peer health navigation.

The need for a safe and effective vaccine to prevent HIV remains urgent. In traditional vaccine studies, people are inoculated and then followed to see if their bodies will respond by making antibodies against HIV. A new idea for HIV prevention is to inject antibodies into people directly, rather than using a vaccine to trigger antibody production. ICAP has been part of the clinical trials for this new approach. Initial results from the Antibody Mediated Prevention Study (HPTN 085) demonstrated efficacy in protecting against certain strains of HIV). Researchers at HPC are also part of the ambitious Mosaico study, which is testing an investigational vaccine regime to prevent HIV. Also known at HVTN 706, this study is testing the efficacy of vaccines that are made from synthetic copies of HIV pieces – created in the laboratory – that cannot themselves cause HIV infection or AIDS. The study will enroll cisgender men and transgender people who have sex with cisgender men and/or transgender people.





Creative. Inspiring. Innovative.

uilding on the experience of developing prior community mobilization efforts for the HIV response, ICAP appreciated the potential power of music to reach people far and wide in response to the COVID-19 pandemic.

In one of its first efforts focused on the COVID-19 response in sub Saharan Africa, ICAP reached out to the beloved Zimbabwean poet and musician, Albert Nyathi, and commissioned a song about how people can protect themselves from infection by social distancing, frequent hand washing, and wearing masks.

With social distancing measures already in place in Zimbabwe's capital where Nyathi and his fellow musician Dereck Mpofu lived, they were able to organize a group of local musicians to individually lay down tracks of lush instrumentation and soaring vocals without having to bring people together physically. The separate tracks were then mixed to create "Apart/ Together—We Stand Strong Against COVID-19."

Produced with incredible speed, the song—which contains lyrics in English, Shona, and Ndebele, the three major languages of Zimbabwe—was already on the airwaves by late April, launched through the artists' social media and widely promoted

online and through media coverage. Hoping that his music would empower people to protect their health, Nyathi said, "This song celebrates the power of the community to overcome a disease that is pushing us apart while it informs listeners of the steps they can take to protect themselves and their community from COVID-19."

ICAP released "Apart/ Together" accompanied by a video "slideshow" of ICAP-supported activities to respond to the pandemic. These images were captured by young people living with HIV/ AIDS who participate in an ICAP photography workshop in Kenya that provides training and support.

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SCAN CODE **TO LISTEN** ONLINE



"Apart / Together" (Zimbabwe)



"I Will Move On" (Myanmar)





"This song celebrates the power of the community to overcome a disease that is pushing us apart while also serving to inform listeners of the steps they can take to protect themselves and their community from COVID-19."

> Albert Nyathi, composer/performer

In Myanmar, ICAP tapped popstars Phyu Phyu Kyaw Thein and Ar-T to produce "I Will Move On" to increase awareness of how medication can enable an HIV positive person to suppress and maintain their viral load at a point where it is no longer detectable, and importantly, they are no longer able to transmit HIV.

The message of their song is simple but essential: Undetectable = Untransmittable, or U=U. For people living with HIV, the song serves as a reminder that if they

are consistent with their treatment, they can have long, healthy lives-and can prevent transmission to their intimate partners. The song and accompanying promotional activities join in the global "Undetectable = Untransmittable" ("U=U") campaign, an effort to raise awareness about the efficacy of HIV medications for preventing sexual transmission of HIV spearheaded by the Prevention Access Campaign since 2016.

### **FUNDED BY**

"Apart/Together - We Stand Strong Against COVID-19" (Zimbabwe): The Bing Zhao Foundation

"I Will Move On" (Myanmar): The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention



### Spreading the Word About PrEP

every year an additional 1.7 million people around the world are infected with HIV. As part of a comprehensive HIV prevention strategy to stem this tide, ICAP has leveraged the creative power of communications media to disseminate information that can help people at risk of HIV infection avoid getting infected.

Research has demonstrated that stories from peers can be an effective approach to reach people in targeted populations with lifesaving public health messaging. That motivated ICAP to produce a series of short videos to show how pre-exposure prophylaxis (PrEP) has helped individuals stay HIV negative. PrEP regimens have been shown to be highly effective for preventing HIV from sex or injection drug use when taken regularly as prescribed.

ICAP's innovative PrEP video messaging focuses on potential PrEP candidates in the Democratic Republic of Congo, Kenya, and Nigeria – three countries where ICAP has been working actively to support the use of PrEP among vulnerable sectors of the society. The videos, each a compelling direct-to-camera story about the individual's experience with PrEP and their motivation for using PrEP, destigmatize its use and reinforce the idea that PrEP is for anyone who is at risk.

The videos are part of an innovative toolkit designed to help health care professionals provide PrEP to appropriate candidates in a safe and effective manner. In addition to the videos, the toolkit includes training materials, job aids, and monitoring and evaluation tools. The package, which is free of charge on ICAP's website, is adaptable to specific contexts and available in English, Spanish, French, and Portuguese.

### **FUNDED BY**

U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC)







"The Power of PrEP"
(Democratic Republic of Congo)





"The Power of PrEP"

(Kenya)





"The Power of PrEP"

(Nigeria)





### Sustaining Methadone Treatment During Lockdown

Inventive. Preventive. Sustainable

hile the advent of the COVID-19 pandemic in early 2020 dominated the attention of global public health, the challenge of treating drug addiction and HIV – often co-occurring – was only complicated by fear of COVID-19 and the necessary restrictions imposed by governments to prevent transmission.

The Kyrgyz Republic is one of three countries in Central Asia, along with Kazakhstan and Tajikistan, where ICAP has been working since 2011, supporting HIV and tuberculosis services, particularly for people who inject drugs. In this context, ICAP's focus shifted to ensuring that hard-won health gains to reach vulnerable populations in Kyrgyzstan would not be set back by the new pandemic.

In the context of the COVID-19 lockdown, the protocol in Kyrgyzstan for patients using medication-assisted therapy (MAT) to control their drug addiction needed to be rapidly transformed. The usual requirements involved the need for the clients to visit an MAT clinic every day for counseling and to receive a limited supply of methadone.

After six months, if the client met certain criteria, including negative urine tests and consistent medication usage, then the MAT site would issue an increased supply so clients could take the medication at home.

After the Kyrgyz government declared a state of emergency on March 22, 2020 in response to the worsening COVID-19 situation, ICAP collaborated with the Ministry of Health's Republican Narcology Center (RNC) on plans to keep clients in MAT treatment, while minimizing the need for travel during the national quarantine and the risk of exposure to COVID-19. As part of these COVID-19 preventive measures, the RNC began to increase the number of MAT clients in Kyrgyzstan permitted to take home up to five daily doses of methadone supply.

"After almost nine months, we have seen great success with this new protocol and the proportion of clients on MAT who pick up methadone for 5-7 days increased from 36% to 97%."

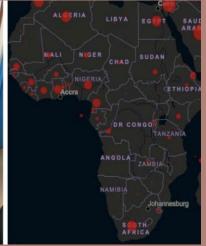
Ainagul Isakova, ICAP program coordinator in Kyrgyzstan Working out the logistics to implement this new policy during the pandemic required thoughtful planning. While travel throughout the country was restricted, each client was given reference and route sheets that serve as authorization that they could to show to law enforcement officials at roadblock posts. MAT sites were also provided with a supply of personal protective equipment, hand disinfectants, remote thermometers and additional mobile phone units. ICAP also worked with MAT specialists at the RNC to streamline methadone distribution using QR codes, another example of ICAP's continuing pursuit of innovative solutions to emerging global health needs.

### **FUNDED BY**

The Global Fund to Fight AIDS, Tuberculosis, and Malaria and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR)







## Introducing and Scaling Up HIV Service Delivery Models

gainst the backdrop of COVID-19, the 21 countries in the ICAPsupported Coverage, **Quality and Impact Network** (CQUIN) are collaborating to support resilient HIV prevention and treatment programs in the face of the pandemic. Launched in 2017 to support South-to-South learning and the scale-up of HIV differentiated service delivery (DSD), CQUIN pivoted in 2020 to a focus on maintaining HIV services in the midst of a global crisis.

Many countries built on their earlier experience with differentiated treatment models to ensure continuity of services during lockdowns. One example is multi-month antiretroviral therapy (ART) dispensing (MMD), in which receive three or six months of ART instead of a single month's supply. In Ethiopia, ICAP has supported the

Ethiopian Ministry of Health to scale up MMD since 2017. Currently, an estimated 170,000 clients at 1,051 health facilities across the country are enrolled in Ethiopia's Appointment Spacing Model. Before MMD became the norm at Ethiopia's Dessie Referral hospital, Aderaw Wegene, a construction worker, would spend time and money going back and forth between his jobs and the hospital to get his monthly ART refills. Now, after being enrolled in the new hospital program for 18 months, Wegene needs to go to the hospital only twice a year for ART. "It no longer affects my job and my life," he said.

By mid-2020, multiple countries in the CQUIN network had expanded access to MMD in order to decrease the need for health facility visits during COVID-19. Ten countries expanded MMD eligibility, seven countries

increased the amount of ART dispensed via MMD and nine enabled MMD of tuberculosis preventive treatment as well as ART. CQUIN supported cross-learning that helped to accelerate these nimble pandemic responses. For example, the ministries of health of Eswatini, Mozambique, Liberia, and Uganda leveraged lessons learned from Ethiopia to expand and scale up MMD. "This is just one example of how ICAP is leveraging the CQUIN project to foster realtime exchange of questions, resources, best practices and lessons learned," said Miriam Rabkin, ICAP's director of Health Systems Strategies and principal investigator of CQUIN. "Over the years, CQUIN has created a trusted and collegial network that facilitates this type of rapid and productive exchange."

### **FUNDED BY**

The Bill & Melinda Gates Foundation



Cutting-edge | Science-driven | Coordinated

s hope for the end of the HIV pandemic is coming into sight in many countries, public health systems in high-burden countries now have a laser focus on reaching the sectors of the population that are key to breaking the transmission chain. One of these critical demographics is people who are recently infected with HIV and might not realize it. These people may wait years before seeking treatment, putting their own health at risk as well as the health of their partners.

A new, point-of-care rapid HIV test can distinguish a recently acquired HIV infection from one acquired more than 12 months ago. Through its Tracking with Recency Assays to Control the Epidemic (TRACE) program, ICAP supports recent infection testing efforts in eight countries: Democratic Republic of Congo, Eswatini, Ethiopia, Lesotho, Nigeria, Rwanda, Tanzania, and Zimbabwe.

With stringent global restrictions on travel and public gatherings in place to halt the transmission of COVID-19, our team needed to quickly retool our training delivery systems so we could restart HIV recency testing in countries we support.

Jessica Justman, MD ICAP Principal Investigator for TRACE

"Individuals with recent HIV infection often have higher viral loads than individuals with a long-term infection," said Jessica Justman, MD, ICAP's senior technical director and principal investigator of TRACE. "This means it's especially important to identify recently infected individuals so they can rapidly start HIV treatment and gain the health benefits that follow. In addition, the new test makes it possible to track clusters of recent infections and mobilize testing and prevention efforts to prevent HIV transmission."

In Nigeria, ICAP is training health workers to provide real-time data of recent HIV infections in order to more efficiently direct public health resources. In 2020, as the training program gained momentum, COVID-19 threatened to interrupt the progress of TRACE efforts by making travel and face-to-face training programs dangerous for both ICAP's team and in-country health care workers.

At a time when Nigeria is facing two public health emergencies, namely COVID-19 and HIV, identifying people with undiagnosed HIV infection, especially those who have been recently infected, could not be more important," said Adewale Akinjeji, ICAP country director in Nigeria. Recognizing what was at stake in maintaining this work, ICAP leveraged digital meeting platforms and online teaching methods to safely deliver trainings to frontline health care workers.

"The newly evolving landscape of infectious disease and pandemics across the world is a call-to-arms to all countries to invest in the human potential at the core of public health systems," said Suzue Saito, ICAP project director for TRACE. By building a pool of experts in HIV recency testing in countries hit hardest by the HIV epidemic, the TRACE program builds more forward-looking public health systems in countries like Nigeria."

### **FUNDED BY**

The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC)



# Now, more than ever, accurate data are needed to guide policies, programs, and funding decisions. ICAP is deeply committed to supporting general population and other types of surveys in order to serve as a blueprint for countries as they advance their response to HIV as well as new threats to their population's health." Wafaa El-Sadr, MD, MPH, MPA,

# Surveying the HIV Epidemic Undaunted

Intrepid | Resourceful | Determined

ince 2014, the Population-based HIV Impact Assessment (PHIA) Project has been guiding the global HIV response by conducting national representative surveys that chart the state of the HIV epidemic across 15 countries. The PHIA Project measures population-level understanding of HIV epidemic as well as access to preventive care and treatment services. To date, 16 national surveys have interviewed more than 173.000 households, resulting in a wealth of data being used around to improve progress toward the UNAIDS goals for HIV epidemic control.

The onset of the COVID-19 pandemic required a pause in PHIA's household-based HIV surveillance work. True to their determined nature, many of the teams in the PHIA countries retooled their efforts to be prepared to resume data collection at the first opportunity.

One such team was the one conducting the Uganda Population-based HIV Impact Assessment (UPHIA 2020), which had begun their household visits in February 2020 only to be forced to stop a month later as the country went into lockdown.

When the COVID-19 pandemic swept across the world, like many other nations, Uganda adopted a strict lockdown to prepare its health system for the potential spread of the virus. By the end of March 2020, most businesses were closed, vehicle movement was restricted, and an evening curfew was put in place.

After a seven-month hiatus, the UPHIA 2020 surveys resumed data collection in October 2020. The timing was less than ideal, as this marked the heart of the rainy season and the UPHIA teams soon learned that an unforeseen consequence of COVID-19 would be the treacherous terrain they would need to negotiate at this time of year.

One team travelled to Eastern Uganda to reach a community at the top of Mount Elgon, an extinct shield volcano bordering Uganda and Kenya, an area notorious for its heavy rains and landslides. Located in a remote area with limited access to health services, the community members were eager to receive the UPHIA 2020 team, participate in the survey, and receive HIV testing and counseling. When the team was preparing to leave, the continuous rain had caused landslides that left the PHIA vehicles stuck in the mud. The team split up, with one group staying behind to extricate the vehicles from the mud while the other group trekked for six hours on foot to rendezvous with couriers that could transport the collected samples to the nearest satellite laboratory so they could be processed on time.

Elsewhere in the country teams have had to travel on water for hours to reach remote islands on Lake Victoria. Another team was interrupted by cattle raids. In urban areas, the struggle is to find participants at home when they come knocking to do a survey. And on top of it all, COVID-19 is always an obstacle, with team members needing to be routinely tested for COVID-19 and screened every morning for related symptoms before data collection.

This kind of determination is standard in all the countries where ICAP is supporting this groundbreaking effort. After all, the PHIA team members are committed to seeing an end to HIV in their nations, and they will let nothing stand in their way to bring back the data that will help them achieve that goal.

### **FUNDED BY**

U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC)





# Tracking COVID-19 Through Innovative Surveys

Surveys can play a vital role in tracking the COVID-19 situation, providing a real-time window into outbreaks to enable rapid response. Through the PHIA Project, ICAP has extensive experience with HIV surveillance. PHIA is currently operating in 15 sub-Saharan countries, including Lesotho, where the survey is known as LePHIA.

In 2020, as the COVID-19 pandemic spread, ICAP immediately leveraged its existing project partnerships in Lesotho to create an innovative surveillance project using cellphones to assess COVID-19 incidence across the country. The COVID-19 cellphone-based survey, known as 'LeCellPHIA,' involves calling 1,700 LePHIA participants weekly to ask about symptoms they or any household members may have. The data is fed into an electronic monitoring system that ICAP newly designed and that piggybacks on a suite of health informatics and data management solutions that ICAP had previously created.

"Instead of dedicating valuable resources to develop completely new data management systems and protocols to track COVID-19," noted Tsigereda Gadisa, MD, MPH, chief of party for the

strategic information strengthening project for ICAP in Lesotho, "we leveraged data management systems ICAP had already built for Lesotho's HIV response and our internal expertise on data platforms and local contexts."

LeCellPHIA is just one a number of innovative surveys ICAP has introduced to help build understanding of the toll of COVID-19. In addition to Lesotho, during 2020 and into 2021, ICAP supported COVID-19 surveillance in Cameroon, DRC, Eswatini, Malawi, and Zimbabwe including virologic surveillance, sentinel surveillance, and serosurveys - as well as two key population surveys in New York City - to paint an ever clearer picture of this unprecedented viral threat and its effects on public health. These joined a range of other surveys ICAP undertook during the period to measure the effects of other health challenges, including HIV and violence against children.

### Surveys by the Numbers

Population-based HIV Impact Assessment (PHIA) surveys in 15 countries

**16** national PHIA surveys completed

173,000+ household interviews conducted

**477,000+** individual interviews conducted

**421,000+** adults and children received HIV testing

12 Bio-behavioral surveys in 6 countries

COVID-19-related surveys in **6 countries** 

Violence against children surveys in **3 countries** 



### Responding to Malaria in Remote Regions

Ambitious | Collaborative | Effective

ore than two-thirds of Ethiopia's population lives in malaria high-risk areas and more than 1.5 million cases are reported annually.

"Over the past decade, Ethiopia has made tremendous strides in fighting malaria and many lives have been saved thanks to ICAP's vital partnership with the Ethiopian ministry of health and other project partners," said Zenebe Melaku, MD, ICAP's country director in Ethiopia.

Through improved case management, the accuracy of diagnosis of malaria has risen dramatically to 97 percent in 2016 and annual malaria-related deaths have declined from more than 2,000 to just 374 in 2017. But challenges remain to achieve the global goal of Zero Malaria.

People who live in Ethiopia's most rural areas still face severe outbreaks of this devastating disease. Yeraber Health Center, about 136 miles from Bahir Dar, the capital of the Amhara Regional State, is inaccessible by vehicle year-round and perilous to reach during the long rainy season. Patients with critical malaria have needed to be transported to a larger regional hospital by mule or carried on stretcher for a two-hour journey that requires crossing an overflowing river that has claimed has many lives.

Since 2019, the Malaria Diagnosis and Treatment Activity (MDTA) team at ICAP's regional office in the Amhara region have courageously crossed the dangerous river in a locally-made airboat and then walked for hours to reach the health center to provide comprehensive technical and logistic support. "This daring approach to reach inaccessible health facilities has had remarkable success in improving malaria diagnosis and treatment services," stated Simeneh Atnafu, MDTA program manager at ICAP's regional office in Amhara region.

MDTA, implemented by ICAP in Ethiopia, is currently supporting 15 hospitals, 141 health centers and 611 health posts in 25 districts of the Amhara regional state. The teams train and provide onsite mentorship to clinical and laboratory personnel on fever case management and laboratory diagnosis of malaria and provide health facilities with essential national guidelines and manuals, as well as support tools including job aids, bench aids, desktop references and M&E tools, and QA/QC formats. Providing these capacity-building resources, the MDTA efforts have improved the competency and skills of laboratory personnel and clinicians so they are capable of effectively diagnosing and treating malaria cases as the country looks toward a day when this deadly disease will not take such a dramatic toll on its people.

### **FUNDED BY**

The U.S. Agency for International Development (USAID) through the President's Malaria Initiative (PMI) "As a result of the past decade's work, we have seen more than 1,000 health facilities in the highest-risk areas improve the quality of the services they provide."

Bereket Alemayehu, MD, MS
ICAP's principal investigator for both previous
and current PMI projects in Ethiopia







Security-focused | Multi-sectoral | Pioneering

hile the rapid spread of COVID-19 continues to dominate headlines around the world, another health crisis looms large: the global threat of antimicrobial resistance (AMR). The indiscriminate use of these agents threatens effective treatment for a growing list of common diseases - including pneumonia, tuberculosis, blood poisoning, gonorrhea, and foodborne diseases increasing the risk of disease spread, severe illness and death.

Together with its longstanding partner, the government of Eswatini, ICAP is working to stop the further emergence of drug-resistant infections that greatly impact the health of humans, animals, and our environment. ICAP's work in this area is grounded in the One Health approach,

which recognizes that the health of people is closely connected to the health of animals and our shared environment. As resistant bacteria can spread between humans, animals, and the environment, curbing drug misuse and overuse across all health sectors is critical to tackling resistance as a whole.

In Eswatini, a multi-ministry taskforce supported by ICAP is working to meet the challenge of AMR head-on by building a national surveillance system for antimicrobial resistance, use, and consumption across animal and human health systems in the country. The goal is to develop evidence-based interventions to improve the use of antimicrobials in human and animal sectors and inform infection prevention and control (IPC) plans at the local, regional and global



The health sector working alone cannot solve this problem. It is only by working together that we can move forward to address the rising threat of AMR around the world. We hope that initiatives like ICAP's multi-sectoral partnership to combat AMR in Eswatini may serve as a global model.

> Ruben Sahabo, MD Country Director, ICAP in Eswatini

levels. "Strengthening AMR surveillance is a priority for the human and animal health sectors in the Kingdom of Eswatini," said Thuli Magagula, assistant director of Pharmaceutical Services in the Eswatini Ministry of Health, and a member of the Eswatini Ministry of Health's AMR Containment Committee (AMRCC).

Since the project's start in early 2020, ICAP's efforts to combat AMR in Eswatini have included strengthening of the governance and leadership of the AMRCC, as well as supporting the establishment and renovation of AMR surveillance sites within the human and animal health sectors, equipping and supplying laboratories, and building capacity of human and animal health workers.

Additionally, ICAP has developed a variety of tools to be used at the intersection of animal, human, and environmental care including standardized operating procedures and protocols, lab aids, and national data flow systems in compliance with the Global Antimicrobial Resistance Surveillance System (GLASS). The project is notable for the wide range of stakeholders represented, including the Ministry of Health, the Ministry of Agriculture, the University of Eswatini's Faculty of Agriculture, and the AMRCC. Additional key partners include EcoHealth, Health and Education Consulting, and the University of Pretoria.

**FUNDED BY** 

Fleming Fund

### By the Numbers

17 countries



# "Kagera region became a symbol of well-functioning CTC outreach services, and I am happy to say that Kigoma region has also implemented our CTC outreach services model." Jonas Kessy, MD Regional AIDS Control

### Connecting Key Populations to Care

Engaged | Community-based | Tenacious

or people who suffer from stigma and fear — including sex workers, men who have sex with men, people who inject drugs and victims of genderbased violence - overcoming barriers to accessing health care is an enormous challenge. Most at risk for HIV and sexually transmitted infections, they often face obstacles to prevention, education, testing, and treatment services. But effectively reaching these key populations is critical to end the HIV pandemic. In Tanzania, ICAP has developed and expanded innovative programs that are having a widespread impact as the country continues to advance toward epidemic control.

Like many young women from rural settlements in Kagera, a region bordering Lake Victoria in Tanzania, Kuhuru had to make her own way in the world after her parents separated when she was 15. Intending to try to earn a living selling fruit at the local fish market, she met an older man with whom she had a child. He died soon afterward and, with few economic opportunities available, Kuhuru turned to sex work to support herself and her child, increasing both her risk for HIV and the likelihood that she could transmit the virus. Although Zuhura had been sexually active for several years, she had never been tested for HIV, due to the area's severe shortage of health care resources, her lack of money and concerns about stigma. In Kagera, young women comprise one in four new HIV cases, and ICAP has been determined to reach them.

ICAP started the FIKIA project in 2016 to implement comprehensive, community-based HIV prevention, linkage, and retention services for key populations and adolescent girls and young women across Tanzania, including in Kagera. FIKIA means "to reach" in Swahili and the project's innovative model incorporated both clinic-based and community-based peer educators and outreach specialists to bridge the gap between populations in need of HIV services and distant regional facilities. Zuhuru received HIV testing and counseling services provided by ICAP's FIKIA project, and after discovering that she was HIV positive, she received followup counseling and psychosocial support from a FIKIA community outreach volunteer. Just one week later, she enrolled in care. This focused outreach and fast turnaround between testing and linkage to care is thanks to FIKIA's unique partnership with the Regional and Council Health Management Teams, which works with ICAP to bring comprehensive and tailored health services directly to communities through a model called CTC (Care and Treatment Center) outreach.

Based on its initial success in bringing HIV prevention and treatment to vulnerable young women in Kagera, FIKIA expanded in 2017 to ensure that clients who are diagnosed with HIV start antiretroviral therapy and stay on treatment. ICAP has also introduced PrEP—pre-exposure prophylaxis which offers hope for preventing HIV infection. FIKIA meets at-risk

individuals wherever they are and empowers them to protect their health by training young women and men from populations with elevated HIV risk. These peers become outreach volunteers that bring HIV prevention services to workplaces, social meeting places, informal gold mining sites, bustling urban markets, and rural villages accessible only on foot or via motorcycle to provide services in tents, vehicles, brothels, and other venues where sex workers or people who inject drugs congregate. "Before I joined the FIKIA project, I was a sex worker engaging in risky sex behaviors," explained one outreach volunteer named Happiness. "The education I got from ICAP helped me change so now I can assist my friends to also

As FIKIA has expanded in scope and scale it is offering a broader range of health services to key populations. Sex workers are also at higher risk for cervical cancer, so ICAP has been using boats to bring cervical cancer screening to small islands on Lake Victoria. By bundling together health care services for hard-to-reach key populations, FIKIA is providing the care and treatment all people deserve.

### **FUNDED BY**

The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC)





### Addressing **Gender-Based Violence**

Gender-based violence (GBV) is a global pandemic that affects 1 in 3 women in their lifetime. The numbers are sobering. According to the World Health Organization, 35% of women worldwide have experienced either physical and/or sexual intimate partner violence or non-partner sexual violence. ICAP has made addressing GBV a priority across the many countries where it work.

One country that has shown hopeful progress is Mozambique, where ICAP has partnered closely with the Ministry of Health to scale implementation of interventions focused on prevention of gender-based violence (GBV) since 2012. With consistent growth over the past five years, ICAP now supports GBV prevention and treatment services at all 59 health facilities in Nampula, Mozambique's most populous province, reaching 2,735 people in 2020. Within these facilities, ICAP supports health care workers to provide comprehensive support for GBV prevention and treatment at all entry points and trains mentor mothers and peer educators to refer victims to the health facility for post-GBV care.

In three referral hospitals across the province, ICAP has supported the Provincial Health Management Team to

bundle health care services into a One-Stop-Shop Model for victims of GBV. The One-Stop-Shop Model provides services 24 hours-a-day in one consultation room, which allows for privacy, security and holistic care. The team provides clinical and laboratory services, psychosocial support, and legal services, including engagement with police.

To increase access and community outreach, ICAP supports five mobile clinics that provide GBV counseling, screening, and post-GBV care. Since the launch of these activities in November 2020, a total of 495 people have been screened and offered counseling, HIV and Syphilis testing, emergency contraception, STI and post-exposure prophylaxis as needed at the community level in Nampula.

ICAP is also improving GBV quality of care with a new tool for Gender Based Violence routine screening, providing tablets and training for health care workers to ensure that victims of GBV are referred for services. The data collected by this tool will measure results and identify gaps in the process as the foundation for next steps to continue to improve health care for this key population.

FUNDED BY U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC)



### Reaching Key and Vulnerable Populations with Life-Saving **Health Services**

>245,000 priority populations &

>82,500 key populations reached with HIV prevention interventions

531,897 people living with HIV received ART

70,531 members of key populations received HIV testing

17,082 members of key populations received viral load testing

3,412 members of key populations started on ART

3,257 members of key populations started on PrEP

### ICAP's **Technical Areas**

Strengthening Clinical Services and Programs

- HIV prevention
- HIV care and treatment
- TB and HIV/TB integration
- Maternal and child health
- Malaria
- Non-communicable diseases
- Medication-assisted treatment

COUNTRIES Angola, Burundi, Switzerland, Côte d'Ivoire, Cameroon, Colombia, Ethiopia, Ghana, Haiti, Kenya, Kyrgyzstan, Kazakhstan, Liberia, Lesotho, Myanmar, Mauritania, Mozambique, Niger, Peru, Rwanda, Sierra Leone, Senegal, South Sudan, Tajikistan, Tanzania, Uganda, Zambia, Zimbabwe

### Health Systems Strengthening

- Workforce development
- Laboratory
- Pharmacy
- Differentiated service delivery
- Quality improvement

**COUNTRIES** Angola, Burundi, Democratic Republic of Congo, Côte d'Ivoire, Cameroon, Ethiopia, Eswatini, Ghana, Haiti, Kenya, Lesotho, Myanmar, Mauritania, Mozambique, Nigeria, Rwanda, Sierra Leone, Senegal, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe

### Global Health Security

- Antimicrobial resistance
- Infection prevention and control
- **Preparedness**
- **Emergency response operations**
- Immunization
- Border health/surveillance

COUNTRIES Angola, Burundi, Democratic Republic of Congo, Cameroon, Ethiopia, Eswatini, Haiti, Kenya, Kazakhstan, Lesotho, Mozambique, Rwanda, Sierra Leone, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe



### COVID-19

- COVID-19-related health worker training
- Procurement of personal protective and medical equipment
- Establishment of fever clinics and health brigades
- Contact tracing
- Infection prevention and control for COVID-19
- **Emergency operations centers**
- COVID-19-related surveillance and surveys
- Identification of new prevention and treatment methods
- Vaccine preparedness

**COUNTRIES** Angola, Burundi, Democratic Republic of Congo, Côte d'Ivoire, Cameroon, Colombia, Ethiopia, Eswatini, Haiti, Kenya, Kazakhstan, Lesotho, Malawi, Mozambique, Namibia, Peru, Rwanda, Sierra Leone, South Sudan, Tanzania, Uganda, United States, Zambia, Zimbabwe

### Research

- Clinical trials
- Implementation science research
- Research capacity-building

COUNTRIES Ethiopia, Jordan, Kenya, Kyrgyzstan, Kazakhstan, Malawi, El Salvador, United States



### Human Resources for Health

- Health worker training and skills building
- Capacity building of provincial / district health management teams
- Strategies, policies, guidelines, and training tools
- Learning networks / communities of practice
- Global health fellowships

**COUNTRIES** Angola, Burundi, Democratic Republic of Congo, Côte d'Ivoire, Cameroon, Ethiopia, Eswatini, Ghana, Haiti, Kenya, Lesotho, Myanmar, Mauritania, Mozambique, Nigeria, Rwanda, Sierra Leone, Senegal, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe

### Strategic Information

- Public health surveillance and surveys
- Health information systems
- Data visualization and use

COUNTRIES Angola, Democratic Republic of Congo, Côte d'Ivoire, Cameroon, Ethiopia, Eswatini, Haiti, Kenya, Kyrgyzstan, Lesotho, Myanmar, Malawi, Mozambique, Namibia, Rwanda, Sierra Leone, Tanzania, Uganda, United States, Zambia, Zimbabwe



The United States Centers for Disease Control and Prevention (CDC)

The United States Agency for International Development (USAID)

The United States Health Resources and Services Administration (HRSA)

The National Institutes of Health (NIH)

The Bill & Melinda Gates Foundation

Columbia University

The World Health Organization (WHO)

Gilead Sciences

Janssen Pharmaceuticals

Fleming Fund

**Elton John AIDS Foundation** 

Zhao Public Health Fund

Resolve to Save Lives

**Becton Dickinson** 

Contour Global

**CDC** Foundation

Orange Foundation

Bristol Myers Squibb Foundation

The Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund)

Family Health International (FHI)

Fred Hutchinson Cancer Research Center

AstraZeneca

Merck

**Evofem** 

**New York Community Trust** 

Samuels Foundation



ICAP at Columbia University Mailman School of Public Health 722 West 168th Street, 13th Floor New York, NY 10032

icap.columbia.edu